Report

SLOSS INDUSTRIES
Manufacturing Tradition Since 1882

Consolidated Overview of Environmental Data in Support of the Environmental Indicator Determination

Prepared for

Sloss Industries

Birmingham, Alabama

July 2005

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2567 Fairlane Drive
Montgomery, AL 36116

Report

Consolidated Overview of Environmental Data in Support of the Environmental Indicator Determination

Submitted to

Sloss Industries

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Acronyms

ADEM	Alabama Department of Environmental Management
ASI	Analytical Services, Inc.
BEHP	bis(2-ethylhexyl)phthalate
BFB	bromofluorobenzene
bgs	below ground surface
BMDL	below method detection limit
BSC	benzenesulfonyl chloride
BTF	Biological Treatment Facility
CLP	Contract Laboratory Program
CMS	corrective measures study
COED	Consolidated Overview of Environmental Data
COPC	constituent of potential concern
DQE	data quality evaluation
EI	environmental indicator
ELCR	excess lifetime cancer risk
EPA	U.S. Environmental Protection Agency
FWI	Facilitywide Investigation
gpm	gallons per minute
GPRA	Government Performance Results Act
HHRA	human health risk assessment
HI	hazard index
HSA	hollow-stem auger
HSWA	Hazardous and Solid Waste Amendments
IAVI	indoor air vapor intrusion
ICP	inductively coupled plasma
IDW	investigation-derived waste
JWC	Jim Walter Corporation
LCS	laboratory control sample
MCL	maximum contaminant level
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MS/MSD	matrix spike/matrix spike duplicate
msl	mean sea level
NFA	no further action
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PAH	polynuclear aromatic hydrocarbon
PPE	personal protective equipment
PRG	Preliminary Remediation Goals
PVC	polyvinyl chloride
RAGS	Risk Assessment Guidance for Superfund

RBC	risk-based criteria
RBSL	risk-based screening level
RCRA	Resource Conservation and Recovery Act
RCRIS	RCRA Information Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RGO	remedial goal option
RL	reporting limit
STL	Severn Trent Laboratory
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TOC	total organic carbon
TSA	Toluene Sulfonyl Acid
VOC	Volatile organic compound
VSI	visual site inspection

Executive Summary

Sloss Industries Corporation (Sloss), located in Jefferson County, Alabama, manufactures coke and slag wool fiber at its Birmingham facility. Sloss has been evaluating past waste management practices in accordance with the regulations set forth by the Hazardous and Solid Waste Amendments (HSWA) of the Resource Conservation and Recovery Act (RCRA) since approximately 1990. Although the RCRA Facility Investigation (RFI) process is still ongoing, at the request of the U.S. Environmental Protection Agency (EPA), Sloss performed supplemental sampling at the site to support the completion of the Environmental Indicator (EI) determinations for *Current Human Exposure under Control* (RCRA Information Act [RCRIS] Code CA 725) and *Migration of Contaminated Groundwater under Control (*RCRIS Code CA 750) before EPA's September 30, 2005, deadline. This Consolidated Overview of Environmental Data (COED) report has been generated in support of the EI determinations. It consolidates most of the site information collected to date and also will be used to refine future RFI investigative activities.

In an effort to accelerate corrective action at RCRA facilities, the Government Performance Results Act (GPRA) set goals for RCRA facilities to have human exposures controlled and groundwater releases controlled by the year 2005. These goals, which are represented by the CA 725 (*Current Human Exposure under Control*) EI and CA 750 (*Migration of Contaminated Groundwater under Control)* EI, provide a measurement of the progress of corrective action at each facility and also provide a means of summarizing and reporting on the sitewide environmental conditions at the highest priority sites. Although the major goals of corrective action (site characterization and source removal) are the final goals for all RCRA sites, the intermediate priority goal is to determine if plausible human exposures exist from onsite contamination in all media and to determine if contaminated groundwater is migrating.

ES.1 Environmental Indicators Determinations

The overall EI determination for CA 725 (*Current Human Exposure Under Control*) is IN: insufficient information is available to determine if conditions are under control. Currently, there are insufficient data available for background concentrations of inorganics and polynuclear aromatic hydrocarbons (PAHs) to determine if offsite properties are affected by the site.

It is also currently unknown whether the volatile organic compound (VOC) plume in groundwater extends under offsite residences and, if so, what the concentrations are in these areas. Therefore, insufficient data currently exist to evaluate the indoor air vapor intrusion (IAVI) pathway for offsite residents.

The overall EI determination for CA 750 (*Migration of Contaminated Groundwater Under Control*) is IN: insufficient information is available to determine if conditions are under control. Currently, there are insufficient historical groundwater monitoring data to determine if contaminant plume boundaries are stable. Additionally, some plume

boundaries are not fully defined because of gaps in the monitoring network and/or a lack of usable groundwater sampling data.

Although it appears that contaminated groundwater probably is discharging to surface water in the Biological Treatment Facility (BTF) area, surface water sampling indicates that these impacts are currently acceptable, because surface water sampling results generally meet the National Recommended Water Quality Criteria for Human Health at all locations.

ES.2 Conclusions

On the basis of the consolidated review of environmental data collected from the Sloss facility, the following conclusions are drawn:

- Onsite soils have been affected primarily by VOC and semivolatile organic compound (SVOC) contamination. The greatest VOC impacts have been identified in the Chemical Plant area, while SVOCs are affecting the Coke Plant and BTF areas.
- Offsite soils have been affected by benzo(a)pyrene. Generally, concentrations of benzo(a)pyrene decrease with increasing distance from the Sloss property, and are greater to the south and southeast of the facility than to the east or west. However, because low-level PAH concentrations also are associated with urban environments, the collection of background soil samples from undisturbed locations, unaffected by the site, may be warranted to assess the natural concentrations of PAHs in the general area.
- Offsite soils may exhibit somewhat elevated levels of arsenic and beryllium. On the basis of a review of background soils analyses, it is believed that arsenic and beryllium detected in onsite and offsite soils generally are naturally occurring. The current set of background soil samples may not be representative of arsenic and beryllium concentrations in soils that have developed through weathering of the Conasauga Limestone.
- Sediment in the unnamed tributary contains significant levels of SVOCs, probably as a result of soil contamination. VOC contamination in this same area does not appear to be significant.
- The concentrations of SVOCs in Five Mile Creek sediments are significantly lower than those detected in the sediments of the unnamed tributary. Five Mile Creek does not appear to be significantly affected by site contaminants.
- Additional sources of sediment contamination appear to be present upstream of the Sloss property on Five Mile Creek.
- Surface water samples in both Five Mile Creek and the unnamed tributary generally meet the National Recommended Water Quality Criteria for Human Health.
- Groundwater contamination generally is limited to the Coke and Chemical Plants and BTF area, although localized “hot spots” also occur within the land disposal areas.

- Based on the limited amount of historical groundwater data, concentrations of groundwater contaminants appear to be relatively stable to decreasing in facility boundary monitoring wells.
- The groundwater contaminant plumes identified do not appear to migrate beyond the Sloss property boundary, with the exception of the petroleum hydrocarbon and chlorinated solvent plume identified in the Chemical Plant area.
- The presence of dissolved iron and manganese in shallow aquifer groundwater probably is a result of biodegradation of the petroleum hydrocarbon and chlorinated solvent plumes, which has resulted in a reducing environment, thus solubilizing these metals.
- Petroleum hydrocarbons, chlorinated solvents, and their related compounds have been detected at concentrations exceeding the preliminary remediation goal (PRG) for IAVI in boundary monitoring wells near the Chemical Plant. These contaminants may be affecting a nearby residential neighborhood.
- Petroleum hydrocarbon and coal tar-related compounds are the primary constituents of the groundwater contaminant plume in the Coke Plant.
- Groundwater contamination in the BTF area generally consists of petroleum hydrocarbons, coal tar-related compounds, and inorganics. Contaminated groundwater may discharge to surface water bodies in this area; however, they appear to be localized and, based on the results of surface water sampling, do not appear to cause significant impacts to surface water quality based on National Recommended Water Quality Criteria for Human Health.
- The current concentration of benzene in well MW-17 is below method detection limit (BMDL), indicating that groundwater exceeding the benzene maximum contaminant level (MCL) is not affecting Five Mile Creek or the unnamed tributary, as indicated by previous sampling results.

ES.3 Proposed Actions

Sloss is proposing the following effort to support the revision of the human health and the groundwater migration EI determinations, as well as to further progress within its RFI program:

- Collect background soil samples from undisturbed locations unaffected by the site and where soils have developed through weathering of the Conasauga Limestone for analysis of inorganics and PAHs to assess the natural concentrations in the area. After representative background concentrations of PAHs and metals have been established, additional surface soil samples may be warranted from residential properties that exceed the background concentrations and the risk-based screening levels (RBSLs).
- Collect soil gas samples around the occupied buildings in the Coke Plant that are situated above the groundwater VOC plume to determine the potential impact on indoor air.

- Complete an overall assessment of the efficacy of the existing monitoring well network and the sampling and analysis plan for the site.
- Install additional monitoring wells in the residential areas to delineate the extent of the offsite groundwater plume and the groundwater concentrations near residences.
- Conduct annual water level monitoring, potentiometric surface mapping, and sampling from all monitoring wells at the facility (possibly more frequent for select wells and surface water bodies) to obtain a groundwater data set sufficient to assess stabilization of the groundwater contaminant plume(s).
- Begin identification of ecological issues, supplimenting existing information, as appropriate.
- Review existing data for the purpose of identifying whether future investigative activities or no further action determination is warranted for each solid waste management unit.

1.0 Project Background

Sloss Industries Corporation (Sloss), located in Jefferson County, Alabama, manufactures coke and slag wool fiber at its Birmingham facility (Figure 1-1). Sloss has been evaluating past waste management practices in accordance with the regulations set forth by the Hazardous and Solid Waste Amendments (HSWA) of the Resource Conservation and Recovery Act (RCRA) since approximately 1990. As such, numerous investigations have been completed to determine the nature and extent of potential contamination that may have been released from solid waste management units (SWMUs) identified at the facility.

Although the RCRA Facility Investigation (RFI) process is still ongoing, at the request of the U.S. Environmental Protection Agency (EPA), Sloss performed supplemental sampling at the site to support the completion of the Environmental Indicator (EI) determinations for *Current Human Exposure under Control* (RCRIS Code CA 725) and *Migration of Contaminated Groundwater under Control (*RCRIS Code CA 750) before EPA's September 30, 2005, deadline. This Consolidated Overview of Environmental Data (COED) report has been generated in support of the EI determinations, but also will be used to refine the RFI process for future activity, because it consolidates a majority of the site information collected to date.

1.1 Purpose and Organization of Report

The purpose of this COED Report is threefold:

1. Provide a consolidated overview of the environmental data collected at the Sloss facility to date.
2. Support the EI determination for RCRIS Code CA 725–*Current Human Exposure under Control* and RCRIS Code CA 750–*Migration of Contaminated Groundwater under Control.*
3. Present the procedures followed and the results of the April 2005 supplemental sampling event (conducted to support the EI) (see Appendix A).

The remainder of this section provides background and status information related to facility ownership and operation, regulatory history, and the specific SWMUs, while the remainder of the report presents the following:

- Historic Analytical Testing [Section 2]
- Human Health Risk Screening, including a discussion of the current exposure scenarios (for EI purposes), screening levels for each medium of concern, and selection of constituents of potential concern (COPCs); potential future exposure scenarios also are discussed for future RFI planning [Section 3]
- Summary of the Extent of Soil COPCs [Section 4]
- Summary of the Extent of Sediment and Surface Water COPCs [Section 5]

Insert Figure 1-1

- Summary of the Extent of Groundwater COPCs [Section 6]
- Environmental Indicator Determinations, including a discussion of both current human exposures and the migration of contaminated groundwater [Section 7]
- Conclusions regarding the EI determinations and sitewide conditions (Section 8)
- Proposed Actions for future RFI activities (Section 9)

A few points worth noting with regard to the information presented in this COED report include the following:

- Although the SWMUs are identified and discussed individually in Section 1, the remainder of the information included in support of the EI determinations is evaluated and presented on a sitewide basis in accordance with EPA guidance on completing EIs.
- Historical screening evaluations of ecological risk have not been included in this report, because that information is not needed specifically for the EI determinations. An assessment of the potential ecological risks will be evaluated and documented in future deliverables as part of the ongoing RFI.

1.2 Background Information

1.2.1 Facility History of Ownership and Operation

The original coke manufacturing facility began operation in 1919 as Sloss Sheffield Steel and Iron Company, producing foundry and furnace coke and coke by-products. In 1939, the company merged with United States Pipe and Foundry, and then in the late 1960s, Jim Walter Corporation (JWC) purchased the company. In January 1988, JWC sold controlling interest to Hillsborough Holding Corporation, and Sloss Industries Corporation became a wholly owned subsidiary.

The following operations have occurred at the facility:

- *Coke manufacturing* has occurred at the site since 1919. Coke batteries 1 and 2, consisting of 120 coke ovens, were taken out of service in 1979; coke batteries 3, 4, and 5, consisting of 120 coke ovens, continue to operate.
- *Chemical manufacturing* of Toluene Sulfonyl Acid (TSA) 94 began at the site in 1948; operations expanded with the production of sulfones through a sulfonization process of sulfuric acid and benzenesulfonyl chloride (BSC), until all chemical manufacturing operations ceased in 2002.
- An *iron blast furnace* that produced pig iron from iron ore began operation in 1958; blast furnace operations ceased in 1979 and the facility was decommissioned in 1984.
- The *mineral wool plant*, that manufactures mineral fibers used for ceiling tiles and insulating products, was built in late 1947, and currently is operating.
- The *Biological Treatment Facility (*BTF) and sewers, designed to treat wastewater generated at the facility, were constructed in 1973 and are still in operation.

1.2.2 Regulatory History and Status

The following provides a brief chronological overview of the RCRA regulatory history for the Sloss Birmingham facility. The information is not intended to be comprehensive, but rather highlights the primary regulatory drivers at the facility:

- November 19, 1980, original Part A application submitted to EPA by Jim Walter Resources; final Part A application identified only the equalization basin as a regulated unit (surface impoundment); EPA I.D. No. ALD 000 828 848 was assigned to the facility
- November 12, 1985: Part B permit application was submitted to EPA.
- In lieu of the facility's original request for a variance from the surface impoundment retrofitting requirements, the facility submitted a closure plan to clean close the SWMU 13/Equalization Basin. The closure plan conditionally was approved on September 15, 1987; closure of the unit was certified by the Alabama Department of Environmental Management (ADEM) on March 30, 1988.
- May 9 and 10, 1989: EPA conducted a visual site inspection (VSI) of the facility; a RCRA Facility Assessment (RFA) was completed in August 1989.
  - The RFA identified 39 SWMUs, including the closed equalization basin (SWMU 13).
  - Of the 39 SWMUs, 15 were noted by EPA as exhibiting low or no potential for release; the remaining 24 were noted as having a potential to release to one or more environmental media.
- September 29, 1989: Section 3008(h) Administrative Order 89-39-R was issued to Sloss Industries to perform an RFI and to perform a Corrective Measures Study (CMS) to prevent or mitigate the migration of releases of hazardous wastes or hazardous constituents at or from the facility.

1.2.2.1 Phase I RFI Activities

- 1990 to 1994: Sloss initiated planning for the RFI to characterize the nature, extent, and rate of contaminant migration from the identified SWMUs. The RFI Work Plan to investigate the 39 SWMUs was approved by EPA in 1994:
  - The SWMUs were separated into four areas for investigation to group similar industrial activities, including the following: Coke Manufacturing, Land Disposal Areas, BTF and Sewers, and Chemical Manufacturing.
- 1995 and 1996: Facilitywide Investigation (FWI) was completed to develop a conceptual hydrogeologic and hydrologic model of the facility. The RFI FWI Report was submitted to EPA in February 1996:
  - October 6, 2000: EPA approved the FWI Report

- 1996 to 1999: RFI field investigations were conducted and reports submitted to EPA (Coke Manufacturing Plant–November 1996; Land Disposal Areas–January 1998; BTF and Sewers–February and October 1999; and Chemical Manufacturing Plant–December 1999):
  - July 21, 2000: EPA conditionally approved the Land Disposal Report.
  - October 6, 2000: EPA conditionally approved the Coke Plant Report.
  - December 6, 2002: EPA conditionally approved the BTF and Sewers Report.

1.2.2.2 Phase II RFI Activities

- 2000 and 2001: Phase II RFI Coke and Chemical Plant field investigations were conducted in July 2000; report was submitted to EPA in February 2001.
- 2001 to 2003: Phase II RFI BTF and Sewers and Land Disposal Areas field investigations were conducted in June 2001; report was submitted in June 2002 (revised January 2003):
  - December 6, 2002: EPA conditionally approved the Phase II Land Disposal Area and BTF and Sewers Report, provided that additional waste source and type delineation occurs in future phases of investigation.
  - December 12, 2003: EPA provided additional technical review comments on the Phase II Coke and Chemical Manufacturing Plant Report, for additional data collection to fully characterize the human health and/or environmental threat.
  - March 17, 2004: EPA provides additional technical review comments on the Phase II Land Disposal Area and BTF and Sewers Report, for additional data collection to fully characterize the human health and/or environmental threat and to assist in focusing resources to meet the EI evaluations completion goal.
- February 20, 2002: Interim Remedial Measures Work Plan for the Chemical Plant was submitted to EPA; EPA provided technical comment on December 12, 2003.

1.2.2.3 Current Status

March 1, 2005: EPA approved the *Final Data Gap Analysis and Proposed Environmental Indicators (EI) Sampling Plan*; Sloss implements the sampling plan in April 2005.

July 2005: Draft EI Memo (RCRIS CA Codes 725 and 750) was submitted to EPA; this COED report was prepared to support the EI determinations; the report also provided a consolidated review of the facility environmental data for future RFI planning.

1.2.3 SWMU Descriptions and Status

Thirty-nine SWMUs were identified by EPA in the original RFA, and have been investigated by Sloss in accordance with the approved work plans and various reports, as outlined above (Figure 1-2). The SWMUs are shown in Figure 1-2. Table 1-1 summarizes the SWMUs (by area designation) and provides an overview of the recommendations that have been proposed throughout the RFI process. As we understand the current regulatory status, each SWMU is still considered to be under investigation. EPA has requested additional data (typically specific to surficial soils and source areas) before concurrence with previous requests for no further action (NFA).

Insert Figure 1-2

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
COKE MANUFACTURING PLANT					
1 (A/B)	Quench Tower/Sump	Concrete tower and sump	FA	NFA (after sump inspections, soil, quench water sampling)	N/A
2 (A/B)	Quench Tower Pump Basins	Partially in-ground concrete basins	FA		
3A	Old Quench Tower Settling Basins	Partially in-ground concrete basins	FA		
5	Coal Tar Storage Area Drain System	In-ground concrete trough	FA	NFA for soils MW-58 for SVOC monitoring	Define groundwater as separate area of concern, rather than associated with any one SWMU Propose 9 MWs (6 onsite/3 offsite) to delineate shallow plumes at Coke/Chemical Plants Characterize fill material and native soil
7	Coal Tar Collection Sump in No. 1 Pump House	In-ground concrete sump	FA	Soil sampling to delineate the extent of PAHs MW-59 for SVOC monitoring	
10	Coal Tar Decanter for Nos. 3 and 4 Coke Batteries	Steel ASTs on concrete pads	FA	NFA for soils MW-60 to determine if PAHs have migrated to the shallow bedrock	
11	Coal Tar Decanter for No. 5 Battery		FA		
12	Coal Tar Decanter for No. 1 and No. 2 Coke Batteries	Steel ASTs on concrete pads	FA	NFA (after soil sampling)	N/A
6	Spill Area Around Diesel Tank	Area adjacent to a 10,000-gallon steel AST and concrete containment	FA	NFA (after confirmatory soil sampling)	N/A

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
8	Flushing Liquor Decanter	Steel AST on a concrete base	NFA	NFA (after inspection of concrete, soil sampling)	N/A
9	Flushing Liquor Decanter Sump	In-ground concrete sump	FA	NFA (after integrity testing, soil sampling)	N/A
BIOLOGICAL TREATMENT FACILITY (BTF) AND SEWERS					
4	BTF Sewer	In-ground sewer line and open-to-surface troughs	FA	MWs-62 and 65 to assess impact of soil (benzo(a)pyrene) on groundwater	NFA on soils and groundwater
13	Equalization Basin	Surface impoundments, constructed in clay backfill following removal of original fill material to bedrock Equalization Basin is not backfilled Emergency Basin is backfilled	FA	NFA on sludge and subsurface soil (after sampling sludge, subsurface soil, groundwater, and DNAPL) Install 3 MWs to delineate DNAPL at MWs-4A and 3; install 3 MWs to delineate LNAPL at MW-6; install 1 MW to delineate benzene and assess presence of PAHs near 13-SB0010 Assess presence of PAHs, metal, and cyanide in drainage ditch sediment and presence of metals and cyanide in drainage ditch surface water	NFA on soils and LNAPL, PAH, and cyanide plume south of SWMUs 13 and 21 Assess presence of benzene and naphthalene in the deep Conasauga north of SWMU 13 (proposed 1 deep MW to assess benzene downgradient of plume—will not assess deep Conasauga) Bail MW 4A quarterly for DNAPL as an interim remedial measure
21	Emergency Basin		FA		

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
14	pH Neutralization	In-ground concrete tanks	NFA	NFA on subsurface soil (after sampling) Determine presence of PAHs in groundwater at one soil boring location (13-SB0010)	NFA on soils
15	Primary Clarifier				
16	Aeration Basin				
17	Secondary Clarifier				
18	Thickener				
19	Digester				
20	Dewatering Machine	Filter press	NFA	N/A	N/A
22	Polishing Pond	17-acre surface impoundment	FA	NFA on sludge, subsurface soils, and pond discharge (after sampling) MW-45, 47, and 17D to delineate benzene horizontally and vertically (at MW-17)	NFA on soils Assess presence of cyanide in the deep Conasauga downgradient Collect biogeochemical data to assess natural attenuation potential
25	Storm Water Runoff Sewer	In-ground concrete sewer lines and drains	FA	NFA (after storm water effluent sampling)	N/A

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
37	BTF Sewer Tar Trap	In-ground concrete basin	FA	NFA on soil (based on only fill material above shallow bedrock) MW-68S to assess impact of sump on groundwater quality Additional sediment and surface water sampling to delineate the extent of PAH, metal, and cyanide contamination in the drainage ditch.	NFA on soil and groundwater
LAND DISPOSAL AREA					
23	Biological Sludge Disposal Area	Unlined, 2-acre cleared area surrounded by a soil dike	FA	NFA on sludge, subsurface soil, and groundwater (after seismic and conductivity surveys, soil, groundwater, and sludge sampling)	NFA on soils
24	Blast Furnace Emission Control Sludge Waste Pile	Former site of waste pile, currently un-vegetated, several acres	FA	NFA on sludge and surficial soil (after sampling of both) MW 48 to delineate cyanide vertically (in vicinity of SWMU and BTF)	NFA on soils Need to delineate cyanide to the east and south (downgradient of SWMU 24)
38	Landfill	NE to SW trending ridge-shaped plateau	FA	NFA on subsurface soils (after sampling) MWs-63 and 64 to delineate benzene	NFA on subsurface soils Need to delineate benzene to north, west, and east; proposed 4 deep MWs (upgradient/sidegradient, and two downgradient) Collect biogeochemical data to assess natural attenuation

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
39	Blast Furnace Emission Control Sludge Waste Pile Near Landfill	Waste pile (currently being removed), with elongated ridge, partially vegetated	FA	NFA on sludge and subsurface soil (after sampling) MWs-66 and 67 to delineate cyanide vertically (at MW-32)	NFA on subsurface soils Need to delineate cyanide contamination to the east and south, as well as upgradient (proposed 1 deep MW) Collect biogeochemical data to assess natural attenuation
CHEMICAL MANUFACTURING PLANT					
26	Chemical Manufacturing Plant Main Process Building Floor Drain	Tile-lined trough	FA	Shallow MWs (54, 55, and 56) to verify contamination Shallow MWs (50, 51, 52, and 53) to evaluate horizontal extent 1 deep MW (57D) to assess source of vinyl chloride Soil sampling (from MW boreholes 52, 53, 54, and 55) to delineate the extent of affected soil	Define groundwater as separate area of concern, rather than associated with any one SWMU Perimeter soil borings to delineate benzene, chlorobenzene, and toluene; additional soil samples as needed to delineate VOCs Propose 9 MWs (6 onsite/3 offsite) to delineate shallow plumes at Coke and Chemical Plants
27	TSA 94 Building Drain Floor	Tile-lined trough	FA		
29	Chemical Product Tank Containment Area	Concrete containment area (pad, dike, sump)	FA		

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
					Interim Remedial Measures Work Plan (Feburary 2002) addresses: 1) Chlorobenzene in the soil behind SWMU 27 2) Benzene and chlorobenzene in shallow groundwater at MW-56 3) Benzene and vinyl chloride in shallow groundwater along the Plant property boundary 4) Tetrachlorethene and trichloroethene contamination in shallow groundwater in the southern portion of the Chemical Plant.
31	Monohydrate Building Floor Drain and Sump	Concrete drain and sump	FA	NFA (after sump/floor drain inspections and soil sampling)	N/A
28	Sulfonation Building Floor Drain	Stainless steel trough	NFA	Soil sampling in the vicinity of former drum storage area	N/A
30	Centrifuge Wastewater Tank	Steel AST	NFA		
32	BSC 94 Drum Storage Area	Plastic drums	NFA		
33	BSC Plant Drum Storage Area	Plastic drums	NFA		

TABLE 1-1
Summary of SWMUs
Sloss Industries, Birmingham, Alabama

SWMU # [a]	Name	Description	Recommendations [b,c]		
			RFA	Phase I RFI	Phase II RFI
34	BSC Wastewater Neutralization System	ASTs and mixing units,concrete containment	NFA	Soil sampling in the vicinity of former drum storage area	N/A
35	Old Waste Pile at Mineral Wool Plant	Waste pile, sparsely vegetated	NFA		
36	Maintenance Shop Used Oil Tank	Steel AST (rectangular)	NFA; EPA later requests visual inspection of gravel and soil samples	NFA (after visual inspection and soil sampling)	N/A

Notes:
[a] Thirty-nine SWMUs are listed by area of investigation (i.e., Coke Plant, BTF/Sewers, Land Disposal Area, Chemical Plant), rather than sequential order.
[b] FA = Further Action; NFA = No Further Action; NA = Not Applicable (i.e., not investigated further)
[c] Phase I recommendations based on comparison of site concentrations to Region 3 risk-based concentrations; see Section 3 for updated risk screening using Region 9 preliminary remediation goals (PRGs)
SWMU = solid waste management unit
RFA = RCRA Facility Assessment
RFI = RCRA Facility Investigation
FA = further action
NFA = no further action
AST = aboveground storage tank
SVOC = semivolatile organic compound
PAH = polynuclear aromatic hydrocarbon
MW = monitoring well
DNAPL = dense non-aqueous phase liquid
LNAPL = light non-aqueous phase liquid
BTF = Biological Treatment Facility
VOC = volatile organic compound
BSC = benzene sulfonyl chloride
EPA = U.S. Environmental Protection Agency

1.3 Geologic and Hydrogeologic Setting and Site Conceptual Model

Sloss is underlain by sedimentary rocks that range in age from Cambrian to Pennsylvanian. The Opossum Valley Fault generally trends northeast to southwest, crossing through the Sloss property in the northern portion of the facility at the Polishing Pond. The majority of the Sloss property lies on the hanging wall fault block to the east of the Opossum Valley Fault. The foot wall of the fault lies to the west and underlies Sand Mountain. The majority of the Sloss property is underlain by the Conasauga Limestone. The Red Mountain Formation, Fort Payne Formation, Tuscumbia Limestone, Hartselle Sandstone, Floyd Shale, and Pottsville Formation outcrop in the small area of the facility on the western side of the fault. A site geologic map is presented in Figure 1-3.

1.3.1 Bedrock Geology

The Conasauga Limestone is Cambrian Age and typically is medium gray, thin- to medium-bedded limestone. Locally, bedding thickness is reported to range from a few inches to as much as 5 feet or more in the massive sections. Massive bedding sections are rare and bedding thicknesses less than 1 foot are common. Locally, the Conasauga Formation dips to the southeast at 26 to 32 degrees, with a strike of approximately N45ºE. Cross sections trending northwest-southeast and northeast-southwest are presented in Figures 1-4, 1-5, and 1-6. An extensive network of faults and joints has developed in the Conasauga Limestone as a result of thrust faulting. The faults and joints typically trend northeast and northwest. The northeast trending joints (strike of N45ºE) dip approximately 60ºNW (approximately perpendicular to bedding), while the northwest trending joints strike N30ºW and have subvertical dips.

The results of previous investigations indicate that the upper 2 feet of the Conasauga Formation underlying the Sloss Facility are highly weathered. Below the weathered surface, the limestone is generally massive, with few fractures. The limestone is typically hard with 1- to 2-foot-thick lenses of softer, darker gray shale and shaley limestone. Occasionally, fractures are present, ranging from a few inches to a few feet thick. Fracture zones typically contain limestone rubble that exhibits secondary healing by calcite crystals. Fracture zones typically are encountered in the upper 50 feet of the formation and are less frequent with increasing depth.

On the western side of the Opossum Valley Fault, in the SWMU 24 area, outcrops of the Hartselle Sandstone, Tuscumbia Limestone, Fort Payne Chert, Red Mountain Formation, and Pottsville Formation have been mapped. Brief descriptions of these units are provided below:

- Hartselle Sandstone–composed mainly of clean, well-sorted, light-colored, very fine- to medium-grained quartz sand
- Tuscumbia Limestone–consists of thick bedded, medium-dark- to medium-gray, crystalline, oolitic, sublithographic, and bioclastic limestone with minor amounts to chert

Insert Figure 1-3

Insert Figure 1-4

Insert Figure 1-5

Insert Figure 1-6

- Fort Payne Chert–consists of dark-gray sublithographic limestone and dense dark-gray chert
- Red Mountain Formation–consists of dark-reddish-brown to olive-gray siltstone, sandstone, and shale with hematite beds
- Pottsville Formation–characterized by alternating beds of sandstone and shale with numerous coal seams and associated underclays

The topography of the bedrock underlying the Sloss facility generally slopes to the north toward Five Mile Creek. Top of bedrock elevations range from 583.1 feet above mean sea level (msl) in the Coke Plant area to 498.6 feet msl near Five Mile Creek. Weathering of the Conasauga Limestone has produced undulations in the surface of the bedrock. Several feet of relief have developed on the bedrock surface, and this relief is as much as several tens of feet in some areas of the property.

1.3.2 Soils

The majority of the overburden at the Sloss facility consists of residual soil from weathered Conasauga Formation limestone. On and adjacent to Sand Mountain immediately west and north of the Polishing Pond (SWMU 22), residual soils have formed on the Hartselle Sandstone and the Tuscumbia Limestone. Near the Coke and Chemical Plants, fill material, consisting of coal, slag, or coke breeze, is present at thicknesses ranging from 0.5 to 6 feet. Similar fill material also is present in the BTF area. The overburden ranges in thickness from 2 to more than 20 feet.

Native soil over limestone consists of cohesive, medium stiff to stiff inorganic clays of low to medium plasticity and high plasticity. General engineering properties, as indicated by analytical and visual observations of site soil properties, include high shrink-swell potential, low permeability, and low strength capabilities.

Near the base of the residuum, at the bedrock interface, a zone of more permeable soils has developed with chert and highly weathered limestone gravels consolidated from weathering of the underlying bedrock. This typically is referred to as a rubble zone. Where observed, the rubble zone appears to range up to 2 feet in thickness. The rubble zone does not appear to be laterally continuous throughout the facility, but may be a significant water-bearing zone locally.

1.3.3 Monitoring Well Network

The groundwater monitoring network at the Sloss Birmingham facility consists of 95 monitoring wells and piezometers. Boring logs and well construction diagrams for each monitoring well and piezometer are presented in Appendix B. Monitoring wells and piezometers are constructed of 2-inch-diameter, Schedule 40 polyvinyl chloride (PVC) casing and screens with a sand pack. Screens are typically 10 feet long with a 0.010-inch slot size. The sand pack typically extends a minimum of 2 feet above the top of the screen, above which a 2-foot bentonite well seal is installed. Neat cement grout typically is installed following hydration of the bentonite seal and extends upward to the ground surface. A surface isolation casing, usually 10-inch-diameter steel, typically is installed from the top of bedrock to the ground surface at locations where residuum groundwater is encountered.

Monitoring wells can be grouped into four classifications, as shown in Table 1-2 and Figure 1-7; based on the various units they monitor, as described below:

- Residuum monitoring wells are those wells with screens that are completed within the unconsolidated residuum above bedrock or those monitoring wells with screens and sand filter packs that extend above the top of the bedrock (mixed monitoring). Eleven wells have been classified as residuum monitoring wells. The majority of these wells are located within the BTF area, primarily surrounding SWMU 13 (Equalization Basin).
- Shallow bedrock monitoring wells have screens completed entirely within the Conasauga Limestone, with screens generally between 0 and 40 feet of the top of the bedrock surface. These wells are situated in the fractured and weathered upper portions of the Conasauga Limestone. A total of 66 monitoring wells fall into this category.
- The 15 onsite deep bedrock monitoring wells have screens completed between 40 and 150 feet below the top of the bedrock surface. These wells are situated in the less fractured and weathered lower portions of the Conasauga Limestone, where groundwater flow is significantly slower than that observed in the shallow Conasauga.
- Three monitoring wells have been separated from the bedrock monitoring wells of the Conasauga Limestone. These non-Conasauga monitoring wells have been installed at SWMU 23, on the western side of the Opposum Valley Fault. They are not completed in the Conasauga Limestone and are not included in the potentiometric surface maps developed for either the shallow or deep Conasauga Limestone flow zones.

1.3.4 Groundwater Flow through the Residuum and Conasauga Water-bearing Zones (Shallow and Deep Bedrock)

Three potential water-bearing zones are comprised of the upper weathered bedrock surface, fracture zones, and soft, shaley zones in the limestone (40 to 140 feet below ground surface [bgs]), and shaley zones below approximately 140 feet bgs.

Water enters the groundwater system in the valley via infiltration of rainfall through the residual soils. Recharge moves vertically downward until it encounters the rubble zone, where lateral groundwater flow across the bedrock surface may occur. Significant volumes of groundwater may be encountered in this zone as a perched water table at the soil-bedrock interface (Figure 1-8). Because of the discontinuous occurrence of groundwater in the residuum and the lack of sitewide residuum monitoring wells, a potentiometric surface map for residuum groundwater has not been developed.

Groundwater flows from the residuum into the shallow bedrock aquifer through voids in the Conasauga Limestone. Within this formation, groundwater flow is controlled by the occurrence and relationships between fractures, joints, and bedding of the limestone and shale. These features are interconnected and comprise the dominant feature of the groundwater flow systems, providing preferential flow paths for groundwater and contaminant migration. Significant water-bearing zones in the Conasauga Formation vary laterally and with depth. Porous media flow through the Conasauga Formation does not appear to be significant because of the dense nature of the limestone.

Insert Table 1-2 (page 1 of 4)

Table 1-2 (page 2 of 4)

Table 1-2 (page 3 of 4)

Table 1-2 (page 4 of 4)

Insert Figure 1-7

Insert Figure 1-8

The upper weathered bedrock surface and fractures and soft, shaley zones in the upper 40 to 140 feet appear to be hydraulically connected, based on historical water level data. Although recharge rates are slow for wells completed in the deep Conasauga Formation, water level measurements indicate that the deep zone is generally in hydraulic connection with the shallow, more permeable zones of the Conasauga Formation.

1.3.4.1 Groundwater Flow in the Shallow Bedrock Aquifer

Potentiometric surface maps of the shallow and deep bedrock flow zones have been developed using depth-to-water measurements collected sitewide on June 13, 2001, and in recently installed monitoring wells MW-69 through MW-72 on April 25, 2005 (Table 1-1 and Figures 1-9 and 1-10). A comparison of shallow bedrock groundwater elevations collected in June 2001 and April 2005 for select monitoring wells revealed groundwater elevations that typically varied by less than 0.5 feet. On the basis of this assessment, the groundwater elevations for wells MW-69 through MW-72 have been incorporated into the June 2001 shallow bedrock potentiometric surface map.

As shown in Figure 1-9, shallow bedrock groundwater generally flows from south to north toward Five Mile Creek. Groundwater elevations in the shallow bedrock aquifer range from 587.68 feet msl at P-19S (south) to 506.55 feet msl in MW-16D (north).

Locally, a groundwater ridge is developed in the shallow bedrock potentiometric surface, trending generally east to west extending from P-19S, beneath the Coke Plant toward the Chemical Plant and MW-55, a local groundwater high. In the vicinity of the Chemical Plant, groundwater flows radially away from MW-55. Groundwater appears to flow from the Chemical Plant offsite to the east toward a residential area. Along the southern boundary of the Sloss facility, shallow bedrock groundwater appears to flow offsite to the south-southeast. It is possible that this ridge in the shallow bedrock groundwater is the local groundwater divide in the valley. Additional shallow bedrock monitoring locations to the south of the Sloss facility would be necessary to confirm this assessment.

At the northern end of the Coke Plant area, the storm water sewer appears to serve as a discharge point for shallow bedrock groundwater. A trough in the potentiometric surface in the vicinity of well MW-68S is shown in Figure 1-9. Additionally, the LaFarge Quarry serves as a discharge point for shallow bedrock groundwater.

Groundwater elevations in the residuum in the BTF area are up to 2 feet higher than those recorded in the shallow bedrock aquifer, indicating recharge of the shallow bedrock aquifer by residuum groundwater.

Near SWMU 13 (Equalization Basin), surface water elevations on the Unnamed Tributary at SG-1A are approximately 2 feet higher than nearby shallow bedrock monitoring well MW-5D. In this area, the shallow bedrock aquifer is recharged by surface water.

Insert Figure 1-9

Insert Figure 1-10

The surface water elevation at SWMU 22 (Polishing Pond) (SG-4) is approximately 2 feet higher than the shallow bedrock groundwater elevation measured in MW-19, indicating a potential flow of water from the Polishing Pond to the shallow bedrock aquifer. Surface water elevations are approximately 20 feet higher in the Polishing Pond than in well MW-16D, further confirming potential recharge of the shallow bedrock aquifer from this area. The large difference in hydraulic head indicates that although there is a potential for recharge, actual recharge rates are likely to be slow. Shallow bedrock groundwater discharges to Five Mile Creek in the vicinity of the BTF. Surface water was measured to be 500.18 feet msl at SG-3 in Five Mile Creek, while shallow bedrock groundwater elevations in well MW-16D are approximately 6.5 feet higher.

1.3.4.2 Groundwater Flow in the Deep Bedrock Aquifer

Flow within the deep bedrock aquifer is generally from the west-northwest to the east-southeast, along the Opossum Valley Fault (Figure 1-10). Groundwater elevations in deep bedrock monitoring wells range from 587.68 feet msl at P-19D to 406.97 feet msl at P-9. Deep bedrock groundwater discharges to the LaFarge Quarry and the Southern Ready Mix Quarry to the east (Figure 1-11). It is anticipated that groundwater flow in the deep bedrock generally would follow shallow bedrock groundwater flow across the site to the north toward Five Mile Creek. However, pumping of water from the quarries has created a sink in the deep bedrock aquifer, causing deep bedrock groundwater flow to the east.

A comparison of groundwater elevations in nested shallow and deep bedrock aquifer monitoring wells indicated a general downward vertical gradient from the shallow to the deep aquifer throughout the site. Along the western side of the facility, near the Opossum Valley Fault, the difference in shallow and deep aquifer groundwater elevations ranges from 0 feet (P-19S/D) to 0.02 feet (MW-17S/D) to 1.52 feet (MW-34S/D). Moving eastward, the difference in these elevations increases to as much as 138.01 feet at MW-49S/D. This increase in elevation may be the result of pumping of the quarries, which has caused dewatering of the deep aquifer preferentially along the strike of the bedding planes.

The deep aquifer groundwater level recorded at MW-17D (512.43 feet msl) is approximately 12 feet greater than the surface water elevation reported at SG-3 (500.18 feet msl). Additionally, the shallow aquifer groundwater elevation reported at MW-16D was 506.55 feet msl during the June 2001 monitoring event, indicating that discharge of deep aquifer groundwater to the shallow bedrock aquifer, and ultimately to the surface water of Five Mile Creek, may be occurring. Because of the slow recharge times observed in deep aquifer monitoring wells, the volume of water discharging from the deep bedrock aquifer to the shallow bedrock aquifer is not considered to be significant.

1.4 Water Well Inventory

An inventory of water wells located in a 2-mile radius of the Sloss facility was completed. Appendix C contains documentation of the water well inventory activities and the results of that survey. No current wells were found to exist in a 1-mile radius of the facility; two wells were identified in the 2-mile radius.

Insert Figure 1-11

Well W-1 was owned by Lone Star Cement Company, and apparently was located on the property adjacent to Sloss near the quarry. That well reportedly was drilled in 1947 to a depth of 300 feet and completed in the Conasauga Limestone. The well was measured in 1952 and produced about a 100-gallon-per-minute (gpm) flow. The well was reported as destroyed in the 1978 report.

Well V-7, located about a mile or more due south of the Sloss property, is owned by Birmingham Stove and Range. The well is 205 feet deep, completed in the Ketona Dolomite, and in 1978 was producing a flow of about 50 gpm. The well reportedly had been a reliable source of water for the site since about 1936.

2.0 Historical Analytical Testing

With the numerous field investigations that have been conducted since 1995 at the various locations on Sloss' property, this section provides a compiled summary of the historical analytical testing and laboratory analyte lists for quick review. The summary is discussed by media in the following subsections; the analytical results for all RFI sampling activities are presented in tabular form in Appendix D (CD-format).

2.1 Soil Sampling and Analysis

Numerous surface and subsurface soil sampling events have been performed at the Sloss Birmingham facility since 1995. Investigative efforts were performed on both a facility-wide and a SWMU or plant area basis with target analyte lists selected to be most appropriate for potential site contaminants; investigations occured in 1995, 1996, 1997, 1998, 1999, 2000, and 2005. Table 2-1 summarizes all of the soil samples collected and laboratory analyses performed; Table 2-2 presents the list of analytes evaluated via each laboratory method.

A total of 295 soil samples have been collected from 183 sampling stations (Figure 2-1) using either a hollow-stem auger (HSA) and split-spoon sampler or a hand auger, as appropriate. Of the 183 sampling stations, 148 of those were onsite at depths ranging from surface soils (0 to 6 inches bgs) up to 38 feet bgs; the remaining 35 stations were collected offsite from 0 to 6 inches bgs.

2.2 Surface Water Sampling and Analysis

Surface water sampling was performed in 1995, 1998, and 2001 at 21 locations (Figure 2-2) for the varying list of analytes, as reported in Table 2-3. The 21 surface water locations have included the following:

- Two from Five Mile Creek at the northern end of the Sloss property in 1995
- Seventeen from the unnamed tributary that flows through the Sloss facility and empties into Five Mile Creek in 2001
- Two from the outfalls of SWMU 22 (Polishing Pond) and SWMU 25 (Storm Water Runoff Sewer) in 1998

Insert Table 2-1 (page 1 of 7)

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Insert Table 2-2 (page 1 of 3)

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Insert Figure 2-1

Insert Figure 2-2

Insert Table 2-3

2.3 Sediment Sampling and Analysis

A total of 38 sediment samples were collected in 1995, 1998, 2001, and 2005 throughout the site for the varying list of analytes, as reported in Table 2-4. As shown in Figure 2-2, the 38 sediment samples have included the following:

- Seven from Five Mile Creek–two in 1995 and five in 2005
- Eighteen from the unnamed tributary that flows through the Sloss facility and empties into Five Mile Creek in 1995 and 2001
- Eight from the SWMU 22–Polishing Pond in 1998
- Five from the roadway ditches bordering the Sloss property along 35th Avenue North and Shuttlesworth Drive in 2005

2.4 Groundwater Sampling and Analysis

A total of 165 groundwater samples have been collected throughout the site since 1995. Groundwater sampling events were performed in 1995, 1997, 1998, 1999, 2000, 2001, and 2005 (Figure 1-7). Because the investigations generally have been conducted on a SWMU- or plant area-specific basis, a comprehensive monitoring event inclusive of all site monitoring wells has not been performed. Table 2-5 summarizes the historical groundwater sampling activities and analytical methods; analytical methods were selected for groundwater monitoring on the basis of those methods most likely to detect site-specific contamination.

Although groundwater sampling was conducted in 1995, that specific data set has not been used during the consolidated data review or the EI determination. These samples were collected from well and piezometer development water (labeled investigation-derived waste [IDW] samples), and therefore, it is believed that these samples were composite water samples collected from the containers of development water for waste characterization purposes. Because of the uncertainty of sample collection methods, the validity of the analytical results cannot be determined and these results are not considered representative of groundwater conditions.

2.5 Historical Data Quality Review

The following discussions provide an overview of the data quality for a subset of the historical data sets, specifically from 1995 and 1998. The data quality evaluation (DQE) for the most recent 2005 sampling effort is documented separately in Appendix A. Summary DQE reports were not available for laboratory data reported in 1997, 1999, 2000, and 2001 at the time of this review; therefore, a data quality review of these data was not performed.

Insert Table 2-4

Insert Table 2-5 (page 1 of 4)

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2.5.1 1995 Analyses

Soil, sediment, groundwater, and surface water samples collected from June 8 through August 17, 1995, were submitted to Severn Trent Laboratory (STL) in Tallahassee, Florida, for the following analyses in accordance with the approved work plan:

- Volatile organic compounds (VOCs) by SW-846 Method 8240
- Semivolatile organic compounds (SVOCs) by SW-846 Method 8270
- Pesticides by SW-846 Method 8080
- Organophosphorus pesticides by SW-846 Method 8141
- Herbicides by SW-846 Method 8150
- Dioxins and furans by SW-846 Method 8280
- Metals by SW-846 Method 6010/7000
- Cyanide by SW-846 Method 9012
- Sulfide by SW-846 Method 9030
- Alkalinity by EPA Method 403
- Chloride by EPA Method 325.2
- Sulfate by EPA Method 375.4

STL/Tallahassee submitted EPA Level II data deliverables, which allowed for the review of the following results' summaries (Contract Laboratory Program [CLP]-like data deliverables format): chain-of-custody documentation, holding times, laboratory method and field/equipment blank analyses, surrogate compound recoveries, matrix spike compound recoveries and reproducibility, inorganic initial and continuing calibration, target compound identification, laboratory control sample(LCS) results, and blind field duplicate sample results. Overall, laboratory data quality was acceptable with minimal data qualification. Validation qualifiers were appended to the sample results during the data validation process. Project-required reporting limits (RLs) were not met by STL/Tallahassee for the following VOCs:

- 2-Chloroethyl vinyl ether
- Trans-1,4-dichloro-2-butene
- Ethyl methacrylate
- Vinyl acetate

IDW soil and rock samples collected from July 7 through August 14, 1995, were submitted to Guardian Systems Laboratory in Leeds, Alabama, for the following analyses in accordance with the approved plan:

- VOCs by SW-846 Method 8260
- SVOCs by SW-846 Method 8270
- Priority pollutant metals plus barium by SW-846 Method 6010/7000
- Cyanide by SW-846 Method 9012

Guardian Systems submitted EPA Level III data deliverables, which allowed for the review of the following results summaries (CLP-like data deliverables format): chain-of-custody documentation, holding times, laboratory method and field blank analyses, surrogate compound recoveries, matrix spike compound recoveries and reproducibility, bromofluorobenzene (BFB) mass tuning results, initial and continuing calibration, second

source recovery and internal standard area performance summaries, target compound identification, LCS results, inductively coupled plasma (ICP) interference check samples, post-spike sample recoveries, serial dilution results, laboratory and blind field duplicate sample results, and detection limits and sensitivity. The analyses were performed acceptably, but several samples required qualification due to holding time and initial calibration exceedances and method blank contamination. Validation qualifiers were appended to the sample results during the data validation process.

2.5.2 1998 Analyses

Soil, sludge, groundwater, and surface water samples collected from June through August 1998 were submitted to Analytical Services, Inc. (ASI), in Norcross, Georgia, for analyses of the following in accordance with the approved work plan:

- VOCs by SW-846 Method 8240
- SVOCs by SW-846 Method 8270
- Pesticides by SW-846 Method 8081
- PCBs by SW-846 Method 8082
- Organophosphorus pesticides by SW-846 Method 8141
- Herbicides by SW-846 Method 8150
- Dioxins and furans by SW-846 Method 8280
- Priority pollutant metals plus barium metals by SW-846 Method 6010/7000
- Cyanide by SW-846 Method 9010/9014
- Sulfide by SW-846 Method 9030/9034
- Polynuclear aromatic hydrocarbons (PAHs) by SW-846 Method 8310
- Simultaneously extracted metals by SW-846 Method 6010B
- Acid volatile sulfide by standard Method 4500-S
- Total organic carbon (TOC) by SW-846 Method 9060M

ASI submitted an EPA Level II data deliverable, which allowed for the review of the following results' summaries (CLP-like data deliverables format): chain-of-custody documentation, holding times, laboratory method and field/equipment blank analyses, surrogate compound recoveries, matrix spike compound recoveries and reproducibility, LCS results, and blind field duplicate sample results. Soil samples collected during this sampling event were collected using Encore samplers. The laboratory preserved the 5-gram samples with methanol within 48 hours of sample receipt. Because of the preservation method used by the laboratory, VOC detection limits were elevated by a factor of 50X for all soil samples, resulting in RLs ranging from 60 to 3,000 micrograms per kilogram (µg/kg). This factor should be noted when assessing these samples for the qualitative absence of specific VOCs. The analyses were performed acceptably, but several samples required qualification due to matrix spike/matrix spike duplicate (MS/MSD), surrogate, and/or field duplicate exceedances. Validation qualifiers were appended to the sample results during the data validation process.

3.0 Human Health Risk Evaluation

The following subsections summarize the historic human health risk evaluations that have been performed at the site, provide an updated evaluation of the current exposure scenarios at the site (in support of the EI evaluation), and provide a screening evaluation of the site media for potential future exposures.

3.1 Overview of Historic Risk Activities

Historically, four human health risk assessments (HHRAs) were prepared for the site and included in the RFI Reports for the Coke Manufacturing Plant, Land Disposal Areas, Chemical Manufacturing Plant, and BTF and Sewers. The methodology used and the results presented in the HHRAs are summarized below. It should be noted that some of the exposure assumptions and toxicity values that were used in the HHRAs (prepared from 1996 to 1999) may not be the same as those that would be used if the HHRAs were prepared in 2005.

3.1.1 Coke Manufacturing Plant

In 1996, a HHRA was prepared for the Coke Manufacturing Plant, consisting of SWMUs 1 through 3 and 5 through 12. COPCs were selected by comparing the maximum detected concentrations to EPA Region 3 risk-based concentrations (RBCs) using a target excess lifetime cancer risk (ELCR) of $1x10^{-6}$ and non-cancer hazard index (HI) of 0.1. The concentrations detected in process water were compared to tap water RBCs for a residential scenario. Soil concentrations were compared to both residential and industrial RBCs. Groundwater data were not available. The following COPCs were identified:

- Surface soil–seven carcinogenic PAHs, arsenic, beryllium, and chromium
- "Total soil" (surface soil and subsurface soil combined)–seven PAHs and four inorganics
- Process water–1,2,3-Trichlorophenol

Both industrial workers and construction workers were evaluated in the HHRA. Industrial workers were assumed to contact process water and surface soil (0 to 1 foot), while construction workers were assumed to contact subsurface soil (1 to 15 feet). Exposures for offsite residents were not evaluated. The exposure frequencies for an industrial worker and construction worker were assumed to be 250 days per year and 90 days per year, respectively. Exposures to process water were assumed to occur for 1 hour per day at a frequency of 12 days per year.

Data from all SWMUs in the Coke Manufacturing Plant were compiled and used in the risk calculations. On the basis of the assumptions indicated above, the following ELCRs and HIs were calculated:

- Industrial worker–ELCR = $1x10^{-4}$, HI = 0.4
- Construction worker–ELCR = $2x10^{-6}$, HI = 0.3

Risk-based remedial goal options (RGOs) for soil were developed for the eight analytes that exceeded an ELCR of $1x10^{-6}$, including arsenic, beryllium, lead, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The RGOs were developed for ELCR levels of $1x10^{-4}$, $1x10^{-5}$, and $1x10^{-6}$. The concentrations of benzo(a)pyrene at two SWMUs (SWMUs 7 and 11) exceeded the RGOs, for an ELCR = $1x10^{-4}$.

3.1.2 Land Disposal Areas

In 1998, a HHRA was prepared for the Land Disposal Areas, consisting of SWMUs 23, 24, and 38/39. COPCs were selected by comparing the maximum detected concentrations to EPA Region 3 RBCs using a target ELCR of $1x10^{-6}$ and non-cancer HI of 0.1, as well as a comparison to twice the site-specific background concentrations. Concentrations detected in sludge and surface soil were compared to the soil RBCs for a residential scenario. Subsurface soil concentrations were compared to the industrial RBCs. Groundwater data were not evaluated. COPCs were selected for SWMUs 23, 24, and 38/39 separately. The following COPCs were identified:

- Surface soil–seven carcinogenic PAHs and four inorganics at SWMU 24; none at the other SWMUs
- Subsurface soil–arsenic (SMWU 23) and beryllium (SWMUs 38/39); none at SWMU 24
- Sludge–seven carcinogenic PAHs and five inorganics at SWMU 23, six inorganics at SWMU 24, and four inorganics at SWMUs 38/39

Both industrial workers and construction workers were evaluated in the HHRA. These receptors were assumed to contact both sludge and soil (0 to 1 foot for industrial workers and 1 to 15 feet for construction workers). Exposures for offsite residents were not evaluated. The exposure frequencies for an industrial worker and a construction worker at all SWMUs were assumed to be 250 days per year and 90 days per year, respectively, with the exception of SWMU 23, where it was assumed that the exposure frequency was 12 days per year because of its isolated location.

Data from SWMUs 23, 24, and 38/39 were evaluated separately in the risk calculations. Both deterministic and probabilistic risk calculations (using the Monte Carlo analysis) were conducted. On the basis of the assumptions indicated above for deterministic risk assessment, the following ELCRs and HIs were calculated:

- Industrial worker–***SWMU 23***: ELCR = $1x10^{-5}$, HI = 0.01; ***SWMU 24:*** ELCR = $4x10^{-5}$, HI = 0.8; ***SWMUs 38/39:*** ELCR = $2x10^{-6}$, HI = 0.5
- Construction worker–***SWMU 23***: ELCR = $8x10^{-7}$, HI = 0.1; ***SWMU 24:*** not evaluated; ***SWMUs 38/39:*** ELCR = $8x10^{-8}$, HI = 0.0003

Risk-based RGOs for soil were developed for the two analytes that exceeded an ELCR of $1x10^{-6}$, including beryllium and benzo(a)pyrene. The RGOs were developed for ELCR levels of $1x10^{-4}$, $1x10^{-5}$, and $1x10^{-6}$. No SWMUs exceeded RGOs for an ELCR = $1x10^{-4}$.

3.1.3 Chemical Manufacturing Plant

In 1999, an HHRA was prepared for the Chemical Manufacturing Plant. Conclusions from the historic Facilitywide Assessment indicated that only SWMUs 26, 27, 29, 31, and 36 were included in the HHRA. COPCs were selected by comparing maximum detected concentrations in soil to EPA Region 3 RBCs for a residential scenario using a target ELCR of $1x10^{-6}$ and non-cancer HI of 0.1, as well as a comparison to twice the background concentrations. Groundwater data were not evaluated. The COPCs were evaluated for two SWMU groupings: SWMUs 25, 27, 29, and 31 as one group, and SWMU 36 separately. The following COPCs were identified:

- Two VOCs, 17 SVOCs, and arsenic for SWMUs 25, 27, 29, and 31
- No COPCs were identified for SMWU 36

Industrial workers, construction workers, utility workers, and trespassers were evaluated in the HHRA. All receptors were assumed to contact soil (0 to 13 feet). Industrial workers also were assumed to contact indoor air. Exposures by offsite residents were not evaluated. The exposure frequencies for an industrial worker, construction worker, utility worker, and trespasser were assumed to be 250 days per year, 90 days per year, 5 days per year, and 24 days per year, respectively. Potential indoor air concentrations were modeled using the Johnson and Ettinger model for groundwater to indoor air vapor intrusion (IAVI).

On the basis of the assumptions indicated above, the following ELCRs and HIs were calculated:

- Industrial worker–ELCR = $4x10^{-6}$, HI = 2
- Construction worker–ELCR = $2x10^{-7}$, HI = 0.07
- Utility worker–ELCR = $1x10^{-6}$, HI = 0.1
- Trespasser–ELCR = $8x10^{-7}$, HI = 0.2

Risk-based RGOs for soil were developed for the two analytes that exceeded an ELCR of $1x10^{-6}$ or HI of 1, including arsenic and chlorobenzene. The RGOs were developed for ELCR levels of $1x10^{-4}$, $1x10^{-5}$, and $1x10^{-6}$ and HI levels of 0.1, 1, and 3. The detected arsenic concentrations were expected to be within the background range.

3.1.4 BTF and Sewers

In 1999, an HHRA was prepared for the BTF and Sewers. SWMUs 4 and 13 through 22 were included in the HHRA. COPCs were selected by comparing the maximum detected concentrations to EPA Region 3 RBCs for a residential scenario using a target ELCR of $1x10^{-6}$ and non-cancer HI of 0.1. Maximum detected concentrations in sludge, sediment, and soil were compared to soil RBCs, while maximum detected concentrations in groundwater and surface water were compared to tap water RBCs.

Industrial workers and excavation workers were evaluated in the HHRA. Excavation workers were assumed to contact soil (0 to 13 feet), shallow groundwater, and sludge. Industrial workers were assumed to contact indoor air. Exposures by offsite residents were not evaluated. The exposure frequencies for an industrial worker and excavation worker were assumed to be 250 days per year and 90 days per year, respectively. Potential indoor air concentrations were modeled using the Johnson and Ettinger model for IAVI.

On the basis of the assumptions indicated above, the following ELCRs and HIs were calculated:

- Industrial worker–ELCR = $2x10^{-7}$, HI = 0.003
- Excavation worker–ELCR = $1x10^{-6}$, HI = 0.6

Risk-based RGOs were not developed because the calculated risks were within the acceptable levels.

3.2 Evaluation of Current Scenarios

Descriptions of the current human health exposure scenarios for the site and those areas potentially affected by the site are provided below. Additionally, applicable risk-based screening levels (RBSLs) are identified for environmental media (soil, groundwater, surface water, and sediment), and a comparison is made between RBSLs and concentrations historically detected in these media. This information is used to support the responses provided in the EI RCRIS Code (CA 725) for *Current Human Exposures under Control*.

3.2.1 Exposure Scenarios

The following subsections describe the potential media, locations of environmental exposure, and receptors at those locations. The current land uses and activities are used as the basis for identifying potential exposure scenarios.

3.2.1.1 Onsite Exposure Points and Receptors

Soil. Surface soil (approximately 0 to 1 foot in depth) within, and at, areas potentially affected by SWMUs, currently is accessible to outdoor industrial workers. However, the activities performed by site workers in the areas of the SWMUs are limited (see Tables 3-1 through 3-4), and site workers are required to wear personal protective equipment (PPE) (including gloves) in accordance with the Sloss PPE Policy (see Appendix E). The facility is fenced with staffed security gates. In the past 10 years, trespassers have been observed only once; three adolescents on bicycles were observed near the (now) inactive Chemical Manufacturing Plant. Because this was one isolated incident, trespassers were not identified as receptors at the site. Therefore, there currently are no direct contact exposure points in site surface soil. Indirect exposures to soil via ambient air are addressed below.

Groundwater. Currently, there is no potable use of groundwater onsite. In addition, there are no excavation activities to the groundwater table (ranging from 5 to 20 feet bgs, depending on the location onsite). Therefore, there are currently no exposure points in site groundwater. Indirect exposures to groundwater via IAVI are addressed below.

Ambient Air. Exposure points were identified in ambient air for site industrial workers as a result of fugitive dust emissions and volatilization from surface soil at SWMUs and SWMU-affected areas.

Indoor Air. There is the potential for IAVI into buildings at those locations onsite where VOCs are present in groundwater beneath occupied buildings. The buildings situated atop VOC plumes are located in the Coke and Chemical Plants. The buildings in the Chemical Plant currently are not occupied, because the Chemical Plant is not in operation. Therefore,

Insert Table 3-1

Insert Table 3-2

Insert Table 3-3

Insert Table 3-4

potential exposure points in indoor air were identified at buildings situated above VOC plumes in groundwater within the Coke Plant.

As stated in the EPA guidance, *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils* (EPA, 2002), the Occupational Safety and Health Administration (OSHA) and EPA have agreed that OSHA generally will take the lead role in addressing occupational exposures. Therefore, EPA does not expect the vapor intrusion guidance document listed above to be used in EI determinations (CA 725) for occupational settings. However, EPA recommends that facilities be notified of the potential for the IAVI exposure pathway and that facilities consider potential exposures that may result. Therefore, the IAVI pathway has been included in the current exposure scenario evaluation, but will not be used to make conclusions for the EI determination for CA 725.

Surface Water. A few SWMUs in the BTF contain surface water, and workers are present in these areas. However, workers are required to wear gloves in accordance with the Sloss PPE Policy (Appendix E). In addition, there is no worker contact with surface water in the drainage ditch that traverses the site. Therefore, there currently are no exposure points in site surface water.

Sediment. A few SWMUs in the BTF contain sediment, and workers are present in these areas. However, the sediments are covered with water year-round and the workers do not contact them. Additionally, workers are required to wear gloves in accordance with the Sloss Personal Protective Equipment Policy (Appendix E). There also is no worker contact with sediments in the drainage ditch that traverses the site. Therefore, there currently are no exposure points in site sediment.

3.2.1.2 Offsite Exposure Points and Receptors

Soil. Soil is accessible to current residents at homes and schools situated in the vicinity of the site. Surface soil is expected to be the depth most affected, because air deposition is the migration pathway from the site to offsite areas. Therefore, exposure points were identified in offsite surface soil.

Groundwater. There are no existing public water wells in a 2-mile radius of the site (Benny Laughlin, ADEM, June 20, 2005). Additionally, no private water wells are known to exist within 1 mile of the site. Therefore, no current exposure points in groundwater were identified in the vicinity of the site.

Ambient Air. Exposure points were identified in ambient air at offsite residences as a result of fugitive dust emissions on properties where surface soil is affected.

Indoor Air. There is the potential for IAVI into residences at those locations where VOCs are present in groundwater beneath occupied homes. Groundwater is expected to be approximately 20 feet bgs in the vicinity where the VOC plume may extend offsite.

Surface Water. Five Mile Creek is located adjacent to the site. Surface water in the creek is not affected directly by the SWMUs via overland flow or groundwater discharge. However, it receives discharge from a drainage ditch that traverses the site. Although there are no surface water intakes for drinking water in the vicinity of the site, it is likely that fishing

occurs by local residents. Therefore, exposure points were identified in Five Mile Creek for local fishers (residents).

Groundwater releases via direct discharge and seeps (along steep quarry walls) to the lake in the LaFarge Quarry adjacent to the site, but the quarry is inactive and there are no receptors at the quarry. Therefore, no current exposure points in the quarry lake were identified.

Sediment. Sediments in Five Mile Creek are not expected to be affected directly by site SWMUs via overland flow or groundwater discharge. However, the creek receives discharge from a drainage ditch that traverses the site. Because the creek is perennial (water is flowing year-round) and the water is approximately 2 feet deep, sediments are always covered by water. Therefore, no exposure points were identified in Five Mike Creek sediments.

3.2.2 Screening Levels

After potential exposure points and potential receptors were identified for current land uses and scenarios (Sections 3.2.1.1 and 3.2.1.2), conservative RBSLs were identified for environmental media at the potential exposure points. The RBSLs are risk-based levels protective of the receptors at the potential exposure points.

3.2.2.1 Soil

No current exposure points were identified in site soil, so no RBSLs are presented for site soil. However, potential exposure points were identified in offsite surface soil for residents at homes, local parks, and local schools. The RBSLs used to evaluate potential soil exposures for residents are the EPA Region 9 preliminary remediation goals (PRGs) (EPA Region 9, 2004) for a residential setting. For those PRGs based on noncarcinogenic health effects, PRGs were divided by 10 to account for cumulative effects from multiple noncarcinogens potentially acting on the same target organ or system.

3.2.2.2 Groundwater

No current exposure points were identified in onsite or offsite groundwater, so no RBSLs are presented for groundwater.

3.2.2.3 Ambient Air

Current onsite exposure points were identified in ambient air for site industrial workers as a result of fugitive dust emissions and volatilization from surface soil. The RBSLs used to evaluate the potential ambient air exposures for industrial workers are the EPA Region 9 PRGs (EPA Region 9, 2004) for soil inhalation at an industrial setting. For those PRGs based on noncarcinogenic health effects, PRGs were divided by 10 to account for cumulative effects from multiple noncarcinogens potentially acting on the same target organ or system. For those detected analytes without tabulated PRGs, surrogate chemicals were used (acenaphthene for acenaphthylene and pyrene for phenanthrene).

Exposure points were identified in offsite ambient air as a result of fugitive dust emissions from surface soil. The RBSLs used to evaluate potential ambient air exposures for residents are the EPA Region 9 PRGs (EPA Region 9, 2004) for a residential setting. For those PRGs

based on noncarcinogenic health effects, PRGs were divided by 10 to account for cumulative effects from multiple noncarcinogens potentially acting on the same target organ or system.

3.2.2.4 Indoor Air

Potential indoor air exposure points were identified for current industrial workers in buildings situated above VOC plumes in groundwater within the Coke Plant. The RBSLs used to evaluate the potential indoor air exposures for industrial workers are the EPA IAVI screening levels (EPA, 2002) for groundwater, set at a target risk level of $1x10^{-6}$ and a conservative default attenuation factor (between soil gas and indoor air) for a residential setting (values for an industrial setting are not available).

Potential indoor air exposure points also were identified for residents in homes potentially situated above VOC plumes in groundwater to the east and south of the site. The RBSLs used to evaluate potential indoor air exposures for residents are the EPA IAVI screening levels for groundwater, set at a target risk level of $1x10^{-6}$ and the conservative default attenuation factor of 0.001 (between soil gas and indoor air) for a residential setting.

3.2.2.5 Surface Water

No current onsite exposure points were identified in site surface water, so no RBSLs are presented for site surface water. However, potential exposure points were identified in Five Mile Creek for locals who fish. The RBSLs used to evaluate the potential fish exposures for residents are the EPA *National Recommended Water Quality Criteria for the Protection of Human Health for the Consumption of Organisms* (EPA, 2003).

3.2.2.6 Sediment

No current exposure points were identified in onsite or offsite sediment, so no RBSLs are presented for sediment.

3.2.3 Results of Risk Screening

The following subsections present the results of the risk screening. As part of screening, the concentrations detected at current potential exposure points (Section 3.2.1) are compared to the RBSLs identified in Section 3.2.2.

3.2.3.1 Soil–Off-Site

Potential surface soil exposures (encompassing incidental ingestion, dermal contact, and inhalation exposures) were evaluated for offsite residents. In April 2005, one surface soil sample (0- to 2-foot interval) was collected from each of 35 properties (homes, schools, and a park) within residential areas adjacent to the site. As shown in Table 3-5, maximum concentrations of the following analytes exceed the RBSLs, and RBSLs are exceeded at the indicated number of locations:

- Arsenic (maximum = 49 milligrams per kilogram [mg/kg]; 39 locations)
- Benzo(a)anthracene (maximum = 5.4 mg/kg; 6 locations)
- Benzo(a)pyrene (maximum = 6.2 mg/kg; 34 locations)
- Benzo(b)fluoranthene (maximum = 8.5 mg/kg; 9 locations)

Insert Table 3-5 (page 1 of 3)

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- Dibenzo(a,h)anthracene (maximum = 1.8 mg/kg; 17 locations)
- Indeno(1,2,3-cd)pyrene (maximum = 3.6 mg/kg; 4 locations)

It should be noted that the analytes listed above also are present in urban background (unaffected) locations, and that all detected concentrations are not necessarily associated with site SWMUs or ongoing operations. In addition, based on the open literature, typical urban background concentrations of PAHs, such as those listed above, exceed the RBSLs.

3.2.3.2 Groundwater

Potential exposures to groundwater were not evaluated because no exposure points were identified in onsite or offsite groundwater.

3.2.3.3 Ambient Air–Onsite

Potential ambient air exposures were evaluated for site industrial workers. Between 1995 and 2000, surface soil samples (0- to 2-foot interval) were collected from various locations onsite as part of the RFI activities. Additionally, in 2005, 22 surface soil samples were collected from onsite locations within and between SWMUs. As shown in Table 3-6, maximum concentrations of the following analytes exceed the RBSLs, and the RBSLs are exceeded at the indicated number of locations:

- Benzene (maximum = 2.3 mg/kg; one location [SWMU 31] in the Chemical Plant)
- Cyanide (maximum = 5.6 mg/kg; one location [SWMU 12] in the Coke Plant and three locations [SWMU 24] in the Land Disposal Area)
- 2-Methylnaphthalene (maximum = 25 mg/kg; one location [EI#9] in the Chemical Plant)
- Naphthalene (maximum = 64 mg/kg; one location [EI#9] in the Chemical Plant)
- Xylenes (maximum = 160 mg/kg; one location [SWMU 31] in the Chemical Plant)

It should be noted that the RBSLs used in the comparison are conservative levels based on worker exposures for 250 days per year and 8 hours per day. The RBSLs for cyanide, 2-Methylnaphthalene, naphthalene, and xylenes were lowered by a factor of 10 to account for multiple chemicals acting on the same target organ or system. In other words, it is assumed that 10 noncarcinogenic analytes act on the same target organ or system. However, only four noncarcinogens were detected above these conservative screening levels, and all are at concentrations less than 10 times the RBSL.

Most of the exceedances indicated above occurred in the Chemical Plant at SWMU 31 and location EI#9. However, as stated above and in Table 3-2, the Chemical Plant currently is not in operation, and a forklift driver works in a few areas of the Chemical Plant for a total of approximately 12 hours per week.

One exceedance (cyanide) occurred in the Coke Plant, at the SWMU 12 surface soil. However, as indicated in Table 3-1, the only receptors near SWMU 12 are workers walking nearby on their way to and from their work areas.

The remaining exceedance occurred at the Land Disposal Area, at the SWMU 24 surface soil. However, as indicated in Table 3-4, there currently are no workers present in this area.

Insert Table 3-6

In summary, the maximum detected concentrations of five chemicals in a few locations in site surface soil exceed conservative RBSLs for the protection of ambient air. Most RBSLs were adjusted downward by a factor of 10 to account for cumulative health effects. Receptors either are not present in these areas or are present at a frequency that is much lower than the basis for the RBSLs. Therefore, ambient air exposures onsite are not expected to be significant.

3.2.3.4 Ambient Air–Offsite

Potential ambient air exposures were evaluated for offsite residents adjacent to the site. In April 2005, one surface soil sample (0- to 2-foot interval) was collected from each of 35 properties (homes, schools, and a park) in residential areas adjacent to the site. The maximum detected concentrations of all analytes were less than the RBSLs for protection from inhalation exposures.

3.2.3.5 Indoor Air–Onsite

Potential indoor air exposures were evaluated for industrial workers in buildings situated above VOC plumes in groundwater in the Coke Plant. Between 1997 and 2001, groundwater samples were collected from various wells onsite as part of the RFI activities. Additionally, in 2005, groundwater samples were collected from a few wells onsite. Four monitoring wells (MW-54, MW-58, MW-59, and MW-60) are present in areas where VOC plumes have been detected near occupied buildings in the Coke Plant. As shown in Table 3-7, maximum concentrations of the following analytes in these 12 monitoring wells exceed the RBSLs, and the RBSLs are exceeded at the indicated number of locations:

- Benzene (maximum = 8,600 micrograms per liter [µg/L]; four wells)
- Chlorobenzene (maximum = 73,000 µg/L; one well)
- Naphthalene (maximum = 19,000 µg/L; two wells)
- Tetrachloroethene (maximum = 2,100 µg/L; one well)
- Toluene (maximum = 11,000 µg/L; one well)
- Vinyl chloride (maximum = 23 µg/L; one well)

It should be noted that the RBSLs used in the comparison are conservative levels based on residential exposures for 350 days per year and 24 hours per day, in a small building with little attenuation between soil gas concentrations and indoor air. In addition, default partitioning from groundwater to soil gas is assumed in the RBSLs based on Henry's Law Constant. However, groundwater is situated approximately 15 to 20 feet beneath the buildings, and a clay soil type is present between the building base and groundwater, thus reducing vapor permeability. Therefore, lower concentrations are expected in shallow soil gas around the buildings, and a much lower attenuation factor (between soil gas and indoor air) is expected to be applicable for the building than the basis for the RBSLs. However, because of the elevated concentrations of some analytes in comparison to their RBSLs (benzene, chlorobenzene, and tetrachloroethene concentrations at three or more orders of magnitude above the RBSLs), the indoor air exposure pathway may be a concern for onsite workers in buildings atop the VOC plume. As indicated in Section 3.2.1.1, the IAVI pathway will not be used in the EI determinations (CA 725) for the occupational setting, but was included so that potential exposures can be evaluated.

Insert Table 3-7

3.2.3.6 Indoor Air–Offsite

Potential indoor air exposures were evaluated for residents in homes that may be situated above VOC plumes in offsite groundwater to the south or east of the site. However, because no monitoring wells are situated in the residential areas, it is not known if the groundwater plume actually extends to these areas, and if so, what the concentrations are in these areas.

Between 1997 and 2001, groundwater samples were collected from various wells onsite as part of the RFI activities. Ten monitoring wells or piezometers located near the Sloss property downgradient boundary (MW-49S, MW-50, MW-52, MW-57S, MW-69, P10, P11, P12, P15, and P16B) reflect groundwater quality that may be extending offsite under or adjacent to homes. As shown in Table 3-8, maximum concentrations of the following analytes in these 10 monitoring wells exceed the RBSLs, and the RBSLs are exceeded at the indicated number of locations:

- 1,2-Dichloroethane (maximum = 22 µg/L; one location)
- Benzene (maximum = 150 µg/L; four locations)
- Vinyl chloride (maximum = 470 µg/L; three locations)

It should be noted that the RBSLs used in the comparison are conservative levels based on little attenuation between the soil gas concentrations and indoor air. In addition, default partitioning from groundwater to soil gas is assumed in the RBSLs based on Henry's Law Constant. However, groundwater is situated approximately 15 to 20 feet beneath the residences, and a clay soil type is present between the building base and groundwater, thus reducing vapor permeability. Therefore, lower concentrations are expected in shallow soil gas around the buildings, and a much lower attenuation factor (between soil gas and indoor air) is expected to be applicable for the building than the basis for the RBSLs. However, the indoor air exposure pathway is a potential concern for offsite residents in homes atop the VOC plume, if present in the residential areas.

3.2.3.7 Surface Water–Five Mile Creek

Potential fish ingestion exposures were evaluated for local fishers who may eat fish caught downstream from the site in Five Mile Creek. In 1995, surface water samples were collected from Five Mile Creek as part of the RFI activities. In addition, historically, the creek has been sampled three times per month for total cyanide as part of the required monitoring for the National Pollution Discharge Elimination System (NPDES) permit for the outfall from the BTF. Two locations (SW-1 and "Five Mile Creek Approximately 0.5 Miles Downstream") are situated adjacent or downstream within approximately 0.5 mile of the site. Cyanide is the only analyte detected in the samples. As shown in Table 3-9, the maximum detected concentrations of cyanide are less than the RBSL.

3.2.3.8 Sediment

Potential exposures to sediment were not evaluated because no exposure points were identified in onsite or offsite sediment.

Insert Table 3-8

TABLE 3-9
Comparison to Fish Ingestion Screening Levels–Five Mile Creek
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
SW-1	6/8/95	Cyanide, Total	11	140
Five Mile Creek Approximately 0.5 Miles Downstream	1/13/04	Cyanide, Total	93	140

Notes:
RBSL = risk-based screening level
µg/L = micrograms per liter

3.2.4 Summary of Current Risk Screening

Potential exposures to SWMU-affected media in onsite and at offsite locations were evaluated for current land uses and activities. The results are summarized below.

Soil. Soil exposures do not occur onsite because the workers use PPE in accordance with the Sloss PPE Policy. The maximum detected concentrations of the following six analytes in surface soil exceed the RBSLs for offsite residents:

- Arsenic
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)pyrene

Some of the detected concentrations may be typical urban background levels.

Groundwater. Potential exposures to groundwater were not evaluated because no exposure points were identified in onsite or offsite groundwater.

Ambient Air. The maximum detected concentrations of the following five analytes in site surface soil exceed RBSLs for the protection of ambient air for workers:

- Benzene
- Cyanide
- 2-Methylnaphthalene
- Naphthalene
- Xylenes

The few areas where the exceedances occurred are areas where workers typically are not present, or are present for only short periods of time, so exceedances of the RBSLs are not expected to be significant. The maximum detected concentrations in offsite surface soil do not exceed the RBSLs for the protection of ambient air for residents.

Indoor Air. The maximum detected concentrations of the following six analytes in groundwater exceed the RBSLs for protection of indoor air exposures onsite:

- Benzene
- Chlorobenzene
- Naphthalene
- Tetrachloroethene
- Toluene
- Vinyl chloride

Although the RBSLs are based on conservative assumptions regarding partitioning between groundwater and indoor air, the indoor air exposure pathway may be a concern for onsite workers in buildings atop the VOC plume in the Coke Plant.

The maximum detected concentrations of the following three analytes in groundwater exceed the RBSLs for protection of indoor air exposures at offsite residences:

- 1,2-Dichloroethane
- Benzene
- Vinyl chloride

However, because no groundwater monitoring wells are situated in the residential areas, it is not known if the groundwater plume actually extends under residences, and if so, what the concentrations are in these areas. Also, the RBSLs are based on conservative assumptions regarding partitioning between groundwater and indoor air, and the presence of a clay soil type onsite and in the vicinity of the site is expected to result in much lower partitioning than that assumed in the RBSLs.

Surface Water and Sediment. Surface water exposures do not occur onsite because of the worker use of PPE in accordance with the Sloss PPE Policy. In Five Mile Creek, the maximum detected concentrations do not exceed the RBSLs for the protection of fish ingestion exposures by local persons who fish. Potential exposures to sediment were not evaluated because no exposure points were identified in onsite or offsite sediment.

3.3 Evaluation of Potential Future Scenarios

As part of the human health risk evaluation for general RFI purposes, descriptions of the realistic future human health exposure scenarios for the site and those areas potentially affected by the site are provided below. Additionally, the applicable RBSLs are identified for environmental media (soil, groundwater, air, surface water, and sediment), and a comparison is made between the RBSLs and the concentrations historically detected in these media.

3.3.1 Exposure Scenarios

The following subsections describe the potential media and locations of environmental exposure and the potential receptors at those locations. Realistic future land uses and activities are used as the basis for identifying potential exposure scenarios.

3.3.1.1 On-Site Exposure Points and Receptors

Soil. The realistic future land use onsite is industrial. In the future, excavation activities may be conducted and soil currently in the 0-6 feet depth may be excavated (for building foundations or utility lines) and redistributed at the site surface. Therefore, soil currently in the 0- to 6-foot-depth interval was assumed to be accessible to outdoor industrial workers and construction workers in the future. In addition, it was assumed that there is no PPE policy in the future for contact with soil, and that workers come into direct contact with the soil. Because of the nature of the heavy industrial setting, it was realistic to assume that the facility remains fenced with staffed security gates. Therefore, exposure points were identified in site soil (0- to 6-foot interval) for future industrial workers and construction workers.

Groundwater. Although there is currently no potable use of groundwater onsite, there is no local ordinance preventing its use, and the yield may be sufficient to sustain potable wells installed in the shallow aquifer. In addition, there may be excavation activities to shallow groundwater in areas where groundwater is less than 6 feet bgs. Therefore, exposure points were identified in shallow site groundwater for future industrial workers and construction workers.

Ambient Air. Exposure points were identified in ambient air for future site industrial workers and construction workers as a result of fugitive dust emissions and volatilization from soil currently in the 0- to 6-foot-depth interval at the site.

Indoor Air. There is the potential for IAVI into occupied buildings that may be constructed atop VOC plumes in site groundwater. Therefore, potential exposure points in indoor air were identified for future industrial workers in future buildings constructed atop VOC plumes.

Surface Water. In the future, it was assumed that surface water remains in the BTF SWMUs that currently contain surface water and in the drainage ditch that traverses the site. It also was assumed that workers do not come into direct contact with surface water. Because of the nature of the heavy industrial setting, it was realistic to assume that the facility remains fenced with staffed security gates. Therefore, no future exposure points were identified in site surface water.

Sediment. For the future scenario, it was assumed that sediments remain in the BTF SWMUs that currently contain sediment and in the drainage ditch that traverses the site. However, because sediments will continue to be covered by water, no future exposure points were identified in site sediment.

3.3.1.2 Off-Site Exposure Points and Receptors

Soil. Soil will continue to be accessible to residents at homes and schools situated in the vicinity of the site in the future. Therefore, future exposure points in offsite surface soil were assumed to be the same as the current exposure points.

Groundwater. Although there are currently no potable wells in the vicinity of the site, there is no local ordinance preventing their installation, and the yield may be sufficient to sustain potable wells in the shallow aquifer. Therefore, exposure points were identified in shallow groundwater for future offsite residents.

Ambient Air. Future exposure points in offsite ambient air were assumed to be the same as those for current exposures.

Indoor Air. There is the potential for IAVI into residences at those locations where VOCs are present in groundwater. Therefore, the potential exposure points in indoor air were identified at future residences if situated above VOC plumes in groundwater.

Surface Water. Future exposure points in Five Mile Creek were assumed to be the same as those for current exposures. It also was assumed that the adjacent LaFarge Quarry will become active and the current quarry lake will be pumped to provide access to the underlying rock. Under this scenario, quarry workers would not contact surface water from groundwater discharge because the groundwater would be pumped from the quarry to facilitate mining. Therefore, no future exposure points in quarry surface water were identified.

Sediments. For the future scenario, sediments in Five Mile Creek will continue to be covered by water; therefore, no future exposure points were identified in sediment.

3.3.2 Screening Levels

After potential exposure points and potential receptors were identified for the future land uses and scenarios (Sections 3.3.1.1 and 3.3.1.2), conservative RBSLs were identified for the environmental media at the potential exposure points. The RBSLs are risk-based levels protective of the future receptors at the potential exposure points.

3.3.2.1 Soil

The RBSLs used to evaluate potential future onsite soil exposures by workers in the 0- to 6-foot-depth interval are the EPA Region 9 PRGs (EPA Region 9, 2004) for an industrial setting. These PRGs account for incidental ingestion, dermal contact, and inhalation exposures from soil. For those PRGs based on noncarcinogenic health effects, PRGs were divided by 10 to account for cumulative effects from multiple noncarcinogens potentially acting on the same target organ or system. The RBSLs used to evaluate future offsite soil exposures for residents are the same as those used for the current scenario.

3.3.2.2 Groundwater

The RBSLs used to evaluate the potential future onsite and offsite groundwater exposures are the following: if a maximum contaminant level (MCL) is available, the lower of the MCL or the EPA IAVI value; if an MCL is not available, the lower of the EPA Region 9 PRG for tap water or the EPA IAVI value. For those PRGs based on noncarcinogenic health effects, PRGs were divided by 10 to account for cumulative effects from multiple noncarcinogens potentially acting on the same target organ or system. For those detected analytes without tabulated PRGs, surrogate chemicals were used (naphthalene for 1-Methylnaphthalene, 2,4-Dichlorophenol for 2,6-Dichlorophenol, and pyrene for phenanthrene and benzo(g,h,i)perylene).

3.3.2.3 Ambient Air

The RBSLs used to evaluate the potential soil exposures for site workers and offsite residents include the inhalation (of ambient air) pathway; therefore, no additional RBSLs were needed to evaluate this pathway for these receptors.

3.3.2.4 Indoor Air

The RBSLs used to evaluate the potential groundwater exposures for site workers and offsite residents include the inhalation (of indoor air) pathway; therefore, no additional RBSLs were needed to evaluate this pathway for these receptors.

3.3.2.5 Surface Water

The RBSLs used to evaluate the future offsite surface water exposures for residents are the same as those used for the current scenario.

3.3.2.6 Sediment

No future exposure points were identified in onsite or offsite sediment, so no RBSLs are presented for sediment.

3.3.3 Results of Risk Screening

The following subsections present the results of the risk screening. As part of screening, concentrations currently detected at future potential exposure points (Section 3.3.1) were compared to the RBSLs identified in Section 3.3.2.

3.3.3.1 Soil–Onsite

Potential surface soil exposures (encompassing incidental ingestion, dermal contact, and inhalation exposures) were evaluated for future onsite workers. Between 1995 and 2000, soil samples from the 0- to 6-foot-depth interval were collected from various locations onsite as part of the RFI activities. Additionally, in 2005, 22 surface soil samples were collected from onsite locations in and between the SWMUs. As shown in Table 3-10, the maximum detected concentrations of the following analytes exceed the RBSLs, and the RBSLs are exceeded in the indicated number of samples:

- Arsenic (maximum = 220 mg/kg; 118 samples)
- Benzene (maximum = 59 mg/kg; 16 samples)
- Benzo(a)anthracene (maximum = 170 mg/kg; 28 samples)
- Benzo(a)pyrene (maximum = 130 mg/kg; 38 samples)
- Benzo(b)fluoranthene (maximum = 140 mg/kg; 30 samples)
- Benzo(k)fluoranthene (maximum = 110 mg/kg; 5 samples)
- Chlorobenzene (maximum = 6,100 mg/kg; 3 samples)
- Dibenzo(a,h)anthracene (maximum = 22 mg/kg; 22 samples)
- Indeno(1,2,3-cd)pyrene (maximum = 67 mg/kg; 22 samples)
- Naphthalene (maximum = 1,000 mg/kg; 9 samples)
- Toluene (maximum = 1,000 mg/kg; 1 sample)
- Xylenes (maximum = 160 mg/kg; 1 sample)

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It should be noted that the PAHs listed above typically are present in urban background (unaffected) locations, and that all of the detected concentrations are not necessarily associated with site SWMUs or ongoing operations.

3.3.3.2 Soil–Offsite

The same offsite concentrations and screening levels were used for the current and future scenarios; therefore, the results are the same as for the current scenario (see Section 3.2.3.1 and Table 3-5).

3.3.3.3 Groundwater

Potential groundwater exposures (encompassing incidental ingestion, dermal contact, and inhalation exposures) were evaluated for future onsite workers and offsite residents. Between 1997 and 2001, groundwater samples were collected from various locations onsite as part of the RFI activities. Additionally, in 2005, groundwater samples were collected from a few locations onsite and immediately adjacent to the site. As shown in Table 3-11, the maximum detected concentrations of the following analytes exceed the RBSLs, and the RBSLs are exceeded in the indicated number of samples:

- 1-Methylnaphthalene (maximum = 380 µg/L; 2 wells)
- 3- and 4-Methylphenol (maximum = 220 µg/L; 1 well)
- Carbazole (maximum = 730 µg/L; 2 wells)
- Ammonia nitrogen (maximum = 130,000 µg/L; 1 well)
- Chloride (maximum = 462,000 µg/L; 9 wells)
- Cyanide (maximum = 440 µg/L; 7 wells)
- Sulfate (maximum = 1,580,000 µg/L; 4 wells)
- Phosphorus (maximum = 90 µg/L; 7 wells)
- Arsenic (maximum = 90 µg/L; 3 wells)
- Iron (maximum = 130,000 µg/L; 9 wells)
- Lead (maximum = 40 µg/L; 3 wells)
- Manganese (maximum = 38,000 µg/L; 9 wells)
- Silver (maximum = 240 µg/L; 1 well)
- 2,4-Dimethylphenol (maximum = 1,300 µg/L; 2 wells)
- 2-Methylnaphthalene (maximum = 680 µg/L; 7 wells)
- 2-Methylphenol (maximum = 510 µg/L; 2 wells)
- 4-Methylphenol (maximum = 115 µg/L; 3 wells)
- Acenaphthene (maximum = 180 µg/L; 5 wells)
- Benzo(a)anthracene (maximum = 23 µg/L; 1 well)
- Benzo(a)pyrene (maximum = 29 µg/L; 2 wells)
- Benzo(b)fluoranthene (maximum = 23 µg/L; 1 well)
- Benzo(k)fluoranthene (maximum = 29 µg/L; 1 well)
- bis(2-ethylhexyl)phthalate (maximum = 150 µg/L; 12 wells)
- Chrysene (maximum = 26 µg/L; 1 well)
- Dibenzofuran (maximum = 130 µg/L; 4 wells)
- Fluorene (maximum = 130 µg/L; 4 wells)
- Indeno(1,2,3-cd)pyrene (maximum = 15 µg/L; 1 well)
- Naphthalene (maximum = 19,000 µg/L; 3 wells)

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- Phenanthrene (maximum = 120 µg/L; 6 wells)
- Phenol (maximum = 4,100 µg/L; 2 wells)
- Pyrene (maximum = 73 µg/L; 1 well)
- 1,2-Dichloroethane (maximum = 80 µg/L; 1 well)
- Benzene (maximum = 170,000 µg/L; 20 wells)
- Chlorobenzene (maximum = 240,000 µg/L; 6 wells)
- Ethylbenzene (maximum = 2,700 µg/L; 1 well)
- Tetrachloroethene (maximum = 2,100 µg/L; 3 wells)
- Toluene (maximum = 220,000 µg/L; 3 wells)
- Trichloroethene (maximum = 350 µg/L; 1 well)
- Vinyl chloride (maximum = 830 µg/L; 7 wells)

3.3.3.4 Ambient Air

The RBSLs used to evaluate the potential soil exposures for site workers and offsite residents (Sections 3.3.3.1 and 3.3.3.2, respectively) include the inhalation (of ambient air) pathway; therefore, separate screening for ambient air exposures was not conducted for these receptors.

3.3.3.5 Indoor Air

The RBSLs used to evaluate the potential groundwater exposures for site workers and offsite residents (Section 3.3.3.3) include the inhalation (of indoor air) pathway; therefore, separate screening for indoor air exposures was not conducted for these receptors.

3.3.3.6 Surface Water–Five Mile Creek

The same offsite concentrations and screening levels were used for the current and future scenarios; therefore, the results are the same as the current scenario (see Section 3.2.3.7 and Table 3-9).

3.3.3.7 Sediment

Potential exposures to sediment were not evaluated because no exposure points were identified in onsite or offsite sediment.

3.3.4 Summary of Future Risk Screening

The potential exposures to SWMU-affected media onsite and at offsite locations were evaluated for realistic future land uses and activities. The results are summarized below.

Soil. Future soil exposures may occur onsite in the current 0- to 6-foot-depth interval. Maximum detected concentrations of arsenic, four VOCs, and seven PAHs in soil exceed the RBSLs for onsite workers. Some of the detected concentrations may be typical urban background levels. The results of the soil screening for offsite residents are the same as the results for the current scenario.

Groundwater. It was conservatively assumed that future potable groundwater exposures may occur onsite or in the vicinity of the site. The maximum detected concentrations of 10 inorganics, 21 SVOCs, and 8 VOCs in site groundwater exceed RBSLs for potable groundwater and protection of indoor air exposures from IAVI. However, because no

groundwater wells are situated within the residential areas, it is not known if the groundwater plume actually extends under residences, and if so, what the concentrations are in these areas. Also, the RBSLs are based on conservative assumptions regarding partitioning between groundwater and indoor air, and the presence of a clay soil type onsite and in the vicinity of the site is expected to result in much lower partitioning than that assumed in the RBSLs.

Ambient Air. The RBSLs used to evaluate the potential future soil exposures for site workers and offsite residents include the inhalation (of ambient air) pathway; therefore, separate screening for ambient air exposures was not conducted.

Indoor Air. The RBSLs used to evaluate the potential future groundwater exposures for site workers and offsite residents include the inhalation (of indoor air) pathway; therefore, separate screening for indoor air exposures was not conducted.

Surface Water and Sediment. The results of the surface water screening for people fishing offsite in Five Mile Creek are the same as results for the current scenario. The potential exposures to sediment were not evaluated because no exposure points were identified in onsite or offsite sediment.

3.3.5 Conclusions of Human Health Risk Evaluation

As discussed in Sections 3.2 and 3.3, a conservative risk-based screening evaluation was performed for the potential current and future SWMU-related exposures. The potential exposures onsite and in the site vicinity were evaluated and presented in the previous discussions. The results of the screening are summarized for quick reference in Table 3-12.

TABLE 3-12
Summary of Human Health Risk Evaluation Conclusions
Sloss Industries – Birmingham, Alabama Facility

Current Scenarios	**Potential Human Health Concerns**
Soil–Onsite	None
Soil–Offsite	Arsenic and 5 PAHs exceed RBSLs; some detected concentrations may be within background levels.
Groundwater	None
Ambient Air	None
Indoor Air–Onsite	Six VOCs in groundwater near occupied Coke Plant buildings exceed IAVI RBSLs [OSHA].
Indoor Air–Offsite	Three VOCs in groundwater near the facility boundary exceed IAVI RBSLs, and may represent groundwater quality under residences.
Surface Water and Sediment	None
Future Scenarios	**Potential Human Health Concerns**
Soil–Onsite	Arsenic, 4 VOCs, and 7 PAHs exceed RBSLs; some detected concentrations may be within background levels.
Soil–Offsite	Arsenic and 5 PAHs exceed RBSLs; some detected concentrations may be within background levels.

TABLE 3-12
Summary of Human Health Risk Evaluation Conclusions
Sloss Industries – Birmingham, Alabama Facility

Current Scenarios	**Potential Human Health Concerns**
Groundwater–Onsite	10 inorganics, 21 SVOCs, and 8 VOCs exceed RBSLs.
Groundwater–Offsite	Unknown
Ambient Air	Included in soil exposures (above).
Indoor Air	Included in groundwater exposures (above).
Surface Water and Sediment	None

Notes:
PAH = polynuclear aromatic hydrocarbon
RBSL = risk-based screening level
VOC = volatile organic compound
IAVI = indoor air vapor intrusion
OSHA = Occupational Safety and Health Administration
SVOC = semivolatile organic compound

4.0 Summary of the Extent of Soil COPCs

This section presents the analytical results for the onsite and offsite soil sampling performed during the course of the ongoing RFI, as compared to the appropriate screening levels. As discussed in Section 3, onsite soil results are compared to industrial soil PRGs that have been adjusted for the consideration of exposure to multiple contaminants, as discussed in Section 3. Screening levels for offsite surface soil analytical results are developed from the EPA Region 9 PRGs for residential soil and/or two times the average background concentration for organic and inorganic constituents, per the *Supplemental Guidance to Risk Assessment Guidance for Superfund* (RAGS): *Region 4 Bulletins* (EPA, 2000). The average background concentration for each detected analyte was developed from the existing six background surface soil samples collected along the Sloss property boundary at locations believed to have been undisturbed previously.

The remaining discussions are presented by compound (organics and inorganics), and then by data set (background, onsite, and offsite).

4.1 Organic Compounds

4.1.1 Organic Compounds in Background Soils

Background soil samples (SB-1 through SB-6) were collected from multiple depths, ranging from surface soil (0- to 2-foot bgs) and subsurface soil (up to 38 feet bgs). As shown in Table 4-1, several VOCs and SVOCs were detected in background soils. Of those VOCs and SVOCs detected in background soil samples, only benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, tetrachlorethene, and trichlorethene were detected at concentrations exceeding their respective EPA Region 9 PRG residential and industrial soil standards.

Tetrachlorethene was detected at three locations in surface soil samples (SB-3, SB-5, and SB-6) at 0.58 mg/kg, 3.2 mg/kg, and 20 mg/kg, respectively. Trichlorothene was detected in surface and subsurface soils in background samples collected near SWMU 24. Trichlorothene was detected at SB-5 (12 mg/kg in surface soil, 2.6 mg.kg at 4 to 6 feet bgs, and 8 mg/kg at 6 to 8 feet bgs) at concentrations exceeding the residential and industrial soil PRGs. Trichlorothene also was detected at SB-6 in the surface soil sample (82 mg/kg) at a concentration exceeding the residential and industrial soil PRG.

The three PAH compounds reported in background soils were all detected in surface soil samples (0 to 2 feet bgs). Benzo(a)anthracene (33 mg/kg), benzo(a)pyrene (40 mg/kg), and benzo(b)fluroanthene (65 mg/kg) were detected at SB-1 at concentrations exceeding their respective residential and industrial soil PRG standards. Benzo(b)fluoranthene also exceeded the residential and industrial PRGs in surface soil collected at SB-2 (66 mg/kg).

TABLE 4-1
Average Organic Analyte Concentrations Detected in Background Soils
Sloss Industries - Birmingham, Alabama Facility

Parameters	Surface Soil (0 to 2 feet bgs)		Subsurface Soil (2+ feet bgs)		Region 9 PRG	
	Average (mg/kg)	Max (mg/kg)	Average (mg/kg)	Max (mg/kg)	Industrial Soil	Residential Soil
1,1,2-Trichloroethane	0.10	0.67	0.40	2.60	1.61	0.73
Benzo(a)anthracene	4.71	33	0	0	2.10	0.62
Benzo(a)pyrene	5.71	40	0	0	0.21	0.06
Benzo(b)fluoranthene	18.7	66	0	0	2.10	0.62
Bis(2-Ethylhexyl)phthalate	4.43	31	0	0	123	35
Chrysene	6.14	43	0	0	211	62
Di-n-butylphthalate	0.00	0.00	6.00	72	6,200	610
Di-n-octylphthalate	12.3	38	22.8	180	24,600	2,444
Fluoranthene	17	61	0	0	22,000	2,300
Methylene chloride (Dichloromethane)	1.29	4.3	1.38	6.00	20.53	9.11
Naphthalene	13.1	48	0	0	188	56
Phenanthrene	4.29	30	0	0	2,900	230
Pyrene	7.43	52	0	0	29,000	2,300
Tetrachloroethene	3.40	20	0	0	1.30	0.48
Toluene	1.06	7.4	0.83	3.30	520	520
Trichloroethene	13.4	82	0.88	8.00	0.11	0.05

Notes:
mg/kg = milligrams per kilogram
PRG = preliminary remediation goal
bgs = below ground surface

4.1.2 Distribution of Organic Compounds in Onsite Soils

Detections of organic compounds in onsite soils typically consist of petroleum-related compounds including benzene, toluene, xylene, and chlorbenzene; and PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene, and naphthalene.

Benzene was detected in 24 soil samples at concentrations as high as 59 mg/kg (compared to the industrial soil PRG of 1.4 mg/kg). Benzene soil contamination primarily is limited to the Chemical Plant area, though additional exceedances have been detected in the Coke Plant and BTF (Table 4-2 and Figure 4-1).

Elevated concentrations of PAHs are widespread throughout the facility. Generally, concentrations of PAHs in onsite soils tend to be greater in the BTF area and the northern portions of the land disposal areas than within the Coke or Chemical Plants. There does not appear to be a trend in vertical PAH distribution in the subsurface.

Of the 40 detections of benzo(a)anthracene that exceeded the industrial PRG (2.1 mg/kg), only 9 exceed the maximum detected background concentration (33 mg/kg in surface soil) (Figures 4-2A and 4-2B . For benzo(a)pyrene, 65 detections exceeded the industrial soil PRG

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Insert Figure 4-1

Insert Figure 4-2A

Insert Figure 4-2B

(0.21 mg/kg); however, only 5 detections also exceeded the surface maximum detected background soil concentration (40 mg/kg). Thirty-eight detections of benzo(b)fluoranthene exceeded the industrial soil PRG (2.1 mg/kg), while only 4 of these also exceeded the maximum detected benzo(b)fluoranthene concentration in background surface soil (66 mg/kg).

4.1.3 Distribution of Organic Compounds in Offsite Surface Soils

In offsite soil samples, benzo(a)pyrene is the most commonly detected organic compound that exceeds its residential soil PRG (0.08 mg/kg). Of the 40 detections of benzo(a)pyrene in offsite surface soils that exceed the residential soil PRG, none were detected higher than the maximum detected benzo(a)pyrene concentration in background surface soil (40 mg/kg). Benzo(a)pyrene has been detected as high as 6.2 mg/kg in offsite surface soil (OSW#8), but concentrations generally are less than 0.5 mg/kg. Detections of other PAHs in offsite soil samples are sproratic and are generally found at locations nearer to the Sloss property. Benzo(a)anthracene was detected in five offsite surface soil samples and benzo(b)fluoranthene was detected in nine offsite surface soil samples at concentrations exceeding their residential soil PRGs (both 0.62 mg/kg). Neither benzo(a)anthracene nor benzo(b)fluoranthene were detected in offsite surface soil samples at concentrations exceeding their maximum detected background concentrations of 33 mg/kg and 66 mg/kg, respectively. No VOCs were detected at concentrations exceeding their respective residential soil PRGs in offsite surface soil samples.

Overall, the concentrations of benzo(a)pyrene decrease with increasing distance from the Sloss property. With the exception of OSW#8, samples collected south and southeast of the facility generally exhibited higher benzo(a)pyrene concentrations than those collected to the east and west of the facility. Concentrations of benzo(a)pyrene on the western side of the Sloss property average 0.083 mg/kg (excluding OSW#8), slightly above the residential soil PRG of 0.062 mg/kg. To the east of the Sloss property, benzo(a)pyrene averages 0.16 mg/kg, while to the south and southeast, benzo(a)pyrene averages 1.03 mg/kg. Because benzo(a)pyrene is present in typical urban background environments, it is expected that some of the benzo(a)pyrene detected in offsite soils is unrelated to the site.

4.2 Inorganics

4.2.1 Inorganics in Background Soils

Background soil samples (SB-1 through SB-6) were collected from multiple depths, ranging from 0 to 2 feet bgs in the surface soil and up to 38 feet bgs in the subsurface soil. Numerous inorganic constituents were detected in background soils including arsenic, barium, beryllium, copper, lead, nickel, thallium, and zinc. The average and maximum concentrations of metals detected in surface and subsurface soils are provided in Table 4-3, along with their respective industrial and residential EPA Region 9 PRGs.

TABLE 4-3
Average Inorganic Analyte Concentrations in Background Soils
Sloss Industries – Birmingham, Alabama Facility

Parameter	Surface Soil (0-2 feet)		Subsurface Soil (2 feet bgs +)		Region 9 PRGs	
	Avg (mg/kg	Max (mg/kg	Avg (mg/kg)	Max (mg/kg)	Industrial Soil	Residential Soil
Arsenic	12.66	21	6.23	14	1.6	0.39
Barium	50.86	72	72.17	200	6,700	5,400
Beryllium	0.60	0.87	1.72	2.6	190	150
Copper	7.97	12	16.33	32	4,100	3,100
Lead	14	23	10.45	17	800	400
Nickel	7.83	15	28.64	47	2,000	1,600
Zinc	35.29	67	38.47	71	31,000	23,000

Notes:
PRG = preliminary remediation goal
bgs = below ground surface
mg/kg = milligrams per kilogram

With the exception of arsenic, all of the average and maximum surface and subsurface background metals concentrations are below their respective EPA Region 9 PRGs for both industrial and residential soil. Arsenic is the only inorganic constituent detected in background soil samples that exceeds its PRGs for industrial and residential soil in both surface and subsurface soils. The average arsenic concentration in background surface soils exceeds the industrial soil PRG by almost 8 times and the residential standard by more than 32 times. Subsurface arsenic concentrations were approximately 4 times greater than the industrial and 16 times greater than the residential standard.

Thallium was only detected in one surface soil sample at 1.1 mg/kg and in two subsurface soil samples at 1.3 and 1.1 mg/kg.

It should be noted that the background soil samples were collected from an area, believed to be located on the western side of the Opossum Valley Fault, where outcrops of the Hartselle Sandstone (SB-1 through SB-3) and the Red Mountain Formation (SB-4 through SB-6) are exposed. Concentrations of metals in soils are directly related to the underlying bedrock from which they are developed. For this reason, these locations may not be representative of metals concentrations for soils developed on the eastern side of the fault, where soils have developed in the underlying Conasauga Limestone.

Statewide, Alabama soils are reported to contain arsenic over a range of 0.8 to 11 mg/kg, as reported by ADEM. The average arsenic concentration in Alabama soils is 4.7 mg/kg. Average soil arsenic concentrations in Alabama are approximately 3 times greater than the industrial soil PRG for arsenic and roughly 12 times greater than the residential standard.

4.2.2 Distribution of Inorganics in Onsite Soils

Arsenic concentrations exceeding the industrial soil PRG (1.6 mg/kg) are widespread throughout the Sloss facility (Figure 4-3). Arsenic concentrations exceed the screening level at 250 locations, while only 3 arsenic detections were reported below the screening level (MW-13S (6 to 8 feet), 4-SB0001 (6 to 8 feet), and 31-SB0002 (8 to 10 feet)). Arsenic has been reported as high as 220 mg/kg, while the average arsenic exceedance was approximately 10.8 mg/kg (Table 4-4). On the basis of the previous discussion regarding background arsenic concentrations in local soils, it is possible that the majority of the arsenic detected in soils throughout the Sloss facility is naturally occurring.

Three additional metals were detected in soil at concentrations exceeding their respective industrial soil PRGs:

- Antimony at 5-SB0004 (7-9 feet)–59 mg/kg (vs. industrial PRG of 41 mg/kg)
- Copper at 1B-SB0004 (8-10 feet)–32,000 mg/kg (vs. industrial PRG of 4,100 mg/kg)
- Lead at 1B-SB0004 (8-10 feet)–1,200 mg/kg (vs. industrial PRG of 800 mg/kg)

4.2.3 Distribution of Inorganics in Offsite Soils

Arsenic detections in offsite surface soil exceeded the residential soil PRGs at all 35 sampling locations. The maximum detected concentration of arsenic in offsite soil was 49 mg/kg, as compared to the residential soil PRG of 0.39 mg/kg. Samples collected in neighborhoods south and east of the Sloss facility contained arsenic typically ranging between 20 and 40 mg/kg. Samples collected on the western side of the property contained arsenic concentrations between 7.6 and 16 mg/kg.

It is likely that the concentrations of arsenic in offsite soils are naturally occurring in local soils, because the offsite soil samples collected from the western side of the Sloss property and from residential neighborhoods to the east and south of the Sloss facility generally contain arsenic concentrations similar to those of background soils. Additional background soil sampling may be necessary to better define the naturally occurring arsenic concentration in soils developed on the Conasauga Limestone.

Insert Figure 4-3

Insert Table 4-4

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5.0 Summary of the Extent of Surface Water and Sediment COPCs

This section presents the analytical results of the surface water and sediment sampling efforts conducted since 1995. The surface water results have been compared to the EPA *National Recommended Water Quality Criteria for Protection of Human Health*, as developed in Section 3. Sediment results have been compared to EPA Region 9 PRGs for residential soil for discussion purposes only, although the potential for human contact with sediments in Five Mile Creek is insignificant because sediments are covered with water year-round.

5.1 Five Mile Creek and Associated Tributaries

The results of surface water sampling in Five Mile Creek and the associated tributaries indicate that surface water crossing the Sloss facility and in Five Mile Creek above and below the Sloss outfall generally meets the National Recommended Water Quality Criteria for Protection of Human Health, while sediment samples generally were above the EPA Region 9 PRGs for residential soil. With the exception of the influent and effluent samples from SWMU 22 (Polishing Pond), no VOCs or SVOCs were detected in surface water collected from Five Mile Creek or the unnamed tributary (Table 5-1). This situation is true despite the concentrations of PAHs detected at the co-located sediment sampling stations along the unnamed tributary.

Exceedances of the surface water comparison criteria were reported at two locations, 22-SW0001 and SW-18 (Figures 5-1 and 5-2), for the following compounds:

- Cyanide, benzo(a)anthracene, and chrysene at 22-SW0001 collected from the outfall of SWMU 22 (Polishing Pond)
- Cyanide at SW-18 located adjacent to the LaFarge Quarry in the land disposal area

Within Five Mile Creek and the unnamed tributaries, PAHs and metals are the most commonly detected compounds in sediment that exceed their respective screening levels (Table 5-2), while benzene (4.4J at 22-SD0007) is the only VOC detected in sediment above its residential soil screening level.

In 1995, sediment samples collected upstream and downstream of the Sloss outfall indicated no detections of VOC or SVOC compounds. In 2005, sediment samples collected from Five Mile Creek contained concentrations of PAH compounds exceeding their respective residential soil PRG values; the most commonly detected included the following:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a)anthracene

Insert Table 5-1 (page 1 of 2)

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Insert Figure 5-1

Insert Figure 5-2

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Moving downstream from FMC#5 toward the confluence with the unnamed tributary that drains the Sloss property, PAH concentrations appear to be stable to slowly decreasing, as indicated by a comparison of the detected concentrations in samples FMCSS#5 and FMCSS#4. Immediately downstream of the tributary confluence (FMCSS#3), PAH concentrations in sediment are approximately 10 times greater than those detected upstream. PAH concentrations decrease rapidly downstream of the confluence with the unnamed tributary, roughly an order of magnitude (FMCSS#1).

Within the sediments of the unnamed tributary that drains the Sloss property, PAHs and metals, similar to those observed in the Five Mile Creek sediments, were detected in 1998 and 2001; however, concentrations within the tributary are significantly greater than those observed in Five Mile Creek. Concentrations generally tend to decrease significantly in an upstream direction within the unnamed tributary, because PAH concentrations in the landfill area (SD-21, SD-19) are as much as 40 times lower than those observed near the outfall of SMWU-22 (SD-2 and SD-7).

It should be noted that no PAHs were detected in sediment collected at SD-15, located on a branch of the unnamed tributary that drains the eastern side of the LaFarge Quarry and Shuttlesworth Drive, indicating that significant PAH contamination probably is not migrating into the BTF from this area.

Arsenic is the most commonly detected metal in tributary sediments, followed by copper, cadmium, and vanadium. There does not appear to be a clear trend in the concentrations of arsenic in the sediments of the unnamed tributary. Concentrations are similar to those observed in background soils, and arsenic concentrations probably are related to arsenic contained in surface soils that has eroded into the stream channel.

Copper concentrations in sediment do appear to show a trend, decreasing both upstream and downstream of SWMU 13 (Equalization Basin), with 1600J to 2500J mg/kg at SD-5.

5.2 35th Avenue and Shuttlesworth Drive Drainage

The results from the five sediment samples collected from the drainageway located along 35th Avenue and Shuttlesworth Drive contained concentrations of arsenic and several PAH compounds that exceeded the residential soil screening criteria. Concentrations of VOCs were not detected at levels exceeding the soil screening criteria at these sample locations.

Arsenic (ranging from 12 mg/kg to 28 mg/kg) was detected at all five locations at levels exceeding the comparison criteria (0.39 mg/kg). Arsenic at two of these locations (28 mg/kg at 35SS#2 and 25 mg/kg at 35SS#4) exceeds the maximum detected concentration of arsenic in background surface soil (21 mg/kg). It is possible that these are naturally occurring arsenic concentrations for soils developed in the Conasauga Limestone; additional background arsenic testing of these soils is necessary to confirm this.

The number of PAH compounds exceeding the screening levels and their respective concentrations increase from both directions toward 35SS#2. The greatest number of compounds exceeding the screening levels and the highest concentrations were detected in the sediment sample collected near the intersection of 35th Avenue North and Shuttlesworth Drive (35SS#2), which may be indicative of a low spot in the drainageway.

6.0 Summary of the Extent of Groundwater COPCs

This section presents the results of the groundwater investigations performed during the course of the ongoing RFI. The following four subsections discuss the groundwater analytical results for COPCs as groups of related compounds:

- Petroleum hydrocarbons and related compounds
- Chlorinated solvents and related compounds
- Coal tar-related compounds
- Inorganics

The comparison criteria used in this section for identifying COPCs have been identified based on the results of the current HHRA, and may be adjusted in the future, if warranted by an evaluation of the ecological risks. Background concentrations of organic and inorganic analytes could not be determined from upgradient property boundary monitoring wells because of a lack of representative data at these locations. As indicated in Section 2.4, the analytical results from the 1995 facilitywide efforts, which included installation of the upgradient boundary monitoring wells, are not considered representative because sampling of the upgradient groundwater consisted of IDW (purge water). No additional groundwater sampling efforts have been performed that included the upgradient boundary monitoring wells.

6.1 Petroleum Hydrocarbons and Related Compounds

Petroleum hydrocarbons and related COPCs in groundwater at the Sloss facility primarily consist of the following:

- Benzene,
- Ethylbenzene,
- Toluene,
- Xylene
- Chlorobenzene.

Two distinct petroleum hydrocarbon plumes have developed in the groundwater beneath the facility in the following areas:

- Coke and Chemical Plant areas
- BTF area.

6.1.1 Coke and Chemical Plant Plume

Exceedances of the EPA MCLs were detected in shallow bedrock groundwater in the Coke and Chemical Plant areas (Figure 6-1) for the following:

- Benzene
- Ethylbenzene
- Toluene
- Xylene
- Chlorobenzene

Petroleum hydrocarbons have not been detected at concentrations that exceed the screening criteria during deep bedrock aquifer monitoring.

Benzene is the most widespread groundwater contaminant in the Coke and Chemical Plant areas (Figure 6-1). Benzene concentrations in the Chemical Plant groundwater plume have been detected at concentrations as high as 170,000 µg/L (EPA MCL equals 5 µg/L) in MW-56 (April 2001) and appear to be generally stable at this concentration (Table 6-1). Within the Coke Plant, benzene has been detected as high as 8,600 µg/L in MW-60.

Ethylbenzene, toluene, and chlorobenzene also have been detected in monitoring wells located around the Chemical Plant; however, they are absent in the groundwater in the Coke Plant. Ethylbenzene concentrations have been detected as high as 2,700 µg/L in April 2001 at MW-53 and appear to be increasing. MW-53 is the only well in which ethylbenzene has exceeded its EPA MCL of 700 µg/L. Toluene has been detected at concentrations exceeding its EPA MCL of 1,000 µg/L in three shallow bedrock monitoring wells. With the exception MW-55, toluene concentrations appear to be on a decreasing trend. Chlorobenzene has been detected as high as 240,000 µg/L in well MW-55. The concentration of chlorobenzene detected in well MW-55 showed an increase between 2000 and 2001 from 190,000 µg/L to 240,000 µg/L. Chlorobenzene concentrations generally decreased in the center of the plume, while they increased in boundary monitoring well MW-49S.

Benzene appears to be the only contaminant in this area that is migrating offsite at concentrations exceeding the screening level. Benzene migrates offsite to the east from the Chemical Plant toward the residential neighborhoods located along 42nd Avenue North. Benzene concentrations in boundary monitoring well MW-49S were reported as high as 150 µg/L in August 1995, though concentrations have been decreasing slowly at this monitoring location since that time. Benzene also exceeds its EPA MCL in boundary monitoring wells, as follows:

- MW-50 (18 µg/L in April 2001)
- MW-51 (30 µg/L in April 2001)
- MW-52 (21 µg/L in April 2001)
- MW-57S (7 µg/L in July 2000)

Chlorobenzene typically has been below the EPA MCL of 100 µg/L in monitoring well MW-49S; however, in April 2001, chlorobenzene was detected at 120 µg/L at this location. Chlorobenzene, ethylbenzene, and toluene have not been detected at concentrations exceeding their respective EPA MCLs in boundary monitoring wells in this area.

Insert Figure 6-1

Insert Table 6-1 (page 1 of 20)

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The concentrations of all petroleum hydrocarbon compounds were below the screening levels in offsite downgradient monitoring wells MW-70, MW-71, and MW-72 , located near the residential neighborhood to the east of the Sloss property.

6.1.2 BTF Area Plume

Benzene is the only petroleum hydrocarbon that exceeds its screening level in BTF area shallow bedrock groundwater. Petroleum hydrocarbons have not been detected in the deep bedrock aquifer wells in this area. Generally, concentrations of benzene in BTF area groundwater are significantly lower than detections near the Chemical Plant (Figure 6-1), with BTF area benzene concentrations historically ranging up to 340 µg/L at MW-10 (July 1998). Benzene also is primarily limited to monitoring locations downgradient of SWMU 13 (Equalization Basin) at MWs-10, 38, 40, and 41.

Historically, benzene has been detected at 15 µg/L in well MW-17S in 1998 and 2001, indicating migration of benzene at concentrations exceeding the EPA MCL (5 µg/L) toward Five Mile Creek. However, recent (April 2005) data reported benzene as below method detection limit (BMDL) at this location, indicating that groundwater exceeding the benzene MCL is not affecting Five Mile Creek.

Benzene also has been detected at elevated concentrations in wells MW-26 and MW-63, located near the storm water drainageway, with historical results indicating that benzene concentrations are increasing in MW-26 (Table 6-1).

6.2 Chlorinated Hydrocarbons and Related Compounds

Detections of chlorinated hydrocarbons that exceed their respective screening primarily are limited to shallow bedrock groundwater in the Chemical Plant area and include the following:

- Tetrachlorethene
- Trichlorothene
- Vinyl chloride

Tetrachlorethene has been detected in three wells within this area, with concentrations as high as 2,100 µg/L (MW-54, July 2000) (Figure 6-2). Tetrachlorethene has been detected in deep bedrock monitoring well MW-57D at levels exceeding its EPA MCL of 5 µg/L. Shallow aquifer concentrations of tetrachlorethene appear to be decreasing, as evidenced in MW-51 and MW-54.

Trichlorothene exceedances historically have been limited to one shallow bedrock monitoring well MW-51 (39 µg/L in April 2001 and 350 µg/L in July 2000). This is the only location in which trichlorothene has exceeded its EPA MCL (5 µg/L).

Vinyl chloride is the most widespread chlorinated hydrocarbon, currently exceeding its MCL (2 µg/L) in six monitoring wells in the Chemical Plant area. Vinyl chloride historically has been detected in both shallow and deep bedrock monitoring wells within this area. Vinyl chloride concentrations have been detected as high as 600 µg/L in shallow bedrock well MW-53 and 34 µg/L in deep bedrock monitoring well MW-49D. Vinyl chloride concentrations appear to be decreasing across the majority of the plume area; however, in

Insert Figure 6-2

boundary monitoring wells MW-50 and MW-52, increases in vinyl chloride were reported between 2000 and 2001.

No chlorinated solvents or related compounds were detected in shallow bedrock monitoring wells near the residential neighborhood to the east of the Sloss property (MW-70, MW-71, or MW-72).

6.3 Coal Tar-related Compounds

Coal tar has been observed in residuum monitoring well MW-04A and MW-06 in the BTF area and shallow bedrock monitoring well MW-58 in the Coke Plant (Figure 6-3). Coal tar-related compounds (SVOCs) exceeding groundwater screening primarily consist of PAH compounds.

It should be noted that bis(2-ethylhexyl)phthalate was not considered when developing the groundwater contaminant plume boundaries shown in Figure 6-3. The presence of bis(2-ethylhexyl)phthalate in groundwater samples is believed to be unrelated to site activities, based on a review of the Sloss process. Bis(2-ethylhexyl)phthalate at low levels can be a result of field or laboratory contamination at the time of sample collection and/or analysis, and it is not believed that bis(2-ethylhexyl)phthalate detections in the Sloss groundwater are indicative of site-related contamination.

PAH compounds have been detected at levels exceeding their respective drinking water standards in Coke Plant shallow bedrock monitoring wells, including the following:

- Acenaphthene (as high as 180 µg/L)
- Dibenzofuran (as high as 130 µg/L)
- Fluorene (as high as 130 µg/L)
- Naphthalene (as high as 19,000 µg/L)

The following SVOCs also have been detected at concentrations exceeding their respective EPA Region 9 PRGs for tap water in the Coke Plant:

- Dimethylphenol
- 2-Methylphenol
- 3- and 4-Methylphenol
- Benza(a)pyrene
- Fluorene

Moving downgradient through this plume, naphthalene and 4-Methylphenol are the only compounds that remain at elevated concentrations in the Chemical Plant area. Naphthalene in Chemical Plant monitoring wells has been detected as high as 140 µg/L, while 4-Methylphenol has been detected as high as 110 µg/L. Naphthalene and 4-Methylphenol may not be related to coal tar contamination within the Chemical Plant area, but may be the result of the petroleum hydrocarbon contamination occurring in this area.

In the BTF area, naphthalene is the primary contaminant detected in groundwater at concentrations exceeding its EPA Region 9 tap water PRG (0.62 µg/L). Exceedances of the naphthalene tap water PRG have been detected in six monitoring wells at concentrations as

Insert Figure 6-3

high as 420 µg/L. Acenaphthene is the only other contaminant detected in BTF area groundwater at levels exceeding its tap water PRG (37 µg/L). Acenaphthene was detected in a groundwater sample and associated duplicate sample from shallow bedrock well MW-17S (35 and 38 µg/L, respectively).

6.4 Inorganics

Site-wide, cyanide is the primary inorganic contaminant detected at concentrations exceeding its regulatory standard (EPA MCL, 200 µg/L). Cyanide concentrations exceeding the EPA MCL generally have been limited to shallow bedrock groundwater in the BTF and land disposal areas (Figure 6-4).

Within the BTF area, cyanide has been detected as high as 320 µg/L in MW-08 and MW-32 (July 1998). Cyanide has exceeded its EPA MCL in four shallow bedrock wells in this area–MW-08, MW-09, and MW-41, near SWMU 13 (Equalization Basin), and MW-17S, near SWMU 22 (Polishing Pond).

Arsenic has been detected at concentrations exceeding the EPA MCL (10 µg/L) in the BTF area in a monitoring well located near SWMU 22 (Polishing Pond). In this area, arsenic has been detected as high as 90 µg/L in deep bedrock monitoring well MW-16D.

Lead has also been detected at concentrations exceeding its EPA action level of 15 µg/L in two shallow bedrock monitoring locations–near SWMU 13 (Equalization Basin) within the BTF area and in deep bedrock monitoring well MW-34D in the land disposal area. Lead concentrations in BTF monitoring wells are slightly above the EPA action level at 20 µg/L in MW-39 and 23 to 28 µg/L in MW-41. In well MW-34D, lead was detected at 40 µg/L. These detections may be a result of sediment contamination within the groundwater samples at the time of collection due to incomplete well development or improper sampling techniques; however, this cannot be confirmed at this time.

In the Chemical Plant area, total iron and total manganese have been detected in shallow bedrock groundwater at concentrations exceeding their respective EPA Region 9 PRGs (1,100 and 88 µg/L, respectively). Total iron concentrations in this area range from 6,000 to 41,000 µg/L, while total manganese has been detected from 600 to 13,000 µg/L. Dissolved concentrations of these constituents are similar to the total concentrations, indicating that the vast majority of these metals are in a dissolved mobile phase.

The presence of dissolved iron and manganese in shallow aquifer groundwater probably is a result of biodegradation of the petroleum hydrocarbon and chlorinated solvent plumes. Reducing conditions have developed beneath these plumes as the microbes present in groundwater have used all of the available oxygen during aerobic degradation of the organic contaminants. The resulting anaerobic environment creates conditions favorable for the reduction of iron and manganese, thus solubilizing these metals from the clays present in the residuum and shallow bedrock aquifer and creating the resulting dissolved iron and manganese plumes. The extent of this dissolved metal plume probably is limited to the area of VOC groundwater contamination and associated anerobic conditions with the shallow bedrock aquifer. It is suspected that the dissolved concentrations of iron and manganese will naturally decrease to background levels once remediation of the VOC contaminant plumes in this area is completed and an oxygenated environment is reestablished. The iron

Insert Figure 6-4

and manganese currently should precipitate out of solution because of the oxidation of these metals.

7.0 Environmental Indicator Determination

In an effort to accelerate corrective action at RCRA facilities, the Government Performance Results Act (GPRA) set goals for RCRA facilities to have human exposures controlled and groundwater releases controlled by the year 2005. These goals, which are represented by the CA 725 (*Current Human Exposure under Control*) EI and CA 750 (*Migration of Contaminated Groundwater under Control)* EI, provide a measurement of the progress of corrective action at each facility and also provide a means of summarizing and reporting on the sitewide environmental conditions at the highest priority sites.

EPA is charged with the responsibility of directing RCRA facilities to assess all media to determine if the conditions at the facility meet the GPRA goals for EIs. Although the major goals of corrective action (site characterization and source removal) are the final goals for all RCRA sites, the intermediate priority goal is to determine if plausible human exposures exist from onsite contamination in all media and to determine if contaminated groundwater is migrating.

To meet the EI goals by September 2005, EPA requested that Sloss gather sufficient (additional) information in the soil, surface water, air, and groundwater across the site and offsite upon which to base conclusions. As provided in EPA's *Additional Review Comments on the Phase II RFI of the Coke and Chemical Manufacturing Plants Report* (letter to Sloss dated December 12, 2003), EPA specifically expressed interest in an assessment of the following:

- The top 6 inches of soil to determine the presence and concentration of hazardous constituents and the risk of a plausible human exposure
- Offsite surface water, soil, and sediment data to determine if releases have occurred, and if so, whether VOC vapors are migrating from shallow groundwater to the surface
- Chlorinated solvent plumes in the soil and groundwater, and their potential to present an inhalation hazard onsite
- Offsite groundwater plumes, if any, and whether they are static or migrating

In response to EPA's request, Sloss submitted the *Final Data Gap Analysis and Proposed Environmental Indicators Sampling Plan* on February 4, 2005; the sampling plan was approved by EPA on March 1 and implemented by Sloss in April 2005. Procedures followed and specific results of the supplemental (EI) sampling activities are included in Appendix A.

Following the completion of the April sampling event, these recent data, along with the historical data collected at the facility since 1995, were compiled and reviewed to assess the human health risks and groundwater concentrations and trends. The intent of this consolidation and review was to indicate the immediate quality of the environment in relation to current human exposures to contamination (CA 725) and the migration of contaminated groundwater (CA 750), and to propose a strategy to mitigate all plausible exposures, as appropriate.

The draft EI memorandum was prepared and the draft EI determination forms completed for each; these have been submitted to EPA for review, concurrently with this (supporting) COED report. The three possible determinations are: 1) **Yes–**conditions are under control; 2) **No–**conditions are not under control; or 3) **IN–**insufficient information is available to determine if conditions are under control. The EI determinations for the Sloss facility (prepared and submitted under separate cover) are summarized below.

7.1 Current Human Exposure under Control (CA 725)

The overall EI determination for CA 725 (*Current Human Exposure under Control*) is IN: insufficient information is available to determine if conditions are under control. Currently, there are insufficient data available for background concentrations of inorganics and PAHs to determine if offsite properties are affected by the site.

It is also currently unknown whether the VOC plume in groundwater extends under offsite residences and, if so, what the concentrations are in these areas. Therefore, insufficient data currently exist to evaluate the IAVI pathway for offsite residents.

7.2 Migration of Contaminated Groundwater under Control (CA 750)

The overall EI determination for CA 750 (*Migration of Contaminated Groundwater under Control*) is IN: or insufficient information is available to determine if conditions are under control. Currently, insufficient historical groundwater monitoring data exist to determine if contaminant plume boundaries are stable. Additionally, some plume boundaries are not well defined because of a lack of or inappropriately positioned monitoring wells, and/or groundwater sampling methods not in conformance with EPA guidance were used, thus rendering the resulting data set invalid.

Although it appears that contaminated groundwater probably is discharging to surface water in the BTF area, surface water sampling indicates that these impacts currently are acceptable, because surface water sampling results generally meet the National Recommended Water Quality Criteria for Protection of Human Health at all locations.

8.0 Conclusions

On the basis of the consolidated review of environmental data collected from the Sloss facility, the following conclusions are drawn:

- Onsite soils have been affected primarily by VOC and SVOC contamination. The greatest VOC impacts have been identified in the Chemical Plant area, while SVOCs are affecting the Coke Plant and BTF areas.
- Offsite soils have been affected by benzo(a)pyrene. Generally, concentrations of benzo(a)pyrene decrease with increasing distance from the Sloss property, and are greater to the south and southeast of the facility than to the east or west. However, because low-level PAH concentrations also are associated with urban environments, the collection of background soil samples from undisturbed locations unaffected by the site may be warranted to assess the natural concentrations of PAHs in the general area.
- Through a review of background soils analyses, it is believed that arsenic and beryllium detected in onsite and offsite soils generally are naturally occurring. The current set of background soil samples may not be representative of arsenic and beryllium concentrations in soils that have developed through weathering of the Conasauga Limestone. The collection of additional background soil samples from undisturbed locations, where soils have developed from weathering of the Conasauga Limestone, may be warranted to assess the natural concentrations of arsenic and beryllium in these soils.
- Sediment in the unnamed tributary contains elevated levels of SVOCs, probably as a result of soil contamination. VOC contamination in this same area does not appear to be significant.
- The concentrations of SVOCs in Five Mile Creek sediments are significantly lower than those detected in the sediments of the unnamed tributary. Five Mile Creek does not appear to be significantly affected by site contaminants.
- Additional sources of sediment contamination appear to be present upstream of the Sloss property on Five Mile Creek.
- Surface water samples in both Five Mile Creek and the unnamed tributary generally meet the National Recommended Water Quality Criteria for Human Health, despite the sediment contamination detected at co-located sampling stations in the unnamed tributary.
- Groundwater contamination is generally limited to the Coke and Chemical Plants and to the BTF area, although localized “hot spots” also occur in the land disposal areas.
- Based on the limited amount of historical groundwater data, concentrations of groundwater contaminants appear to be relatively stable to decreasing in facility boundary monitoring wells.

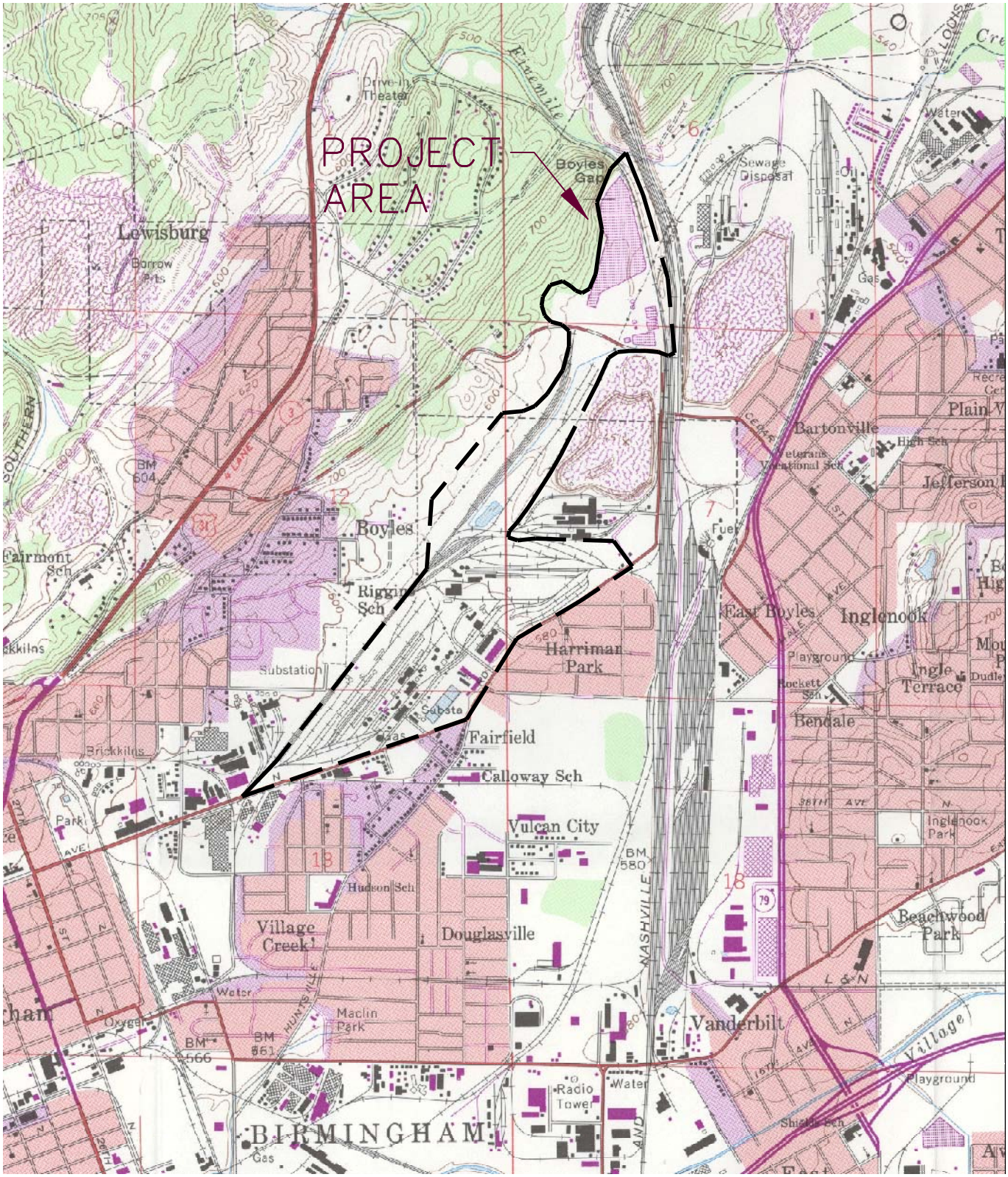
- The groundwater contaminant plumes identified do not appear to migrate beyond the Sloss property boundary, with the exception of the petroleum hydrocarbon and chlorinated solvent plume identified in the Chemical Plant area.
- Because of the difference in the Coke Plant and Chemical Plant benzene concentrations and the lack of additional petroleum hydrocarbon detections in Coke Plant shallow groundwater, it is likely that more than one source of contamination exists in these areas and that commingling of the contaminant plumes is occurring.
- The presence of dissolved iron and manganese in shallow aquifer groundwater probably is a result of biodegradation of the petroleum hydrocarbon and chlorinated solvent plumes which has resulted in a reducing environment, thus solubilizing these metals. Once oxidizing conditions are reestablished in this area, the iron and manganese should precipitate out of solution as a result of oxidation of these metals.
- Petroleum hydrocarbons, chlorinated solvents, and their related compounds have been detected at concentrations exceeding the PRGs for IAVI in boundary monitoring wells near the Chemical Plant. These contaminants may be affecting a nearby residential neighborhood.
- Petroleum hydrocarbon and coal tar-related compounds comprise the groundwater contaminant plume in the Coke Plant.
- Groundwater contamination in the BTF area generally consists of petroleum hydrocarbons, coal tar-related compounds, and inorganics. Contaminated groundwater may discharge to surface water bodies in this area; however, they appear to be localized and, based on the results of surface water sampling, do not appear to cause significant impacts to surface water quality based on National Recommended Water Quality Criteria for Human Health.
- The current concentration of benzene in well MW-17 is BMDL, indicating that groundwater exceeding the benzene MCL is not affecting Five Mile Creek or the unnamed tributary, as indicated by previous sampling results.

9.0 Proposed Actions

Sloss proposes the following effort to support a revision of the human health and the groundwater migration EI determinations, as well as to further progress within Sloss' RFI program:

- Collect background soil samples from undisturbed locations unaffected by the site and where soils have developed through weathering of the Conasauga Limestone for analysis of inorganics and PAHs to assess the natural concentrations in the area. After representative background concentrations of PAHs and metals have been established, additional surface soil samples may be warranted from residential properties where results exceed the background concentrations and the RBSLs.
- Collect soil gas samples around the occupied buildings in the Coke Plant that are situated above the groundwater VOC plume to determine the potential impact on indoor air.
- Complete an overall assessment of the efficacy of the existing monitoring well network; the sampling and analysis plan for the site will be conducted and updated in the future, as needed.
- Install additional monitoring wells in the residential areas to delineate the extent of the offsite groundwater plume and the groundwater concentrations near residences.
- Conduct annual water level monitoring, potentiometric surface mapping, and sampling from appropriate monitoring wells at the facility (possibly more frequently for select wells and surface water bodies) to obtain a groundwater data set sufficient to assess stabilization of the groundwater contaminant plume(s).
- Continue identification of ecological issues, supplementing existing information, as appropriate.
- Review existing data to identify whether future investigative activities or NFA determination is warranted for each SWMU.

Data collected in these activities will be of sufficient quality for use in the RFI process. Work plans and the results of these sampling activities will be provided to EPA as the RFI process continues.



USGS TOPOGRAPHICAL QUADRANGLE BIRMINGHAM NORTH, ALABAMA

N

0' 1000 2000
APPROX SCALE

Figure 1–1
Project Location Map
Sloss Industries, Birmingham, Alabama

(Arcadias, 1999)

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SAN/CAD/327751_SLOSS/MASTERS/DWG/FIG 1–1.DGN
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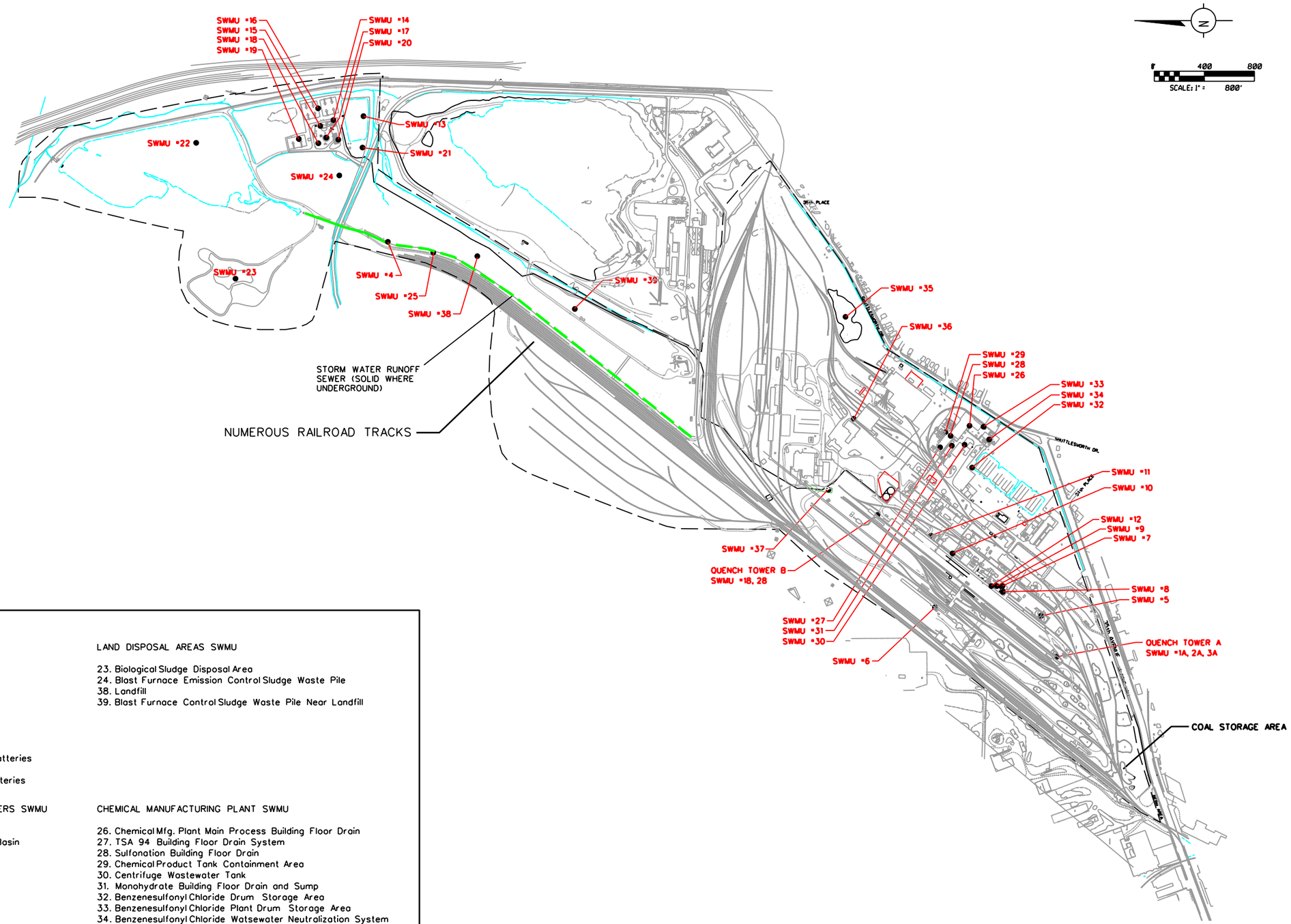

LEGEND

- EXISTING RAILROADS
- EXISTING ROADS
- PROPERTY BOUNDARY
- SWMU #2 ● SOLID WASTE MANAGEMENT UNITS
- STORM-WATER DRAINAGE DITCH

COKE MANUFACTURING PLANT SWMU

1. Quench Towers and Sumps
2. Quench Tower Pump Basins
3. Old Quench Tower Settling Basins
5. Coal Tar Storage Area Drain System
6. Spill Area Around Diesel Tank
7. Coal Tar Collection Sump in No. 1 Pump House
8. Flushing Liquor Decanter
9. Flushin Liquor Decanter Sump
10. Coal Tar Decanter for No. 3 and No. 4 Coke Batteries
11. Coal Tar Decanter for Coke Battery No. 5
12. Coal Tar decanter for No. 1 and No. 2 Coke Batteries

BIOLOGICAL TREATMENT FACILITY (BTF) AND SEWERS SWMU

4. Biological Treatment Facility (BTF) Sewer
13. Biological Treatment Facility (BTF) Equalization Basin
14. BTF pH Neutralization Basin
15. BTF Primary Clarifier
16. BTF Aeration Basin
17. BTF Secondary Clarifier
18. BTF Thickener
19. BTF Digester
20. Dewatering Machine
21. BTF Emergency Basin
22. Polishing Pond
25. Storm Water Runoff Sewer
37. BTF Sewer Tar Trap

LAND DISPOSAL AREAS SWMU

23. Biological Sludge Disposal Area
24. Blast Furnace Emission Control Sludge Waste Pile
38. Landfill
39. Blast Furnace Control Sludge Waste Pile Near Landfill

CHEMICAL MANUFACTURING PLANT SWMU

26. Chemical Mfg. Plant Main Process Building Floor Drain
27. TSA 94 Building Floor Drain System
28. Sulfonation Building Floor Drain
29. Chemical Product Tank Containment Area
30. Centrifuge Wastewater Tank
31. Monohydrate Building Floor Drain and Sump
32. Benzenesulfonyl Chloride Drum Storage Area
33. Benzenesulfonyl Chloride Plant Drum Storage Area
34. Benzenesulfonyl Chloride Watsewater Neutralization System
35. Old Waste Pile at Mineral Wool Plant
36. Maintenance Shop Used Oil Tank

(Arcadis, 1999)

Figure 1–2
Facility Plan and Solid
Waste Management Units
Sloss Industries, Birmingham, Alabama

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SAN//CAD/327751_SLOSS/MASTERS/DGN/FIG1-2X_LAYOUT1.DGN
6-JUL-2005

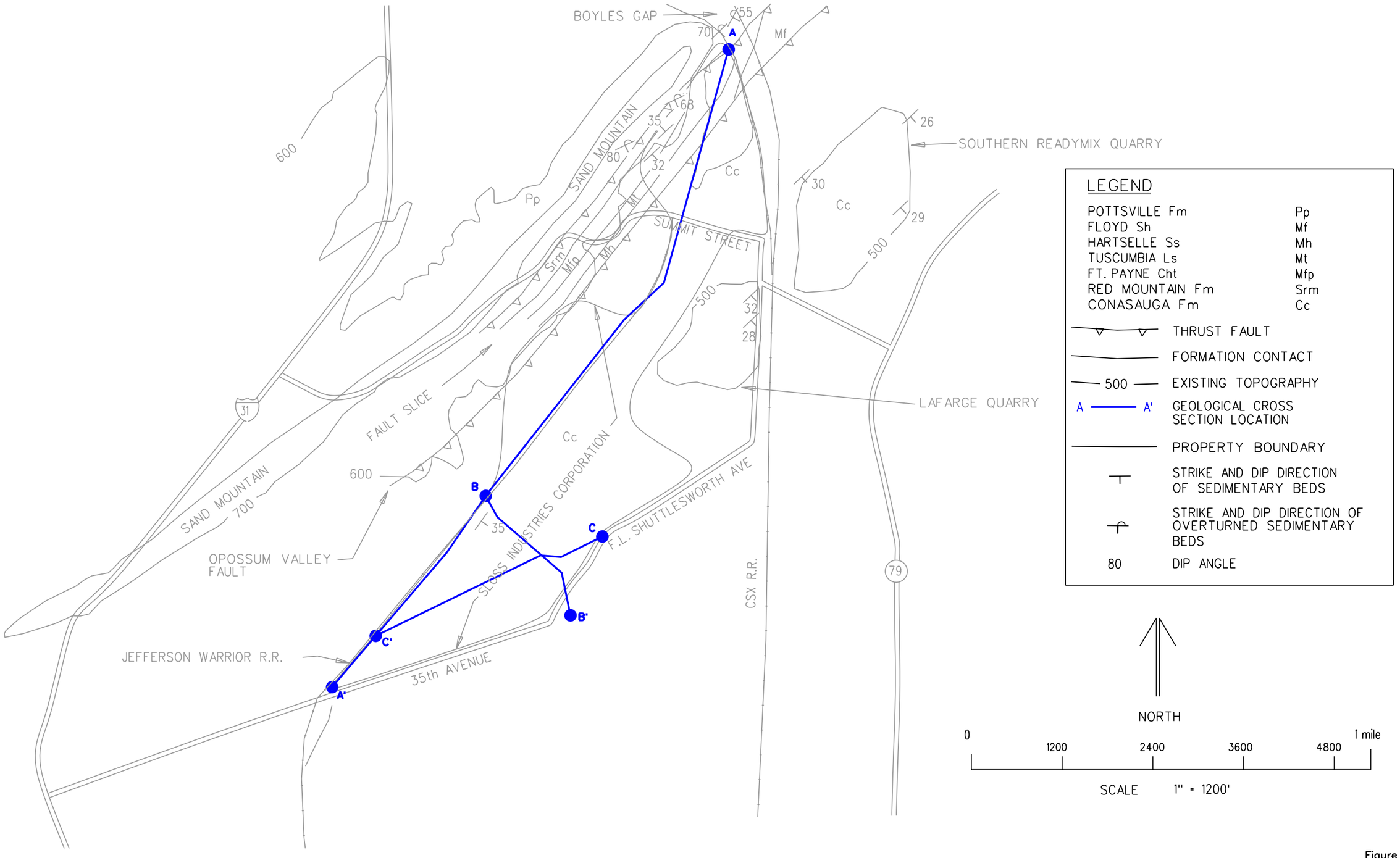

Figure 1–3
Geology of The Sloss Property and Vicinity
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

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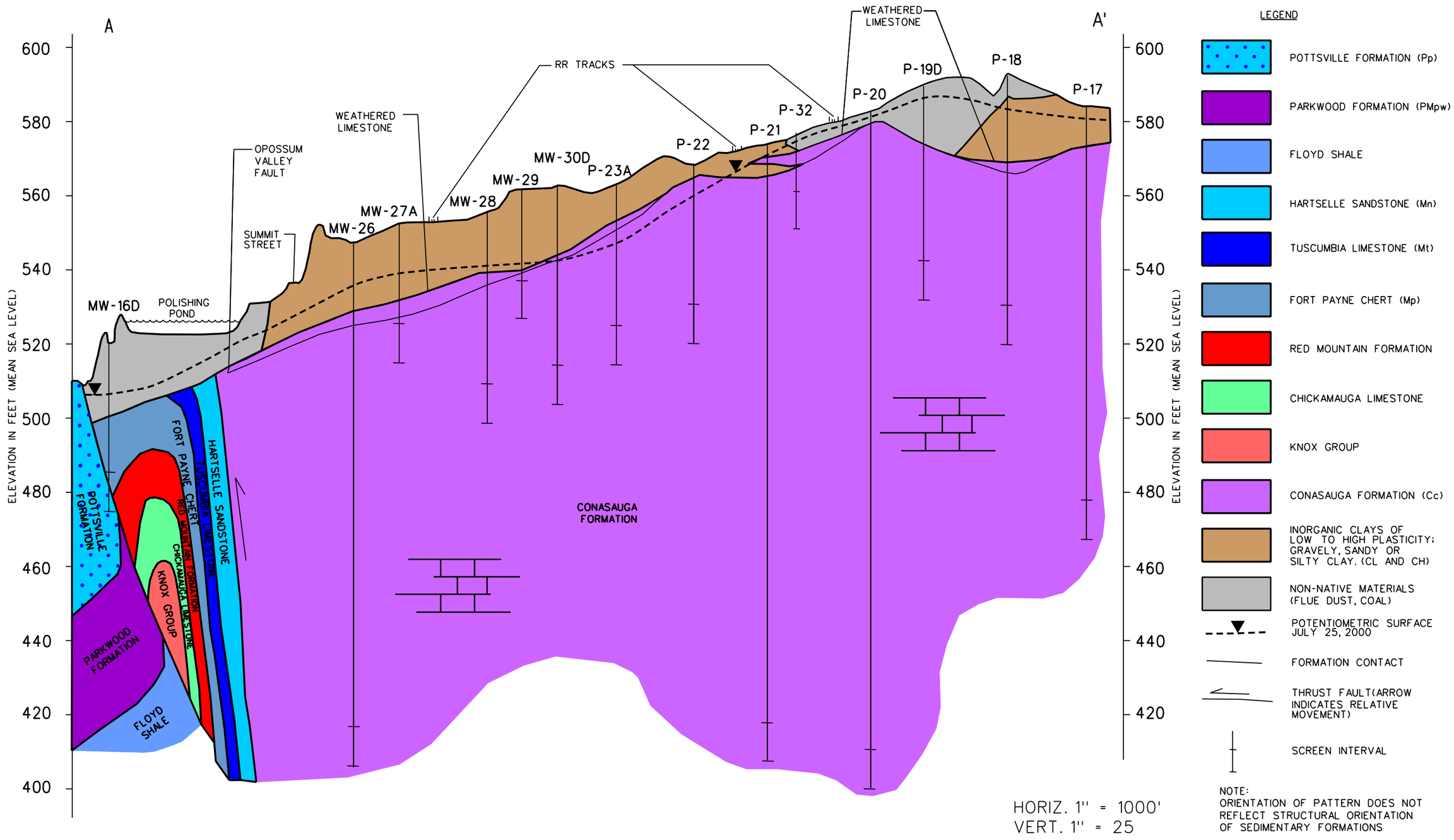

Figure 1–4
Geological Cross Section A – A'
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

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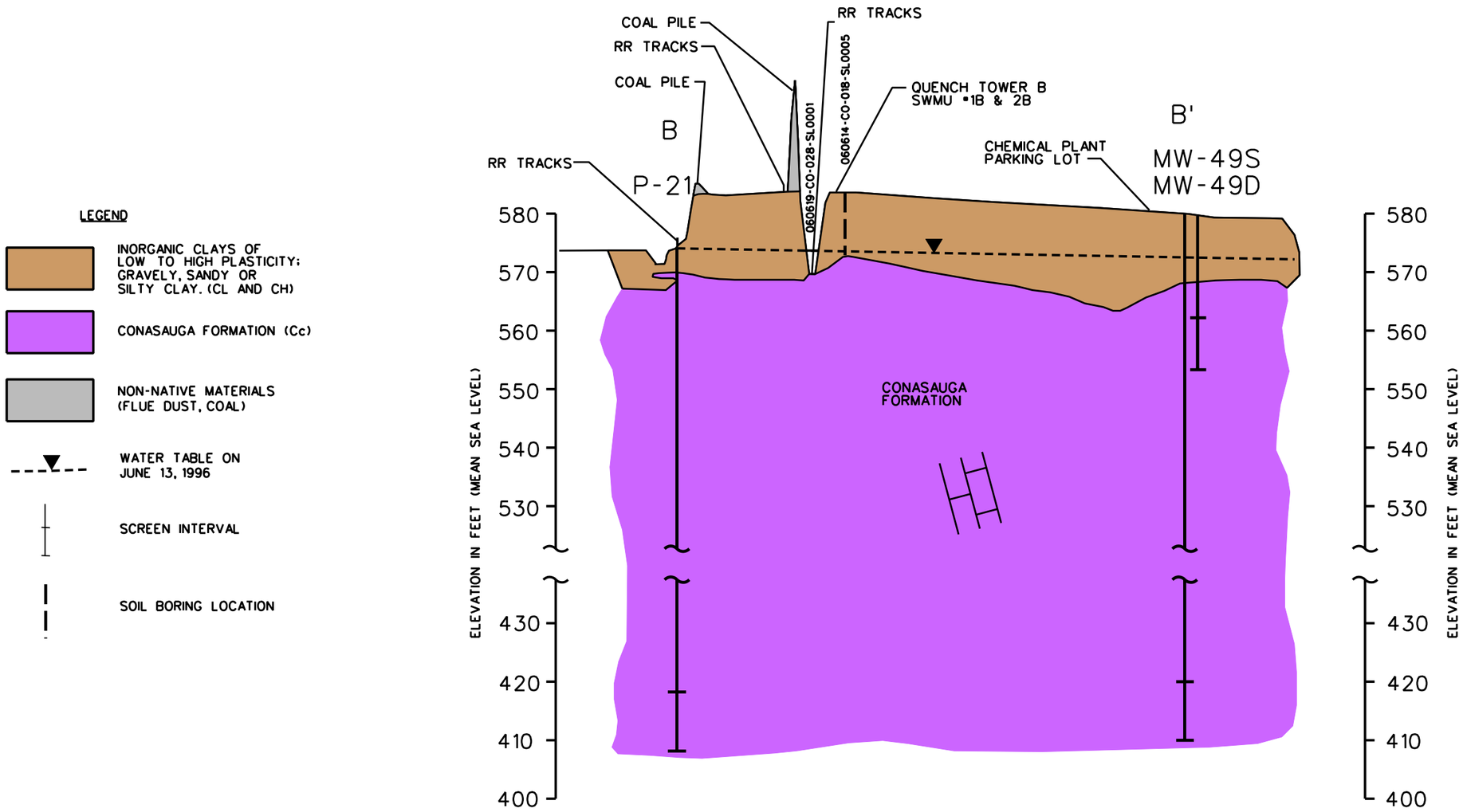

Figure 1–5
Geological Cross Section B – B'
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

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28-JUN-2005

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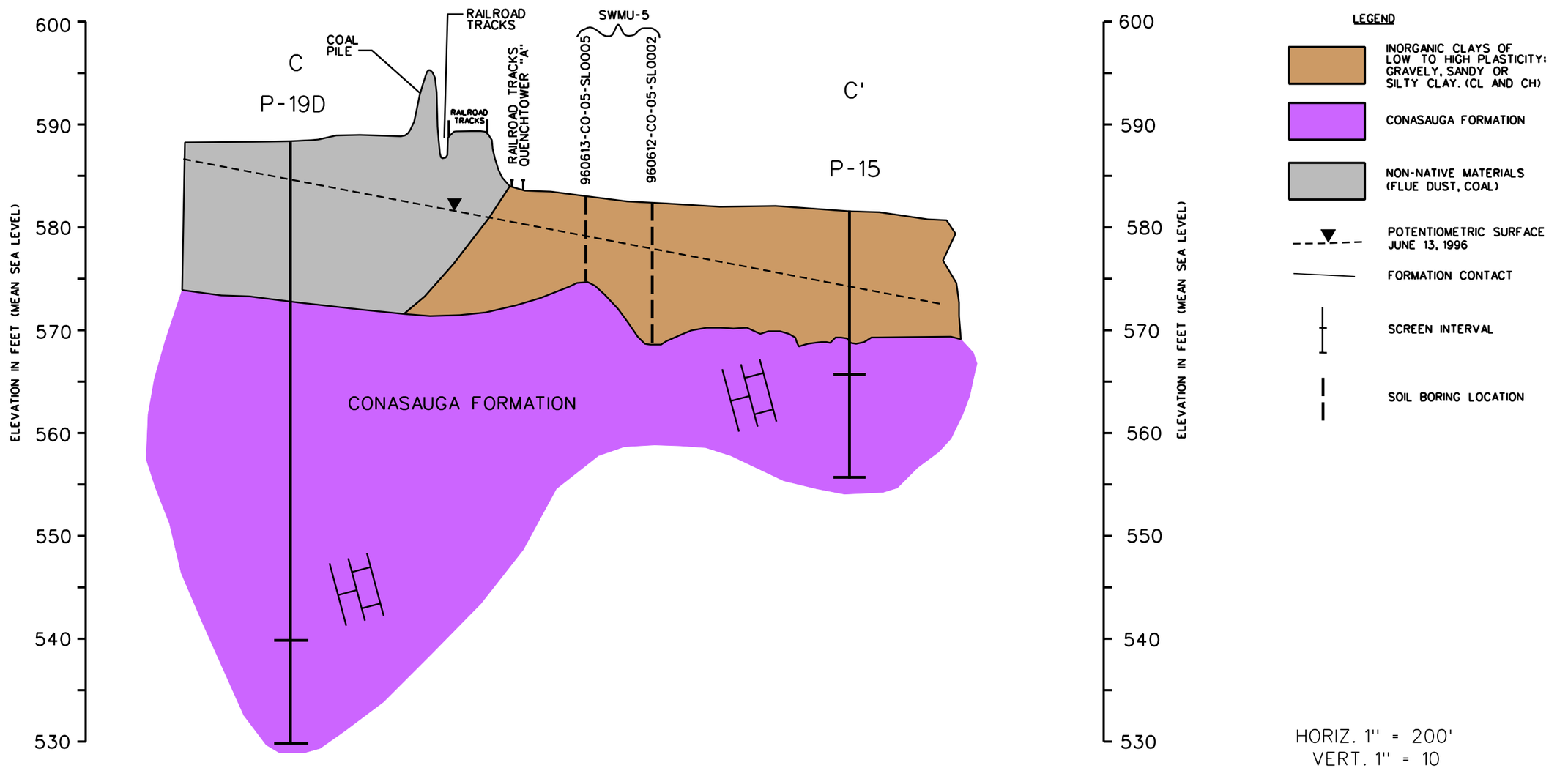

Figure 1–6
Geological Cross Section C – C'
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

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SAN//CAD/327751_SLOSS/MASTER/DGN/FIG1-6_LAYOUT1.DGN
28-JUN-2005

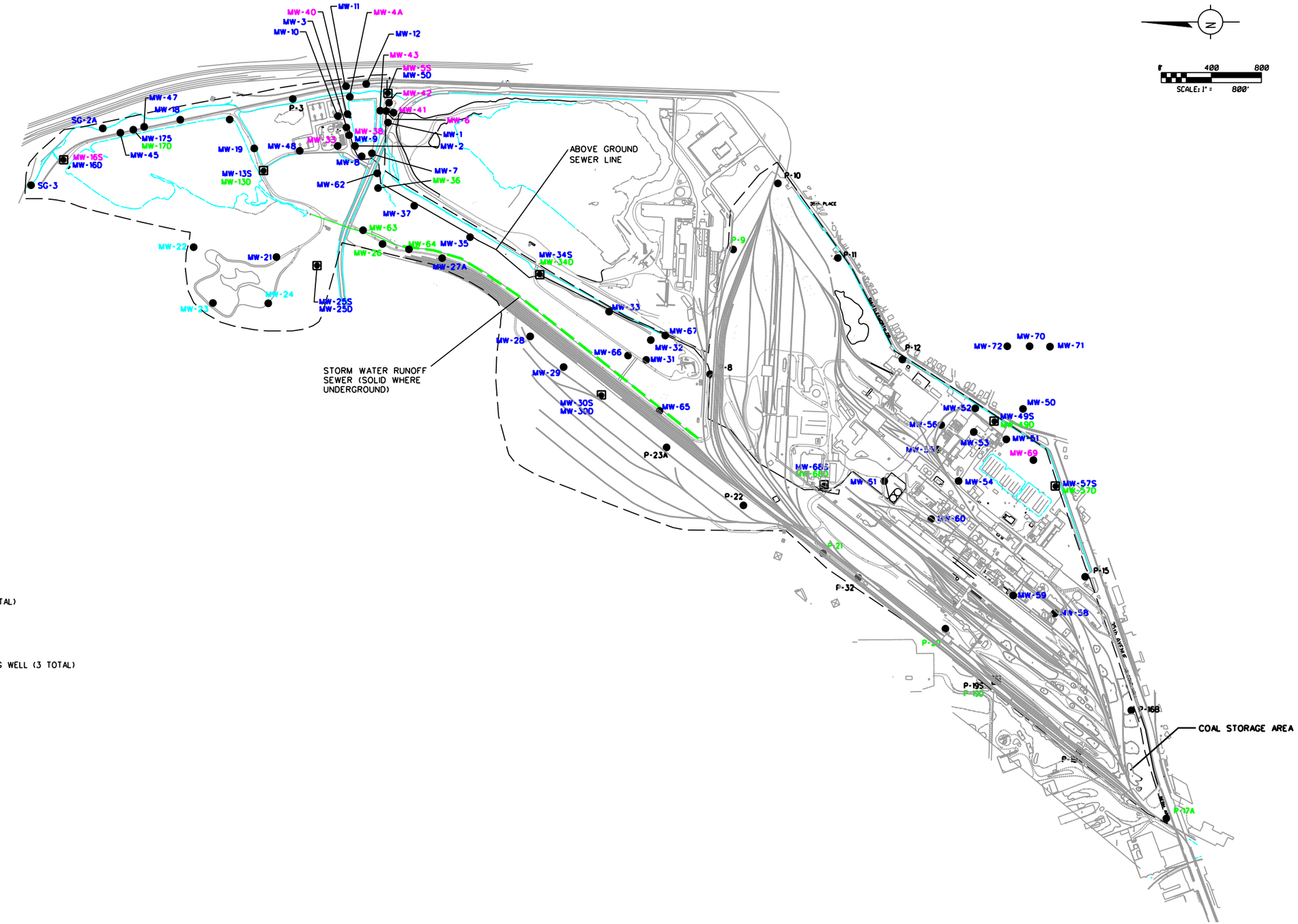
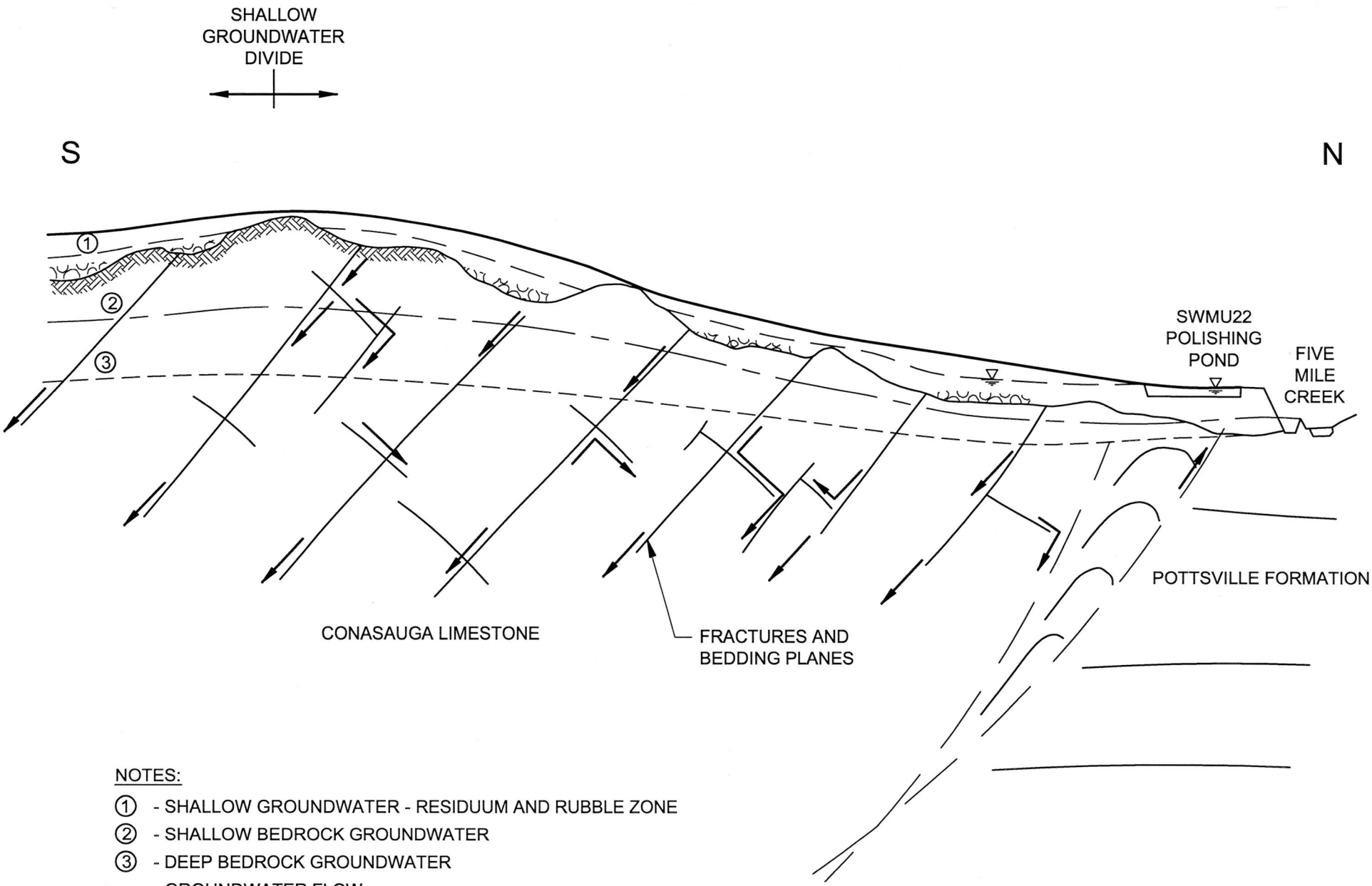


Figure 1–7
Monitoring Well Network
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

CH2MHILL

SAN//CAD/327751_SLOSS/MASTERS/DGN/FIG1-7X_LAYOUT1.DGN
28-JUN-2005



NOTES:

1 - SHALLOW GROUNDWATER - RESIDUUM AND RUBBLE ZONE

2 - SHALLOW BEDROCK GROUNDWATER

3 - DEEP BEDROCK GROUNDWATER

← - GROUNDWATER FLOW

— — — — - RESIDUUM POTENTIOMETRIC SURFACE

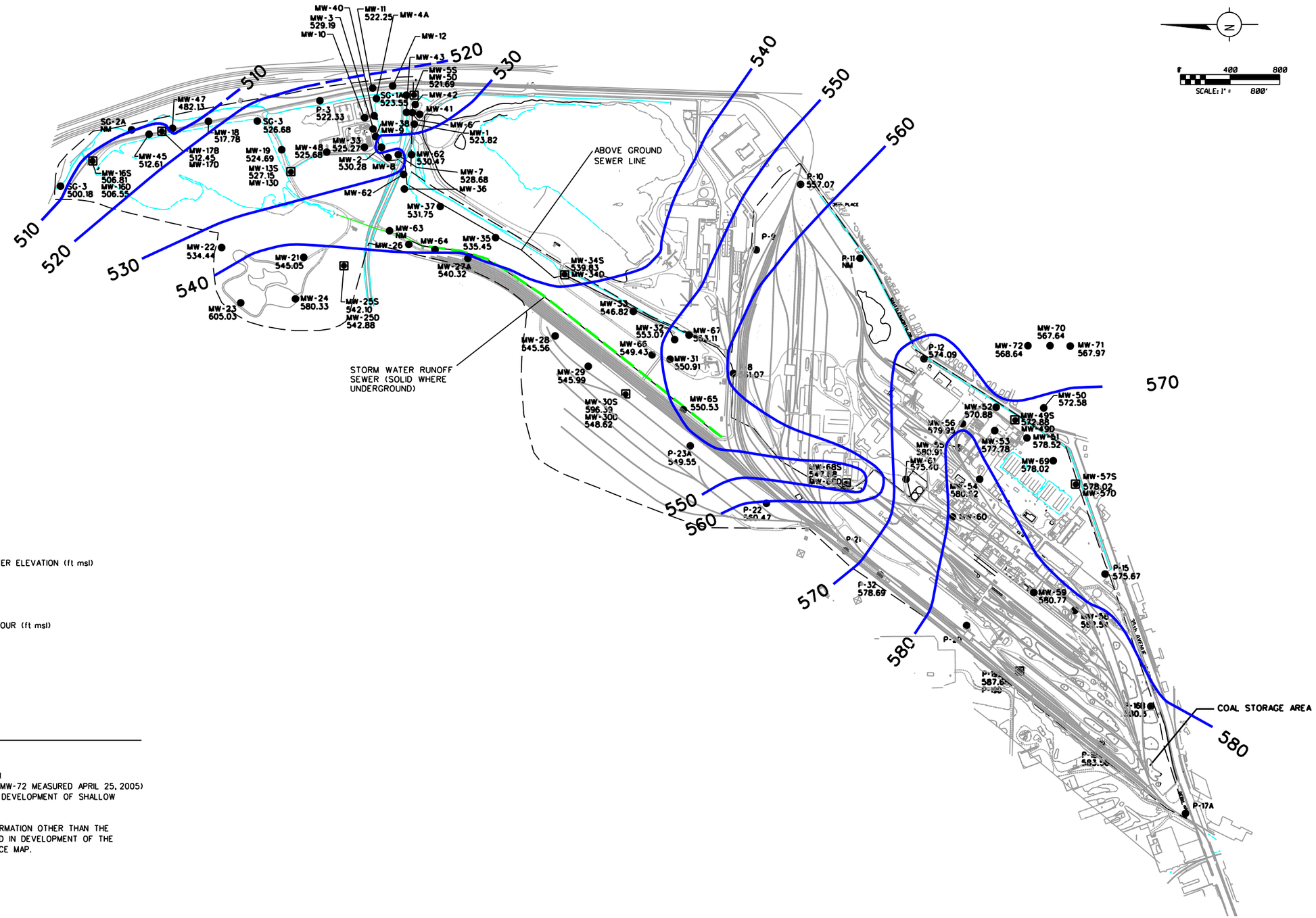
—— – —— - SHALLOW BEDROCK POTENTIOMETRIC SURFACE

– – – – – – - DEEP BEDROCK POTENTIOMETRIC SURFACE

NOT TO SCALE

FIGURE 1-8
CONCEPTUAL GROUNDWATER FLOW
Sloss Industries - Birmingham, Alabama Facility

CH2MHILL



LEGEND

- EXISTING RAILROADS
- EXISTING ROADS
- PROPERTY BOUNDARY
- P-31 SINGLE PIEZOMETERS
- P-1 PIEZOMETER COUPLET
- SG-3 STAFF GAGE
- MW-21 SINGLE MONITOR WELL
- MW-25 MONITOR WELL COUPLET
- 542.10 SHALLOW BEDROCK GROUNDWATER ELEVATION (ft msl)
- STORM-WATER DRAINAGE DITCH
- 500 GROUNDWATER ELEVATION CONTOUR (ft msl)
- NM NOT MEASURED

NOTES:

WATER LEVELS MEASURED ON JUNE 13, 2001
(EXCEPT WELLS MW-69, MW-70, MW-71, AND MW-72 MEASURED APRIL 25, 2005)
RESIDUUM MONITORING WELLS NOT USED IN DEVELOPMENT OF SHALLOW BEDROCK POTENTIOMETRIC SURFACE MAP.

MW-23 AND MW-24 ARE SCREENED IN A FORMATION OTHER THAN THE CONASAUGA LIMESTONE AND WERE NOT USED IN DEVELOPMENT OF THE SHALLOW BEDROCK POTENTIOMETRIC SURFACE MAP.

Figure 1–9
Shallow Bedrock Potentiometric Surface
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

CH2MHILL

SAN//CAD/327751_SLOSS/MASTERS/DGN/FIG1-9X_LAYOUT1.DGN
23-JUN-2005

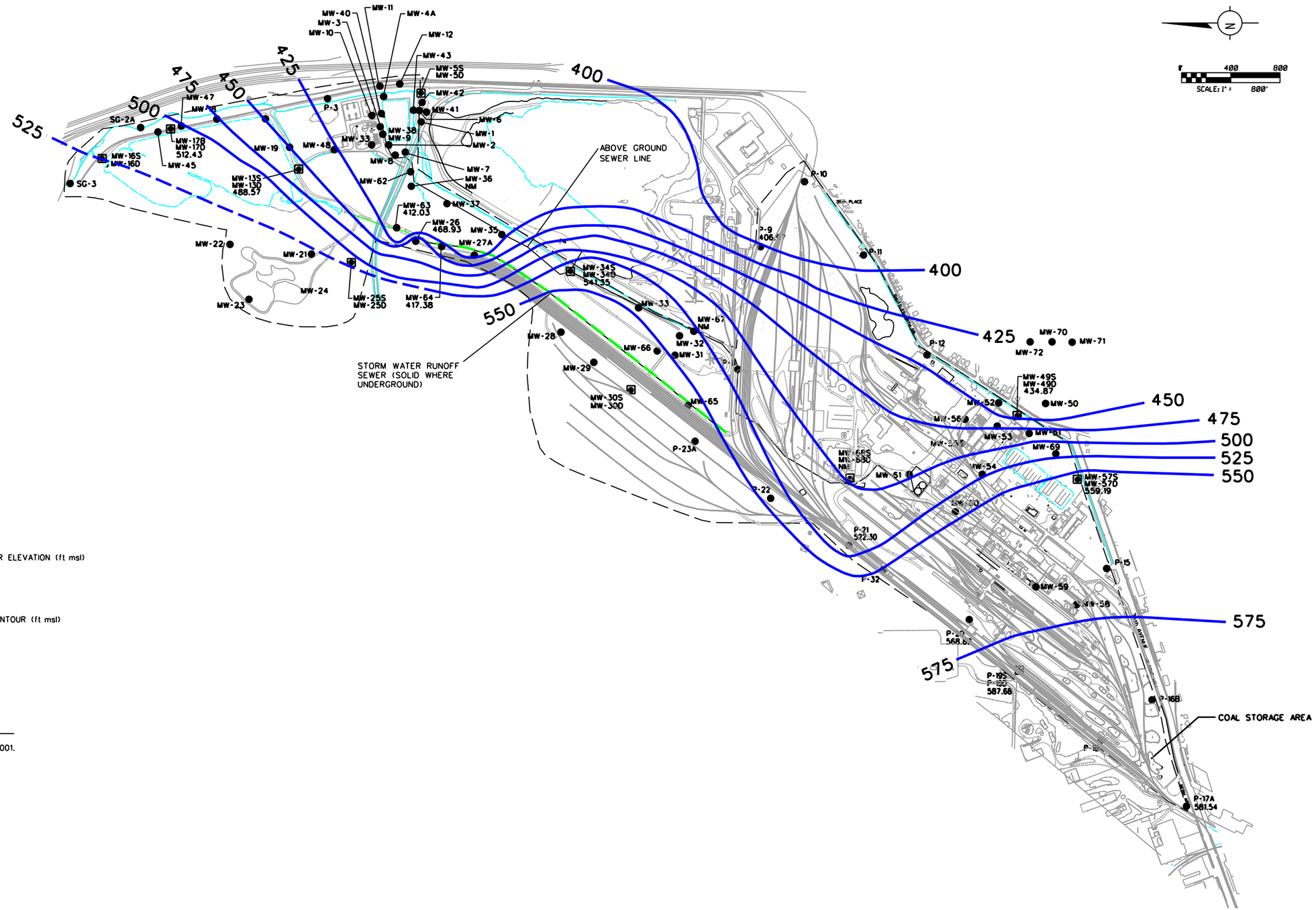
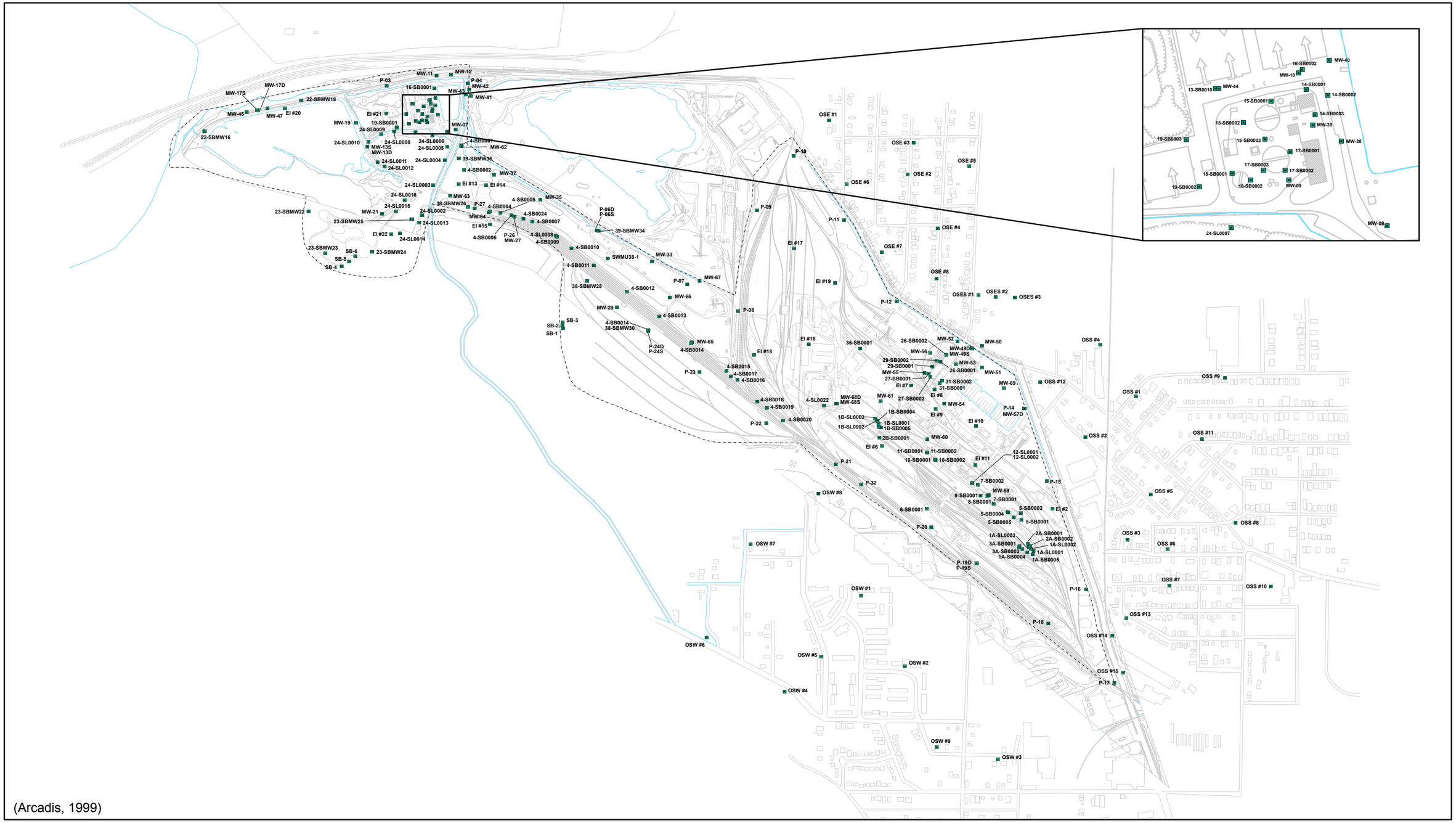


Figure 1–10
Deep Bedrock Potentiometric Surface
Sloss Industries, Birmingham, Alabama

(Arcadis, 1999)

CH2MHILL

SAN//CAD/327751_SLOSS/MASTERS/DGN/FIG1-9X_LAYOUT1.DGN
23-JUN-2005



(Arcadis, 1999)

Legend

SB-5 Soil Sampling Station

Basemap

Water

Property Boundary

N

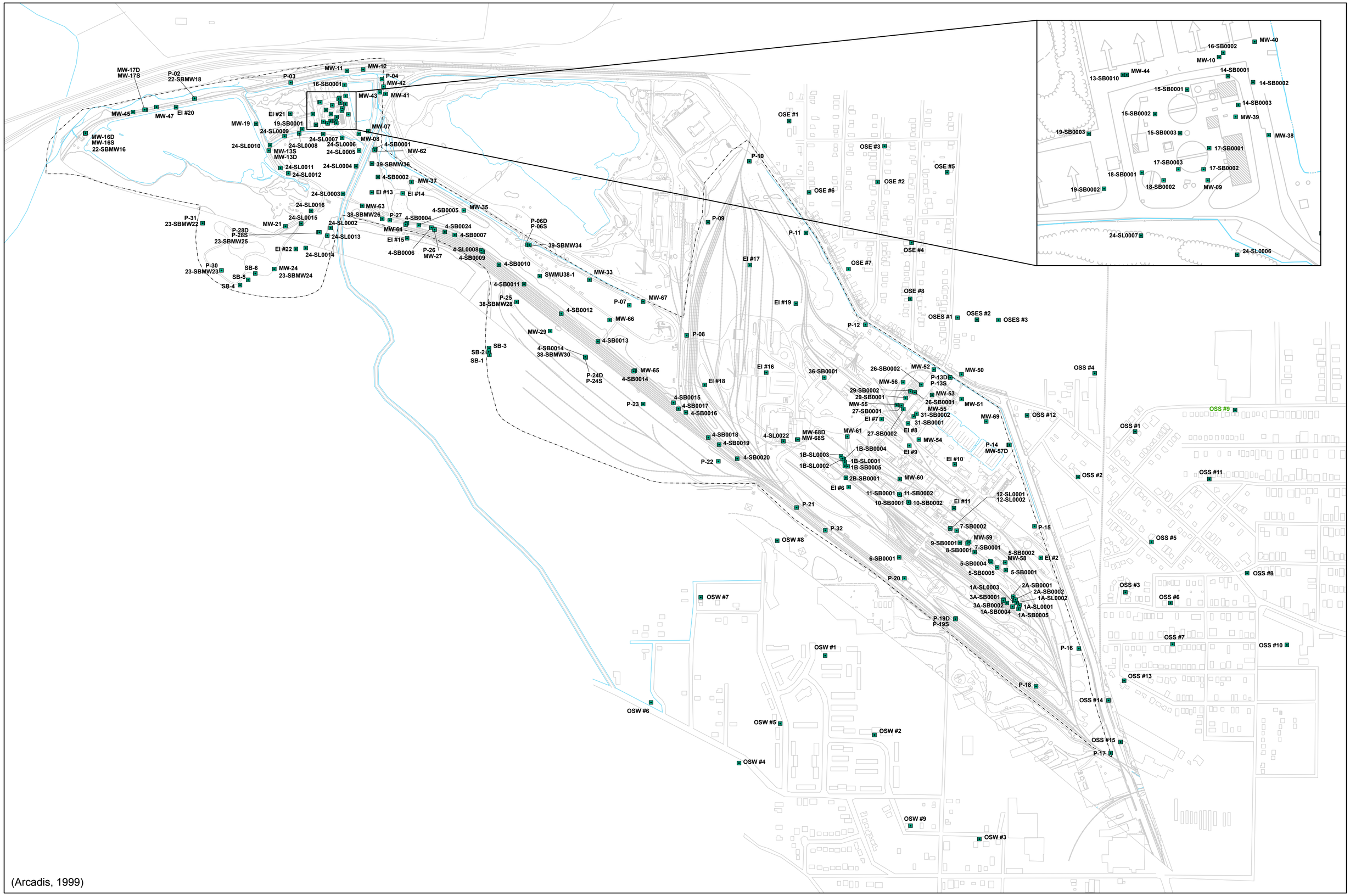
900 450 0 900 Feet

Figure 2-1
Soil Sampling Locations
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\Soil_Locations_11X17.mxd

DATE: 06/29/2005



(Arcadis, 1999)

Legend

SB-5 Soil Sampling Station

Basemap

Water

Property Boundary

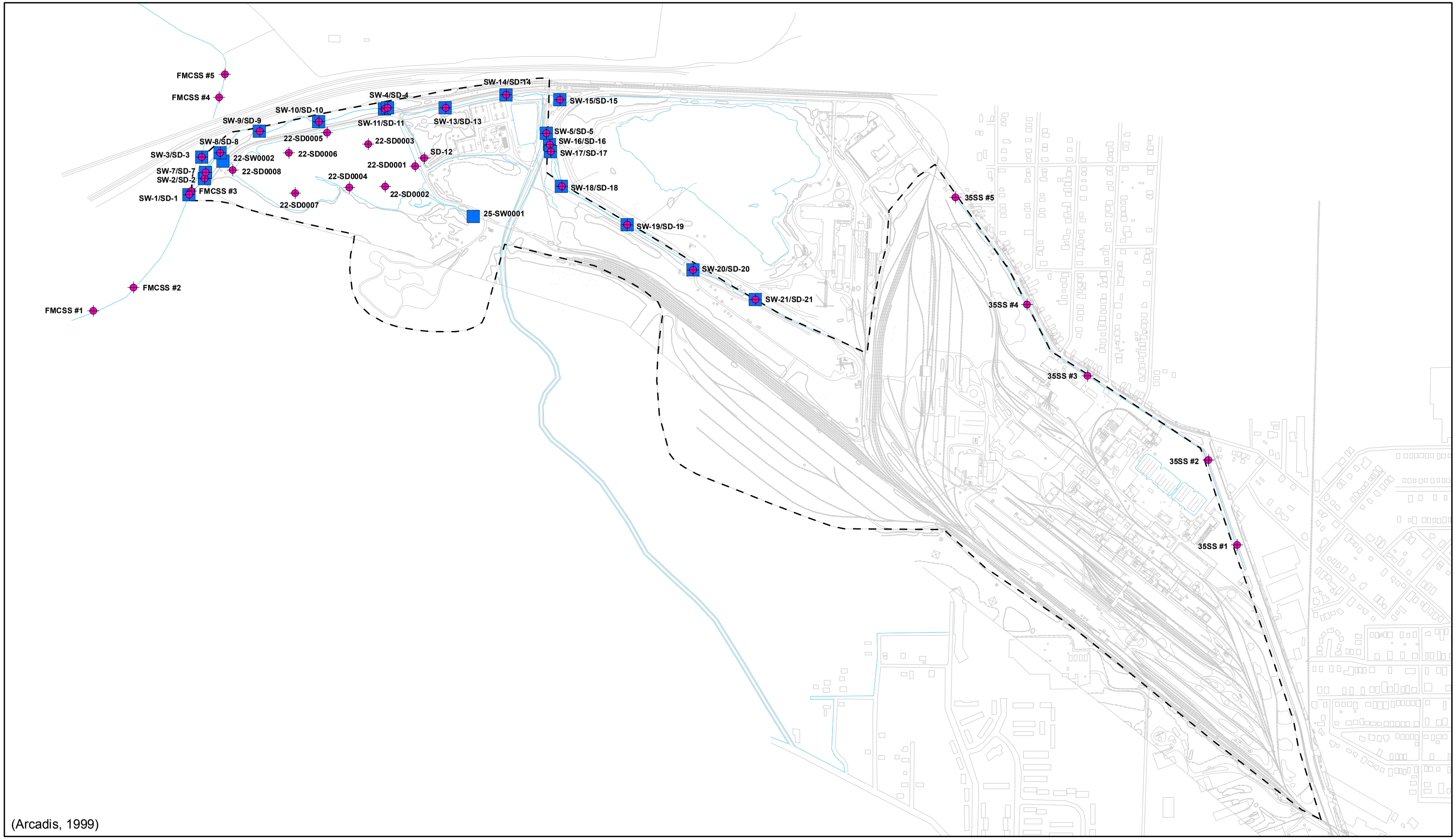
N

550 275 0 550 1,100 Feet

Figure 2-1
Soil Sampling Locations
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\Soil_Locations_Csize.mxd DATE: 06/20/2005



(Arcadis, 1999)

Legend

SD-1 Sediment Sampling Location

SW-1 Surface Water Sampling Location

Basemap

Water

Property Boundary

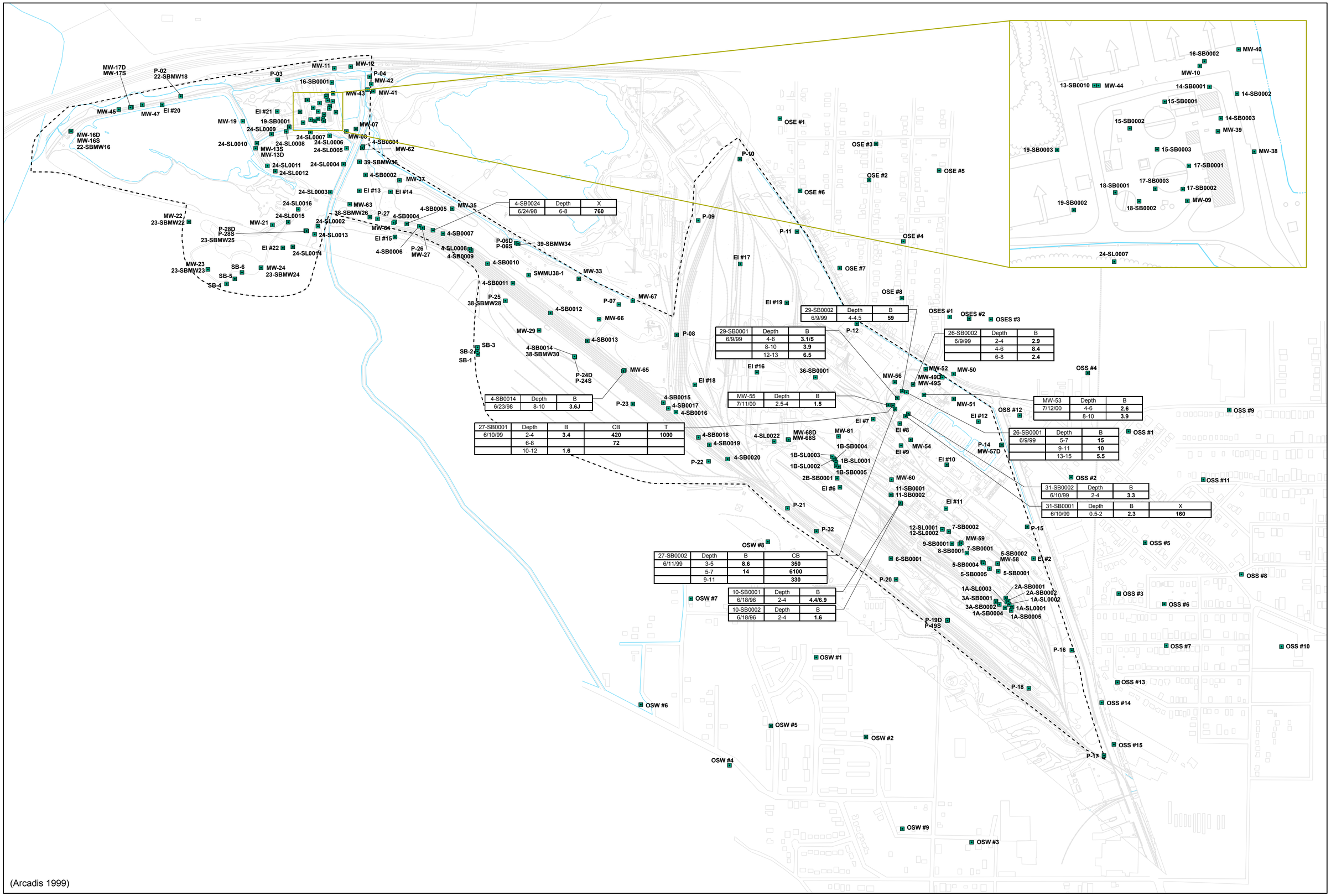
N

750 375 0 750 Feet

Figure 2-2
Surface Water and Sediment Sampling Locations
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD's\W&SD_Locations_11x17.mxd DATE: 06/29/2005



4-SB0024	Depth	X
6/24/98	6-8	**760**

29-SB0002	Depth	B
6/9/99	4-4.5	**59**

29-SB0001	Depth	B
6/9/99	4-6	**3.1/5**
	8-10	**3.9**
	12-13	**6.5**

26-SB0002	Depth	B
6/9/99	2-4	**2.9**
	4-6	**8.4**
	6-8	**2.4**

4-SB0014	Depth	B
6/23/98	8-10	**3.6J**

MW-55	Depth	B
7/11/00	2.5-4	**1.5**

MW-53	Depth	B
7/12/00	4-6	**2.6**
	8-10	**3.9**

27-SB0001	Depth	B	CB	T
6/10/99	2-4	**3.4**	**420**	**1000**
	6-8		**72**	
	10-12	**1.6**		

26-SB0001	Depth	B
6/9/99	5-7	**15**
	9-11	**10**
	13-15	**5.5**

31-SB0002	Depth	B
6/10/99	2-4	**3.3**

31-SB0001	Depth	B	X
6/10/99	0.5-2	**2.3**	**160**

27-SB0002	Depth	B	CB
6/11/99	3-5	**8.6**	**350**
	5-7	**14**	**6100**
	9-11		**330**

10-SB0001	Depth	B
6/18/96	2-4	**4.4/6.9**

10-SB0002	Depth	B
6/18/96	2-4	**1.6**

(Arcadis 1999)

Legend

- Soil Boring Location
- Basemap
- Water
- Property Boundary

B - Benzene
CB - Chlorobenzene
T - Toluene
X - Xylenes

Notes:
All soil samples collected from 0-2 ft bgs unless otherwise noted
(24-SL0003 through 24-SL0016 collected 0-1 ft bgs)
All results in mg/kg
Onsite soil results compared to industrial soil PRGs.
Offsite soil results compared to residential soil PRGs.
A **bold** result indicates an exceeding of the comparison criteria.
A blank indicates the analyte was below the screeining level at that depth interval.

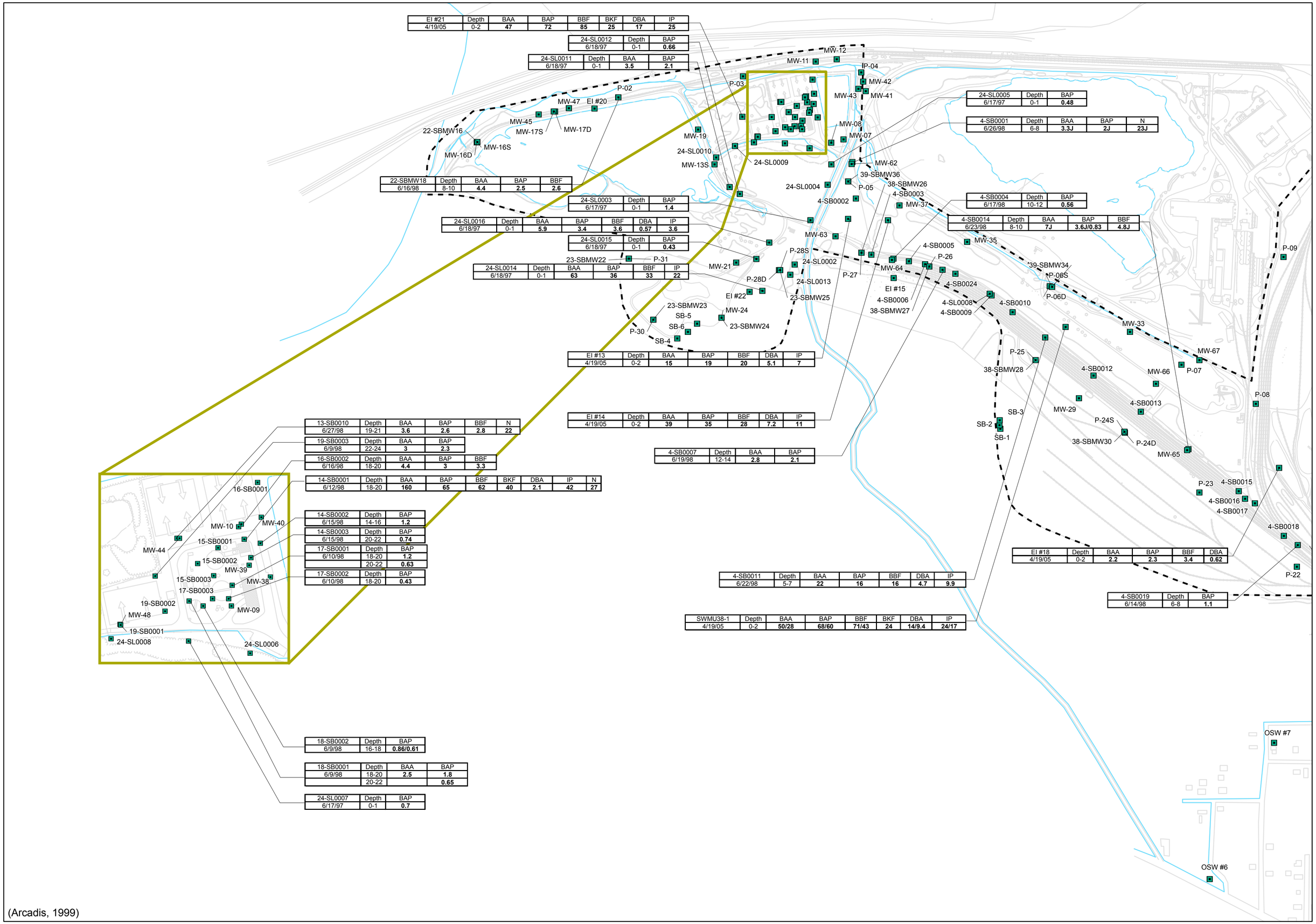
N

550 275 0 550 1,100
Feet

Figure 4-1
Comparison of Detected VOCs in Soil to Risk Based Screening Criteria
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\SO_Onsite_VOCs.mxd



(Arcadis, 1999)

Legend

EI #1 — Soil Sample Location

Basemap

Water

Property Boundary

Notes:
BAA - Benzo(a)anthracene
BAP - Benzo(a)pyrene
BBF - Benzo(b)fluoranthene
BKF - Benzo(k)fluoranthene
DBA - Dibenzo(a,h)anthracene
IP - Indeno(1,2,3-c,d)pyrene
N - Naphthalene
All soil samples collected from 0-2 ft bgs unless otherwise noted

(24-SL0003 through 24-SL0016 collected 0-1 ft bgs)
All results in mg/kg
Onsite soil results compared to industrial soil PRGs.
Offsite soil results compared to residential soil PRGs.
A bold result indicates an exceeding of the comparison criteria.
A blank indicates the analyte was below the screeining level at that depth interval.
J - The result is below the quantitiation limit.
The reported value is an estimate.

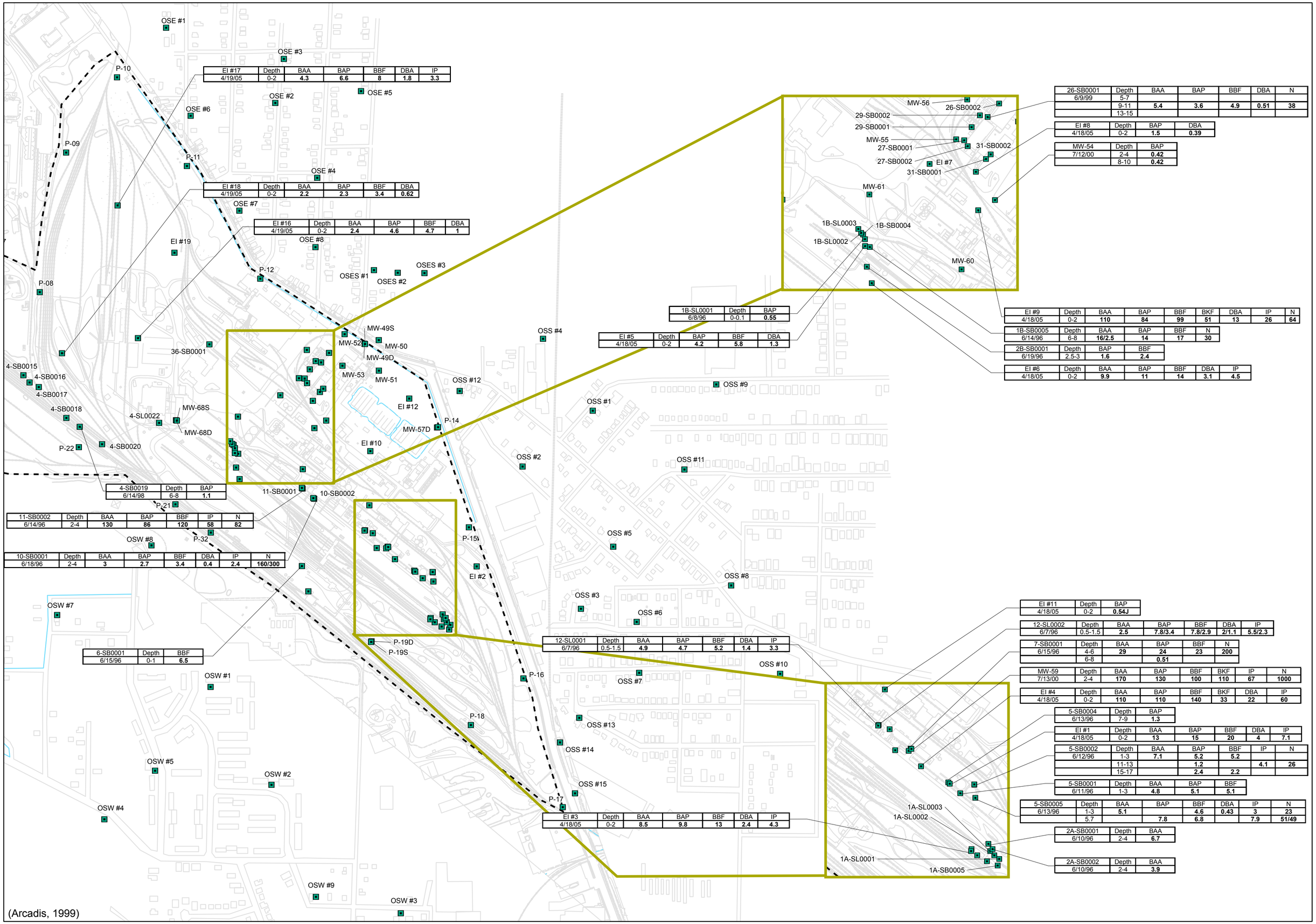
N

850 425 0 850 Feet

Figure 4-2-A
Comparison of Detected SVOCs in Soil to Risk Based Screening Criteria and 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\SO_Onsite_SVOC_4-2-A.mxd DATE: 6/29/2005



EI #17	Depth	BAA	BAP	BBF	DBA	IP
4/19/05	0-2	**4.3**	**6.6**	**8**	**1.8**	**3.3**

EI #18	Depth	BAA	BAP	BBF	DBA
4/19/05	0-2	**2.2**	**2.3**	**3.4**	**0.62**

EI #16	Depth	BAA	BAP	BBF	DBA
4/19/05	0-2	**2.4**	**4.6**	**4.7**	**1**

4-SB0019	Depth	BAP
6/14/98	6-8	**1.1**

11-SB0002	Depth	BAA	BAP	BBF	IP	N
6/14/96	2-4	**130**	**86**	**120**	**58**	**82**

10-SB0001	Depth	BAA	BAP	BBF	DBA	IP	N
6/18/96	2-4	**3**	**2.7**	**3.4**	**0.4**	**2.4**	**160/300**

6-SB0001	Depth	BBF
6/15/96	0-1	**6.5**

26-SB0001	Depth	BAA	BAP	BBF	DBA	N
6/9/99	5-7					
	9-11	**5.4**	**3.6**	**4.9**	**0.51**	**38**
	13-15					

EI #8	Depth	BAP	DBA
4/18/05	0-2	**1.5**	**0.39**

MW-54	Depth	BAP
7/12/00	2-4	**0.42**
	8-10	**0.42**

EI #9	Depth	BAA	BAP	BBF	BKF	DBA	IP	N
4/18/05	0-2	**110**	**84**	**99**	**51**	**13**	**26**	**64**

1B-SB0005	Depth	BAA	BAP	BBF	N
6/14/96	6-8	**16/2.5**	**14**	**17**	**30**

2B-SB0001	Depth	BAP	BBF
6/19/96	2.5-3	**1.6**	**2.4**

EI #6	Depth	BAA	BAP	BBF	DBA	IP
4/18/05	0-2	**9.9**	**11**	**14**	**3.1**	**4.5**

1B-SL0001	Depth	BAP
6/8/96	0-0.1	**0.55**

EI #5	Depth	BAP	BBF	DBA
4/18/05	0-2	**4.2**	**5.8**	**1.3**

12-SL0001	Depth	BAA	BAP	BBF	DBA	IP
6/7/96	0.5-1.5	**4.9**	**4.7**	**5.2**	**1.4**	**3.3**

EI #3	Depth	BAA	BAP	BBF	DBA	IP
4/18/05	0-2	**8.5**	**9.8**	**13**	**2.4**	**4.3**

EI #11	Depth	BAP
4/18/05	0-2	**0.54J**

12-SL0002	Depth	BAA	BAP	BBF	DBA	IP
6/7/96	0.5-1.5	**2.5**	**7.8/3.4**	**7.8/2.9**	**2/1.1**	**5.5/2.3**

7-SB0001	Depth	BAA	BAP	BBF	N
6/15/96	4-6	**29**	**24**	**23**	**200**
	6-8		**0.51**		

MW-59	Depth	BAA	BAP	BBF	BKF	IP	N
7/13/00	2-4	**170**	**130**	**100**	**110**	**67**	**1000**

EI #4	Depth	BAA	BAP	BBF	BKF	DBA	IP
4/18/05	0-2	**110**	**110**	**140**	**33**	**22**	**60**

5-SB0004	Depth	BAP
6/13/96	7-9	**1.3**

EI #1	Depth	BAA	BAP	BBF	DBA	IP
4/18/05	0-2	**13**	**15**	**20**	**4**	**7.1**

5-SB0002	Depth	BAA	BAP	BBF	IP	N
6/12/96	1-3	**7.1**	**5.2**	**5.2**		
	11-13		**1.2**		**4.1**	**26**
	15-17		**2.4**	**2.2**		

5-SB0001	Depth	BAA	BAP	BBF
6/11/96	1-3	**4.8**	**5.1**	**5.1**

5-SB0005	Depth	BAA	BAP	BBF	DBA	IP	N
6/13/96	1-3	**5.1**		**4.6**	**0.43**	**3**	**23**
	5.7		**7.8**	**6.8**		**7.9**	**51/49**

2A-SB0001	Depth	BAA
6/10/96	2-4	**6.7**

2A-SB0002	Depth	BAA
6/10/96	2-4	**3.9**

(Arcadis, 1999)

Legend

EI #1 Soil Sample Location

Basemap

Water

Property Boundary

Notes:
BAA - Benzo(a)anthracene
BAP - Benzo(a)pyrene
BBF - Benzo(b)fluoranthene
BKF - Benzo(k)fluoranthene
DBA - Dibenzo(a,h)anthracene
IP - Indeno(1,2,3-c,d)pyrene
N - Naphthalene
All soil samples collected from 0-2 ft bgs unless otherwise noted

(24-SL0003 through 24-SL0016 collected 0-1 ft bgs)
All results in mg/kg
Onsite soil results compared to industrial soil PRGs.
Offsite soil results compared to residential soil PRGs.
A bold result indicates an exceeding of the comparison criteria.
A blank indicates the analyte was below the screeining level at that depth interval.
J - The result is below the quantitiation limit.
The reported value is an estimate.

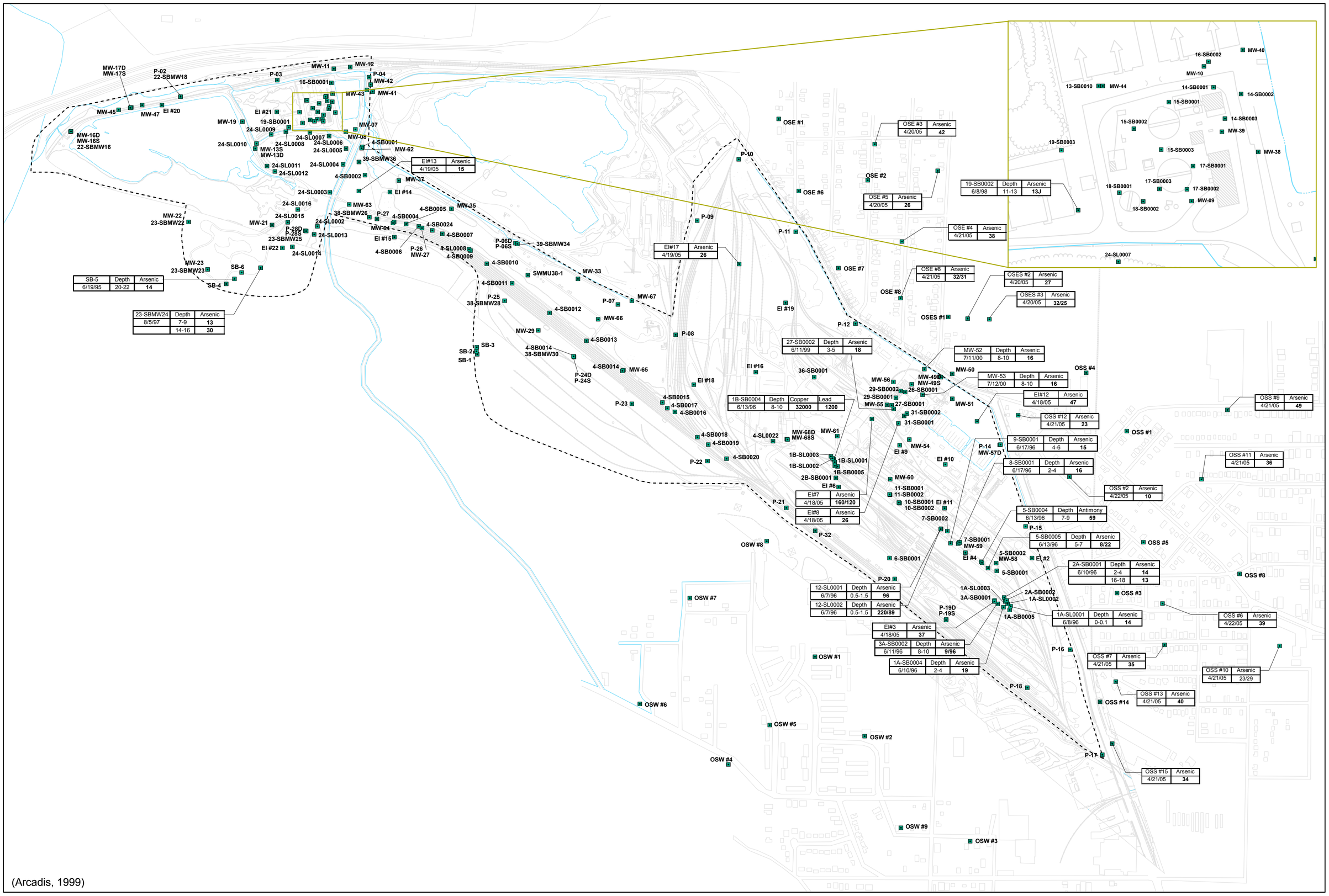
N

850 425 0 850 Feet

Figure 4-2-B
Comparison of Detected SVOCs in Soil to Risk Based Screening Criteria and 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\SO_Onsite_SVOC_4-2-B.mxd DATE: 6/29/2005



SB-5	Depth	Arsenic
6/19/95	20-22	**14**

23-SBMW24	Depth	Arsenic
8/5/97	7-9	**13**
	14-16	**30**

EI#13	Arsenic
4/19/05	**15**

EI#17	Arsenic
4/19/05	**26**

OSE #3	Arsenic
4/20/05	**42**

OSE #5	Arsenic
4/20/05	**26**

OSE #4	Arsenic
4/21/05	**38**

OSE #8	Arsenic
4/21/05	**32/31**

OSES #2	Arsenic
4/20/05	**27**

OSES #3	Arsenic
4/20/05	**32/25**

19-SB0002	Depth	Arsenic
6/8/98	11-13	**13J**

27-SB0002	Depth	Arsenic
6/11/99	3-5	**18**

MW-52	Depth	Arsenic
7/11/00	8-10	**16**

MW-53	Depth	Arsenic
7/12/00	8-10	**16**

EI#12	Arsenic
4/18/05	**47**

OSS #12	Arsenic
4/21/05	**23**

OSS #9	Arsenic
4/21/05	**49**

1B-SB0004	Depth	Copper	Lead
6/13/96	8-10	**32000**	**1200**

9-SB0001	Depth	Arsenic
6/17/96	4-6	**15**

8-SB0001	Depth	Arsenic
6/17/96	2-4	**16**

OSS #11	Arsenic
4/21/05	**36**

OSS #2	Arsenic
4/22/05	**10**

EI#7	Arsenic
4/18/05	**160/120**

EI#8	Arsenic
4/18/05	**26**

5-SB0004	Depth	Antimony
6/13/96	7-9	**59**

5-SB0005	Depth	Arsenic
6/13/96	5-7	**8/22**

2A-SB0001	Depth	Arsenic
6/10/96	2-4	**14**
	16-18	**13**

12-SL0001	Depth	Arsenic
6/7/96	0.5-1.5	**96**

12-SL0002	Depth	Arsenic
6/7/96	0.5-1.5	**220/89**

1A-SL0001	Depth	Arsenic
6/8/96	0-0.1	**14**

OSS #6	Arsenic
4/22/05	**39**

EI#3	Arsenic
4/18/05	**37**

3A-SB0002	Depth	Arsenic
6/11/96	8-10	**9/96**

1A-SB0004	Depth	Arsenic
6/10/96	2-4	**19**

OSS #7	Arsenic
4/21/05	**35**

OSS #10	Arsenic
4/21/05	**23/29**

OSS #13	Arsenic
4/21/05	**40**

OSS #15	Arsenic
4/21/05	**34**

(Arcadis, 1999)

Legend

MW-19 — Soil Boring Location

Basemap

Water

Property Boundary

Notes:
Arsenic values shown where they exceed 2X background concentrations for surface soil (25.32 mg/kg) and subsurface soil (12.46 mg/kg).
All results in mg/kg
Onsite soil results compared to industrial soil PRG.
Offsite soil results compared to residential soil PRGs.
A bold result indicates an exceeding of the comparison criteria.
A blank indicates the analyte was below the screeining level at that depth interval.
J - The result is below the quantitiation limit. The reported value is an estimate.
SB-1 through SB-6 are background soil sampling locations.

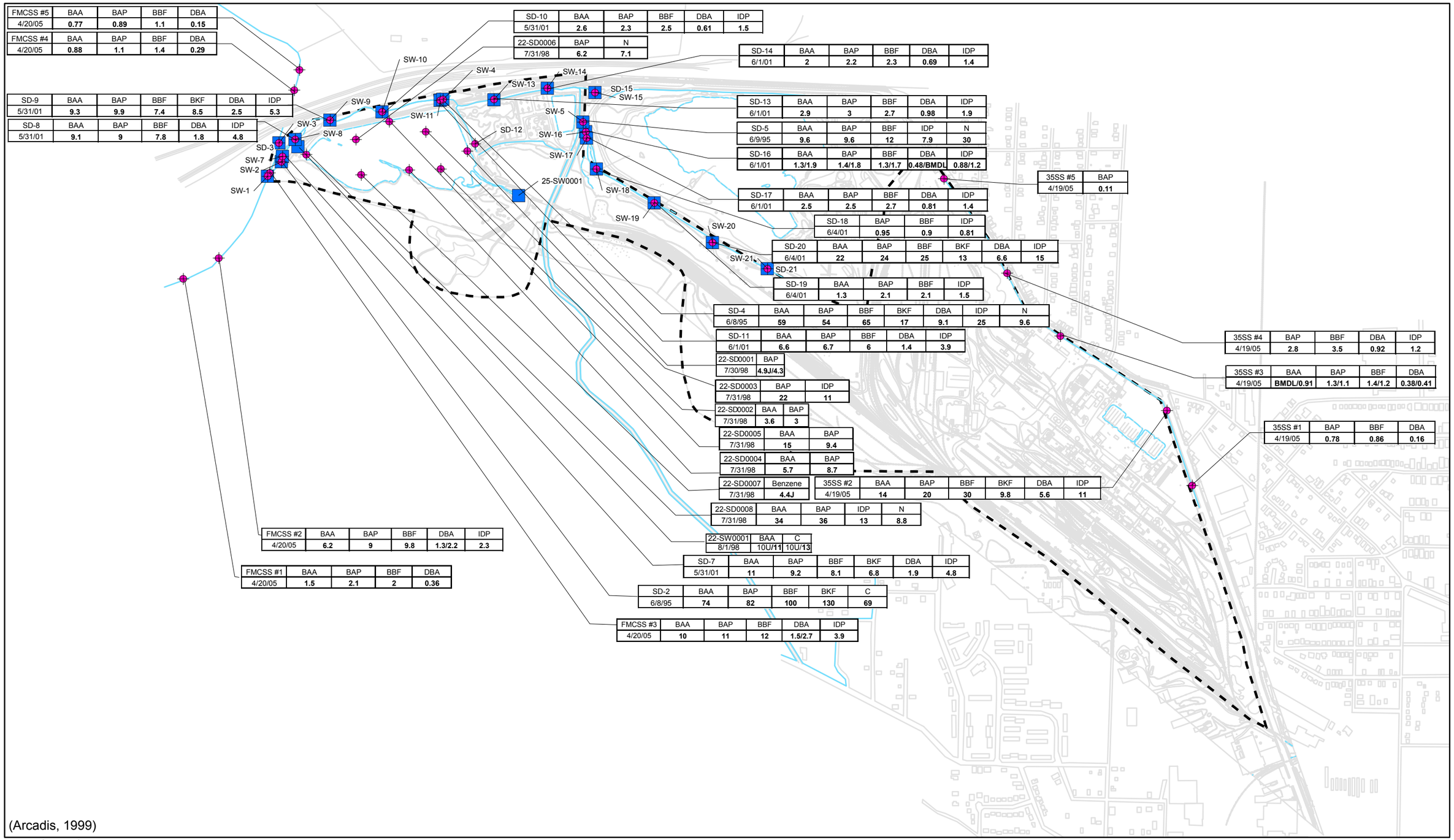
N

550 275 0 550 1,100
Feet

Figure 4-3
Metals Exceeding 2X Surface or Subsurface Background Concentration
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\SO_Onsite_Metals(ver2).mxd DATE: 06/24/2005



FMCSS #5	BAA	BAP	BBF	DBA
4/20/05	0.77	0.89	1.1	0.15

FMCSS #4	BAA	BAP	BBF	DBA
4/20/05	0.88	1.1	1.4	0.29

SD-9	BAA	BAP	BBF	BKF	DBA	IDP
5/31/01	9.3	9.9	7.4	8.5	2.5	5.3

SD-8	BAA	BAP	BBF	DBA	IDP
5/31/01	9.1	9	7.8	1.8	4.8

SD-10	BAA	BAP	BBF	DBA	IDP
5/31/01	2.6	2.3	2.5	0.61	1.5

22-SD0006	BAP	N
7/31/98	6.2	7.1

SD-14	BAA	BAP	BBF	DBA	IDP
6/1/01	2	2.2	2.3	0.69	1.4

SD-13	BAA	BAP	BBF	DBA	IDP
6/1/01	2.9	3	2.7	0.98	1.9

SD-5	BAA	BAP	BBF	IDP	N
6/9/95	9.6	9.6	12	7.9	30

SD-16	BAA	BAP	BBF	DBA	IDP
6/1/01	1.3/1.9	1.4/1.8	1.3/1.7	0.48/BMDL	0.88/1.2

35SS #5	BAP
4/19/05	0.11

SD-17	BAA	BAP	BBF	DBA	IDP
6/1/01	2.5	2.5	2.7	0.81	1.4

SD-18	BAP	BBF	IDP
6/4/01	0.95	0.9	0.81

SD-20	BAA	BAP	BBF	BKF	DBA	IDP
6/4/01	22	24	25	13	6.6	15

SD-19	BAA	BAP	BBF	IDP
6/4/01	1.3	2.1	2.1	1.5

SD-4	BAA	BAP	BBF	BKF	DBA	IDP	N
6/8/95	59	54	65	17	9.1	25	9.6

SD-11	BAA	BAP	BBF	DBA	IDP
6/1/01	6.6	6.7	6	1.4	3.9

22-SD0001	BAP
7/30/98	4.9J/4.3

22-SD0003	BAP	IDP
7/31/98	22	11

22-SD0002	BAA	BAP
7/31/98	3.6	3

22-SD0005	BAA	BAP
7/31/98	15	9.4

22-SD0004	BAA	BAP
7/31/98	5.7	8.7

22-SD0007	Benzene
7/31/98	4.4J

35SS #2	BAA	BAP	BBF	BKF	DBA	IDP
4/19/05	14	20	30	9.8	5.6	11

35SS #4	BAP	BBF	DBA	IDP
4/19/05	2.8	3.5	0.92	1.2

35SS #3	BAA	BAP	BBF	DBA
4/19/05	BMDL/0.91	1.3/1.1	1.4/1.2	0.38/0.41

35SS #1	BAP	BBF	DBA
4/19/05	0.78	0.86	0.16

22-SD0008	BAA	BAP	IDP	N
7/31/98	34	36	13	8.8

FMCSS #2	BAA	BAP	BBF	DBA	IDP
4/20/05	6.2	9	9.8	1.3/2.2	2.3

22-SW0001	BAA	C
8/1/98	10U/11	10U/13

FMCSS #1	BAA	BAP	BBF	DBA
4/20/05	1.5	2.1	2	0.36

SD-7	BAA	BAP	BBF	BKF	DBA	IDP
5/31/01	11	9.2	8.1	6.8	1.9	4.8

SD-2	BAA	BAP	BBF	BKF	C
6/8/95	74	82	100	130	69

FMCSS #3	BAA	BAP	BBF	DBA	IDP
4/20/05	10	11	12	1.5/2.7	3.9

Legend

- SD-01 Sediment Sample Location
- SW-01 Surface Water Sample Location
- Basemap
- Water
- Property Boundary

Notes:
BAP-Benzo(a)pyrene
BAA - Benzo(a)anthracene
IDP - Indeno(1,2,3-cd)pyrene
N - Naphthalene
DBA - Dibenzo(a,h)anthracene
BBF - Benzo(b)fluoranthene
BKF - Benzo(k)fluroanthene
C - Chrysene

Notes:
Sediment concentrations reported as mg/kg
Surface water concentrations reported as ug/L
J - Result is below the quantitiation limit and the reported value is an estimate.
Surface water results exceed EPA Region 9 PRGs for Ambient Water Quality Criteria.
Sediment results shown exceed EPA Region 9 PRGs for Residential Soil.

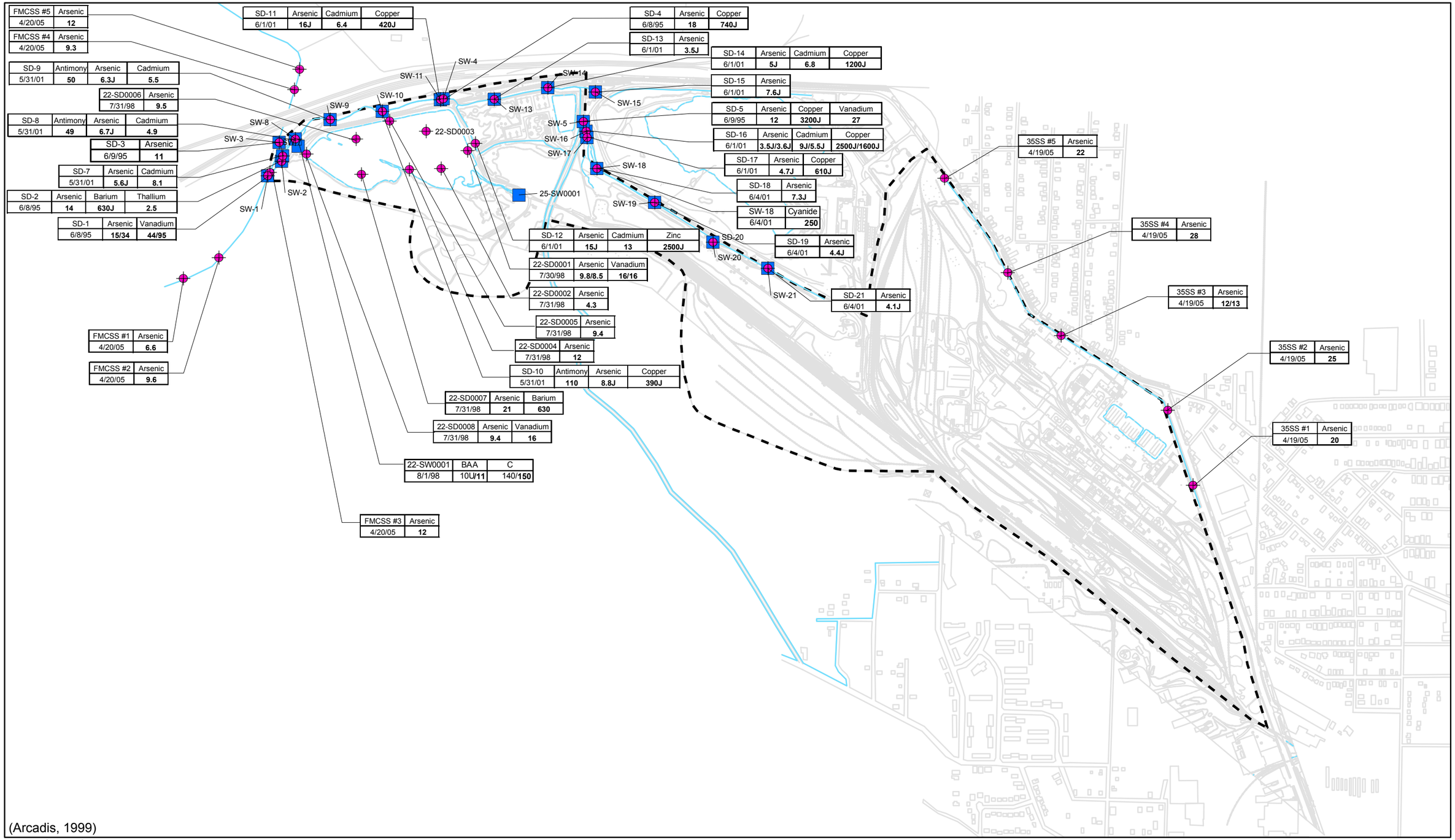
N

850 425 0 850 1,700 2,550 Feet

Figure 5-1
VOCs and SVOCs Exceeding Comparison Criteria in Sediment and Surface Water
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\SED_COAL_TAR.mxd DATE: 06/29/2005



(Arcadis, 1999)

Legend

- SD-01 Sediment Sample Location
- SW-01 Surface Water Sample Location
- Basemap
- Water
- Property Boundary

Notes:
Sediment concentrations reported as mg/kg
Surface water concentrations reported as ug/L
J - Result is below the quantitiation limit and the reported value is an estimate.
Surface water results exceed EPA Region 9 PRGs for Ambient Water Quality Criteria.
Sediment results shown exceed EPA Region 9 PRGs for Residential Soil.

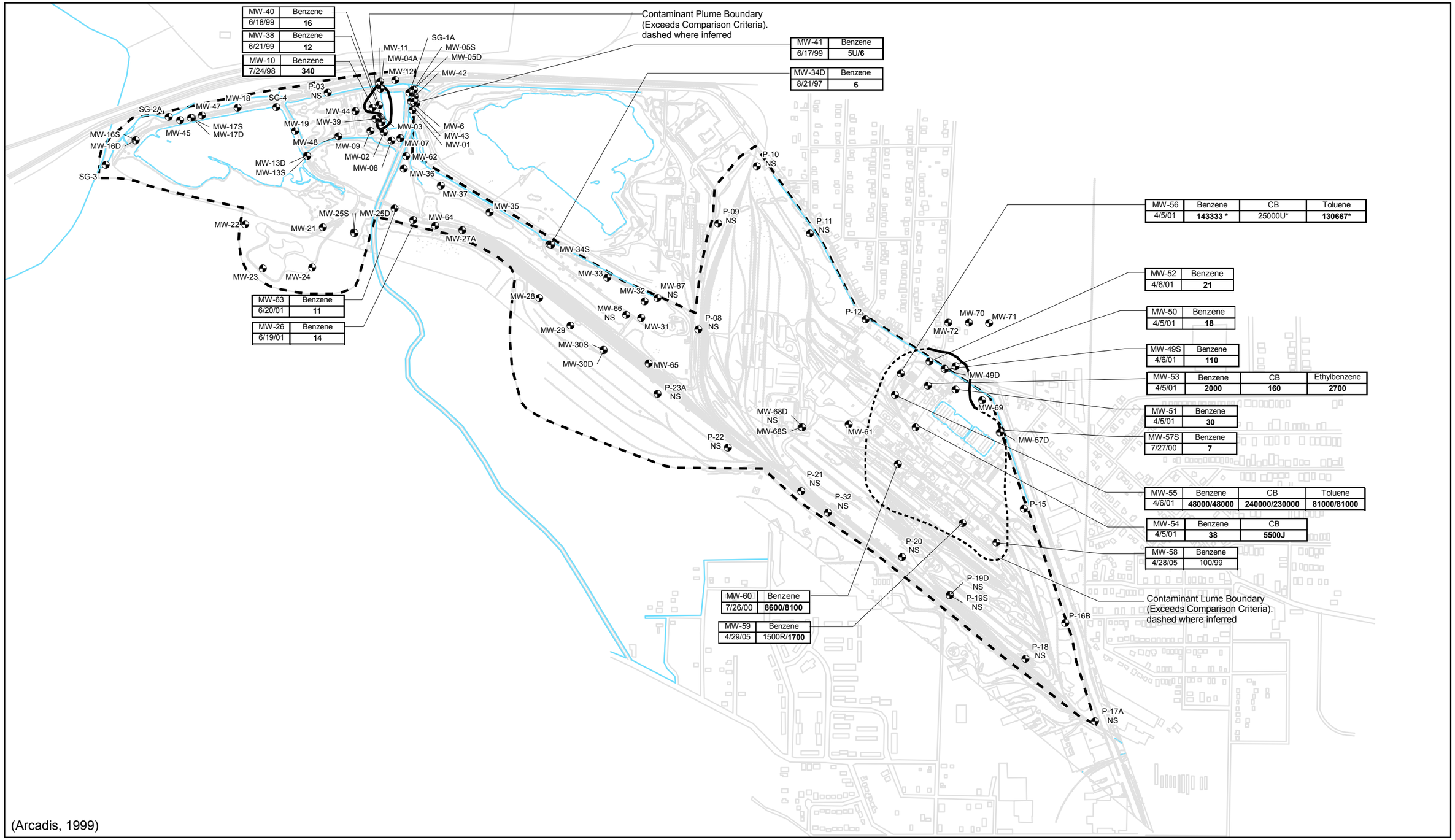
N

850 425 0 850 1,700 2,550 Feet

Figure 5-2
Metals Exceeding Comparison Criteria in Sediment and Surface Water
Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\SED_Metal.mxd DATE: 06/29/2005



(Arcadis, 1999)

Legend

- MW-01 Monitoring Well
- Basemap
- Water
- Property Boundary
- Plume Boundary

Notes:
CB - Chlorobenzene
NS - not sampled for VOCs or only sampled as Investigation Derived Waste
U - Result was below method detection limit.
J - Result is below the quantitiation limit and the reported value is an estimate.
All results reported as ug/L.
*Well MW-56 was sampled at the top, middle, and bottom of the screen in April 2001.
The average of these three results has been used to develop this figure.
Only most current data shown for each location on the figure. Historical detections for each analyte which exceeds its comparison criteria are contained in Table 6-1.

N

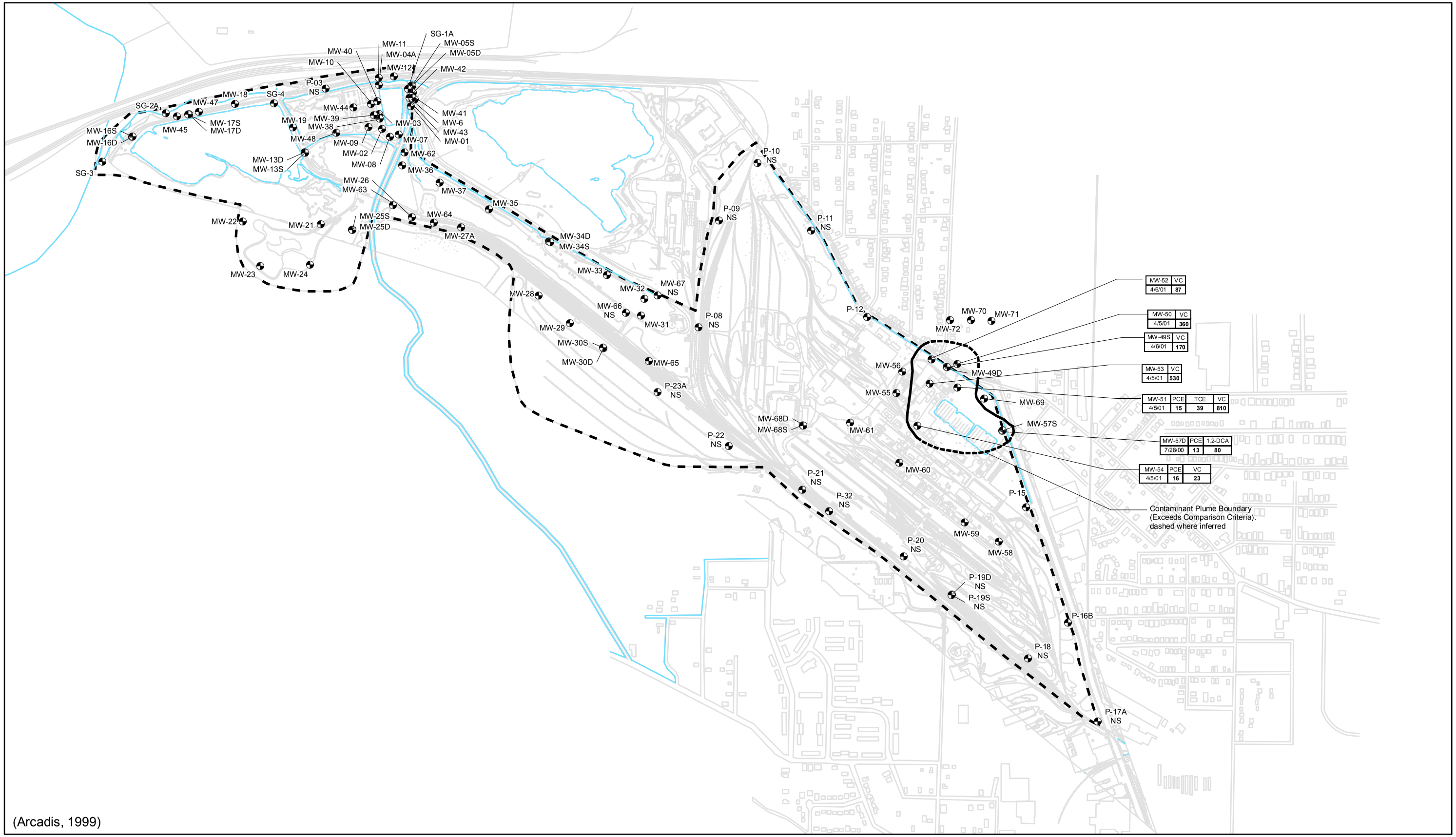
850 425 0 850 1,700 2,550 Feet

Figure 6-1
Distribution of Petroleum Hydrocarbons and Related Compounds Exceeding Comparison Criteria in Groundwater

Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\GW_Petro.mxd DATE: 06/23/2005



(Arcadis, 1999)

Legend

MW-01 Monitoring Well

Basemap

Water

Property Boundary

Plume Boundary

Notes:
NS - not sampled for VOCs or only sampled as Investigation Derived Waste
VC - Vinyl chloride
PCE - Tetrachloroethene
TCE - Trichloroethene
DCE - Dichloroethene
DCA - Dichloroethane
All results reported as ug/L.

*Well MW-56 was sampled at the top, middle, and bottom of the screen in April 2001. The average of these three results has been used to develop this figure. Only most current data shown for each location on the figure. Historical detections for each analyte which exceeds its comparison criteria are contained in Table 6-1.

N

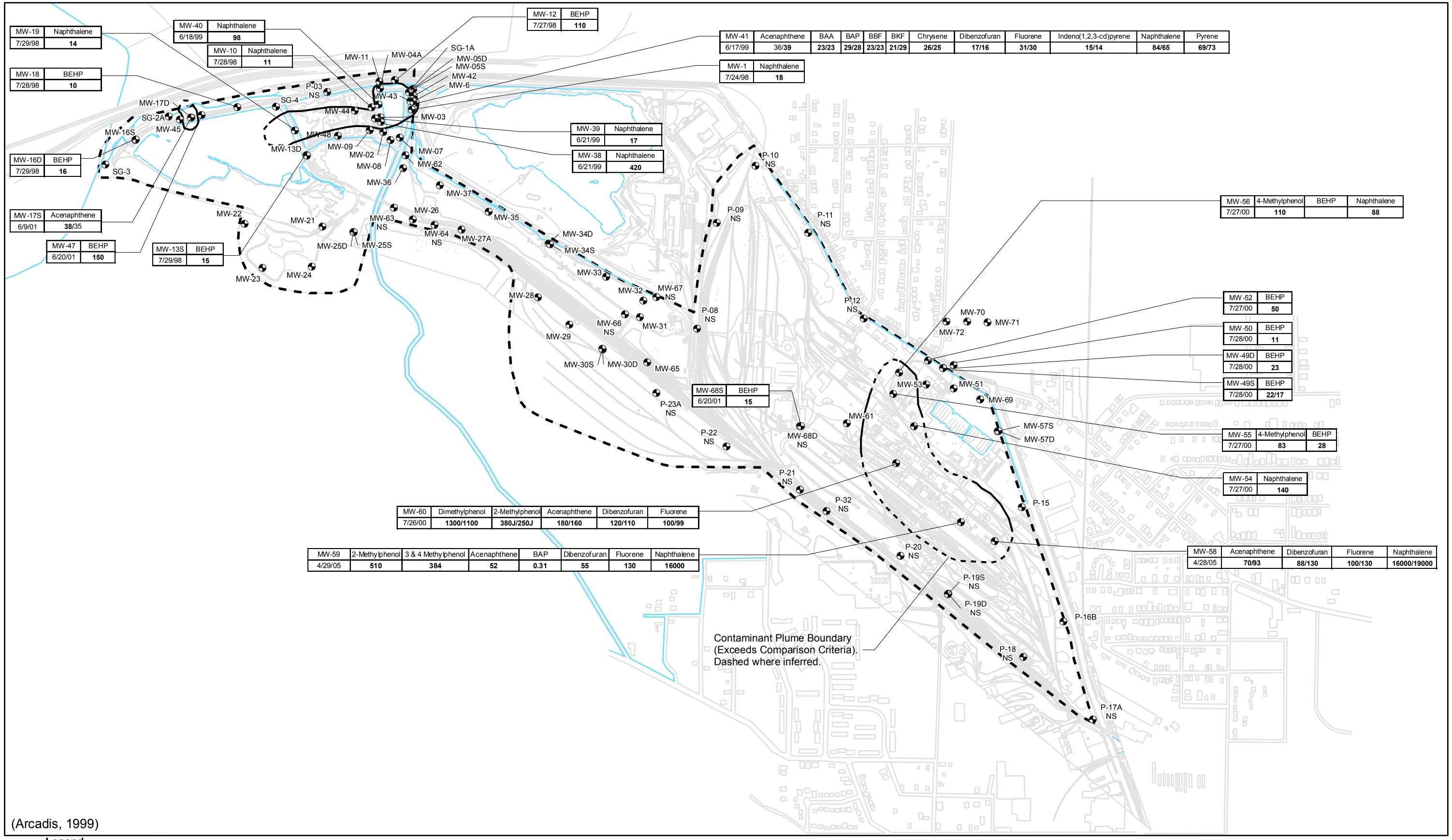
850 425 0 850 1,700 2,550 Feet

Figure 6-2
Distribution of Chlorinated Solvents and Related Compounds Exceeding Comparison Criteria in Groundwater

Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\GW_Chlorinated.mxd DATE: 06/23/2005



(Arcadis, 1999)

Legend

- MW-01 Monitoring Well
- Basemap
- Water
- Property Boundary
- Plume Boundary

Notes:
NS - not sampled or only sampled as Investigation Derived Waste
BEHP - Bis(2-ethylhexyl)phthalate
BAA - Benzo(a)anthracene
BAP - Benzo(a)pyrene
BBF - Benzo(b)fluoranthene
BKF - Benzo(k)fluroanthene
All results reported as ug/L.
U - Result was below method detection limit.
J - Result is below the quantitiation limit and the reported value is an estimate.

Only most current data shown for each location on the figure. Historical detections for each analyte which exceeds its comparison criteria are contained in Table 6-1.

N

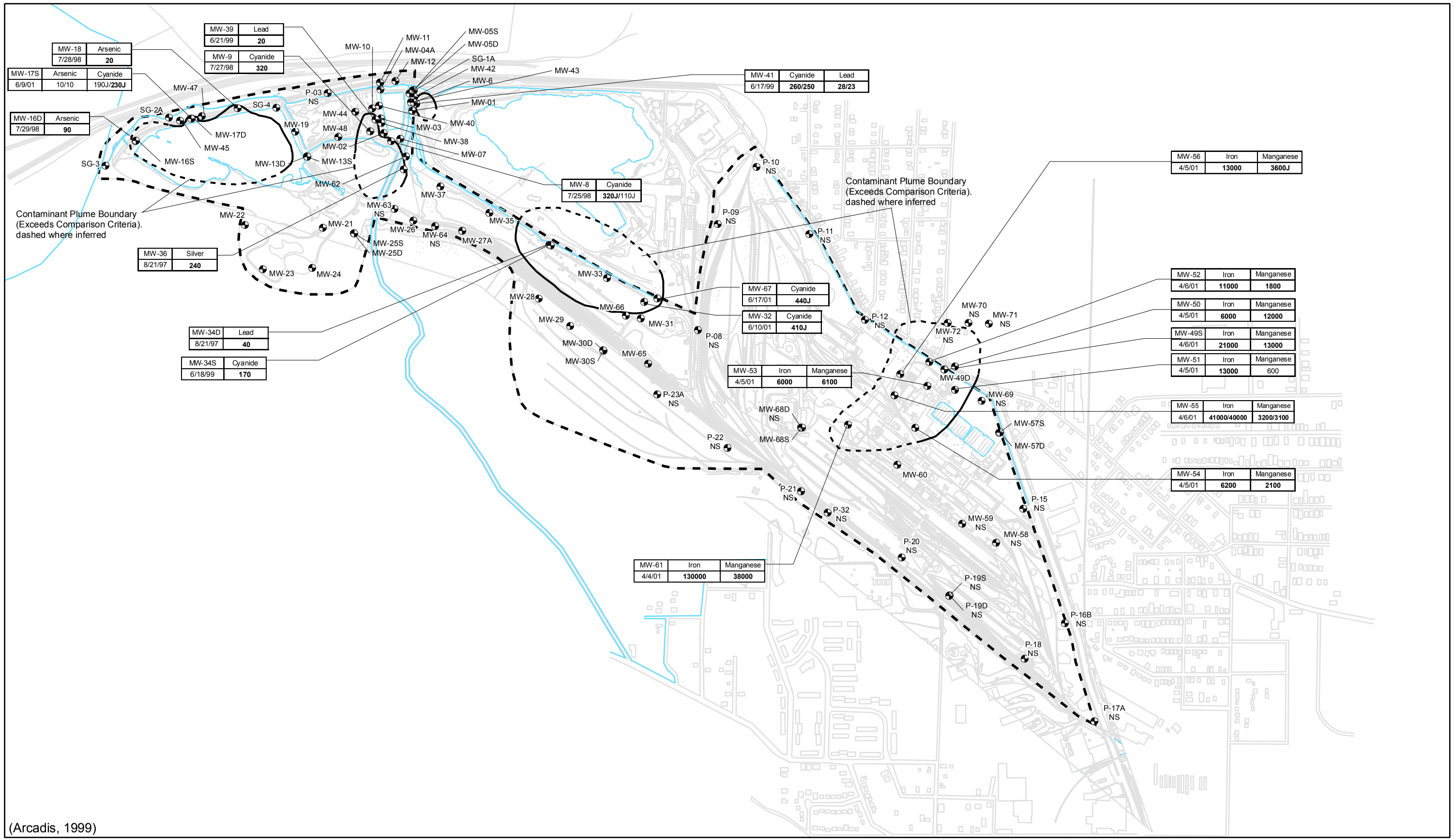
850 425 0 850 1,700 2,550 Feet

Figure 6-3
Distribution of Coal Tar Related Compounds Exceeding Comparison Criteria in Groundwater

Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\GW_Coal_Tar.mxd DATE: 6/24/2005



Legend

MW-01 Monitoring Well

Basemap

Water

Property Boundary

Plume Boundary

Notes:
NS - not sampled or only sampled as Investigation Derived Waste
All results reported as ug/L.
U - Result was below method detection limit.
J - Result is below the quantitiation limit and the reported value is an estimate.
Only most current data shown for each location on the figure. Historical detections for each analyte which exceeds its comparison criteria are contained in Table 6-1.
MW-66 and MW-67 sampled for cyanide only.

N

850 425 0 850 1,700 2,550 Feet

Figure 6-4
Distribution of Metals Exceeding Comparison Criteria in Groundwater

Sloss Industries, Birmingham, Alabama

CH2MHILL

FILENAME: J:\Sloss\Projects\Samples\MXD\GW_Metal.mxd DATE: 6/24/2005

TABLE 1-2
Well Designation (Residuum, Shallow Bedrock, Deep Bedrock, and non-Conasauga) and Surface and Groundwater Elevations
Sloss Industries, Birmingham, Alabama

Well ID	Alias	Monitored Unit	Fill Material	TD	Depth of Bedrock	of Bedrock Drilled	Screened Interval	Date	GW Elev	Notes
MW-1		SB		28			18-28	6/13/01	523.82	
MW-2		SB		28			18-28	6/13/01	530.28	
MW-3		SB		45			35-45	6/13/01	529.19	
MW-4A	MW-4	MM/RS		19			11.8-19	6/13/01	NM	
MW-5S	MW-05	MM		18	9.1	9	8-18	6/13/01	523	
MW-5D	P-04	SB	0-6	38	9.1	28.9	27.5-37.5	6/13/01	521.69	
MW-6		MM/RS		18			8-18	6/13/01	523.53	
MW-7		SB	NP	42	24.5	17.5	31.5-41.5	6/13/01	528.68	
MW-8			NP	69.5	24.25	45.25	59-69	6/13/01	525.22	
MW-9		SB	Present	39.2	19.75	19.45	28.5-38.5	6/13/01	526.24	
MW-10		SB	?	58	19.75	38.25	48-58	6/13/01	528.36	Drilled to 122 ft, completed over soft shaley zone
MW-11		SB	Present	30.75	11	19.75	20-30	6/13/01	522.25	
MW-12		SB	Present	27	8.25	18.75	16.5-26.5	6/13/01	522.45	
MW-13S		SB	NP	55	19.5	35.5	45-55	6/13/01	527.15	
MW-13D		DB	NP	160.5	19.5	141	150-160	6/13/01	488.57	
MW-16S	P-01S	RS	0-22	22.5	22	0.5	11-21	6/13/01	506.81	
MW-16D	P-01D	SB	0-22	45	22	23	35-45	6/13/01	506.55	
MW-17S	MW-17	SB		58	21.5	36.5	47.5-57.5	6/13/01	512.45	
MW-17D		DB	0-2.5	100	19	81	90-100	6/13/01	512.43	same gw elev as shallow well: 512.45 vs 512.43
MW-18	P-02	SB	0-12	36	23	13	25.5-35.5	6/13/01	517.78	Noted creosote odor during drilling
MW-19		SB	NP	34	17.5	16.5	23.5-33.5	6/13/01	524.69	
MW-21		SB	NP	42	23.5	18.5	29-39	6/13/01	545.05	
MW-22	P-31	NC	NP	119	0	119	108.5-118.5	6/13/01	534.94	Drilled through sandstone and shale to 104.5 ft, LS starts at 104.5
MW-23	P-30	NC	NP	79	30	49	68.5-78.5	6/13/01	605.03	Drilled through sandstone and shale to 79 ft, no LS
MW-24	P-29	NC	NP	76	21	55	63.3-73.3	6/13/01	580.33	Drilled through sandtone and shale to 76 ft, no LS
MW-25S	P-28S	SB	0-18	46	28	18	35.5-45.5	6/13/01	542.1	
MW-25D	P-28D	SB	0-18	67	28	39	56.3-66.3	6/13/01	542.88	
MW-26	P-27	DB	NP	141	22	119	130.5-140.5	6/13/01	468.93	
MW-27A	MW-27/P-26	SB	0-4	37	23	14	27-37	6/13/01	540.32	
MW-28	P-25	SB	0-0.75	58	18	40	48-58	6/13/01	545.56	
MW-29		SB	0-3	38	21.5	16.5	26-36	6/13/01	545.99	
MW-30S	P-24S	SB	0-2	35	20.3	14.7	24.5-34.5	6/13/01	546.39	
MW-30D	P-24D	SB	0-2	59	20.3	38.7	48.5-58.8	6/13/01	548.62	
MW-31		SB	0-15	47	15	32	36.5-46.5	6/13/01	550.91	
MW-32	P-07	SB	0-8	47.5	8.5	39	37-47	6/13/01	553.07	
MW-33		SB	0-8	39.5	14	25.5	29-39	6/13/01	546.82	

TABLE 1-2
Well Designation (Residuum, Shallow Bedrock, Deep Bedrock, and non-Conasauga) and Surface and Groundwater Elevations
Sloss Industries, Birmingham, Alabama

Well ID		Monitored Unit	Fill Material	TD	Depth of Bedrock	of Bedrock Drilled	Screened Interval	Date	GW Elev	Notes
MW-34S	P-06S	SB	0-10	34.5	11.25	23.25	24-34	6/13/01	539.83	
MW-34D	P-06D	DB	0-10	181	11.25	169.75	168-178	6/13/01	541.35	
MW-35		SB	0-8	42	11.5	30.5	19.5-29.5	6/13/01	535.45	
MW-36	P-05	DB	NP	137	12.5	124.5	126.5-136.5	6/13/01	NM	
MW-37		SB	0-2	30.5	10	20.5	20-30	6/13/01	531.75	
MW-38		MM	NP	30	21	9	19.5-29.5	6/13/01	528.89	No surface casing, screen extends above top of bedrock into residuum
MW-39		MM	NP	33	23.25	9.75	22-32	6/13/01	526.73	No surface casing, screen extends above top of bedrock into residuum
MW-40		MM	NP	27.75	18.25	9.5	17.5-27.5	6/13/01	527.22	No surface casing, screen extends above top of bedrock into residuum
MW-41		MM	0-5	16	8.5	7.5	5.5-15.5	6/13/01	524.47	Coal tar observed in residuum from 5-8.25 ft bgs. No surface casing, screen extends above top of bedrock into residuum.
MW-42		MM	0-1.5	16	6.5	9.5	5.5-15.5	6/13/01	523.64	
MW-43		MM	0-6	22	11.75	10.25	10-20	6/13/01	523.49	No surface casing, screen extends above top of bedrock into residuum
MW-44		SB	NP	38.25	20	18.25	27.75-37.75	6/13/01	525.27	
MW-45		SB	0-2	59	23	36	47.5-57.5	6/13/01	512.61	
MW-47		SB	0-4	57.5	22	35.5	47.5-57.5	6/13/01	482.13	
MW-48		SB	NP	50	21.5	28.5	40-50	6/13/01	525.68	
MW-49S	P-13S	SB	0-2	26.5	13.5	13	16-26	6/13/01	572.88	
MW-49D	P-13D	DB	0-2	170	13.5	156.5	159.5-169.5	6/13/01	434.87	
MW-50		SB	0-2	35.5	19	16.5	25-35	6/13/01	572.58	
MW-51		SB	0-6	24.5	9	15.5	14-24	6/13/01	578.52	
MW-52		SB	NP	25	10.5	14.5	11.5-21.5	6/13/01	570.83	Surface casing installed to exclude residuum groundwater
MW-53		SB	0-2	25	10	15	12-22	6/13/01	577.78	Surface casing installed to exclude residuum groundwater
MW-54		SB	0-2	34	18	16	22-32	6/13/01	580.52	
MW-55		SB	0-2	22.58	8	14.58	12-22	6/13/01	580.95	Surface casing installed to exclude residuum groundwater
MW-56		SB	0-4	20.5	4	16.5	10-20	6/13/01	579.95	
MW-57S	P-14	SB	0-2	76	10.5	65.5	65.5-75.5	6/13/01	578.02	
MW-57D		DB	0-2	175	10.5	164.5	164.5-174.5	6/13/01	559.19	
MW-58		SB	0-2	31	16	15	19-29	6/13/01	582.54	
MW-59		SB	0-2	50	4	46	39.5-49.5	6/13/01	580.77	

TABLE 1-2
Well Designation (Residuum, Shallow Bedrock, Deep Bedrock, and non-Conasauga) and Surface and Groundwater Elevations
Sloss Industries, Birmingham, Alabama

Well ID		Monitored Unit	Fill Material	TD	Depth of Bedrock	of Bedrock Drilled	Screened Interval	Date	GW Elev	Notes
MW-60		SB	0-1	63	13	50	41-51	6/13/01	573.84	
MW-61		SB	0-0.25	28.5	13	15.5	18-28	6/13/01	575.4	
MW-62		SB	0-7.5	27.5	9	18.5	17.5-27.5	6/13/01	530.47	
MW-63		DB	NP	140.5	18	122.5	130.5-140.5	6/13/01	412.03	
MW-64		DB	0-2	140.5	22	118.5	130.5-140.5	6/13/01	417.38	
MW-65		SB	0-6.5	30	10.5	19.5	20-30	6/13/01	550.33	
MW-66		SB	0-4	47.5	18	29.5	37.5-47.5	6/13/01	549.43	
MW-67		SB	0-4	43	6	37	33-43	6/13/01	533.11	
MW-68S		SB	0-11.5	35	11.5	23.5	25-35	6/13/01	547.89	
MW-68D		DB	0-11.5	100	11.5	88.5	90-100		NM	
MW-69		MM	NP	13	11	2	7.8-12.8	4/25/05	570.26	
MW-70		SB	NP	29	13.3	15.7	18.8-28.8	4/25/05	567.64	
MW-71		SB	NP	41	12	29	30.8-40.8	4/25/05	567.97	
MW-72		SB	NP	53	16	37	42.8.52.8	4/25/05	568.39	
P-3		SB	0-8	32.5	12	20.5	22-32	6/13/01	522.33	
P-8		SB	0-14	33.5	18	15.5	23-33	6/13/01	561.07	
P-9		DB	0-7.5	161	7.5	153.5	150.5-160.5	6/13/01	406.97	
P-10		SB	0-2	33	10	23	22.5-32.5	6/13/01	557.07	
P-11		SB	0-0.5	27.5	3	24.5	17-27	6/13/01	NM	
P-12		SB	0-2	27	7	20	16.5-26.5	6/13/01	574.09	
P-15		SB	0-1	26	11.5	14.5	15.5-25.5	6/13/01	575.67	Surface casing not installed
P-16B	P-16/P-16A	SB	0-4	22	7.5	14.5	11.5-21.5	6/13/01	580.3	Surface casing installed to exclude residuum groundwater
P-17A	P-17	DB	0-2	116	9.25	106.75	105.5-115.5	6/13/01	581.54	
P-18		SB	0-6.5	73	24	49	62.5-72.5	6/13/01	583.56	
P-19S		SB	0-12	28	12	16	17.5-27.5	6/13/01	587.68	
P-19D		DB	0-12	58	12	46	47.5-57.5	6/13/01	587.68	
P-20		DB	0-2	202.5	2	200.5	188.3-198.3	6/13/01	568.82	
P-21		DB	0-0.5	166	3.5	162.5	155.5-165.5	6/13/01	522.3	
P-22		SB	NP	49	1.5	47.5	38.5-48.5	6/13/01	560.47	
P-23A	P-23	SB	0-8	49	12	37	38.5-48.5	6/13/01	549.55	
P-32		SB	0-4	27.5	6.5	21	17-27	6/13/01	573.69	

TABLE 1-2
Well Designation (Residuum, Shallow Bedrock, Deep Bedrock, and non-Conasauga) and Surface and Groundwater Elevations
Sloss Industries, Birmingham, Alabama

Staff Guage		Stream Monitored						Date	SW Elev	
SG-1A		UNT						6/13/01	523.55	Located on Unnamed Tributary near SWMU 13
SG-2A		UNT						6/13/01	NM	
SG-3		FMC						6/13/01	500.18	
SG-4		SWMU 22						6/13/01	526.68	Staff guage located in SWMU 22 - Polishing Pond

RS - Residuum
SB - Shallow Bedrock
DB - Deep Bedrock
MM - Mixed Monitoring (well screened in residuum and shallow bedrock)
NC - non-Conasauga
FMC - Five Mile Creek
UNT - Unnamed Tributary
SWMU - Solid Waste Management Unit
NP - not present
NM - not measured

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
ONSITE SOIL SAMPLES				
10-SB0001	960618-CO-10-SL0001(2-4)	6/18/1996	2-4	V,S,PM,C
10-SB0002	960618-CO-10-SL0002(2-4)	6/18/1996	2-4	V,S,PM,C
11-SB0001	960614-CO-11-SL0001(2-4)	6/14/1996	2-4	V,S,PM,C
11-SB0002	960614-CO-11-SL0002(2-4)	6/14/1996	2-4	V,S,PM,C
12-SL0001	960607-CO-12-SL0001(0.5-1.5)	6/7/1996	0.5-1.5	V,S,PM,C
12-SL0002	960607-CO-12-SL0002(0.5-1.5)	6/7/1996	0.5-1.5	V,S,PM,C
13-SB0010	980627-BT-13-SL0010(9-11)	6/27/1998	9-11	V,S,PM,C
13-SB0010	980627-BT-13-SL0010(19-21)	6/27/1998	19-21	V,S,PM,C
14-SB0001	980612-BT-14-SL0001(10-12)	6/12/1998	10-12	V,S,PM,C
14-SB0001	980612-BT-14-SL0001(16-18)	6/12/1998	16-18	V,S,PM,C
14-SB0001	980612-BT-14-SL0001(18-20)	6/12/1998	18-20	V,S,PM,C
14-SB0002	980615-BT-14-SL0002(10-12)	6/15/1998	10-12	V,S,PM,C
14-SB0002	980615-BT-14-SL0002(14-16)	6/15/1998	14-16	V,S,PM,C
14-SB0002	980615-BT-14-SL0002(18-20)	6/15/1998	18-20	V,S,PM,C
14-SB0003	980615-BT-14-SL0003(10-12)	6/15/1998	10-12	V,S,PM,C
14-SB0003	980615-BT-14-SL0003(14-16)	6/15/1998	14-16	V,S,PM,C
14-SB0003	980615-BT-14-SL0003(20-22)	6/15/1998	20-22	V,S,PM,C
15-SB0001	980611-BT-15-SL0001(14-16)	6/11/1998	14-16	V,S,PM,C
15-SB0001	980611-BT-15-SL0001(16-18)	6/11/1998	16-18	V,S,PM,C
15-SB0001	980611-BT-15-SL0001(20-22)	6/11/1998	20-22	V,S,PM,C
15-SB0002	980611-BT-15-SL0002(14-16)	6/11/1998	14-16	V,S,PM,C
15-SB0002	980611-BT-15-SL0002(16-18)	6/11/1998	16-18	V,S,PM,C
15-SB0002	980611-BT-15-SL0002(20-22)	6/11/1998	20-22	V,S,PM,C
15-SB0003	980611-BT-15-SL0003(14-16)	6/11/1998	14-16	V,S,PM,C
15-SB0003	980611-BT-15-SL0003(18-20)	6/11/1998	18-20	V,S,PM,C
15-SB0003	980611-BT-15-SL0003(20-22)	6/11/1998	20-22	V,S,PM,C
16-SB0001	980625-BT-16-SL0001(10-12)	6/25/1998	10-12	V,S,PM,C
16-SB0002	980616-BT-16-SL0002(18-20)	6/16/1998	18-20	V,S,PM,C
17-SB0001	980610-BT-17-SL0001(18-20)	6/10/1998	18-20	V,S,PM,C
17-SB0001	980610-BT-17-SL0001(20-22)	6/10/1998	20-22	V,S,PM,C
17-SB0002	980610-BT-17-SL0002(18-20)	6/10/1998	18-20	V,S,PM,C
17-SB0003	980610-BT-17-SL0003(18-20)	6/10/1998	18-20	V,S,PM,C
18-SB0001	980609-BT-18-SL0001(16-18)	6/9/1998	16-18	V,S,PM,C
18-SB0001	980609-BT-18-SL0001(18-20)	6/9/1998	18-20	V,S,PM,C
18-SB0001	980609-BT-18-SL0001(20-22)	6/9/1998	20-22	V,S,PM,C
18-SB0002	980609-BT-18-SL0002(16-18)	6/9/1998	16-18	V,S,PM,C
19-SB0001	980608-BT-19-SL0001(11-13)	6/8/1998	11-13	V,S,PM,C
19-SB0001	980608-BT-19-SL0001(15-17)	6/8/1998	15-17	V,S,PM,C
19-SB0001	980608-BT-19-SL0001(20-22)	6/8/1998	20-22	V,S,PM,C
19-SB0002	980608-BT-19-SL0002(11-13)	6/8/1998	11-13	V,S,PM,C
19-SB0002	980608-BT-19-SL0002(14-16)	6/8/1998	14-16	V,S,PM,C
19-SB0002	980608-BT-19-SL0002(18-20)	6/8/1998	18-20	V,S,PM,C
19-SB0003	980609-BT-19-SL0003(11-13)	6/9/1998	11-13	V,S,PM,C
19-SB0003	980609-BT-19-SL0003(16-18)	6/9/1998	16-18	V,S,PM,C
19-SB0003	980609-BT-19-SL0003(22-24)	6/9/1998	21-24	V,S,PM,C

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
1A-SL0001	960608-CO-01A-SL0001(0-0.1)	6/8/1996	0-0.1	V,S,PM,C
1A-SL0002	960608-CO-01A-SL0002(0-0.1)	6/8/1996	0-0.1	V,S,PM,C
1A-SL0003	960608-CO-01A-SL0003(0-0.1)	6/8/1996	0-0.1	V,S,PM,C
1A-SB0004	960610-CO-01A-SL0004(2-4)	6/10/1996	2-4	V,S,PM,C
1A-SB0005	960611-CO-01A-SL0005(2-4)	6/11/1996	2-4	V,S,PM,C
1B-SL0001	960608-CO-01B-SL0001(0-0.1)	6/8/1996	0-0.1	V,S,PM,C
1B-SL0002	960608-CO-01B-SL0002(0-0.1)	6/8/1996	0-0.1	V,S,PM,C
1B-SL0003	960608-CO-01B-SL0003(0-0.1)	6/8/1996	0-0.1	V,S,PM,C
1B-SB0004	960613-CO-01B-SL0004(4-6)	6/13/1996	4-6	V,S,PM,C
1B-SB0004	960613-CO-01B-SL0004(8-10)	6/13/1996	8-10	V,S,PM,C
1B-SB0004	960613-CO-01B-SL0004(12-14)	6/13/1996	12-14	V,S,PM,C
1B-SB0005	960614-CO-01B-SL0005(6-8)	6/14/1996	6-8	V,S,PM,C
1B-SB0005	960614-CO-01B-SL0005(9-11)	6/14/1996	9-11	V,S,PM,C
22-SBMW16	980616-BT-22-SL0016(4-6)	6/16/1998	4-6	V,S,PM,C
22-SBMW16	980616-BT-22-SL0016(8-10)	6/16/1998	8-10	V,S,PM,C
22-SBMW18	980616-BT-22-SL0018(6-8)	6/16/1998	6-8	V,S,PM,C
22-SBMW18	980616-BT-22-SL0018(8-10)	6/16/1998	8-10	V,S,PM,C
23-SBMW22	970806-LD-23-SL0022(0-2)	8/6/1997	0-2	V,S,PM,C
23-SBMW23	970806-LD-23-SL0023(12-14)	8/6/1997	12-14	V,S,PM,C
23-SBMW23	970806-LD-23-SL0023(24-26)	8/6/1997	24-26	V,S,PM,C
23-SBMW24	970805-LD-23-SL0024(7-9)	8/5/1997	7-9	V,S,PM,C
23-SBMW24	970805-LD-23-SL0024(14-16)	8/5/1997	14-16	V,S,PM,C
23-SBMW25	970805-LD-23-SL0025(19-21)	8/5/1997	19-21	V,S,PM,C
24-SL0002	970618-LD-24-SL0002	6/18/1997	0-1	V,S,PM,C
24-SL0003	970617-LD-24-SL0003	6/17/1997	0-1	V,S,PM,C
24-SL0004	970617-LD-24-SL0004	6/17/1997	0-1	V,S,PM,C
24-SL0005	970617-LD-24-SL0005	6/17/1997	0-1	V,S,PM,C
24-SL0006	970617-LD-24-SL0006	6/17/1997	0-1	V,S,PM,C
24-SL0007	970617-LD-24-SL0007	6/17/1997	0-1	V,S,PM,C
24-SL0008	970618-LD-24-SL0008	6/18/1997	0-1	V,S,PM,C
24-SL0009	970618-LD-24-SL0009	6/18/1997	0-1	V,S,PM,C
24-SL0010	970618-LD-24-SL0010	6/18/1997	0-1	V,S,PM,C
24-SL0011	970618-LD-24-SL0011	6/18/1997	0-1	V,S,PM,C
24-SL0012	970618-LD-24-SL0012	6/18/1997	0-1	V,S,PM,C
24-SL0013	970618-LD-24-SL0013	6/18/1997	0-1	V,S,PM,C
24-SL0014	970618-LD-24-SL0014	6/18/1997	0-1	V,S,PM,C
24-SL0015	970618-LD-24-SL0015	6/18/1997	0-1	V,S,PM,C
24-SL0016	970618-LD-24-SL0016	6/18/1997	0-1	V,S,PM,C
26-SB0001	990609-CM-26-SL0001(5-7)	6/9/1999	5-7	V,S,PM,C
26-SB0001	990609-CM-26-SL0001(9-11)	6/9/1999	9-11	V,S,PM,C
26-SB0001	990609-CM-26-SL0001(13-15)	6/9/1999	13-15	V,S,PM,C
26-SB0002	990609-CM-26-SL0002(2-4)	6/9/1999	2-4	V,S,PM,C
26-SB0002	990609-CM-26-SL0002(4-6)	6/9/1999	4-6	V,S,PM,C
26-SB0002	990609-CM-26-SL0002(6-8)	6/9/1999	6-8	V,S,PM,C
27-SB0001	990610-CM-27-SL0001(2-4)	6/10/1999	2-4	V,S,PM,C
27-SB0001	990610-CM-27-SL0001(6-8)	6/10/1999	6-8	V,S,PM,C

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
27-SB0001	990610-CM-27-SL0001(10-12)	6/10/1999	10-12	V,S,PM,C
27-SB0002	990611-CM-27-SL0002(3-5)	6/11/1999	3-5	V,S,PM,C
27-SB0002	990611-CM-27-SL0002(5-7)	6/11/1999	5-7	V,S,PM,C
27-SB0002	990611-CM-27-SL0002(9-11)	6/11/1999	9-11	V,S,PM,C
27-SB0003	010403-CM-27-SL0003(0-3)	4/3/2001	0-3	Unknown
27-SB0003	010403-CM-27-SL0003(3-5)	4/3/2001	3-5	Unknown
27-SB0003	010403-CM-27-SL0003(5-7)	4/3/2001	5-7	Unknown
29-SB0001	990609-CM-29-SL0001(4-6)	6/9/1999	4-6	V,S,PM,C
29-SB0001	990609-CM-29-SL0001(8-10)	6/9/1999	8-10	V,S,PM,C
29-SB0001	990609-CM-29-SL0001(12-13)	6/9/1999	12-13	V,S,PM,C
29-SB0002	990609-CM-29-SL0002(4-4.5)	6/9/1999	4-4.5	V,S,PM,C
2A-SB0001	960610-CO-02A-SL0001(2-4)	6/10/1996	2-4	V,S,PM,C
2A-SB0001	960610-CO-02A-SL0001(16-18)	6/10/1996	16-18	V,S,PM,C
2A-SB0002	960610-CO-02A-SL0002(2-4)	6/10/1996	2-4	V,S,PM,C
2B-SB0001	960619-CO-02B-SL0001(2.5-3)	6/19/1996	2.5-3	V,S,PM,C
31-SB0001	990610-CM-31-SL0001(0.5-2)	6/10/1999	0.5-2	V,S,PM,C
31-SB0001	990610-CM-31-SL0001(2-4)	6/10/1999	2-4	V,S,PM,C
31-SB0001	990610-CM-31-SL0001(6-8)	6/10/1999	6-8	V,S,PM,C
31-SB0002	990610-CM-31-SL0002(2-4)	6/10/1999	2-4	V,S,PM,C
31-SB0002	990610-CM-31-SL0002(4-6)	6/10/1999	4-6	V,S,PM,C
31-SB0002	990610-CM-31-SL0002(8-10)	6/10/1999	8-10	V,S,PM,C
36-SB0001	990611-CM-36-SL0001(4-6)	6/11/1999	4-6	V,S,PM,C
36-SB0001	990611-CM-36-SL0001(6-8)	6/11/1999	6-8	V,S,PM,C
36-SB0001	990611-CM-36-SL0001(8-10)	6/11/1999	8-10	V,S,PM,C
38-SBMW26	970804-LD-38-SL0026(10-12)	8/4/1997	10-12	V,S,PM,C
38-SBMW26	970804-LD-38-SL0026(18-20)	8/4/1997	18-20	V,S,PM,C
38-SBMW27	970805-LD-38-SL0027(11-13)	8/5/1997	11-13	V,S,PM,C
38-SBMW27	970805-LD-38-SL0027(22-24)	8/5/1997	22-24	S,PM,C
38-SBMW27	970808-LD-38-SL0027(22-24)	8/8/1997	22-24	V
38-SBMW28	970807-LD-38-SL0028(8-10)	8/7/1997	8-10	V,S,PM,C
38-SBMW28	970807-LD-38-SL0028(13-15)	8/7/1997	13-15	V,S,PM,C
38-SBMW30	970807-LD-38-SL0030(9-11)	8/7/1997	9-11	V,S,PM,C
38-SBMW30	970807-LD-38-SL0030(17-19)	8/7/1997	17-19	V,S,PM,C
39-SBMW34	970805-LD-39-SL0034(10-12)	8/5/1997	10-12	S,PM,C
39-SBMW34	970808-LD-39-SL0034(10-12)	8/8/1997	10-12	V
39-SBMW36	970804-LD-39-SL0036(5-7)	8/4/1997	5-7	V,S,PM,C
39-SBMW36	970804-LD-39-SL0036(10-12)	8/4/1997	10-12	V,S,PM,C
3A-SB0001	960611-CO-03A-SL0001(6-8)	6/11/1996	6-8	V,S,PM,C
3A-SB0002	960611-CO-03A-SL0002(8-10)	6/11/1996	8-10	V,S,PM,C
4-SB0001	980626-BT-4-SL0001(6-8)	6/26/1998	6-8	V,S,PM,C
4-SB0002	980626-BT-4-SL0002(5-7)	6/26/1998	5-7	V,S,PM,C
4-SB0002	980626-BT-4-SL0002(9-11)	6/26/1998	9-11	V,S,PM,C
4-SB0003	980617-BT-4-SL0003(12-14)	6/17/1998	12-14	V,S,PM,C
4-SB0003	980617-BT-4-SL0003(14-16)	6/17/1998	14-16	V,S,PM,C
4-SB0003	980617-BT-4-SL0003(16-18)	6/17/1998	16-18	V,S,PM,C
4-SB0004	980617-BT-4-SL0004(10-12)	6/17/1998	10-12	V,S,PM,C

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
4-SB0005	980617-BT-4-SL0005(8-10)	6/17/1998	8-10	V,S,PM,C
4-SB0005	980617-BT-4-SL0005(14-16)	6/17/1998	14-16	V,S,PM,C
4-SB0005	980617-BT-4-SL0005(18-20)	6/17/1998	18-20	V,S,PM,C
4-SB0006	980618-BT-4-SL0006(7-9)	6/18/1998	7-9	V,S,PM,C
4-SB0006	980618-BT-4-SL0006(14-16)	6/18/1998	14-16	V,S,PM,C
4-SB0006	980618-BT-4-SL0006(18-20)	6/18/1998	18-20	V,S,PM,C
4-SB0007	980619-BT-4-SL0007(6-8)	6/19/1998	6-8	V,S,PM,C
4-SB0007	980619-BT-4-SL0007(12-14)	6/19/1998	12-14	V,S,PM,C
4-SB0007	980619-BT-4-SL0007(18-20)	6/19/1998	18-20	V,S,PM,C
4-SB0009	980620-BT-4-SL0009(8-10)	6/20/1998	8-10	V,S,PM,C
4-SB0009	980620-BT-4-SL0009(12-14)	6/20/1998	12-14	V,S,PM,C
4-SB0009	980620-BT-4-SL0009(16-18)	6/20/1998	16-18	V,S,PM,C
4-SB0010	980620-BT-4-SL0010(7-9)	6/20/1998	7-9	V,S,PM,C
4-SB0010	980620-BT-4-SL0010(16-18)	6/20/1998	16-18	V,S,PM,C
4-SB0010	980620-BT-4-SL0010(20-22)	6/20/1998	20-22	V,S,PM,C
4-SB0011	980622-BT-4-SL0011(5-7)	6/22/1998	5-7	V,S,PM,C
4-SB0012	980622-BT-4-SL0012(4-6)	6/22/1998	4-6	V,S,PM,C
4-SB0013	980622-BT-4-SL0013(7-9)	6/22/1998	7-9	V,S,PM,C
4-SB0013	980622-BT-4-SL0013(11-13)	6/22/1998	11-13	V,S,PM,C
4-SB0013	980622-BT-4-SL0013(13-15)	6/22/1998	13-15	V,S,PM,C
4-SB0014	980623-BT-4-SL0014(8-10)	6/23/1998	8-10	V,S,PM,C
4-SB0015	980623-BT-4-SL0015(8-10)	6/23/1998	8-10	V,S,PM,C
4-SB0016	980623-BT-4-SL0016(1-3)	6/23/1998	1-3	V,S,PM,C
4-SB0017	980623-BT-4-SL0017(6-8)	6/23/1998	6-8	V,S,PM,C
4-SB0018	980624-BT-4-SL0018(3-5)	6/24/1998	3-5	V,S,PM,C
4-SB0019	980624-BT-4-SL0019(6-8)	6/24/1998	6-8	V,S,PM,C
4-SB0020	980624-BT-4-SL0020(7-9)	6/24/1998	7-9	V,S,PM,C
4-SB0024	980624-BT-4-SL0024(6-8)	6/24/1998	6-8	V,S,PM,C
4-SB0024	980624-BT-4-SL0024(10-12)	6/24/1998	10-12	V,S,PM,C
4-SB0024	980624-BT-4-SL0024(18-20)	6/24/1998	18-20	V,S,PM,C
5-SB0001	960611-CO-05-SL0001(1-3)	6/11/1996	1-3	V,S,PM,C
5-SB0001	960611-CO-05-SL0001(9-11)	6/12/1996	9-11	V,S,PM,C
5-SB0001	960611-CO-05-SL0001(11-13)	6/12/1996	11-13	V,S,PM,C
5-SB0002	960612-CO-05-SL0002(1-3)	6/12/1996	1-3	V,S,PM,C
5-SB0002	960612-CO-05-SL0002(11-13)	6/12/1996	11-13	V,S,PM,C
5-SB0002	960612-CO-05-SL0002(15-17)	6/12/1996	15-17	V,S,PM,C
5-SB0004	960613-CO-05-SL0004(1-3)	6/13/1996	1-3	V,S,PM,C
5-SB0004	960613-CO-05-SL0004(7-9)	6/13/1996	7-9	V,S,PM,C
5-SB0004	960613-CO-05-SL0004(9-11)	6/13/1996	9-11	V,S,PM,C
5-SB0005	960613-CO-05-SL0005(1-3)	6/13/1996	1-3	V,S,PM,C
5-SB0005	960613-CO-05-SL0005(5-7)	6/13/1996	5-7	V,S,PM,C
6-SB0001	960615-CO-06-SL0001(0-1)	6/15/1996	0-1	V,S,PM,C
6-SB0001	960615-CO-06-SL0001(1-2)	6/15/1996	1-2	V,S,PM,C
6-SB0001	960615-CO-06-SL0001(6-8)	6/15/1996	6-8	V,S,PM,C
6-SB0001	960615-CO-06-SL0001(12-14)	6/15/1996	12-14	V,S,PM,C
7-SB0001	960615-CO-07-SL0001(4-6)	6/15/1996	4-6	V,S,PM,C

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
7-SB0001	960615-CO-07-SL0001(6-8)	6/15/1996	6-8	V,S,PM,C
7-SB0002	960617-CO-07-SL0002(4-6)	6/17/1996	4-6	V,S,PM,C
7-SB0002	960617-CO-07-SL0002(6-8)	6/17/1996	6-8	V,S,PM,C
8-SB0001	960617-CO-08-SL0001(2-4)	6/17/1996	2-4	V,S,PM,C
9-SB0001	960614-CO-09-SL0001(4-6)	6/14/1996	4-6	V,S,PM,C
9-SB0001	960614-CO-09-SL0001(6-8)	6/14/1996	6-8	V,S,PM,C
MW-07	980629-BT-13-SL0007(15-17)	6/29/1998	15-17	V,S,PM,C
MW-07	980629-BT-13-SL0007(9-11)	6/29/1998	9-11	V,S,PM,C
MW-08	980630-BT-13-SL0008(5-7)	6/30/1998	5-7	V,S,P,PCB,C,PM
MW-08	980630-BT-13-SL0008(9-11)	6/30/1998	9-11	V,S,PM,C
MW-09	980629-BT-13-SL0009(9-11)	6/29/1998	9-11	V,S,P,PCB,C,PM
MW-09	980629-BT-13-SL0009(17-19)	6/29/1998	17-19	V,S,PM,C
MW-13S	980630-BT-22-SL0013(6-8)	6/30/1998	6-8	V,S,P,PCB,C,PM
MW-13S	980630-BT-22-SL0013(8-10)	6/30/1998	8-10	V,S,PM,C
MW-17	980701-BT-22-SL0017(11-13)	7/1/1998	11-13	V,S,P,PCB,C,PM
MW-17	980701-BT-22-SL0017(6-8)	7/1/1998	6-8	V,S,PM,C
MW-21	970806-LD-23-SL0021(14-16)	8/6/1997	14-16	V,S,PM,C
MW-21	970806-LD-23-SL0021(20-22)	8/6/1997	20-22	V,S,PM,C
MW-29	970807-LD-38-SL0029(15-17)	8/7/1997	15-17	V,S,PM,C
MW-29	970807-LD-38-SL0029(19-21)	8/7/1997	19-21	V,S,PM,C
MW-33	970808-LD-39-SL0033(11-13)	8/8/1997	11-13	V,S,PM,C
MW-35	970808-LD-39-SL0035(10-12)	8/8/1997	10-12	V,S,PM,C
MW-37	970808-LD-38-SL0037(4-6)	8/8/1997	4-6	V,S,PM,C
MW-37	970808-LD-38-SL0037(8-10)	8/8/1997	8-10	V,S,PM,C
MW-52	000711-CM-00-SL0052(0-2)	7/11/2000	0-2	V,S,PM,C
MW-52	000711-CM-00-SL0052(4-6)	7/11/2000	4-6	V,S,PM,C
MW-52	000711-CM-00-SL0052(8-10)	7/11/2000	8-10	V,S,PM,C
MW-53	000712-CM-00-SL0053(2-4)	7/12/2000	2-4	V,S,PM,C
MW-53	000712-CM-00-SL0053(4-6)	7/12/2000	4-6	V,S,PM,C
MW-53	000712-CM-00-SL0053(8-10)	7/12/2000	8-10	V,S,PM,C
MW-54	000712-CM-31-SL0054(2-4)	7/12/2000	2-4	V,S,PM,C
MW-54	000712-CM-31-SL0054(8-10)	7/12/2000	8-10	V,S,PM,C
MW-54	000712-CM-31-SL0054(16-18)	7/12/2000	16-18	V,S,PM,C
MW-55	000711-CM-27-SL0055(2.5-4)	7/11/2000	2.5-4	V,S,PM,C
MW-55	000711-CM-27-SL0055(4-6)	7/11/2000	4-6	V,S,PM,C
MW-55	000711-CM-27-SL0055(6-8)	7/11/2000	6-8	V,S,PM,C
MW-59	000713-CO-07-SL0059(2-4)	7/13/2000	2-4	S
SB-1	950615-FW-00-SL0001(0-2)	6/15/1995	0-2	V,S,PM,C
SB-1	950615-FW-00-SL0001(8-10)	6/15/1995	8-10	V,S,PM,C
SB-1	950615-FW-00-SL0001(14-16)	6/15/1995	14-16	V,S,PM,C
SB-2	950615-FW-00-SL0002(0-2)	6/15/1995	0-2	V,S,PM,C
SB-2	950615-FW-00-SL0002(8-10)	6/15/1995	8-10	V,S,PM,C
SB-2	950615-FW-00-SL0002(12-14)	6/15/1995	12-14	V,S,PM,C
SB-3	950615-FW-00-SL0003(0-2)	6/15/1995	0-2	V,S,PM,C
SB-3	950615-FW-00-SL0003(6-8)	6/15/1995	6-8	V,S,PM,C
SB-3	950615-FW-00-SL0003(10-12)	6/15/1995	10-12	V,S,PM,C

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
SB-4	950629-FW-00-SL0004(0-2)	6/29/1995	0-2	V,S,PM,C
SB-4	950629-FW-00-SL0004(16-18)	6/29/1995	16-18	V,S,PM,C
SB-4	950629-FW-00-SL0004(36-38)	6/29/1995	36-38	V,S,PM,C
SB-5	950719-FW-00-SL0005(0-2)	7/19/1995	0-2	V,S,PM,C
SB-5	950719-FW-00-SL0005(2-4)	7/19/1995	2-4	V,S,PM,C
SB-5	950719-FW-00-SL0005(4-6)	7/19/1995	4-6	V,S,PM,C
SB-6	950719-FW-00-SL0006(0-2)	7/19/1995	0-2	V,S,PM,C
SB-6	950719-FW-00-SL0006(10-12)	7/19/1995	10-12	V,S,PM,C
SB-6	950719-FW-00-SL0006(20-22)	7/19/1995	20-22	V,S,PM,C
SWMU38-1	050418-SWMU38	4/19/2005	0-1	V,S,As,Cr
EI #01	050418-EI1	4/18/2005	0-2	V,S,As,Cr
EI #02	050418-EI2	4/18/2005	0-2	V,S,As,Cr
EI #03	050418-EI3	4/18/2005	0-1.5	V,S,As,Cr
EI #04	050418-EI4	4/18/2005	0-1.5	V,S,As,Cr
EI #05	050418-EI5	4/18/2005	0-1.5	V,S,As,Cr
EI #06	050418-EI6	4/18/2005	0-1.5	V,S,As,Cr
EI #07	050418-EI7	4/18/2005	0-2	V,S,As,Cr
EI #08	050418-EI8	4/18/2005	0-1	V,S,As,Cr
EI #09	050418-EI9	4/18/2005	0-1	V,S,As,Cr
EI #10	050418-EI10	4/18/2005	0-1.5	V,S,As,Cr
EI #11	050418-EI11	4/18/2005	0-1	V,S,As,Cr
EI #12	050418-EI12	4/18/2005	0-1.5	V,S,As,Cr
EI #13	050418-EI13	4/19/2005	0-2	V,S,As,Cr
EI #14	050418-EI14	4/19/2005	0-2	V,S,As,Cr
EI #15	050418-EI15	4/19/2005	0-2	V,S,As,Cr
EI #16	050418-EI16	4/19/2005	0-0.5	V,S,As,Cr
EI #17	050418-EI17	4/19/2005	0-0.5	V,S,As,Cr
EI #18	050418-EI18	4/19/2005	0-0.5	V,S,As,Cr
EI #19	050418-EI19	4/19/2005	0-0.5	V,S,As,Cr
EI #20	050418-EI20	4/19/2005	0-2	V,S,As,Cr
EI #21	050418-EI21	4/19/2005	0-2	V,S,As,Cr
EI #22	050418-EI22	4/21/2005	0-2	V,S,As,Cr
OFFSITE SOIL SAMPLES				
OSE #01	050418-OSE1	4/20/2005	0-0.5	V,S,As,Cr
OSE #02	050418-OSE2	4/21/2005	0-0.5	V,S,As,Cr
OSE #03	050418-OSE3	4/20/2005	0-0.5	V,S,As,Cr
OSE #04	050418-OSE4	4/21/2005	0-0.5	V,S,As,Cr
OSE #05	050418-OSE5	4/20/2005	0-0.5	V,S,As,Cr
OSE #06	050418-OSE6	4/20/2005	0-0.5	V,S,As,Cr
OSE #07	050418-OSE7	4/21/2005	0-0.5	V,S,As,Cr
OSE #08	050418-OSE8	4/21/2005	0-0.5	V,S,As,Cr
OSES #01	050418-OSES1	4/20/2005	0-0.5	V,S,As,Cr
OSES #02	050418-OSES2	4/20/2005	0-0.5	V,S,As,Cr
OSES #03	050418-OSES3	4/20/2005	0-0.5	V,S,As,Cr
OSS #01	050418-OSS1	4/21/2005	0-0.5	V,S,As,Cr
OSS #02	050418-OSS2	4/22/2005	0-0.5	V,S,As,Cr

TABLE 2-1
Soil Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
OSS #03	050418-OSS3	4/22/2005	0-0.5	V,S,As,Cr
OSS #04	050418-OSS4	4/21/2005	0-0.5	V,S,As,Cr
OSS #05	050418-OSS5	4/22/2005	0-0.5	V,S,As,Cr
OSS #06	050418-OSS6	4/22/2005	0-0.5	V,S,As,Cr
OSS #07	050418-OSS7	4/21/2005	0-0.5	V,S,As,Cr
OSS #08	050418-OSS8	4/21/2005	0-0.5	V,S,As,Cr
OSS #09	050418-OSS9	4/21/2005	0-0.5	V,S,As,Cr
OSS #10	050418-OSS10	4/21/2005	0-0.5	V,S,As,Cr
OSS #11	050418-OSS11	4/21/2005	0-0.5	V,S,As,Cr
OSS #12	050418-OSS12	4/21/2005	0-0.5	V,S,As,Cr
OSS #13	050418-OSS13	4/21/2005	0-0.5	V,S,As,Cr
OSS #14	050418-OSS14	4/21/2005	0-0.5	V,S,As,Cr
OSS #15	050418-OSS15	4/21/2005	0-0.5	V,S,As,Cr
OSW #01	050418-OSW1	4/22/2005	0-0.5	V,S,As,Cr
OSW #02	050418-OSW2	4/22/2005	0-0.5	V,S,As,Cr
OSW #03	050418-OSW3	4/22/2005	0-0.5	V,S,As,Cr
OSW #04	050418-OSW4	4/22/2005	0-0.5	V,S,As,Cr
OSW #05	050418-OSW5	4/22/2005	0-0.5	V,S,As,Cr
OSW #06	050418-OSW6	4/22/2005	0-0.5	V,S,As,Cr
OSW #07	050418-OSW7	4/22/2005	0-0.5	V,S,As,Cr
OSW #08	050418-OSW8	4/22/2005	0-0.5	V,S,As,Cr
OSW #09	050418-OSW9	4/22/2005	0-0.5	V,S,As,Cr

Notes:
V - Volatile organic compounds
S - Semivolatile organic compounds
BNA - Base-Neutral Semivolatile Organic Compounds
PCB - Polychlorinated Biphenyls
As - Arsenic
Ba - Barium
Cr - Chromium
PM - Priority Pollutant Metals
P - Pesticides, insedcticides, and herbicides
C - Cyanide

TABLE 2-2
Analyte List
Sloss Industries, Birmingham, Alabama

1995 Facility-wide RFI/1996 Coke Manufacturaing Plant RFI		1997 RFI	2000 RFI	2005 RFI
SW-846	**Appendix IX**	**Land Disposal Area**	**Coke/Chemical Plants**	**Facility Wide**
Volatile Organic Compounds (EPA 8260B)				
Acetone	Acetone	Acetone	Acetone	
	Acetonitrile			
Acrolein	Acrolein	Acrolein	Acrolein	
Acrylonitrile	Acrylonitrile	Acrylonitrile	Acrylonitrile	
	Allyl chloride			
Benzene	Benzene	Benzene	Benzene	Benzene
Bromodichloromethane	Bromodichloromethane	Bromodichloromethane	Bromodichloromethane	
Bromoform	Bromoform	Bromoform	Bromoform	
Bromomethane	Bromomethane	Bromomethane	Bromomethane	
Carbon Disulfide	Carbon Disulfide	Carbon Disulfide	Carbon Disulfide	
Carbon Tetrachloride	Carbon Tetrachloride	Carbon Tetrachloride	Carbon Tetrachloride	
Chlorobenzene	Chlorobenzene	Chlorobenzene	Chlorobenzene	Chlorobenzene
Chloroethane	Chloroethane	Chloroethane	Chloroethane	
2-Chloroethyl vinyl ether		2-Chloroethyl vinyl ether	2-Chloroethyl vinyl ether	
Chloroform	Chloroform	Chloroform	Chloroform	
Chloromethane	Chloromethane	Chloromethane	Chloromethane	
	Chloroprene			
Dibromochloromethane	Dibromochloromethane	Dibromochloromethane	Dibromochloromethane	
1,2-Dibromoethane	1,2-Dibromoethane	1,2-Dibromoethane	1,2-Dibromoethane	
Dibromomethane	Dibromomethane	Dibromomethane	Dibromomethane	
	1,2-Dibromo-3-chloropropane			
trans-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	
Dichlorodifluoromethane	Dichlorodifluoromethane	Dichlorodifluoromethane	Dichlorodifluoromethane	
1,1-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethane
1,2-Dichloroethane	1,2-Dichloroethane	1,2-Dichloroethane	1,2-Dichloroethane	1,2-Dichloroethane
				cis-1,2-Dichloroethene
trans-1,2-Dichloroethene	trans-1,2-Dichloroethene	trans-1,2-Dichloroethene	trans-1,2-Dichloroethene	trans-1,2-Dichloroethene
1,1-Dichloroethylene	1,1-Dichloroethylene	1,1-Dichloroethylene	1,1-Dichloroethylene	1,1-Dichloroethene
Dichloromethane	Dichloromethane	Dichloromethane	Dichloromethane	Dichloromethane
1,2-Dichloropropane	1,2-Dichloropropane	1,2-Dichloropropane	1,2-Dichloropropane	
cis-1,3-Dichloropropene	cis-1,3-Dichloropropene	cis-1,3-Dichloropropene	cis-1,3-Dichloropropene	
trans-1,3-Dichloropropene	trans-1,3-Dichloropropene	trans-1,3-Dichloropropene	trans-1,3-Dichloropropene	
Ethyl benzene	Ethyl benzene	Ethyl benzene	Ethyl benzene	Ethyl benzene
Ethyl methacrylate	Ethyl methacrylate	Ethyl methacrylate	Ethyl methacrylate	
2-Hexanone	2-Hexanone	2-Hexanone	2-Hexanone	
Iodomethane	Iodomethane	Iodomethane	Iodomethane	
	Isobutyl alcohol			
	Methyacrylonitrile			
Methyl ethyl ketone	Methyl ethyl ketone	Methyl ethyl ketone (2-Butanone)	Methyl ethyl ketone (2-Butanone)	
	Methyl methacrylate			
4-Methyl-2-pentanone	4-Methyl-2-pentanone	4-Methyl-2-pentanone	4-Methyl-2-pentanone	
	Pentachloroethane			
	Propionitrile			
Styrene	Styrene	Styrene	Styrene	
	1,1,1,2-Tetrachloroethane			
1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane
Tetrachloroethene	Tetrachloroethene	Tetrachloroethene	Tetrachloroethene	Tetrachloroethene
Toluene	Toluene	Toluene	Toluene	Toluene
1,1,1-Trichloroethane	1,1,1-Trichloroethane	1,1,1-Trichloroethane	1,1,1-Trichloroethane	
1,1,2-Trichloroethane	1,1,2-Trichloroethane	1,1,2-Trichloroethane	1,1,2-Trichloroethane	
Trichloroethene	Trichloroethene	Trichloroethene	Trichloroethene	Trichloroethene
Trichlorofluoromethane	Trichlorofluoromethane	Trichlorofluoromethane	Trichlorofluoromethane	
1,2,3-Trichloropropane	1,2,3-Trichloropropane	1,2,3-Trichloropropane	1,2,3-Trichloropropane	
Vinyl acetate	Vinyl acetate	Vinyl acetate	Vinyl acetate	
Vinyl chloride	Vinyl chloride	Vinyl chloride	Vinyl chloride	Vinyl chloride
Xylenes	Xylenes	Xylenes	Xylenes	Xylenes
Semi-Volatile Organic Compounds (EPA 8270C)				
Acenaphthene	Acenaphthene	Acenaphthene	Acenaphthene	Acenaphthene
Acenaphthylene	Acenaphthylene	Acenaphthylene	Acenaphthylene	Acenaphthylene
	Acetophenone			
	2-Acetylaminofluorene			
	4-Aminobiphenyl			
	Aniline			
Anthracene	Anthracene	Anthracene	Anthracene	Anthracene
	Aramite			
				Benzidine
Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene
Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene
Benzyl alcohol	Benzyl alcohol	Benzyl alcohol	Benzyl alcohol	
Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene
benzo(a)pyrene	benzo(a)pyrene	benzo(a)pyrene	benzo(a)pyrene	Benzo(a)pyrene
Bis(2-Chloroethoxy)methane	Bis(2-Chloroethoxy)methane	Bis(2-Chloroethoxy)methane	Bis(2-Chloroethoxy)methane	Bis(2-chloroethoxy)methane
Bis(2-Chloroethyl)ether	Bis(2-Chloroethyl)ether	Bis(2-Chloroethyl)ether	Bis(2-Chloroethyl)ether	Bis(2-chloroethyl)ether
Bis(2-Chloroisopropyl)ether	Bis(2-Chloroisopropyl)ether	Bis(2-Chloroisopropyl)ether	Bis(2-Chloroisopropyl)ether	Bis(2-Chloroisopropyl)ether
Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-ethylhexyl) phthalate
4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether
	Butyl benzyl phthalate			Butyl benzyl phthalate

TABLE 2-2
Analyte List
Sloss Industries, Birmingham, Alabama

1995 Facility-wide RFI/1996 Coke Manufacturaing Plant RFI		1997 RFI	2000 RFI	2005 RFI
SW-846	**Appendix IX**	**Land Disposal Area**	**Coke/Chemical Plants**	**Facility Wide**
	2-sec-Butyl-4,6-dinitrophenol			2-sec-Butyl-4,6-dinitrophenol (Dinoseb)
				Carbazole
p-Chloroaniline	p-Chloroaniline	p-Chloroaniline	p-Chloroaniline	4-Chloroaniline
p-Chloro-m-cresol	p-Chloro-m-cresol	p-Chloro-m-cresol	p-Chloro-m-cresol	4-Chloro-3-methylphenol
2-Chloronaphthalene	2-Chloronaphthalene	2-Chloronaphthalene	2-Chloronaphthalene	
2-Chlorophenol	2-Chlorophenol	2-Chlorophenol	2-Chlorophenol	2-Chlorophenol
2-Chlorophenyl phenyl ether	2-Chlorophenyl phenyl ether	4-Chlorophenyl phenyl ether	4-Chlorophenyl phenyl ether	4-Chlorophenyl phenyl ether
Chrysene	Chrysene	Chrysene	Chrysene	Chrysene
o-Cresol	o-Cresol	o-Cresol (2-Methylphenol)	o-Cresol (2-Methylphenol)	2-Methylphenol
m-Cresol	m-Cresol	m-Cresol (3-Methylphenol)	m-Cresol (3-Methylphenol)	3-Methylphenol
p-Cresol	p-Cresol	p-Cresol (4-Methylphenol)	p-Cresol (4-Methylphenol)	4-Methylphenol
Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	Dibenz(a,h)anthracene
Dibenzofuran	Dibenzofuran	Dibenzofuran	Dibenzofuran	Dibenzofuran
Di-n-butyl phthalate	Di-n-butyl phthalate	Di-n-butyl phthalate	Di-n-butyl phthalate	Di-n-butyl phthalate
o-Dichlorobenzene	o-Dichlorobenzene	o-Dichlorobenzene	o-Dichlorobenzene	1,2-Dichlorobenzene
m-Dichlorobenzene	m-Dichlorobenzene	m-Dichlorobenzene	m-Dichlorobenzene	1,3-Dichlorobenzene
p-Dichlorobenzene	p-Dichlorobenzene	p-Dichlorobenzene	p-Dichlorobenzene	1,4-Dichlorobenzene
2,4-Dichlorophenol	2,4-Dichlorophenol	2,4-Dichlorophenol	2,4-Dichlorophenol	2,4-Dichlorophenol
2,6-Dichlorophenol	2,6-Dichlorophenol	2,6-Dichlorophenol	2,6-Dichlorophenol	
Diethyl phthalate	Diethyl phthalate	Diethyl phthalate	Diethyl phthalate	Diethyl phthalate
3,3'-Dimethylbenzidine	3,3'-Dimethylbenzidine	3,3'-Dimethylbenzidine	3,3'-Dimethylbenzidine	3,3'-Dichlorobenzidine
	alpha,alpha-Dimethylphenethylamine			
2,4-Dimethylphenol	2,4-Dimethylphenol	2,4-Dimethylphenol	2,4-Dimethylphenol	2,4-Dimethylphenol
Dimethyl phthalate	Dimethyl phthalate	Dimethyl phthalate	Dimethyl phthalate	Dimethyl phthalate
4,6-Dinitro-o-cresol	4,6-Dinitro-o-cresol	4,6-Dinitro-o-cresol	4,6-Dinitro-o-cresol	4,6-Dinitro-2-methylphenol
2,4-Dinitrophenol	2,4-Dinitrophenol	2,4-Dinitrophenol	2,4-Dinitrophenol	2,4-Dinitrophenol
2,4-Dinitrotoluene	2,4-Dinitrotoluene	2,4-Dinitrotoluene	2,4-Dinitrotoluene	2,4-Dinitrotoluene
2,6-Dinitrotoluene	2,6-Dinitrotoluene	2,6-Dinitrotoluene	2,6-Dinitrotoluene	2,6-Dinitrotoluene
Di-n-octyl phthalate	Di-n-octyl phthalate	Di-n-octyl phthalate	Di-n-octyl phthalate	Di-n-octyl phthalate
	1,4-Dioxane			
	Diphenylamine			
	Ethyl methanesulfonate			
Fluoranthene	Fluoranthene	Fluoranthene	Fluoranthene	Fluoranthene
Fluorene	Fluorene	Fluorene	Fluorene	Fluorene
Hexachlorobenzene	Hexachlorobenzene	Hexachlorobenzene	Hexachlorobenzene	Hexachlorobenzene
Hexachlorobutadiene	Hexachlorobutadiene	Hexachlorobutadiene	Hexachlorobutadiene	Hexachlorobutadiene
Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	Hexachlorocyclopentadiene
Hexachloroethane	Hexachloroethane	Hexachloroethane	Hexachloroethane	Hexachloroethane
	Hexachloropropene			
	Hexachlorophene			
Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene
Isophorone	Isophorone	Isophorone	Isophorone	Isophorone
	Isosafrole			
	Kepone			
	Methapyrilene			
	3-Methylcholanthrene			
	4-Nitroquinoline-1-oxide			
	Methyl methanesulfonate			
				1-Methylnaphthalene
2-Methylnaphthalene	2-Methylnaphthalene	2-Methylnaphthalene	2-Methylnaphthalene	2-Methylnaphthalene
Naphthalene	Naphthalene	Naphthalene	Naphthalene	Naphthalene
	1,4-Naphthoquinone			
	1-Naphthylamine			
	2-Naphthylamine			
2-Nitroaniline	2-Nitroaniline	2-Nitroaniline	2-Nitroaniline	2-Nitroaniline
3-Nitroaniline	3-Nitroaniline	3-Nitroaniline	3-Nitroaniline	
4-Nitroaniline	4-Nitroaniline	4-Nitroaniline	4-Nitroaniline	4-Nitroaniline
Nitrobenzene	Nitrobenzene	Nitrobenzene	Nitrobenzene	Nitrobenzene
2-Nitrophenol	2-Nitrophenol	2-Nitrophenol	2-Nitrophenol	2-Nitrophenol
4-Nitrophenol	4-Nitrophenol	4-Nitrophenol	4-Nitrophenol	4-Nitrophenol
	N-Nitrosodi-n-butylamine			
	N-Nitrosodiethylamine			
	N-Nitrosomethylethylamine			
	N-Nitrosodiphenylamine			N-Nitrosodiphenylamine
N-Nitrosodimethylamine	N-Nitrosodimethylamine	N-Nitrosodimethylamine	N-Nitrosodimethylamine	N-Nitrosodimethylamine
	N-Nitrosomorpholine			
	N-Nitrosopiperidine			
	N-Nitrosopyrrolidine			
	N-Nitro-o-toluidine			
N-Nitroso-di-n-propylamine	N-Nitroso-di-n-propylamine	N-Nitroso-di-n-propylamine	N-Nitroso-di-n-propylamine	N-Nitrosodi-n-propylamine
	Pentachlorobenzene			
	Pentachloronitrobenzene			
Pentachlorophenol	Pentachlorophenol	Pentachlorophenol	Pentachlorophenol	Pentachlorophenol
	Phenacetin			
Phenanthrene	Phenanthrene	Phenanthrene	Phenanthrene	Phenanthrene
Phenol	Phenol	Phenol	Phenol	Phenol
	p-Phenylenediamine			
	2-Picoline			
	Pronamide			

TABLE 2-2
Analyte List
Sloss Industries, Birmingham, Alabama

1995 Facility-wide RFI/1996 Coke Manufacturaing Plant RFI		1997 RFI	2000 RFI	2005 RFI
SW-846	**Appendix IX**	**Land Disposal Area**	**Coke/Chemical Plants**	**Facility Wide**
Pyrene	Pyrene	Pyrene	Pyrene	Pyrene
Pyridine	Pyridine	Pyridine	Pyridine	
	Safrole			
	1,2,4,5-Tetrachlorobenzene			
2,3,4,6-Tetrachlorophenol	2,3,4,6-Tetrachlorophenol	2,3,4,6-Tetrachlorophenol	2,3,4,6-Tetrachlorophenol	
	o-Toluidine			
1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene
2,4,5-Trichrolophenol	2,4,5-Trichrolophenol	2,4,5-Trichrolophenol	2,4,5-Trichrolophenol	2,4,5-Trichlorophenol
2,4,6-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trichlorophenol	2,4,6-Trichlorophenol
	O,O,O-Triethylphosphorite			
	1,3,5-Trinitrobenzene			
Priority Pollutant Metals (EPA 6010)				
Antimony	Antimony	Antimony	Antimony	
Arsenic	Arsenic	Arsenic	Arsenic	Arsenic
Barium	Barium	Barium	Barium	
Berylium	Berylium	Berylium	Berylium	
Cadmium	Cadmium	Cadmium	Cadmium	
Chromium	Chromium	Chromium	Chromium	Chromium*
	Cobalt			
Copper	Copper	Copper	Copper	
Lead	Lead	Lead	Lead	
Mercury	Mercury	Mercury	Mercury	
Nickel	Nickel	Nickel	Nickel	
Selenium	Selenium	Selenium	Selenium	
Silver	Silver	Silver	Silver	
Thallium	Thallium	Thallium	Thallium	
	Tin			
	Vanadium			
Zinc	Zinc	Zinc	Zinc	
*Samples were checked for both chromium and hexavalent chromium.				
Pesticides, Herbicides, Dioxins/Furans (EPA 8081, 8082, 8141, 8151, 8280)				
	Aldrin			
	alpha-BHC			
	beta-BHC			
	gamma-BHC			
	delta-BHC			
	alpha-Chlordane			
	gamma-Chlordane			
	Chlorobenzilate			
	4,4'-DDD			
	4,4'-DDE			
	4,4'-DDT			
	Dieldrin			
	Endosulfan I			
	Endosulfan II			
	Endosulfan sulfate			
	Endrin			
	Endrin aldehyde			
	Heptachlor			
	Heptachlor epoxide			
	Isodrin			
	Methoxychlor			
	Toxaphene			
	Dimethoate			
	Disulfoton			
	Ethyl parathion			
	Famphur			
	Methyl parathion			
	Phorate			
	Sulfotepp			
	Thionazin			
	2,4-D			
	2,4,5-T			
	2,4,5-TP (Silvex)			
	Tetrachlorodibenzodioxins			
	2,3,7,8-Tetrachlorodibenzodioxin			
	Pentachlorodibenzodioxins			
	Hexachlorodibenzodioxins			
	Tetrachlorodibenzofurans			
	Pentachlorodibenzofurans			
	Hexachlorodibenzofurans			

TABLE 2-3
Surface Water Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
22-SW0002	980801-BT-22-SW0001	8/1/1998		V,S,P,PCB,PM,C
25-SW0001	980801-BT-25-SW0001	8/1/1998		V,S,PM,C
SW-1	950608-FW-00-SW0001	6/8/1995		V,S,P,Hg,PM,C
SW-2	950608-FW-00-SW0002	6/8/1995		V,S,Hg,PM,C
SW-3	950609-FW-00-SW0003	6/9/1995		V,S,P,Hg,PM,C
SW-4	950608-FW-00-SW0004	6/8/1995		V,S,Hg,PM,C
SW-5	950609-FW-00-SW0005	6/9/1995		V,S,P,Hg,PM,C
SW007	010602-BT-00-SW0007	6/2/2001		PM,C
SW008	010602-BT-00-SW0008	6/2/2001		PM,C
SW009	010602-BT-00-SW0009	6/2/2001		PM,C
SW0010	010602-BT-00-SW0010	6/2/2001		PM,C
SW0011	010602-BT-00-SW0011	6/2/2001		PM,C
SW0013	010601-BT-00-SW0013	6/1/2001		PM,C
SW0014	010601-BT-00-SW0014	6/1/2001		PM,C
SW0015	010601-BT-00-SW0015	6/1/2001		PM,C
SW0016	010601-BT-00-SW0016	6/1/2001		PM,C
SW0017	010601-BT-00-SW0017	6/1/2001		PM,C
SW0018	010604-BT-00-SW0018	6/4/2001		PM,C
SW0019	010604-BT-00-SW0019	6/4/2001		PM,C
SW0020	010604-BT-00-SW0020	6/4/2001		PM,C
SW0021	010604-BT-00-SW0021	6/4/2001		PM,C

Notes:
V - Volatile organic compounds
S - Semivolatile organic compounds
Hg - Mercury
PM - Priority Pollutant Metals
P - Pesticides, insedcticides, and herbicides
C - Cyanide
PCB - Polychlorinated biphenyls

TABLE 2-4
Sediment Sampling Efforts
Sloss Industries, Birmingham, Alabama

Sample Location	Sample ID	Sample Date	Sample Interval (ft)	Analysis Parameters
22-SD0001	980730-BT-22-SD0001	7/30/98	0-0.7	V,S,P,PCB,PAH,TOC,C,PM
22-SD0002	980731-BT-22-SD0002	7/31/98	0-0.7	V,S,P,C,TOC,PM
22-SD0003	980731-BT-22-SD0003	7/31/98	0-0.7	V,S,P,C,TOC,PM
22-SD0004	980731-BT-22-SD0004	7/31/98	0-0.7	V,S,P,C,TOC,PM
22-SD0005	980731-BT-22-SD0005	7/31/98	0-0.7	V,S,P,C,TOC,PM
22-SD0006	980731-BT-22-SD0006	7/31/98	0-0.7	V,S,P,C,TOC,PM
22-SD0007	980731-BT-22-SD0007	7/31/98	0-0.7	V,S,P,C,TOC,PM
22-SD0008	980731-BT-22-SD0008	7/31/98	0-0.7	V,S,P,PCB,PAH,TOC,C,PM
SD-1	950608-FW-00-SD0001	6/8/95	0-0.25	V,S,PM,C
SD-2	950608-FW-00-SD0002	6/8/95		V,S,PM,C
SD-4	950608-FW-00-SD0004	6/8/95		V,S,PM,C
SD-3	950609-FW-00-SD0003	6/9/95		V,S,PM,C
SD-5	950609-FW-00-SD0005	6/9/95		V,S,P,PM,C
SD0007	010531-BT-00-SD0007	5/31/01	0-0.2	V,PM,C,BNA,TOC
SD0008	010531-BT-00-SD0008	5/31/01	0-0.2	V,PM,C,BNA
SD0009	010531-BT-00-SD0009	5/31/01	0-0.2	V,PM,C,BNA,TOC
SD0010	010531-BT-00-SD0010	5/31/01	0-0.2	V,PM,C,BNA
SD0011	010601-BT-00-SD0011	6/1/01	0-0.2	V,PM,C,BNA,TOC
SD0012	010601-BT-00-SD0012	6/1/01	0-0.2	V,PM,C,BNA,TOC
SD0013	010601-BT-00-SD0013	6/1/01	0-0.2	V,PM,C,BNA
SD0014	010601-BT-00-SD0014	6/1/01	0-0.2	V,PM,C,BNA,TOC
SD0015	010601-BT-00-SD0015	6/1/01	0-0.2	V,PM,C,BNA
SD0016	010601-BT-00-SD0016	6/1/01	0-0.2	V,PM,C,BNA,TOC
SD0017	010601-BT-00-SD0017	6/1/01	0-0.2	V,PM,C,BNA
SD0018	010604-BT-00-SD0018	6/4/01	0-0.2	V,PM,C,BNA,TOC
SD0019	010604-BT-00-SD0019	6/4/01	0-0.2	V,PM,C,BNA
SD0020	010604-BT-00-SD0020	6/4/01	0-0.2	V,PM,C,BNA,TOC
SD0021	010604-BT-00-SD0021	6/4/01	0-0.2	V,PM,C,BNA
FMCSS #1	050418-FMCSS1	4/20/05	0-0.25	V,S,As,Cr
FMCSS #2	050418-FMCSS2	4/20/05	0-0.25	V,S,As,Cr
FMCSS #3	050418-FMCSS3	4/20/05	0-0.25	V,S,As,Cr
FMCSS #4	050418-FMCSS4	4/20/05	0-0.25	V,S,As,Cr
FMCSS #5	050418-FMCSS5	4/20/05	0-0.25	V,S,As,Cr
35SS #1	050418-35SS1	4/19/05	0-0.5	V,S,As,Cr
35SS #2	050418-35SS2	4/19/05	0-0.5	V,S,As,Cr
35SS #3	050418-35SS3	4/19/05	0-0.5	V,S,As,Cr
35SS #4	050418-35SS4	4/19/05	0-0.5	V,S,As,Cr
35SS #5	050418-35SS5	4/19/05	0-0.5	V,S,As,Cr

Notes:
V - Volatile organic compounds
S - Semivolatile organic compounds
As - Arsenic
PM - Priority Pollutant Metals
P - Pesticides, insedcticides, and herbicides
C - Cyanide
TOC - Total Organic Carbon
BNA - Base-Neutral Extractable SVOCs
Cr - Chromium

TABLE 2-5
Groundwater Sampling Efforts
Sloss Industries, Birmingham, Alabama

Name	Alias	Sample ID	Sample Date	STYPE	Method	Lab	Sample Type
MW-01		980724-BT-13-GW0001	7/24/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,P,D,C,MNA
MW-02		980727-BT-13-GW0002	7/27/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-05D		980724-BT-13-GW0005D	7/24/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-04	MW-05D	950815-FW-IW-GW0004	8/15/1995	GW	BAILER	SAV	V,S,PM,C
MW-05S		981103-BT-13-GW0005S	11/3/1998	GW	BAILER	ASI	S
MW-05S		980724-BT-13-GW0005S	7/24/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-05S		981103-BT-13-GW9005S	11/3/1998	DUP	BAILER	ASI	V,S,PM,C
MW-05	MW-05S	950719-FW-IW-GW0005	7/19/1995	GW	BAILER	SAV	V,S,PM,C
MW-07		980724-BT-13-GW0007	7/24/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-08		980725-BT-13-GW0008	7/25/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,P,D,C,MNA
MW-08		980725-BT-13-GW9008	7/25/1998	DUP	BAILER/SUBPMP	ASI	V,S,PM,C
MW-09		980727-BT-13-GW0009	7/27/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-10		980728-BT-13-GW0010	7/28/1998	GW	BAILER	ASI	V,S,PM,P,D,C,MNA
MW-11		980727-BT-13-GW0011	7/27/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-12		980727-BT-13-GW0012	7/27/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,P,D,C,MNA
MW-13D		980730-BT-22-GW0013D	7/30/1998	GW	BAILER	ASI	V,S,C
MW-13D		980731-BT-22-GW0013D	7/31/1998	GW	BAILER	ASI	PM
MW-13S		981015-BT-22-GW0013S	10/15/1998	GW	BAILER/PRPMP	ASI	MNA,C
MW-13S		980729-BT-22-GW0013S	7/29/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-13S		981015-BT-22-GW9013S	10/15/1998	DUP	BAILER/PRPMP	ASI	V,S,PM,C
MW-16D		981015-BT-22-GW0016D	10/15/1998	GW	BAILER	ASI	MNA,C
MW-16D		980729-BT-22-GW0016D	7/29/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,P,D,C,MNA
P-01D	MW-16D	950815-FW-IW-GW0001D	8/15/1995	GW	BAILER	SAV	V,S,PM,C,GP
MW-16S		980728-BT-22-GW0016S	7/28/1998	GW	BAILER	ASI	V,S,PM,C
P-01S	MW-16S	951014-FW-IW-GW001S	10/14/1995	GW	BAILER/PRPMP	SAV	PM
P-01S	MW-16S	950814-FW-IW-GW001S	8/14/1995	GW	BAILER	SAV	V,S,PM,C
MW-17D		010618-BT-22-GW0017D	6/18/2001	GW	BLPMP	ASI	V,S,PM,C
MW-17S		050418-MW17	4/27/2005	GW	BAILER/SUBPMP	STL	V
MW-17S		010609-BT-22-GW0017S	6/9/2001	GW	PRPMP	ASI	V,S,PM,C
MW-17S		010609-BT-22-GW9017S	6/9/2001	DUP	PRPMP	ASI	V,MNA,TOC
MW-17	MW-17S	980728-BT-22-GW0017	7/28/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-18		980728-BT-22-GW0018	7/28/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-02	MW-18	950811-FW-IW-GW0002	8/11/1995	GW	BAILER	SAV	V,S,PM,C
MW-19		981016-BT-22-GW0019	10/16/1998	GW	BAILER	ASI	MNA,C
MW-19		980729-BT-22-GW0019	7/29/1998	GW	BAILER/SUBPMP	ASI	V,S,PM,P,C,MNA
MW-21		970818-LD-23-GW0021	8/18/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-22		970818-LD-23-GW0022	8/18/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-31	MW-22	951014-FW-IW-GW0031	10/14/1995	GW	BAILER	SAV	S
P-31	MW-22	950815-FW-IW-GW0031	8/15/1995	GW	BAILER	SAV	V,S,PM,C,GP
P-31	MW-22	950815-FW-IW-GW9031	8/15/1995	DUP	BAILER	SAV	V,S,PM,C
MW-23		970818-LD-23-GW0023	8/18/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-30	MW-23	950814-FW-IW-GW0030	8/14/1995	GW	BAILER	SAV	V,S,PM,C
MW-24		970818-LD-23-GW0024	8/18/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-29	MW-24	950815-FW-IW-GW0029	8/15/1995	GW	BAILER	SAV	V,S,PM,C,GP
MW-25D		970819-LD-23-GW0025D	8/19/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-25D		970819-LD-23-GW9025D	8/19/1997	DUP	BAILER/SUBPMP	ASI	
P-28D	MW-25D	961014-FW-IW-GW0028D	10/14/1995	GW	BAILER	SAV	S
P-28D	MW-25D	950817-FW-IW-GW0028D	8/17/1995	GW	BAILER	SAV	V,S,PM,C
MW-25S		970819-LD-23-GW0025S	8/19/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-28S	MW-25S	951014-FW-IW-GW0028S	10/14/1995	GW	BAILER	SAV	S,GP
P-28S	MW-25S	950814-FW-IW-GW0028S	8/14/1995	GW	BAILER	SAV	V,S,PM,C
MW-26		010619-LD-39-GW0026	6/19/2001	GW	BAILER	ASI	V

TABLE 2-5
Groundwater Sampling Efforts
Sloss Industries, Birmingham, Alabama

Name	Alias	Sample ID	Sample Date	STYPE	Method	Lab	Sample Type
MW-26		990619-LD-38-GW0026	6/19/1999	GW	BAILER	ASI	V
MW-26		970821-LD-38-GW0026	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-27	MW-26	951012-FW-IW-GW0027	10/12/1995	GW	PRPMP	SAV	V,S,PM,C
P-27	MW-26	950817-FW-IW-GW0027	8/17/1995	GW	BAILER	SAV	V
MW-27		970819-LD-38-GW0027	8/19/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-26	MW-27	950809-FW-IW-GW0026	8/9/1995	GW	BAILER	SAV	V,S,PM,C
MW-28		970819-LD-38-GW0028	8/19/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-25	MW-28	951012-FW-IW-GW0025	10/12/1995	GW	BAILER	SAV	S
P-25	MW-28	950728-FW-IW-GW0025	7/28/1995	GW	BAILER	SAV	V,S,PM,C
MW-29		970819-LD-38-GW0029	8/19/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-30D		970821-LD-38-GW0030D	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-24D	MW-30D	950727-FW-IW-GW0024D	7/27/1995	GW	BAILER	SAV	V,S,PM,C
MW-30S		970821-LD-38-GW0030S	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-24S	MW-30S	951012-FW-IW-GW0024S	10/12/1995	GW	PRPMP	SAV	PM
P-24S	MW-30S	950728-FW-IW-GW0024S	7/28/1995	GW	BAILER	SAV	V,S,PM,C
MW-31		970821-LD-39-GW0031	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-32		010610-LD-39-GW0032	6/10/2001	GW	PRPMP	ASI	C
MW-32		990619-LD-39-GW0032	6/19/1999	GW	BAILER	ASI	C
MW-32		970821-LD-39-GW0032	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-07	MW-32	951013-FW-IW-GW0007	10/13/1995	GW	BAILER	SAV	C
P-07	MW-32	950808-FW-IW-GW0007	8/8/1995	GW	BAILER	SAV	V,S,PM,C
MW-33		970820-LD-39-GW0033	8/20/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-34D		990618-LD-39-GW0034D	6/18/1999	GW	BAILER	ASI	V
MW-34D		970821-LD-39-GW0034D	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
P-06D	MW-34D	950817-FW-IW-GW0006D	8/17/1995	GW	BAILER	SAV	V,S,PM,C,GP
MW-34S		990618-LD-39-GW0034S	6/18/1999	GW	BAILER	ASI	C
MW-34S		970820-LD-39-GW0034S	8/20/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-34S		970820-LD-39-GW9034S	8/20/1997	DUP	BAILER/SUBPMP	ASI	V,S,PM,C
P-06S	MW-34S	951013-FW-IW-GW0006S	10/13/1995	GW	BAILER	SAV	C
P-06S	MW-34S	950814-FW-IW-GW0006S	8/14/1995	GW	BAILER	SAV	GP
P-06S	MW-34S	950808-FW-IW-GW0006S	8/8/1995	GW	BAILER	SAV	V,S,PM,C
MW-35		970821-LD-39-GW0035	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-36		970821-LD-39-GW0036	8/21/1997	GW	SMPLE PORT	ASI	V,S,PM,C
P-05	MW-36	951012-FW-IW-GW0005	10/12/1995	GW	BAILER	SAV	S
P-05	MW-36	950814-FW-IW-GW0005	8/14/1995	GW	BAILER	SAV	GP
P-05	MW-36	950809-FW-IW-GW0005	8/9/1995	GW	BAILER	SAV	V,S,PM,C
MW-37		970821-LD-38-GW0037	8/21/1997	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-38		990621-BT-13-GW0038	6/21/1999	GW	BAILER	ASI	V,S,PM,C
MW-39		990621-BT-13-GW0039	6/21/1999	GW	BAILER	ASI	V,S,PM,C
MW-40		990618-BT-13-GW0040	6/18/1999	GW	BAILER	ASI	V,S,PM,C
MW-41		990617-BT-13-GW0041	6/17/1999	GW	BAILER	ASI	V,S,PM,C
MW-41		990617-BT-13-GW9041	6/17/1999	DUP	BAILER	ASI	V,S,PM,C
MW-42		990617-BT-13-GW0042	6/17/1999	GW	BAILER	ASI	V,S,PM,C
MW-43		990617-BT-13-GW0043	6/17/1999	GW	BAILER	ASI	V,S,PM,C
MW-44		990621-BT-13-GW0044	6/21/1999	GW	BAILER	ASI	V,S,PM,C
MW-45		010616-BT-22-GW0045	6/16/2001	GW	PRPMP	ASI	V,S,PM,C
MW-47		010620-BT-22-GW0047	6/20/2001	GW	SUBPMP	ASI	V,S,PM,C
MW-48		010616-LD-24-GW0048	6/16/2001	GW	BLPMP	ASI	V,S,PM,C
MW-49D		000728-CM-00-GW0049D	7/28/2000	GW	BAILER	ASI	V,S,PM,C
P-13D	MW-49D	990618-CM-00-GW00P13D	6/18/1999	GW	BAILER	ASI	V
P-13D	MW-49D	951012-FW-IW-GW0013D	10/12/1995	GW	BAILER	SAV	V,S,C
P-13D	MW-49D	950817-FW-IW-GW0013D	8/17/1995	GW	BAILER	SAV	V,PM

TABLE 2-5
Groundwater Sampling Efforts
Sloss Industries, Birmingham, Alabama

Name	Alias	Sample ID	Sample Date	STYPE	Method	Lab	Sample Type
MW-49S		010406-CM-00-GW0049S	4/6/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-49S		000728-CM-00-GW0049S	7/28/2000	GW	BAILER	ASI	V,S,PM,C
MW-49S		000728-CM-00-GW9049	7/28/2000	GW	BAILER	ASI	
P-13S	MW-49S	990618-CM-00-GW00P13S	6/18/1999	GW	BAILER	ASI	V
P-13S	MW-49S	951012-FW-IW-GW0013S	10/12/1995	GW	BAILER	SAV	V,C
P-13S	MW-49S	950815-FW-IW-GW0013S	8/15/1995	GW	BAILER	SAV	GP
P-13S	MW-49S	950803-FW-IW-GW0013S	8/3/1995	GW	BAILER	SAV	V,S,PM,C
MW-50		010405-CM-00-GW0050	4/5/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-50		000728-CM-00-GW0050	7/28/2000	GW	BAILER	ASI	V,S,PM,C
MW-51		010405-CM-00-GW0051	4/5/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-51		000727-CM-00-GW0051	7/27/2000	GW	BAILER	ASI	V,S,PM,C
MW-52		010406-CM-00-GW0052	4/6/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-52		000727-CM-00-GW0052	7/27/2000	GW	BAILER	ASI	V,S,PM,C
MW-53		010405-CM-00-GW0053	4/5/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-53		000727-CM-00-GW0053	7/27/2000	GW	BAILER	ASI	V,S,PM,C
MW-54		010406-CM-31-GW0054	4/5/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-54		000727-CM-31-GW0054	7/27/2000	GW	BAILER	ASI	V,S,PM,C
MW-55		010406-CM-27-GW0055	4/6/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-55		010406-CM-27-GW9055	4/6/2001	DUP	PRPMP	ASI	V,S,PM,C
MW-55		000727-CM-27-GW0055	7/27/2000	GW	BAILER	ASI	V,S,PM,C
MW-56		010405-CM-29-GW0056(10.4)	4/5/2001	GW	PRPMP	ASI	V
MW-56		010405-CM-29-GW0056(13.5)	4/5/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-56		010405-CM-29-GW0056(17.75)	4/5/2001	GW	PRPMP	ASI	V
MW-56		000727-CM-29-GW0056	7/27/2000	GW	BAILER	ASI	V,S,PM,C
MW-57D		000728-CM-00-GW0057D	7/28/2000	GW	BAILER	ASI	V,S,PM,C
MW-57S		000727-CM-00-GW0057S	7/27/2000	GW	BAILER	ASI	V,S,PM,C
P-14	MW-57S	950803-FW-IW-GW0014	8/3/1995	GW	BAILER	SAV	V,S,PM,C
MW-58		050418-MW58	4/28/2005	GW	BAILER/SUBPMP	STL	V,S,P
MW-58		000726-CO-05-GW0058	7/26/2000	GW	BAILER	ASI	S
MW-59		050418-MW59	4/29/2005	GW	BAILER/SUBPMP	STL	V,S,P
MW-59		000726-CO-07-GW0059	7/26/2000	GW	BAILER	ASI	S
MW-60		000726-CO-00-GW0060	7/26/2000	GW	BAILER	ASI	V,S,PM,C
MW-60		000726-CO-00-GW9060	7/26/2000	GW	BAILER	ASI	V,S,PM,C
MW-61		010404-CO-00-GW0061	4/4/2001	GW	PRPMP	ASI	V,MNA,TOC
MW-61		000726-CO-00-GW0061	7/26/2000	GW	BAILER	ASI	V,S,PM,C
MW-62		010615-BT-04-GW0062	6/15/2001	GW	PRPMP	ASI	V,S,PM,C
MW-63		010620-LD-39-GW0063	6/20/2001	GW	BAILER/SUBPMP	ASI	V
MW-64		010620-LD-39-GW0064	6/20/2001	GW	BAILER/SUBPMP	ASI	V
MW-65		010609-BT-04-GW0065	6/9/2001	GW	PRPMP	ASI	V,S,PM,C
MW-66		010610-LD-39-GW0066	6/10/2001	GW	BLPMP	ASI	C
MW-67		010617-LD-39-GW0067	6/17/2001	GW	PRPMP	ASI	C
MW-68S		010621-BT-37-GW0068S	6/20/2001	GW	BAILER/SUBPMP	ASI	V,S,PM,C
MW-69		050418-MW69	4/28/2005	GW	BAILER/SUBPMP	STL	V,S
MW-70		050418-MW70	4/27/2005	GW	BAILER/SUBPMP	STL	V,S
MW-71		050418-MW71	4/25/2005	GW	BAILER/SUBPMP	STL	V,S
MW-72		050418-MW72	4/27/2005	GW	BAILER/SUBPMP	STL	V,S
P-03		950814-FW-IW-GW0003	8/14/1995	GW	BAILER	SAV	V,S,PM,C
P-08		951012-FW-IW-GW0008	10/12/1995	GW	BAILER	SAV	S
P-08		950809-FW-IW-GW0008	8/9/1995	GW	BAILER	SAV	V,S,PM,C
P-09		951012-FW-IW-GW0009	10/12/1995	GW	BAILER	SAV	V,S,C
P-09		950817-FW-IW-GW0009	8/17/1995	GW	BAILER	SAV	V,PM
P-10		950807-FW-IW-GW0010	8/7/1995	GW	BAILER	SAV	V,S,PM,C

TABLE 2-5
Groundwater Sampling Efforts
Sloss Industries, Birmingham, Alabama

Name	Alias	Sample ID	Sample Date	STYPE	Method	Lab	Sample Type
P-11		950808-FW-IW-GW0011	8/8/1995	GW	BAILER	SAV	V,S,PM,C
P-12		001018-CM-00-GW000P12	10/18/2000	GW	BAILER	ASI	V
P-12		950809-FW-IW-GW0012	8/9/1995	GW	BAILER	SAV	V,S,PM,C
P-15		050418-P15	4/29/2005	GW	BAILER/SUBPMP	STL	V,S,P
P-15		990619-FW-00-GW00P15	6/19/1999	GW	BAILER	ASI	V
P-15		951013-FW-IW-GW0015	10/13/1995	GW	BAILER	SAV	V
P-15		950811-FW-IW-GW0015	8/11/1995	GW	BAILER	SAV	V,S,PM,C
P-16B		050418-P16B	4/28/2005	GW	BAILER/SUBPMP	STL	V,S,P
P-16B		950801-FW-IW-GW0016	8/1/1995	GW	BAILER	SAV	V,S,PM,C
P-17		950817-FW-IW-GW0017	8/17/1995	GW	BAILER	SAV	V,S,PM,C
P-18		950801-FW-IW-GW0018	8/1/1995	GW	BAILER	SAV	V,S,PM,C
P-19D		950801-FW-IW-GW0019D	8/1/1995	GW	BAILER	SAV	V,S,PM,C
P-19S		950801-FW-IW-GW0019S	8/1/1995	GW	BAILER	SAV	V,S,PM,C
P-20		951013-FW-IW-GW0020	10/13/1995	GW	BAILER	SAV	V,PM
P-20		950817-FW-IW-GW0020	8/17/1995	GW	BAILER	SAV	V,S,PM,C
P-21		951013-FW-IW-GW0021	10/13/1995	GW	BAILER	SAV	V,S,PM,C
P-21		951013-FW-IW-GW9021	10/13/1995	DUP	BAILER	SAV	V,S,PM,C
P-21		950817-FW-IW-GW0021	8/17/1995	GW	BAILER	SAV	V
P-22		950728-FW-IW-GW0022	7/28/1995	GW	BAILER	SAV	V,S,PM,C
P-23		950809-FW-IW-GW0023	8/9/1995	GW	BAILER	SAV	V,S,PM,C
P-32		950810-FW-IW-GW0032	8/10/1995	GW	BAILER	SAV	V,S,PM,C

Notes:
V - Volatile organic compounds
S - Semivolatile organic compounds
PM - Priority Pollutant Metals
MNA - Monitored Natural Attenuation Paremeters including alkalinity, methane, ethane, ethene, dissolved oxygen, chloride, ammonia nitrogen sulfate, total and dissolved iron, chemical oxygen demand, total phosphorous, bicarbonate alkalinity as CaCO3, biochemical oxygen demand
P - Pesticides, insedcticides, and herbicides
D - Dioxins
C - Cyanide
TOC - Total Organic Carbon
GP - Geochemical Parameters (chloride, sulfate, bicarbonate and carbonate alkalinity as CaCO3)
Shaded rows indicate that sampling was performed as IDW characterization and results do not appear to be valid for RFI decision-making purposes.

TABLE 3-1
Exposure Scenarios at Coke Manufacturing Plant
Sloss Industries, Birmingham, Alabama

SWMU	Name	Worker Type	Activities	Visit Frequency
1	Quench Towers and Sump (Stations 1A and 1B)	MW1	checking pump, clearing spray nozzle; lifting out solids and rescreening; checking pump pressure; observing	20 visits/month, 30 minutes/visit
2	Quench Tower Pump Basins (Stations 2A and 2B)	MW1	checking pump, clearing spray nozzle	20 visits/month, 30 minutes/visit
3	Old Quench Tower Settling Basins (3A--Mill water recirculation)	none; abandoned & filled in	-	-
5	Coal Tar Storage Area Drain System	MW2 or Supervisor (different person each time)	looking for materials or items	1 visit every other month for 5 minutes/visit
6	Spill Area Around Diesel Tank (proximity to Coke Plant)	MW3	routine check; observing for problems; shoveling coal at surface	20 visits/month, 5 minutes/visit
7	Coal Tar Collection Sump in No. 1 Pump House	All laborers at ovens	walking past	20 visits/month, 0.5 minutes/visit
8	Flushing Liquor Decanter	All laborers at ovens	walking past	20 visits/month, 0.5 minutes/visit
9	Flushing Liquor Decanter Sump	All laborers at ovens	walking past	20 visits/month, 0.5 minutes/visit
10	Coal Tar Decanter for Nos. 3 and 4 Coke Batteries	O1	routine rounds	20 visits/month, 40 minutes/visit
11	Coal Tar Decanter for No. 5 Coke Battery	O2	routine rounds	20 visits/month, 40 minutes/visit
12	Coal Tar Decanter for Nos. 1 and 2 Coke Batteries	All laborers at ovens	walking past	20 visits/month, 0.5 minutes/visit

Worker Type:
- MW1 - Maintence worker type
- MW2 - Maintence worker type
- MW3 - Maintence worker type
- O1 - Operator type #1
- O2 - Operator type #2

No groundwater, surface water, or sediment contact.
Workers required to wear personal protective equipment in accordance with Sloss policy.

TABLE 3-2
Exposure Scenarios at Chemical Manufacturing Plant
Sloss Industries, Birmingham, Alabama

SWMU	Name	Worker Type	Activities	Visit Frequency
26	Chemical Plant Main Process Bldg Floor Drain	FO	moving pallets with forklift	12 hrs/wk (SWMUs 26, 28, 31 combined)
27	TSA 94 Bldg Floor Drain	none	-	-
28	Sulfonation Bldg Floor Drain	FO	moving pallets with forklift	12 hrs/wk (SWMUs 26, 28, 31 combined)
29	Chemical Product Tank Containment Area	none	-	-
30	Centrifuge WW Tank	none	-	-
31	Monohydrate Bldg Floor Drain and Sump	FO	moving pallets with forklift	12 hrs/wk (SWMUs 26, 28, 31 combined)
32	BSC 94 Drum Storage Area	none	-	-
33	BSC Plant Drum Storage Area	none	-	-
34	BSC WW Neutralization System	none	-	-
35	Old Waste Pile at Mineral Wool Plant	FL	dumping mineral wool	2 hours per workday
36	Maintenance Shop Used Oil Tank	none	-	-

Worker Type:
FO - Forklift operator
FL- Front-end loader driver

No groundwater, surface water, or sediment contact.
Workers required to wear personal protective equipment in accordance with Sloss policy.

TABLE 3-3
Exposure Scenarios at BTF and Sewers
Sloss Industries, Birmingham, Alabama

SWMU	Name	Worker Type	Activities	Visit Frequency
4	BTF Sewer	none	-	-
13	BTF Equalization Basin	none	-	-
14	BTF Neutralization Basin	O1	water sampling; 500 ml with dipper	20 visits/month, 5 minutes/visit
15	BTF Primary Clarifier	O1	water sampling; 500 ml with dipper	20 visits/month, 5 minutes/visit
16	BTF Aeration Basin	O1	water sampling; 500 ml with dipper	20 visits/month, 5 minutes/visit
17	BTF Secondary Clarifier	O1	water sampling; 500 ml with dipper	20 visits/month, 5 minutes/visit
18	BTF Thickener	none	-	-
19	BTF Digester	O1	water sampling; 500 ml with dipper	20 visits/month, 5 minutes/visit
20	Dewatering Machine	O2	routine maintenance	5 visits/month, 60 minutes/visit
21	BTF Emergency Basin	M	grass cutting	2 visits/month, 20 minutes/visit
22	Polishing Pond	none; except water sampling at outfall	water sampling; 100 ml with dipper in overflow structure; GPS pond every 6 months	20 visits/month, 5 minutes/visit
25	Stormwater Runoff Sewer	none	-	-
37	BTF Sewer Tar Trap	O3	insert and remove baffles, maintain oil booms	0.5

Worker Type:
M - Mower
O1 - Operator Type #1
O2 - Operator Type #2
O3 - Operator Type #3

No groundwater, surface water, or sediment contact.
Workers required to wear personal protective equipment in accordance with Sloss policy.

TABLE 3-4
Exposure Scenarios at Land Disposal Area SWMUs
Sloss Industries, Birmingham, Alabama

SWMU	Name	Worker Type	Activities	Visit Frequency
23	Biological Sludge Disposal Area	none	-	-
24	Blast Furnace Emission Control Sludge Waste Pile	none	-	-
38	Landfill (concrete rubble, conveyor belts, wood, construction material, empty 55-gal drums, flue dust, and coal); No longer used	HE1	regrading area	0.33 visits/month, 4 hours/visit
39	Blast Furnace Emission Control Sludge Waste Pile Near Landfill	HE2	excavating, screening, hauling with dump trucks and front-end loaders	20 visits/month, 8 hours/visit

Worker Type:
HE1 - Heavy equipment operator type #1 (Sloss employee)
HE2 - Heavy equipment operator type #2 (Purchaser of materials)
No groundwater, surface water, or sediment contact.
Workers required to wear personal protective equipment in accordance with Sloss policy.

TABLE 3-5
Exceedances of Residential Screening Levels (Off-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
OSE #1	4/20/05	Arsenic, Total	20	0.39
OSE #2	4/21/05	Arsenic, Total	20	0.39
OSE #3	4/20/05	Arsenic, Total	42	0.39
OSE #4	4/21/05	Arsenic, Total	38	0.39
OSE #5	4/20/05	Arsenic, Total	26	0.39
OSE #6	4/20/05	Arsenic, Total	24	0.39
OSE #7	4/21/05	Arsenic, Total	29	0.39
OSE #8	4/21/05	Arsenic, Total	31	0.39
OSE #8	4/21/05	Arsenic, Total	32	0.39
OSES #1	4/20/05	Arsenic, Total	24	0.39
OSES #2	4/20/05	Arsenic, Total	27	0.39
OSES #3	4/20/05	Arsenic, Total	32	0.39
OSES #3	4/20/05	Arsenic, Total	25	0.39
OSS #1	4/21/05	Arsenic, Total	20	0.39
OSS #10	4/21/05	Arsenic, Total	29	0.39
OSS #10	4/21/05	Arsenic, Total	23	0.39
OSS #11	4/21/05	Arsenic, Total	36	0.39
OSS #12	4/21/05	Arsenic, Total	23	0.39
OSS #13	4/21/05	Arsenic, Total	40	0.39
OSS #14	4/21/05	Arsenic, Total	23	0.39
OSS #15	4/21/05	Arsenic, Total	34	0.39
OSS #2	4/22/05	Arsenic, Total	10	0.39
OSS #3	4/22/05	Arsenic, Total	24	0.39
OSS #4	4/21/05	Arsenic, Total	6.7	0.39
OSS #5	4/22/05	Arsenic, Total	20	0.39
OSS #6	4/22/05	Arsenic, Total	39	0.39
OSS #7	4/21/05	Arsenic, Total	35	0.39
OSS #8	4/21/05	Arsenic, Total	15	0.39
OSS #9	4/21/05	Arsenic, Total	49	0.39
OSW #1	4/22/05	Arsenic, Total	13	0.39
OSW #2	4/22/05	Arsenic, Total	12	0.39
OSW #2	4/22/05	Arsenic, Total	11	0.39
OSW #3	4/22/05	Arsenic, Total	12	0.39
OSW #4	4/22/05	Arsenic, Total	7.2	0.39
OSW #5	4/22/05	Arsenic, Total	12	0.39
OSW #6	4/22/05	Arsenic, Total	10	0.39
OSW #7	4/22/05	Arsenic, Total	9.1	0.39
OSW #8	4/22/05	Arsenic, Total	16	0.39
OSW #9	4/22/05	Arsenic, Total	11	0.39
OSES #3	4/20/05	Benzo(a)anthracene	1.9	0.62
OSS #14	4/21/05	Benzo(a)anthracene	3.2	0.62
OSS #15	4/21/05	Benzo(a)anthracene	3.4	0.62
OSS #3	4/22/05	Benzo(a)anthracene	2.8	0.62
OSS #9	4/21/05	Benzo(a)anthracene	1.1	0.62
OSW #8	4/22/05	Benzo(a)anthracene	5.4	0.62
OSE #1	4/20/05	Benzo(a)pyrene	0.16	0.062

TABLE 3-5
Exceedances of Residential Screening Levels (Off-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
OSE #2	4/21/05	Benzo(a)pyrene	0.44	0.062
OSE #3	4/20/05	Benzo(a)pyrene	0.064	0.062
OSE #4	4/21/05	Benzo(a)pyrene	0.11	0.062
OSE #6	4/20/05	Benzo(a)pyrene	0.14	0.062
OSE #7	4/21/05	Benzo(a)pyrene	0.28	0.062
OSE #8	4/21/05	Benzo(a)pyrene	0.096	0.062
OSE #8	4/21/05	Benzo(a)pyrene	0.13	0.062
OSES #1	4/20/05	Benzo(a)pyrene	0.17	0.062
OSES #2	4/20/05	Benzo(a)pyrene	0.16	0.062
OSES #3	4/20/05	Benzo(a)pyrene	1.1	0.062
OSES #3	4/20/05	Benzo(a)pyrene	0.55	0.062
OSS #1	4/21/05	Benzo(a)pyrene	0.22	0.062
OSS #10	4/21/05	Benzo(a)pyrene	0.12	0.062
OSS #10	4/21/05	Benzo(a)pyrene	0.15	0.062
OSS #11	4/21/05	Benzo(a)pyrene	0.074	0.062
OSS #12	4/21/05	Benzo(a)pyrene	0.33	0.062
OSS #13	4/21/05	Benzo(a)pyrene	0.39	0.062
OSS #14	4/21/05	Benzo(a)pyrene	5.2	0.062
OSS #15	4/21/05	Benzo(a)pyrene	4.4	0.062
OSS #2	4/22/05	Benzo(a)pyrene	0.079	0.062
OSS #3	4/22/05	Benzo(a)pyrene	4.7	0.062
OSS #4	4/21/05	Benzo(a)pyrene	0.26	0.062
OSS #5	4/22/05	Benzo(a)pyrene	0.66	0.062
OSS #6	4/22/05	Benzo(a)pyrene	0.18	0.062
OSS #7	4/21/05	Benzo(a)pyrene	0.3	0.062
OSS #8	4/21/05	Benzo(a)pyrene	0.29	0.062
OSS #9	4/21/05	Benzo(a)pyrene	1.3	0.062
OSW #1	4/22/05	Benzo(a)pyrene	0.068	0.062
OSW #2	4/22/05	Benzo(a)pyrene	0.063	0.062
OSW #4	4/22/05	Benzo(a)pyrene	0.24	0.062
OSW #6	4/22/05	Benzo(a)pyrene	0.088	0.062
OSW #7	4/22/05	Benzo(a)pyrene	0.091	0.062
OSW #8	4/22/05	Benzo(a)pyrene	6.2	0.062
OSE #2	4/21/05	Benzo(b)fluoranthene	0.68	0.62
OSES #3	4/20/05	Benzo(b)fluoranthene	1.7	0.62
OSES #3	4/20/05	Benzo(b)fluoranthene	0.94	0.62
OSS #14	4/21/05	Benzo(b)fluoranthene	8.5	0.62
OSS #15	4/21/05	Benzo(b)fluoranthene	8.3	0.62
OSS #3	4/22/05	Benzo(b)fluoranthene	6.9	0.62
OSS #5	4/22/05	Benzo(b)fluoranthene	0.71	0.62
OSS #9	4/21/05	Benzo(b)fluoranthene	1.6	0.62
OSW #8	4/22/05	Benzo(b)fluoranthene	6.5	0.62
OSE #2	4/21/05	Dibenzo(a,h)anthracene	0.17	0.062
OSE #7	4/21/05	Dibenzo(a,h)anthracene	0.064	0.062
OSES #3	4/20/05	Dibenzo(a,h)anthracene	0.32	0.062
OSES #3	4/20/05	Dibenzo(a,h)anthracene	0.16	0.062

TABLE 3-5
Exceedances of Residential Screening Levels (Off-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
OSS #1	4/21/05	Dibenzo(a,h)anthracene	0.068	0.062
OSS #12	4/21/05	Dibenzo(a,h)anthracene	0.084	0.062
OSS #13	4/21/05	Dibenzo(a,h)anthracene	0.11	0.062
OSS #14	4/21/05	Dibenzo(a,h)anthracene	1.5	0.062
OSS #15	4/21/05	Dibenzo(a,h)anthracene	1.2	0.062
OSS #3	4/22/05	Dibenzo(a,h)anthracene	1.8	0.062
OSS #4	4/21/05	Dibenzo(a,h)anthracene	0.072	0.062
OSS #5	4/22/05	Dibenzo(a,h)anthracene	0.17	0.062
OSS #7	4/21/05	Dibenzo(a,h)anthracene	0.08	0.062
OSS #8	4/21/05	Dibenzo(a,h)anthracene	0.094	0.062
OSS #9	4/21/05	Dibenzo(a,h)anthracene	0.34	0.062
OSW #4	4/22/05	Dibenzo(a,h)anthracene	0.07	0.062
OSW #8	4/22/05	Dibenzo(a,h)anthracene	1.3	0.062
OSS #14	4/21/05	Indeno(1,2,3-cd)pyrene	1.8	0.62
OSS #15	4/21/05	Indeno(1,2,3-cd)pyrene	2.7	0.62
OSS #3	4/22/05	Indeno(1,2,3-cd)pyrene	3.6	0.62
OSW #8	4/22/05	Indeno(1,2,3-cd)pyrene	3.2	0.62

TABLE 3-6
Exceedances of Industrial Screening Levels for Ambient Air (Onsite Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Sample Interval	Concentration (mg/kg)	RBSL (mg/kg)
EI #9	4/18/05	2-Methylnaphthalene	0-2	25	18.94
31-SB0001	6/10/99	Benzene	0.5-2	2.3	1.45
12-SL0001	6/7/96	Cyanide, Total	0.5-1.5	5.4	3.55
24-SL0005	6/17/97	Cyanide, Total	0-1	4.1 J	3.55
24-SL0014	6/18/97	Cyanide, Total	0-1	4.3	3.55
24-SL0015	6/18/97	Cyanide, Total	00-1	5.6	3.55
EI #9	4/18/05	Naphthalene	0-2	64	18.94
31-SB0001	6/10/99	Xylenes	0.5-2	160	90.41

Note:
J - The concentration is below the quantitation limit. The value is an estimate.

TABLE 3-7
Exceedances of Indoor Air Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-54	7/27/00	Benzene	360	5
MW-54	4/5/01	Benzene	38	5
MW-58	4/28/05	Benzene	100	5
MW-58	4/28/05	Benzene	99	5
MW-59	4/29/05	Benzene	1,700	5
MW-60	7/26/00	Benzene	8,600	5
MW-60	7/26/00	Benzene	8,100	5
MW-54	7/27/00	Chlorobenzene	73,000	390
MW-54	4/5/01	Chlorobenzene	5,500 J	390
MW-58	4/28/05	Naphthalene	16,000	150
MW-58	4/28/05	Naphthalene	19,000	150
MW-59	4/29/05	Naphthalene	16,000	150
MW-54	7/27/00	Tetrachloroethene	2,100	5
MW-54	4/5/01	Tetrachloroethene	16	5
MW-54	7/27/00	Toluene	11,000	1500
MW-54	4/5/01	Vinyl chloride	23	2

Note:
J - The concentration is below the quantitation limit. The value is an estimate.

TABLE 3-8
Exceedances of Indoor Air Screening Levels (Offsite Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
P-15	8/11/95	1,2-Dichloroethane	22	5
P-15	10/13/95	1,2-Dichloroethane	11	5
MW-49S	7/28/00	Benzene	100	5
MW-49S	7/28/00	Benzene	100	5
MW-49S	4/6/01	Benzene	110	5
MW-49S	8/3/95	Benzene	150	5
MW-49S	10/12/95	Benzene	130	5
MW-49S	6/18/99	Benzene	120	5
MW-50	7/28/00	Benzene	7	5
MW-50	4/5/01	Benzene	18	5
MW-52	4/6/01	Benzene	21	5
MW-57S	7/27/00	Benzene	7	5
MW-49S	7/28/00	Vinyl chloride	450	2
MW-49S	7/28/00	Vinyl chloride	470	2
MW-49S	4/6/01	Vinyl chloride	170	2
MW-49S	10/12/95	Vinyl chloride	3.6	2
MW-49S	6/18/99	Vinyl chloride	41	2
MW-50	7/28/00	Vinyl chloride	96	2
MW-50	4/5/01	Vinyl chloride	360	2
MW-52	7/27/00	Vinyl chloride	36	2
MW-52	4/6/01	Vinyl chloride	87	2

Table 3-9
Comparison to Fish Ingestion Screening Levels - Five Mile Creek
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (ug/L)	RBSL (ug/L)
SW-1	6/8/95	Cyanide, Total	11	140
Five Mile Creek Approximately 0.5 Miles Downstream	1/13/04	Cyanide, Total	93	140

TABLE 3-10
Exceedances of Industrial Screening Levels (On-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Sample Interval	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
MW-52	7/11/00	0-2	Arsenic, Total	7.9	1.6
MW-52	7/11/00	4-6	Arsenic, Total	15	1.6
MW-55	7/11/00	2.5-4	Arsenic, Total	12	1.6
MW-55	7/11/00	4-6	Arsenic, Total	12	1.6
MW-53	7/12/00	2-4	Arsenic, Total	18	1.6
MW-53	7/12/00	4-6	Arsenic, Total	9.2	1.6
MW-54	7/12/00	2-4	Arsenic, Total	9.9	1.6
MW-54	7/12/00	2-4	Arsenic, Total	11	1.6
EI #1	4/18/05	0-2	Arsenic, Total	12	1.6
EI #10	4/18/05	0-2	Arsenic, Total	23	1.6
EI #11	4/18/05	0-2	Arsenic, Total	20	1.6
EI #12	4/18/05	0-2	Arsenic, Total	47	1.6
EI #13	4/19/05	0-2	Arsenic, Total	15	1.6
EI #14	4/19/05	0-2	Arsenic, Total	6.5	1.6
EI #15	4/19/05	0-2	Arsenic, Total	6.3	1.6
EI #16	4/19/05	0-2	Arsenic, Total	15	1.6
EI #17	4/19/05	0-2	Arsenic, Total	26	1.6
EI #18	4/19/05	0-2	Arsenic, Total	9.1	1.6
EI #19	4/19/05	0-2	Arsenic, Total	8.5	1.6
EI #2	4/18/05	0-2	Arsenic, Total	14	1.6
EI #20	4/19/05	0-2	Arsenic, Total	5.5	1.6
EI #21	4/19/05	0-2	Arsenic, Total	13	1.6
EI #22	4/21/05	0-2	Arsenic, Total	13	1.6
EI #3	4/18/05	0-2	Arsenic, Total	37	1.6
EI #4	4/18/05	0-2	Arsenic, Total	8.8	1.6
EI #5	4/18/05	0-2	Arsenic, Total	11	1.6
EI #6	4/18/05	0-2	Arsenic, Total	15	1.6
EI #7	4/18/05	0-2	Arsenic, Total	160	1.6
EI #8	4/18/05	0-2	Arsenic, Total	26	1.6
EI #9	4/18/05	0-2	Arsenic, Total	20	1.6
EI #7	4/18/05	0-2	Arsenic, Total	120	1.6
SWMU38-1	4/19/05	0-2	Arsenic, Total	12	1.6
SWMU38-1	4/19/05	0-2	Arsenic, Total	11	1.6
SB-1	6/15/95	0-2	Arsenic, Total	11	1.6
SB-2	6/15/95	0-2	Arsenic, Total	16	1.6
SB-3	6/15/95	0-2	Arsenic, Total	14	1.6
SB-3	6/15/95	0-2	Arsenic, Total	21	1.6
SB-4	6/29/95	0-2	Arsenic, Total	13	1.6
SB-5	7/19/95	0-2	Arsenic, Total	6	1.6
SB-5	7/19/95	2-4	Arsenic, Total	3.1	1.6
SB-5	7/19/95	4-6	Arsenic, Total	5.5	1.6
SB-6	7/19/95	0-2	Arsenic, Total	7.6	1.6
12-SL0001	6/7/96	0.5-1.5	Arsenic, Total	96	1.6
12-SL0002	6/7/96	0.5-1.5	Arsenic, Total	220	1.6
12-SL0002	6/7/96	0.5-1.5	Arsenic, Total	89	1.6
1A-SL0001	6/8/96	0-0.1	Arsenic, Total	14	1.6
1A-SL0002	6/8/96	0-0.1	Arsenic, Total	10	1.6
1A-SL0003	6/8/96	0-0.1	Arsenic, Total	9.7	1.6
1A-SL0002	6/8/96	0-0.1	Arsenic, Total	7.3	1.6
1B-SL0001	6/8/96	0-0.1	Arsenic, Total	9.3	1.6
1B-SL0002	6/8/96	0-0.1	Arsenic, Total	3.5	1.6
1B-SL0003	6/8/96	0-0.1	Arsenic, Total	6.2	1.6
1A-SB0004	6/10/96	2-4	Arsenic, Total	19	1.6
2A-SB0001	6/10/96	2-4	Arsenic, Total	14	1.6
2A-SB0002	6/10/96	2-4	Arsenic, Total	24	1.6
1A-SB0005	6/11/96	2-4	Arsenic, Total	12	1.6
5-SB0001	6/11/96	1-3	Arsenic, Total	20	1.6
5-SB0002	6/12/96	1-3	Arsenic, Total	7	1.6
1B-SB0004	6/13/96	4-6	Arsenic, Total	10	1.6
5-SB0004	6/13/96	1-3	Arsenic, Total	7	1.6
5-SB0005	6/13/96	1-3	Arsenic, Total	10	1.6
5-SB0005	6/13/96	5-7	Arsenic, Total	8	1.6
5-SB0005	6/13/96	5-7	Arsenic, Total	22	1.6

TABLE 3-10
Exceedances of Industrial Screening Levels (On-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Sample Interval	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
9-SB0001	6/14/96	4-6	Arsenic, Total	15	1.6
11-SB0001	6/14/96	2-4	Arsenic, Total	10	1.6
11-SB0002	6/14/96	2-4	Arsenic, Total	8.4	1.6
6-SB0001	6/15/96	0-1	Arsenic, Total	15	1.6
6-SB0001	6/15/96	1-2	Arsenic, Total	10	1.6
6-SB0001	6/15/96	1-2	Arsenic, Total	7.8	1.6
7-SB0001	6/15/96	4-6	Arsenic, Total	9.4	1.6
7-SB0002	6/17/96	4-6	Arsenic, Total	36	1.6
7-SB0002	6/17/96	4-6	Arsenic, Total	8.3	1.6
8-SB0001	6/17/96	2-4	Arsenic, Total	16	1.6
10-SB0001	6/18/96	2-4	Arsenic, Total	7.2	1.6
10-SB0002	6/18/96	2-4	Arsenic, Total	6.5	1.6
10-SB0001	6/18/96	2-4	Arsenic, Total	8.9	1.6
2B-SB0001	6/19/96	2.5-3	Arsenic, Total	8	1.6
24-SL0003	6/17/97	0-1	Arsenic, Total	9.1 J	1.6
24-SL0004	6/17/97	0-1	Arsenic, Total	9.9 J	1.6
24-SL0005	6/17/97	0-1	Arsenic, Total	12.8 J	1.6
24-SL0006	6/17/97	0-1	Arsenic, Total	8.1 J	1.6
24-SL0007	6/17/97	0-1	Arsenic, Total	21 J	1.6
24-SL0006	6/17/97	0-1	Arsenic, Total	7.5 J	1.6
24-SL0002	6/18/97	0-1	Arsenic, Total	5.5 J	1.6
24-SL0008	6/18/97	0-1	Arsenic, Total	9 J	1.6
24-SL0009	6/18/97	0-1	Arsenic, Total	9.1 J	1.6
24-SL0010	6/18/97	0-1	Arsenic, Total	16.4 J	1.6
24-SL0011	6/18/97	0-1	Arsenic, Total	9.9 J	1.6
24-SL0012	6/18/97	0-1	Arsenic, Total	13.5 J	1.6
24-SL0013	6/18/97	0-1	Arsenic, Total	7.1 J	1.6
24-SL0014	6/18/97	0-1	Arsenic, Total	19 J	1.6
24-SL0015	6/18/97	0-1	Arsenic, Total	7.7 J	1.6
24-SL0016	6/18/97	0-1	Arsenic, Total	13.7 J	1.6
39-SBMW36	8/4/97	5-7	Arsenic, Total	4.2	1.6
39-SBMW36	8/4/97	5-7	Arsenic, Total	3.5 J	1.6
23-SBMW22	8/6/97	0-2	Arsenic, Total	4.6	1.6
MW-37	8/8/97	4-6	Arsenic, Total	2	1.6
22-SBMW16	6/16/98	4-6	Arsenic, Total	5.5 J	1.6
4-SB0011	6/22/98	5-7	Arsenic, Total	5.7 J	1.6
4-SB0012	6/22/98	4-6	Arsenic, Total	7.6 J	1.6
4-SB0016	6/23/98	1-3	Arsenic, Total	7.8	1.6
4-SB0018	6/24/98	3-5	Arsenic, Total	4.2 J	1.6
4-SB0002	6/26/98	5-7	Arsenic, Total	4.7	1.6
MW-08	6/30/98	5-7	Arsenic, Total	2.6	1.6
26-SB0001	6/9/99	5-7	Arsenic, Total	2.3	1.6
26-SB0002	6/9/99	2-4	Arsenic, Total	4	1.6
26-SB0002	6/9/99	4-6	Arsenic, Total	5.1	1.6
29-SB0001	6/9/99	4-6	Arsenic, Total	5.6	1.6
29-SB0002	6/9/99	4-4.5	Arsenic, Total	4	1.6
29-SB0001	6/9/99	4-6	Arsenic, Total	5.5	1.6
27-SB0001	6/10/99	2-4	Arsenic, Total	5.1	1.6
31-SB0001	6/10/99	0.5-2	Arsenic, Total	8.4	1.6
31-SB0001	6/10/99	2-4	Arsenic, Total	5.3	1.6
31-SB0002	6/10/99	2-4	Arsenic, Total	4.3	1.6
31-SB0002	6/10/99	4-6	Arsenic, Total	4.3	1.6
27-SB0002	6/11/99	3-5	Arsenic, Total	18	1.6
27-SB0002	6/11/99	5-7	Arsenic, Total	11	1.6
36-SB0001	6/11/99	4-6	Arsenic, Total	5.6	1.6
MW-55	7/11/00	2.5-4	Benzene	1.5	1.4
MW-53	7/12/00	4-6	Benzene	2.6	1.4
10-SB0001	6/18/96	2-4	Benzene	4.4	1.4
10-SB0002	6/18/96	2-4	Benzene	1.6	1.4
10-SB0001	6/18/96	2-4	Benzene	6.9	1.4
26-SB0001	6/9/99	5-7	Benzene	15	1.4
26-SB0002	6/9/99	2-4	Benzene	2.9	1.4
26-SB0002	6/9/99	4-6	Benzene	8.4	1.4

TABLE 3-10
Exceedances of Industrial Screening Levels (On-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Sample Interval	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
29-SB0001	6/9/99	4-6	Benzene	5	1.4
29-SB0002	6/9/99	4-4.5	Benzene	59	1.4
29-SB0001	6/9/99	4-6	Benzene	3.1	1.4
27-SB0001	6/10/99	2-4	Benzene	3.4	1.4
31-SB0001	6/10/99	0.5-2	Benzene	2.3	1.4
31-SB0002	6/10/99	2-4	Benzene	3.3	1.4
27-SB0002	6/11/99	3-5	Benzene	8.6	1.4
27-SB0002	6/11/99	5-7	Benzene	14	1.4
MW-59	7/13/00	2-4	Benzo(a)anthracene	170	2.1
EI #1	4/18/05	0-2	Benzo(a)anthracene	13	2.1
EI #13	4/19/05	0-2	Benzo(a)anthracene	15	2.1
EI #14	4/19/05	0-2	Benzo(a)anthracene	39	2.1
EI #16	4/19/05	0-2	Benzo(a)anthracene	2.4	2.1
EI #17	4/19/05	0-2	Benzo(a)anthracene	4.3	2.1
EI #18	4/19/05	0-2	Benzo(a)anthracene	2.2	2.1
EI #21	4/19/05	0-2	Benzo(a)anthracene	47	2.1
EI #3	4/18/05	0-2	Benzo(a)anthracene	8.5	2.1
EI #4	4/18/05	0-2	Benzo(a)anthracene	110	2.1
EI #6	4/18/05	0-2	Benzo(a)anthracene	9.9	2.1
EI #9	4/18/05	0-2	Benzo(a)anthracene	110	2.1
SWMU38-1	4/19/05	0-2	Benzo(a)anthracene	50	2.1
SWMU38-1	4/19/05	0-2	Benzo(a)anthracene	28	2.1
12-SL0001	6/7/96	0-5.1-5	Benzo(a)anthracene	4.9	2.1
12-SL0002	6/7/96	0.5-1.5	Benzo(a)anthracene	2.5	2.1
2A-SB0001	6/10/96	2-4	Benzo(a)anthracene	6.7	2.1
2A-SB0002	6/10/96	2-4	Benzo(a)anthracene	3.9	2.1
5-SB0001	6/11/96	1-3	Benzo(a)anthracene	4.8	2.1
5-SB0002	6/12/96	1-3	Benzo(a)anthracene	7.1	2.1
5-SB0005	6/13/96	1-3	Benzo(a)anthracene	5.1	2.1
11-SB0002	6/14/96	2-4	Benzo(a)anthracene	130	2.1
7-SB0001	6/15/96	4-6	Benzo(a)anthracene	29	2.1
10-SB0001	6/18/96	2-4	Benzo(a)anthracene	3	2.1
24-SL0011	6/18/97	0-1	Benzo(a)anthracene	3.5	2.1
24-SL0014	6/18/97	0-1	Benzo(a)anthracene	63	2.1
24-SL0016	6/18/97	0-1	Benzo(a)anthracene	5.9	2.1
4-SB0011	6/22/98	5-7	Benzo(a)anthracene	22	2.1
MW-54	7/12/00	2-4	Benzo(a)pyrene	0.42	0.21
MW-59	7/13/00	2-4	Benzo(a)pyrene	130	0.21
EI #1	4/18/05	0-2	Benzo(a)pyrene	15	0.21
EI #11	4/18/05	0-2	Benzo(a)pyrene	0.54 J	0.21
EI #13	4/19/05	0-2	Benzo(a)pyrene	19	0.21
EI #14	4/19/05	0-2	Benzo(a)pyrene	35	0.21
EI #16	4/19/05	0-2	Benzo(a)pyrene	4.6	0.21
EI #17	4/19/05	0-2	Benzo(a)pyrene	6.6	0.21
EI #18	4/19/05	0-2	Benzo(a)pyrene	2.3	0.21
EI #21	4/19/05	0-2	Benzo(a)pyrene	72	0.21
EI #3	4/18/05	0-2	Benzo(a)pyrene	9.8	0.21
EI #4	4/18/05	0-2	Benzo(a)pyrene	110	0.21
EI #5	4/18/05	0-2	Benzo(a)pyrene	4.2	0.21
EI #6	4/18/05	0-2	Benzo(a)pyrene	11	0.21
EI #8	4/18/05	0-2	Benzo(a)pyrene	1.5	0.21
EI #9	4/18/05	0-2	Benzo(a)pyrene	84	0.21
SWMU38-1	4/19/05	0-2	Benzo(a)pyrene	68	0.21
SWMU38-1	4/19/05	0-2	Benzo(a)pyrene	60	0.21
12-SL0001	6/7/96	0.5-1.5	Benzo(a)pyrene	4.7	0.21
12-SL0002	6/7/96	0.5-1.5	Benzo(a)pyrene	7.8	0.21
12-SL0002	6/7/96	0.5-1.5	Benzo(a)pyrene	3.4	0.21
1B-SL0001	6/8/96	0-0.1	Benzo(a)pyrene	0.55	0.21
5-SB0001	6/11/96	1-3	Benzo(a)pyrene	5.1	0.21
5-SB0002	6/12/96	1-3	Benzo(a)pyrene	5.2	0.21
5-SB0005	6/13/96	5-7	Benzo(a)pyrene	7.8	0.21
11-SB0002	6/14/96	2-4	Benzo(a)pyrene	86	0.21
7-SB0001	6/15/96	4-6	Benzo(a)pyrene	24	0.21

TABLE 3-10
Exceedances of Industrial Screening Levels (On-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Sample Interval	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
10-SB0001	6/18/96	2-4	Benzo(a)pyrene	2.7	0.21
2B-SB0001	6/19/96	2.5-3	Benzo(a)pyrene	1.6	0.21
24-SL0003	6/17/97	0-1	Benzo(a)pyrene	1.4	0.21
24-SL0005	6/17/97	0-1	Benzo(a)pyrene	0.48	0.21
24-SL0007	6/17/97	0-1	Benzo(a)pyrene	0.7	0.21
24-SL0011	6/18/97	0-1	Benzo(a)pyrene	2.1	0.21
24-SL0012	6/18/97	0-1	Benzo(a)pyrene	0.66	0.21
24-SL0014	6/18/97	0-1	Benzo(a)pyrene	36	0.21
24-SL0015	6/18/97	0-1	Benzo(a)pyrene	0.43	0.21
24-SL0016	6/18/97	0-1	Benzo(a)pyrene	3.4	0.21
4-SB0011	6/22/98	5-7	Benzo(a)pyrene	16	0.21
MW-59	7/13/00	2-4	Benzo(b)fluoranthene	100	2.1
EI #1	4/18/05	0-2	Benzo(b)fluoranthene	20	2.1
EI #13	4/19/05	0-2	Benzo(b)fluoranthene	20	2.1
EI #14	4/19/05	0-2	Benzo(b)fluoranthene	28	2.1
EI #16	4/19/05	0-2	Benzo(b)fluoranthene	4.7	2.1
EI #17	4/19/05	0-2	Benzo(b)fluoranthene	8	2.1
EI #18	4/19/05	0-2	Benzo(b)fluoranthene	3.4	2.1
EI #21	4/19/05	0-2	Benzo(b)fluoranthene	85	2.1
EI #3	4/18/05	0-2	Benzo(b)fluoranthene	13	2.1
EI #4	4/18/05	0-2	Benzo(b)fluoranthene	140	2.1
EI #5	4/18/05	0-2	Benzo(b)fluoranthene	5.8	2.1
EI #6	4/18/05	0-2	Benzo(b)fluoranthene	14	2.1
EI #9	4/18/05	0-2	Benzo(b)fluoranthene	99	2.1
SWMU38-1	4/19/05	0-2	Benzo(b)fluoranthene	71	2.1
SWMU38-1	4/19/05	0-2	Benzo(b)fluoranthene	43	2.1
12-SL0001	6/7/96	0.5-1.5	Benzo(b)fluoranthene	5.2	2.1
12-SL0002	6/7/96	0.5-1.5	Benzo(b)fluoranthene	7.8	2.1
12-SL0002	6/7/96	0.5-1.5	Benzo(b)fluoranthene	2.9	2.1
5-SB0001	6/11/96	1-3	Benzo(b)fluoranthene	5.1	2.1
5-SB0002	6/12/96	1-3	Benzo(b)fluoranthene	5.2	2.1
5-SB0005	6/13/96	1-3	Benzo(b)fluoranthene	4.6	2.1
5-SB0005	6/13/96	5-7	Benzo(b)fluoranthene	6.8	2.1
11-SB0002	6/14/96	2-4	Benzo(b)fluoranthene	120	2.1
6-SB0001	6/15/96	0-1	Benzo(b)fluoranthene	6.5	2.1
7-SB0001	6/15/96	4-6	Benzo(b)fluoranthene	23	2.1
10-SB0001	6/18/96	2-4	Benzo(b)fluoranthene	3.4	2.1
2B-SB0001	6/19/96	2.5-3	Benzo(b)fluoranthene	2.4	2.1
24-SL0014	6/18/97	0-1	Benzo(b)fluoranthene	33	2.1
24-SL0016	6/18/97	0-1	Benzo(b)fluoranthene	3.6	2.1
4-SB0011	6/22/98	5-7	Benzo(b)fluoranthene	16	2.1
MW-59	7/13/00	2-4	Benzo(k)fluoranthene	110	21
EI #21	4/19/05	0-2	Benzo(k)fluoranthene	25	21
EI #4	4/18/05	0-2	Benzo(k)fluoranthene	33	21
EI #9	4/18/05	0-2	Benzo(k)fluoranthene	51	21
SWMU38-1	4/19/05	0-2	Benzo(k)fluoranthene	24	21
27-SB0001	6/10/99	2-4	Chlorobenzene	420	53
27-SB0002	6/11/99	3-5	Chlorobenzene	350	53
27-SB0002	6/11/99	5-7	Chlorobenzene	6100	53
EI #1	4/18/05	0-2	Dibenzo(a,h)anthracene	4	0.21
EI #13	4/19/05	0-2	Dibenzo(a,h)anthracene	5.1	0.21
EI #14	4/19/05	0-2	Dibenzo(a,h)anthracene	7.2	0.21
EI #16	4/19/05	0-2	Dibenzo(a,h)anthracene	1	0.21
EI #17	4/19/05	0-2	Dibenzo(a,h)anthracene	1.8	0.21
EI #18	4/19/05	0-2	Dibenzo(a,h)anthracene	0.62	0.21
EI #21	4/19/05	0-2	Dibenzo(a,h)anthracene	17	0.21
EI #3	4/18/05	0-2	Dibenzo(a,h)anthracene	2.4	0.21
EI #4	4/18/05	0-2	Dibenzo(a,h)anthracene	22	0.21
EI #5	4/18/05	0-2	Dibenzo(a,h)anthracene	1.3	0.21
EI #6	4/18/05	0-2	Dibenzo(a,h)anthracene	3.1	0.21
EI #8	4/18/05	0-2	Dibenzo(a,h)anthracene	0.39	0.21
EI #9	4/18/05	0-2	Dibenzo(a,h)anthracene	13	0.21
SWMU38-1	4/19/05	0-2	Dibenzo(a,h)anthracene	14	0.21

TABLE 3-10
Exceedances of Industrial Screening Levels (On-Site Soil)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Sample Interval	Analyte	Concentration (mg/kg)	RBSL (mg/kg)
SWMU38-1	4/19/05	0-2	Dibenzo(a,h)anthracene	9.4	0.21
12-SL0001	6/7/96	0.5-1.5	Dibenzo(a,h)anthracene	1.4	0.21
12-SL0002	6/7/96	0.5-1.5	Dibenzo(a,h)anthracene	2	0.21
12-SL0002	6/7/96	0.5-1.5	Dibenzo(a,h)anthracene	1.1	0.21
5-SB0005	6/13/96	1-3	Dibenzo(a,h)anthracene	0.43	0.21
10-SB0001	6/18/96	2-4	Dibenzo(a,h)anthracene	0.4	0.21
24-SL0016	6/18/97	0-1	Dibenzo(a,h)anthracene	0.57	0.21
4-SB0011	6/22/98	5-7	Dibenzo(a,h)anthracene	4.7	0.21
MW-59	7/13/00	2-4	Indeno(1,2,3-cd)pyrene	67	2.1
EI #1	4/18/05	0-2	Indeno(1,2,3-cd)pyrene	7.1	2.1
EI #13	4/19/05	0-2	Indeno(1,2,3-cd)pyrene	7	2.1
EI #14	4/19/05	0-2	Indeno(1,2,3-cd)pyrene	11	2.1
EI #17	4/19/05	0-2	Indeno(1,2,3-cd)pyrene	3.3	2.1
EI #21	4/19/05	0-2	Indeno(1,2,3-cd)pyrene	25	2.1
EI #3	4/18/05	0-2	Indeno(1,2,3-cd)pyrene	4.3	2.1
EI #4	4/18/05	0-2	Indeno(1,2,3-cd)pyrene	60	2.1
EI #6	4/18/05	0-2	Indeno(1,2,3-cd)pyrene	4.5	2.1
EI #9	4/18/05	0-2	Indeno(1,2,3-cd)pyrene	26	2.1
SWMU38-1	4/19/05	0-2	Indeno(1,2,3-cd)pyrene	24	2.1
SWMU38-1	4/19/05	0-2	Indeno(1,2,3-cd)pyrene	17	2.1
12-SL0001	6/7/96	0.5-1.5	Indeno(1,2,3-cd)pyrene	3.3	2.1
12-SL0002	6/7/96	0.5-1.5	Indeno(1,2,3-cd)pyrene	5.5	2.1
12-SL0002	6/7/96	0.5-1.5	Indeno(1,2,3-cd)pyrene	2.3	2.1
5-SB0005	6/13/96	1-3	Indeno(1,2,3-cd)pyrene	3	2.1
5-SB0005	6/13/96	5-7	Indeno(1,2,3-cd)pyrene	7.9	2.1
11-SB0002	6/14/96	2-4	Indeno(1,2,3-cd)pyrene	58	2.1
10-SB0001	6/18/96	2-4	Indeno(1,2,3-cd)pyrene	2.4	2.1
24-SL0014	6/18/97	0-1	Indeno(1,2,3-cd)pyrene	22	2.1
24-SL0016	6/18/97	0-1	Indeno(1,2,3-cd)pyrene	3.6	2.1
4-SB0011	6/22/98	5-7	Indeno(1,2,3-cd)pyrene	9.9	2.1
MW-59	7/13/00	2-4	Naphthalene	1000	19
EI #9	4/18/05	0-2	Naphthalene	64	19
5-SB0005	6/13/96	1-3	Naphthalene	23	19
5-SB0005	6/13/96	5-7	Naphthalene	51	19
5-SB0005	6/13/96	5-7	Naphthalene	49	19
11-SB0002	6/14/96	2-4	Naphthalene	82	19
7-SB0001	6/15/96	4-6	Naphthalene	200	19
10-SB0001	6/18/96	2-4	Naphthalene	160	19
10-SB0001	6/18/96	2-4	Naphthalene	300	19
27-SB0001	6/10/99	2-4	Toluene	1000	220
31-SB0001	6/10/99	0.5-2	Xylenes	160	90

Notes:
J - The concentration was below the quantitation limit. The value is an estimate.

TABLE 3-11
Exceedances of Potable Groundwater Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-58	4/28/05	1-Methylnaphthalene	330	150
MW-58	4/28/05	1-Methylnaphthalene	380	150
MW-59	4/29/05	1-Methylnaphthalene	190	150
MW-59	4/29/05	3 & 4 Methylphenol	220	18
MW-58	4/28/05	Carbazole	440	3.4
MW-58	4/28/05	Carbazole	510	3.4
MW-59	4/29/05	Carbazole	730	3.4
MW-61	4/4/01	Ammonia Nitrogen	130000	30000
MW-49S	4/6/01	Chloride	246000	250
MW-50	4/5/01	Chloride	440000	250
MW-51	4/5/01	Chloride	462000	250
MW-52	4/6/01	Chloride	180000	250
MW-53	4/5/01	Chloride	122000	250
MW-54	4/5/01	Chloride	48100	250
MW-55	4/6/01	Chloride	86000	250
MW-55	4/6/01	Chloride	94000	250
MW-56	4/5/01	Chloride	76000	250
MW-61	4/4/01	Chloride	123000	250
MW-08	7/25/98	Cyanide, Total	320 J	200
MW-09	7/27/98	Cyanide, Total	320	200
MW-17S	6/9/01	Cyanide, Total	230 J	200
MW-32	6/10/01	Cyanide, Total	410 J	200
MW-32	8/21/97	Cyanide, Total	380	200
MW-32	6/19/99	Cyanide, Total	360	200
MW-34S	8/20/97	Cyanide, Total	210	200
MW-34S	8/20/97	Cyanide, Total	220	200
MW-41	6/17/99	Cyanide, Total	260	200
MW-41	6/17/99	Cyanide, Total	250	200
MW-67	6/17/01	Cyanide, Total	440 J	200
MW-49S	4/6/01	Sulfate	353000	250000
MW-50	4/5/01	Sulfate	947000	250000
MW-52	4/6/01	Sulfate	633000	250000
MW-61	4/4/01	Sulfate	1580000	250000
MW-49S	4/6/01	Total Phosphorus	40	0.073
MW-50	4/5/01	Total Phosphorus	20	0.073
MW-51	4/5/01	Total Phosphorus	20	0.073
MW-52	4/6/01	Total Phosphorus	20	0.073
MW-53	4/5/01	Total Phosphorus	90	0.073
MW-54	4/5/01	Total Phosphorus	30	0.073
MW-56	4/5/01	Total Phosphorus	30	0.073
MW-16D	7/29/98	Arsenic, Total	90	10
MW-17S	7/28/98	Arsenic, Total	50	10
MW-18	7/28/98	Arsenic, Total	20	10
MW-49S	4/6/01	Iron, Dissolved	22000	1100
MW-50	4/5/01	Iron, Dissolved	6100	1100
MW-51	4/5/01	Iron, Dissolved	5700	1100

TABLE 3-11
Exceedances of Potable Groundwater Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-52	4/6/01	Iron, Dissolved	12000	1100
MW-53	4/5/01	Iron, Dissolved	6000	1100
MW-54	4/5/01	Iron, Dissolved	6100	1100
MW-55	4/6/01	Iron, Dissolved	40000	1100
MW-55	4/6/01	Iron, Dissolved	39000	1100
MW-56	4/5/01	Iron, Dissolved	14000	1100
MW-61	4/4/01	Iron, Dissolved	100000	1100
MW-49S	4/6/01	Iron, Total	21000	1100
MW-50	4/5/01	Iron, Total	6000	1100
MW-51	4/5/01	Iron, Total	13000	1100
MW-52	4/6/01	Iron, Total	11000	1100
MW-53	4/5/01	Iron, Total	6000	1100
MW-54	4/5/01	Iron, Total	6200	1100
MW-55	4/6/01	Iron, Total	41000	1100
MW-55	4/6/01	Iron, Total	40000	1100
MW-56	4/5/01	Iron, Total	13000	1100
MW-61	4/4/01	Iron, Total	130000	1100
MW-34D	8/21/97	Lead, Total	40	15
MW-39	6/21/99	Lead, Total	20	15
MW-41	6/17/99	Lead, Total	28	15
MW-41	6/17/99	Lead, Total	23	15
MW-49S	4/6/01	Manganese, Dissolved	13000	88
MW-50	4/5/01	Manganese, Dissolved	12000	88
MW-51	4/5/01	Manganese, Dissolved	570	88
MW-52	4/6/01	Manganese, Dissolved	2100	88
MW-53	4/5/01	Manganese, Dissolved	6100	88
MW-54	4/5/01	Manganese, Dissolved	2100	88
MW-55	4/6/01	Manganese, Dissolved	3100	88
MW-55	4/6/01	Manganese, Dissolved	3100	88
MW-56	4/5/01	Manganese, Dissolved	4000 J	88
MW-61	4/4/01	Manganese, Dissolved	33000	88
MW-49S	4/6/01	Manganese, Total	13000	88
MW-50	4/5/01	Manganese, Total	12000	88
MW-51	4/5/01	Manganese, Total	600	88
MW-52	4/6/01	Manganese, Total	1800	88
MW-53	4/5/01	Manganese, Total	6100	88
MW-54	4/5/01	Manganese, Total	2100	88
MW-55	4/6/01	Manganese, Total	3200	88
MW-55	4/6/01	Manganese, Total	3100	88
MW-56	4/5/01	Manganese, Total	3600 J	88
MW-61	4/4/01	Manganese, Total	38000	88
MW-36	8/21/97	Silver, Total	240	18
MW-59	7/26/00	2,4-Dimethylphenol	400	73
MW-59	4/29/05	2,4-Dimethylphenol	590	73
MW-60	7/26/00	2,4-Dimethylphenol	1300	73
MW-60	7/26/00	2,4-Dimethylphenol	1100	73

TABLE 3-11
Exceedances of Potable Groundwater Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-38	6/21/99	2-Methylnaphthalene	16	0.62
MW-40	6/18/99	2-Methylnaphthalene	15	0.62
MW-41	6/17/99	2-Methylnaphthalene	33	0.62
MW-41	6/17/99	2-Methylnaphthalene	29	0.62
MW-54	7/27/00	2-Methylnaphthalene	21	0.62
MW-58	7/26/00	2-Methylnaphthalene	270	0.62
MW-58	4/28/05	2-Methylnaphthalene	510	0.62
MW-58	4/28/05	2-Methylnaphthalene	540	0.62
MW-59	7/26/00	2-Methylnaphthalene	47	0.62
MW-59	4/29/05	2-Methylnaphthalene	390	0.62
MW-60	7/26/00	2-Methylnaphthalene	680	0.62
MW-60	7/26/00	2-Methylnaphthalene	660	0.62
MW-59	7/26/00	2-Methylphenol (o-cresol)	480	180
MW-59	4/29/05	2-Methylphenol (o-cresol)	510	180
MW-60	7/26/00	2-Methylphenol (o-cresol)	380 J	180
MW-60	7/26/00	2-Methylphenol (o-cresol)	250 J	180
MW-55	7/27/00	4-Methylphenol (p-cresol)	83	18
MW-56	7/27/00	4-Methylphenol (p-cresol)	110	18
MW-59	7/26/00	4-Methylphenol (p-cresol)	115	18
MW-17S	6/9/01	Acenaphthene	38 J	37
MW-41	6/17/99	Acenaphthene	39	37
MW-58	7/26/00	Acenaphthene	56	37
MW-58	4/28/05	Acenaphthene	70	37
MW-58	4/28/05	Acenaphthene	93	37
MW-59	4/29/05	Acenaphthene	52	37
MW-60	7/26/00	Acenaphthene	180	37
MW-60	7/26/00	Acenaphthene	160	37
MW-41	6/17/99	Benzo(a)anthracene	23	0.092
MW-41	6/17/99	Benzo(a)anthracene	23	0.092
MW-41	6/17/99	Benzo(a)pyrene	29	0.2
MW-41	6/17/99	Benzo(a)pyrene	28	0.2
MW-59	4/29/05	Benzo(a)pyrene	0.31	0.2
MW-41	6/17/99	Benzo(b)fluoranthene	23	0.092
MW-41	6/17/99	Benzo(b)fluoranthene	23	0.092
MW-41	6/17/99	Benzo(k)fluoranthene	21	0.92
MW-41	6/17/99	Benzo(k)fluoranthene	29	0.92
MW-12	7/27/98	Bis(2-ethylhexyl)phthalate	110	6
MW-13S	7/29/98	Bis(2-ethylhexyl)phthalate	15	6
MW-16D	7/29/98	Bis(2-ethylhexyl)phthalate	16	6
MW-18	7/28/98	Bis(2-ethylhexyl)phthalate	10	6
MW-47	6/20/01	Bis(2-ethylhexyl)phthalate	150	6
MW-49D	7/28/00	Bis(2-ethylhexyl)phthalate	23	6
MW-49S	7/28/00	Bis(2-ethylhexyl)phthalate	22	6
MW-49S	7/28/00	Bis(2-ethylhexyl)phthalate	17	6
MW-50	7/28/00	Bis(2-ethylhexyl)phthalate	11	6
MW-52	7/27/00	Bis(2-ethylhexyl)phthalate	50	6

TABLE 3-11
Exceedances of Potable Groundwater Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-55	7/27/00	Bis(2-ethylhexyl)phthalate	28	6
MW-58	7/26/00	Bis(2-ethylhexyl)phthalate	61	6
MW-68S	6/20/01	Bis(2-ethylhexyl)phthalate	15	6
MW-41	6/17/99	Chrysene	26	9.2
MW-41	6/17/99	Chrysene	25	9.2
MW-41	6/17/99	Dibenzofuran	17	1.2
MW-41	6/17/99	Dibenzofuran	16	1.2
MW-58	7/26/00	Dibenzofuran	69	1.2
MW-58	4/28/05	Dibenzofuran	88	1.2
MW-58	4/28/05	Dibenzofuran	130	1.2
MW-59	7/26/00	Dibenzofuran	43	1.2
MW-59	4/29/05	Dibenzofuran	55	1.2
MW-60	7/26/00	Dibenzofuran	120	1.2
MW-60	7/26/00	Dibenzofuran	110	1.2
MW-41	6/17/99	Fluorene	31	24
MW-41	6/17/99	Fluorene	30	24
MW-58	7/26/00	Fluorene	80	24
MW-58	4/28/05	Fluorene	100	24
MW-58	4/28/05	Fluorene	130	24
MW-59	7/26/00	Fluorene	56	24
MW-59	4/29/05	Fluorene	130	24
MW-60	7/26/00	Fluorene	100	24
MW-60	7/26/00	Fluorene	99	24
MW-41	6/17/99	Indeno(1,2,3-cd)pyrene	15	0.092
MW-41	6/17/99	Indeno(1,2,3-cd)pyrene	14	0.092
MW-38	6/21/99	Naphthalene	420	150
MW-58	4/28/05	Naphthalene	16000	150
MW-58	4/28/05	Naphthalene	19000	150
MW-59	4/29/05	Naphthalene	16000	150
MW-40	6/18/99	Phenanthrene	23	18
MW-41	6/17/99	Phenanthrene	120	18
MW-41	6/17/99	Phenanthrene	120	18
MW-54	7/27/00	Phenanthrene	19	18
MW-58	7/26/00	Phenanthrene	71	18
MW-58	4/28/05	Phenanthrene	75	18
MW-58	4/28/05	Phenanthrene	90	18
MW-59	7/26/00	Phenanthrene	61	18
MW-59	4/29/05	Phenanthrene	34	18
MW-60	7/26/00	Phenanthrene	78	18
MW-60	7/26/00	Phenanthrene	67	18
MW-55	7/27/00	Phenol	3000	1100
MW-56	7/27/00	Phenol	4100	1100
MW-41	6/17/99	Pyrene	69	18
MW-41	6/17/99	Pyrene	73	18
MW-57D	7/28/00	1,2-Dichloroethane	80	5
MW-10	7/28/98	Benzene	340	5

TABLE 3-11
Exceedances of Potable Groundwater Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-17S	6/9/01	Benzene	15	5
MW-17S	6/9/01	Benzene	18	5
MW-17S	7/28/98	Benzene	15	5
MW-26	6/19/01	Benzene	14	5
MW-26	8/21/97	Benzene	13	5
MW-26	6/19/99	Benzene	14	5
MW-34D	8/21/97	Benzene	6	5
MW-38	6/21/99	Benzene	12	5
MW-40	6/18/99	Benzene	16	5
MW-41	6/17/99	Benzene	6	5
MW-49S	7/28/00	Benzene	100	5
MW-49S	7/28/00	Benzene	100	5
MW-49S	4/6/01	Benzene	110	5
MW-49S	6/18/99	Benzene	120	5
MW-50	7/28/00	Benzene	7	5
MW-50	4/5/01	Benzene	18	5
MW-51	4/5/01	Benzene	30	5
MW-52	4/6/01	Benzene	21	5
MW-53	7/27/00	Benzene	2900	5
MW-53	4/5/01	Benzene	2000	5
MW-54	7/27/00	Benzene	360	5
MW-54	4/5/01	Benzene	38	5
MW-55	7/27/00	Benzene	16000	5
MW-55	4/6/01	Benzene	48000	5
MW-55	4/6/01	Benzene	48000	5
MW-56	7/27/00	Benzene	140000	5
MW-56	4/5/01	Benzene	110000	5
MW-56	4/5/01	Benzene	150000	5
MW-56	4/5/01	Benzene	170000	5
MW-57S	7/27/00	Benzene	7	5
MW-58	4/28/05	Benzene	100	5
MW-58	4/28/05	Benzene	99	5
MW-59	4/29/05	Benzene	1700	5
MW-60	7/26/00	Benzene	8600	5
MW-60	7/26/00	Benzene	8100	5
MW-63	6/20/01	Benzene	11	5
MW-49S	4/6/01	Chlorobenzene	120	100
MW-51	7/27/00	Chlorobenzene	110	100
MW-53	7/27/00	Chlorobenzene	270	100
MW-53	4/5/01	Chlorobenzene	160	100
MW-54	7/27/00	Chlorobenzene	73000	100
MW-54	4/5/01	Chlorobenzene	5500 J	100
MW-55	7/27/00	Chlorobenzene	190000	100
MW-55	4/6/01	Chlorobenzene	240000	100
MW-55	4/6/01	Chlorobenzene	230000	100

TABLE 3-11
Exceedances of Potable Groundwater Screening Levels (On-Site Groundwater)
Sloss Industries, Birmingham, Alabama

Sample Location	Date	Analyte	Concentration (µg/L)	RBSL (µg/L)
MW-56	7/27/00	Chlorobenzene	10000	100
MW-53	7/27/00	Ethylbenzene	2000	700
MW-53	4/5/01	Ethylbenzene	2700	700
MW-51	7/27/00	Tetrachloroethene	410	5
MW-51	4/5/01	Tetrachloroethene	15	5
MW-54	7/27/00	Tetrachloroethene	2100	5
MW-54	4/5/01	Tetrachloroethene	16	5
MW-57D	7/28/00	Tetrachloroethene	13	5
MW-54	7/27/00	Toluene	11000	1000
MW-55	7/27/00	Toluene	45000	1000
MW-55	4/6/01	Toluene	81000	1000
MW-55	4/6/01	Toluene	81000	1000
MW-56	7/27/00	Toluene	220000	1000
MW-56	4/5/01	Toluene	52000	1000
MW-56	4/5/01	Toluene	140000	1000
MW-56	4/5/01	Toluene	200000	1000
MW-51	7/27/00	Trichloroethene	350	5
MW-51	4/5/01	Trichloroethene	39	5
MW-49D	7/28/00	Vinyl chloride	3	2
MW-49D	6/18/99	Vinyl chloride	18	2
MW-49S	7/28/00	Vinyl chloride	450	2
MW-49S	7/28/00	Vinyl chloride	470	2
MW-49S	4/6/01	Vinyl chloride	170	2
MW-49S	6/18/99	Vinyl chloride	41	2
MW-50	7/28/00	Vinyl chloride	96	2
MW-50	4/5/01	Vinyl chloride	360	2
MW-51	7/27/00	Vinyl chloride	830	2
MW-51	4/5/01	Vinyl chloride	810	2
MW-52	7/27/00	Vinyl chloride	36	2
MW-52	4/6/01	Vinyl chloride	87	2
MW-53	7/27/00	Vinyl chloride	600	2
MW-53	4/5/01	Vinyl chloride	530	2
MW-54	4/5/01	Vinyl chloride	23	2

TABLE 4-2

Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations

Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
10-SB0001	960618-CO-10-SL0001(2-4)	6/18/96	Arsenic, Total	7.2	mg/kg	1.6	12.46	TRUE	FALSE
10-SB0001	960618-CO-10-SL9001	6/18/96	Arsenic, Total	8.9	mg/kg	1.6	12.46	TRUE	FALSE
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Benzene**	**4.4**	**mg/kg**	**1.4**		**TRUE**	
10-SB0001	**960618-CO-10-SL9001**	**6/18/96**	**Benzene**	**6.9**	**mg/kg**	**1.4**		**TRUE**	
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Benzo(a)anthracene**	**3**	**mg/kg**	**2.1**		**TRUE**	
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Benzo(a)pyrene**	**2.7**	**mg/kg**	**0.21**		**TRUE**	
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Benzo(b)fluoranthene**	**3.4**	**mg/kg**	**2.1**		**TRUE**	
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Dibenzo(a,h)anthracene**	**0.4**	**mg/kg**	**0.21**		**TRUE**	
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Indeno(1,2,3-cd)pyrene**	**2.4**	**mg/kg**	**2.1**		**TRUE**	
10-SB0001	**960618-CO-10-SL0001(2-4)**	**6/18/96**	**Naphthalene**	**160**	**mg/kg**	**19**		**TRUE**	**TRUE**
10-SB0001	**960618-CO-10-SL9001**	**6/18/96**	**Naphthalene**	**300**	**mg/kg**	**19**		**TRUE**	
10-SB0002	960618-CO-10-SL0002(2-4)	6/18/96	Arsenic, Total	6.5	mg/kg	1.6	12.46	TRUE	FALSE
10-SB0002	**960618-CO-10-SL0002(2-4)**	**6/18/96**	**Benzene**	**1.6**	**mg/kg**	**1.4**		**TRUE**	
11-SB0001	960614-CO-11-SL0001(2-4)	6/14/96	Arsenic, Total	10	mg/kg	1.6	12.46	TRUE	FALSE
11-SB0002	960614-CO-11-SL0002(2-4)	6/14/96	Arsenic, Total	8.4	mg/kg	1.6	12.46	TRUE	FALSE
11-SB0002	**960614-CO-11-SL0002(2-4)**	**6/14/96**	**Benzo(a)anthracene**	**130**	**mg/kg**	**2.1**		**TRUE**	
11-SB0002	**960614-CO-11-SL0002(2-4)**	**6/14/96**	**Benzo(a)pyrene**	**86**	**mg/kg**	**0.21**		**TRUE**	
11-SB0002	**960614-CO-11-SL0002(2-4)**	**6/14/96**	**Benzo(b)fluoranthene**	**120**	**mg/kg**	**2.1**		**TRUE**	
11-SB0002	**960614-CO-11-SL0002(2-4)**	**6/14/96**	**Indeno(1,2,3-cd)pyrene**	**58**	**mg/kg**	**2.1**		**TRUE**	
11-SB0002	**960614-CO-11-SL0002(2-4)**	**6/14/96**	**Naphthalene**	**82**	**mg/kg**	**19**		**TRUE**	
12-SL0001	**960607-CO-12-SL0001(0.5-1.5)**	**6/7/96**	**Arsenic, Total**	**96**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
12-SL0001	960607-CO-12-SL0001(0.5-1.5)	6/7/96	Benzo(a)anthracene	4.9	mg/kg	2.1	9.42	TRUE	FALSE
12-SL0001	960607-CO-12-SL0001(0.5-1.5)	6/7/96	Benzo(a)pyrene	4.7	mg/kg	0.21	11.42	TRUE	FALSE
12-SL0001	960607-CO-12-SL0001(0.5-1.5)	6/7/96	Benzo(b)fluoranthene	5.2	mg/kg	2.1	37.42	TRUE	FALSE
12-SL0001	**960607-CO-12-SL0001(0.5-1.5)**	**6/7/96**	**Dibenzo(a,h)anthracene**	**1.4**	**mg/kg**	**0.21**		**TRUE**	
12-SL0001	**960607-CO-12-SL0001(0.5-1.5)**	**6/7/96**	**Indeno(1,2,3-cd)pyrene**	**3.3**	**mg/kg**	**2.1**		**TRUE**	
12-SL0002	**960607-CO-12-SL9002**	**6/7/96**	**Arsenic, Total**	**89**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
12-SL0002	**960607-CO-12-SL0002(0.5-1.5)**	**6/7/96**	**Arsenic, Total**	**220**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
12-SL0002	960607-CO-12-SL0002(0.5-1.5)	6/7/96	Benzo(a)anthracene	2.5	mg/kg	2.1	9.42	TRUE	FALSE
12-SL0002	960607-CO-12-SL9002	6/7/96	Benzo(a)pyrene	3.4	mg/kg	0.21	11.42	TRUE	FALSE
12-SL0002	960607-CO-12-SL0002(0.5-1.5)	6/7/96	Benzo(a)pyrene	7.8	mg/kg	0.21	11.42	TRUE	FALSE
12-SL0002	960607-CO-12-SL9002	6/7/96	Benzo(b)fluoranthene	2.9	mg/kg	2.1	37.42	TRUE	FALSE
12-SL0002	960607-CO-12-SL0002(0.5-1.5)	6/7/96	Benzo(b)fluoranthene	7.8	mg/kg	2.1	37.42	TRUE	FALSE
12-SL0002	**960607-CO-12-SL9002**	**6/7/96**	**Dibenzo(a,h)anthracene**	**1.1**	**mg/kg**	**0.21**		**TRUE**	
12-SL0002	**960607-CO-12-SL0002(0.5-1.5)**	**6/7/96**	**Dibenzo(a,h)anthracene**	**2**	**mg/kg**	**0.21**		**TRUE**	
12-SL0002	**960607-CO-12-SL9002**	**6/7/96**	**Indeno(1,2,3-cd)pyrene**	**2.3**	**mg/kg**	**2.1**		**TRUE**	
12-SL0002	**960607-CO-12-SL0002(0.5-1.5)**	**6/7/96**	**Indeno(1,2,3-cd)pyrene**	**5.5**	**mg/kg**	**2.1**		**TRUE**	

TABLE 4-2

Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations

Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
13-SB0010	980627-BT-13-SL0010(9-11)	6/27/98	Arsenic, Total	2.3	mg/kg	1.6	12.46	TRUE	FALSE
13-SB0010	980627-BT-13-SL0010(19-21)	6/27/98	Arsenic, Total	2.8	mg/kg	1.6	12.46	TRUE	FALSE
13-SB0010	**980627-BT-13-SL0010(19-21)**	**6/27/98**	**Benzo(a)anthracene**	**3.6**	**mg/kg**	**2.1**		**TRUE**	
13-SB0010	**980627-BT-13-SL0010(19-21)**	**6/27/98**	**Benzo(a)pyrene**	**2.6**	**mg/kg**	**0.21**		**TRUE**	
13-SB0010	**980627-BT-13-SL0010(19-21)**	**6/27/98**	**Benzo(b)fluoranthene**	**2.8**	**mg/kg**	**2.1**		**TRUE**	
13-SB0010	**980627-BT-13-SL0010(19-21)**	**6/27/98**	**Naphthalene**	**22**	**mg/kg**	**19**		**TRUE**	
14-SB0001	980612-BT-14-SL0001(10-12)	6/12/98	Arsenic, Total	4.2 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0001	980612-BT-14-SL0001(18-20)	6/12/98	Arsenic, Total	4.8 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0001	980612-BT-14-SL0001(16-18)	6/12/98	Arsenic, Total	6.4 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Benzo(a)anthracene**	**160**	**mg/kg**	**2.1**		**TRUE**	
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Benzo(a)pyrene**	**65**	**mg/kg**	**0.21**		**TRUE**	
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Benzo(b)fluoranthene**	**62**	**mg/kg**	**2.1**		**TRUE**	
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Benzo(k)fluoranthene**	**40**	**mg/kg**	**21**		**TRUE**	
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Dibenzo(a,h)anthracene**	**2.1**	**mg/kg**	**0.21**		**TRUE**	
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Indeno(1,2,3-cd)pyrene**	**42**	**mg/kg**	**2.1**		**TRUE**	
14-SB0001	**980612-BT-14-SL0001(18-20)**	**6/12/98**	**Naphthalene**	**27**	**mg/kg**	**19**		**TRUE**	
14-SB0002	980615-BT-14-SL0002(14-16)	6/15/98	Arsenic, Total	5.5 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0002	980615-BT-14-SL0002(10-12)	6/15/98	Arsenic, Total	5.7 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0002	980615-BT-14-SL0002(18-20)	6/15/98	Arsenic, Total	6 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0002	**980615-BT-14-SL0002(14-16)**	**6/15/98**	**Benzo(a)pyrene**	**1.2**	**mg/kg**	**0.21**		**TRUE**	
14-SB0003	980615-BT-14-SL9003	6/15/98	Arsenic, Total	4.3 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0003	980615-BT-14-SL0003(10-12)	6/15/98	Arsenic, Total	5.8 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0003	980615-BT-14-SL0003(20-22)	6/15/98	Arsenic, Total	6.6 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0003	980615-BT-14-SL0003(14-16)	6/15/98	Arsenic, Total	7.1 J	mg/kg	1.6	12.46	TRUE	FALSE
14-SB0003	**980615-BT-14-SL9003**	**6/15/98**	**Benzo(a)pyrene**	**0.74**	**mg/kg**	**0.21**		**TRUE**	
15-SB0001	980611-BT-15-SL0001(16-18)	6/11/98	Arsenic, Total	5.8	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0001	980611-BT-15-SL0001(14-16)	6/11/98	Arsenic, Total	7.6	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0001	980611-BT-15-SL0001(20-22)	6/11/98	Arsenic, Total	9.4	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0002	980611-BT-15-SL0002(16-18)	6/11/98	Arsenic, Total	6.5	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0002	980611-BT-15-SL0002(20-22)	6/11/98	Arsenic, Total	9	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0002	980611-BT-15-SL0002(14-16)	6/11/98	Arsenic, Total	12	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0003	980611-BT-15-SL0003(18-20)	6/11/98	Arsenic, Total	5.7	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0003	980611-BT-15-SL0003(14-16)	6/11/98	Arsenic, Total	6.3	mg/kg	1.6	12.46	TRUE	FALSE
15-SB0003	980611-BT-15-SL0003(20-22)	6/11/98	Arsenic, Total	7.5	mg/kg	1.6	12.46	TRUE	FALSE
16-SB0001	980625-BT-16-SL0001(10-12)	6/25/98	Arsenic, Total	5.5 J	mg/kg	1.6	12.46	TRUE	FALSE
16-SB0001	980625-BT-16-SL9001	6/25/98	Arsenic, Total	6.2 J	mg/kg	1.6	12.46	TRUE	FALSE
16-SB0002	980616-BT-16-SL0002(18-20)	6/16/98	Arsenic, Total	5.5 J	mg/kg	1.6	12.46	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
16-SB0002	**980616-BT-16-SL0002(18-20)**	**6/16/98**	**Benzo(a)anthracene**	**4.4**	**mg/kg**	**2.1**		**TRUE**	
16-SB0002	**980616-BT-16-SL0002(18-20)**	**6/16/98**	**Benzo(a)pyrene**	**3**	**mg/kg**	**0.21**		**TRUE**	
16-SB0002	**980616-BT-16-SL0002(18-20)**	**6/16/98**	**Benzo(b)fluoranthene**	**3.3**	**mg/kg**	**2.1**		**TRUE**	
17-SB0001	980610-BT-17-SL0001(20-22)	6/10/98	Arsenic, Total	5.2 J	mg/kg	1.6	12.46	TRUE	FALSE
17-SB0001	980610-BT-17-SL0001(18-20)	6/10/98	Arsenic, Total	11 J	mg/kg	1.6	12.46	TRUE	FALSE
17-SB0001	**980610-BT-17-SL0001(20-22)**	**6/10/98**	**Benzo(a)pyrene**	**0.63**	**mg/kg**	**0.21**		**TRUE**	
17-SB0001	**980610-BT-17-SL0001(18-20)**	**6/10/98**	**Benzo(a)pyrene**	**1.2**	**mg/kg**	**0.21**		**TRUE**	
17-SB0002	980610-BT-17-SL0002(18-20)	6/10/98	Arsenic, Total	5.6 J	mg/kg	1.6	12.46	TRUE	FALSE
17-SB0002	**980610-BT-17-SL0002(18-20)**	**6/10/98**	**Benzo(a)pyrene**	**0.43**	**mg/kg**	**0.21**		**TRUE**	
17-SB0003	980610-BT-17-SL0003(18-20)	6/10/98	Arsenic, Total	2.1 J	mg/kg	1.6	12.46	TRUE	FALSE
18-SB0001	980609-BT-18-SL0001(20-22)	6/9/98	Arsenic, Total	2.6 J	mg/kg	1.6	12.46	TRUE	FALSE
18-SB0001	980609-BT-18-SL0001(18-20)	6/9/98	Arsenic, Total	3 J	mg/kg	1.6	12.46	TRUE	FALSE
18-SB0001	980609-BT-18-SL0001(16-18)	6/9/98	Arsenic, Total	5.9 J	mg/kg	1.6	12.46	TRUE	FALSE
18-SB0001	**980609-BT-18-SL0001(18-20)**	**6/9/98**	**Benzo(a)anthracene**	**2.5**	**mg/kg**	**2.1**		**TRUE**	
18-SB0001	**980609-BT-18-SL0001(20-22)**	**6/9/98**	**Benzo(a)pyrene**	**0.65**	**mg/kg**	**0.21**		**TRUE**	
18-SB0001	**980609-BT-18-SL0001(18-20)**	**6/9/98**	**Benzo(a)pyrene**	**1.8**	**mg/kg**	**0.21**		**TRUE**	
18-SB0002	980609-BT-18-SL0002(16-18)	6/9/98	Arsenic, Total	5.4 J	mg/kg	1.6	12.46	TRUE	FALSE
18-SB0002	980609-BT-18-SL9002	6/9/98	Arsenic, Total	8.1 J	mg/kg	1.6	12.46	TRUE	FALSE
18-SB0002	**980609-BT-18-SL9002**	**6/9/98**	**Benzo(a)pyrene**	**0.61**	**mg/kg**	**0.21**		**TRUE**	
18-SB0002	**980609-BT-18-SL0002(16-18)**	**6/9/98**	**Benzo(a)pyrene**	**0.86**	**mg/kg**	**0.21**		**TRUE**	
19-SB0001	980608-BT-19-SL0001(20-22)	6/8/98	Arsenic, Total	4.9 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0001	980608-BT-19-SL0001(11-13)	6/8/98	Arsenic, Total	8.9 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0001	980608-BT-19-SL0001(15-17)	6/8/98	Arsenic, Total	11 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0002	980608-BT-19-SL0002(18-20)	6/8/98	Arsenic, Total	4.9 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0002	980608-BT-19-SL0002(14-16)	6/8/98	Arsenic, Total	7 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0002	**980608-BT-19-SL0002(11-13)**	**6/8/98**	**Arsenic, Total**	**13 J**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
19-SB0003	980609-BT-19-SL0003(11-13)	6/9/98	Arsenic, Total	2.9 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0003	980609-BT-19-SL0003(22-24)	6/9/98	Arsenic, Total	8 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0003	980609-BT-19-SL0003(16-18)	6/9/98	Arsenic, Total	9.4 J	mg/kg	1.6	12.46	TRUE	FALSE
19-SB0003	**980609-BT-19-SL0003(22-24)**	**6/9/98**	**Benzo(a)anthracene**	**3**	**mg/kg**	**2.1**		**TRUE**	
19-SB0003	**980609-BT-19-SL0003(22-24)**	**6/9/98**	**Benzo(a)pyrene**	**2.3**	**mg/kg**	**0.21**		**TRUE**	
1A-SB0004	**960610-CO-01A-SL0004(2-4)**	**6/10/96**	**Arsenic, Total**	**19**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
1A-SB0005	960611-CO-01A-SL0005(2-4)	6/11/96	Arsenic, Total	12	mg/kg	1.6	12.46	TRUE	FALSE
1A-SL0001	960608-CO-01A-SL0001(0-0.1)	6/8/96	Arsenic, Total	14	mg/kg	1.6	25.32	TRUE	FALSE
1A-SL0002	960608-CO-01A-SL9002	6/8/96	Arsenic, Total	7.3	mg/kg	1.6	25.32	TRUE	FALSE
1A-SL0002	960608-CO-01A-SL0002(0-0.1)	6/8/96	Arsenic, Total	10	mg/kg	1.6	25.32	TRUE	FALSE
1A-SL0003	960608-CO-01A-SL0003(0-0.1)	6/8/96	Arsenic, Total	9.7	mg/kg	1.6	25.32	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
1B-SB0004	960613-CO-01B-SL0004(12-14)	6/13/96	Arsenic, Total	9	mg/kg	1.6	12.46	TRUE	FALSE
1B-SB0004	960613-CO-01B-SL0004(8-10)	6/13/96	Arsenic, Total	9	mg/kg	1.6	12.46	TRUE	FALSE
1B-SB0004	960613-CO-01B-SL0004(4-6)	6/13/96	Arsenic, Total	10	mg/kg	1.6	12.46	TRUE	FALSE
1B-SB0004	**960613-CO-01B-SL0004(8-10)**	**6/13/96**	**Copper, Total**	**32000**	**mg/kg**	**4100**	**32.66**	**TRUE**	**TRUE**
1B-SB0004	**960613-CO-01B-SL0004(8-10)**	**6/13/96**	**Lead, Total**	**1200**	**mg/kg**	**800**	**20.9**	**TRUE**	**TRUE**
1B-SB0005	960614-CO-01B-SL0005(6-8)	6/14/96	Arsenic, Total	4.2	mg/kg	1.6	12.46	TRUE	FALSE
1B-SB0005	960614-CO-01B-SL9005	6/14/96	Arsenic, Total	6.2	mg/kg	1.6	12.46	TRUE	FALSE
1B-SB0005	960614-CO-01B-SL0005(9-11)	6/14/96	Arsenic, Total	11	mg/kg	1.6	12.46	TRUE	FALSE
1B-SB0005	**960614-CO-01B-SL9005**	**6/14/96**	**Benzo(a)anthracene**	**2.5**	**mg/kg**	**2.1**		**TRUE**	
1B-SB0005	**960614-CO-01B-SL0005(6-8)**	**6/14/96**	**Benzo(a)anthracene**	**16**	**mg/kg**	**2.1**		**TRUE**	
1B-SB0005	**960614-CO-01B-SL0005(6-8)**	**6/14/96**	**Benzo(a)pyrene**	**14**	**mg/kg**	**0.21**		**TRUE**	
1B-SB0005	**960614-CO-01B-SL0005(6-8)**	**6/14/96**	**Benzo(b)fluoranthene**	**17**	**mg/kg**	**2.1**		**TRUE**	
1B-SB0005	**960614-CO-01B-SL0005(6-8)**	**6/14/96**	**Naphthalene**	**30**	**mg/kg**	**19**		**TRUE**	
1B-SL0001	960608-CO-01B-SL0001(0-0.1)	6/8/96	Arsenic, Total	9.3	mg/kg	1.6	25.32	TRUE	FALSE
1B-SL0001	**960608-CO-01B-SL0001(0-0.1)**	**6/8/96**	**Benzo(a)pyrene**	**0.55**	**mg/kg**	**0.21**		**TRUE**	
1B-SL0002	960608-CO-01B-SL0002(0-0.1)	6/8/96	Arsenic, Total	3.5	mg/kg	1.6	25.32	TRUE	FALSE
1B-SL0003	960608-CO-01B-SL0003(0-0.1)	6/8/96	Arsenic, Total	6.2	mg/kg	1.6	25.32	TRUE	FALSE
22-SBMW16	980616-BT-22-SL0016(4-6)	6/16/98	Arsenic, Total	5.5 J	mg/kg	1.6	12.46	TRUE	FALSE
22-SBMW16	980616-BT-22-SL0016(8-10)	6/16/98	Arsenic, Total	8.4 J	mg/kg	1.6	12.46	TRUE	FALSE
22-SBMW18	980616-BT-22-SL0018(8-10)	6/16/98	Arsenic, Total	7 J	mg/kg	1.6	12.46	TRUE	FALSE
22-SBMW18	980616-BT-22-SL0018(6-8)	6/16/98	Arsenic, Total	9.2 J	mg/kg	1.6	12.46	TRUE	FALSE
22-SBMW18	**980616-BT-22-SL0018(8-10)**	**6/16/98**	**Benzo(a)anthracene**	**4.4**	**mg/kg**	**2.1**		**TRUE**	
22-SBMW18	**980616-BT-22-SL0018(8-10)**	**6/16/98**	**Benzo(a)pyrene**	**2.5**	**mg/kg**	**0.21**		**TRUE**	
22-SBMW18	**980616-BT-22-SL0018(8-10)**	**6/16/98**	**Benzo(b)fluoranthene**	**2.6**	**mg/kg**	**2.1**		**TRUE**	
23-SBMW22	970806-LD-23-SL0022(0-2)	8/6/97	Arsenic, Total	4.6	mg/kg	1.6	25.32	TRUE	FALSE
23-SBMW23	970806-LD-23-SL0023(12-14)	8/6/97	Arsenic, Total	2.9	mg/kg	1.6	12.46	TRUE	FALSE
23-SBMW23	970806-LD-23-SL0023(24-26)	8/6/97	Arsenic, Total	6.3	mg/kg	1.6	12.46	TRUE	FALSE
23-SBMW24	**970805-LD-23-SL0024(7-9)**	**8/5/97**	**Arsenic, Total**	**13**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
23-SBMW24	**970805-LD-23-SL0024(14-16)**	**8/5/97**	**Arsenic, Total**	**30**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
23-SBMW25	970805-LD-23-SL0025(19-21)	8/5/97	Arsenic, Total	3.8	mg/kg	1.6	12.46	TRUE	FALSE
24-SL0002	970618-LD-24-SL0002	6/18/97	Arsenic, Total	5.5 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0003	970617-LD-24-SL0003	6/17/97	Arsenic, Total	9.1 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0003	**970617-LD-24-SL0003**	**6/17/97**	**Benzo(a)pyrene**	**1.4**	**mg/kg**	**0.21**		**TRUE**	
24-SL0004	970617-LD-24-SL0004	6/17/97	Arsenic, Total	9.9 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0005	970617-LD-24-SL0005	6/17/97	Arsenic, Total	12.8 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0005	**970617-LD-24-SL0005**	**6/17/97**	**Benzo(a)pyrene**	**0.48**	**mg/kg**	**0.21**		**TRUE**	
24-SL0006	970617-LD-24-SL9001	6/17/97	Arsenic, Total	7.5 J	mg/kg	1.6	25.32	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
24-SL0006	970617-LD-24-SL0006	6/17/97	Arsenic, Total	8.1 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0007	970617-LD-24-SL0007	6/17/97	Arsenic, Total	21 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0007	**970617-LD-24-SL0007**	**6/17/97**	**Benzo(a)pyrene**	**0.7**	**mg/kg**	**0.21**		**TRUE**	
24-SL0008	970618-LD-24-SL0008	6/18/97	Arsenic, Total	9 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0009	970618-LD-24-SL0009	6/18/97	Arsenic, Total	9.1 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0010	970618-LD-24-SL0010	6/18/97	Arsenic, Total	16.4 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0011	970618-LD-24-SL0011	6/18/97	Arsenic, Total	9.9 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0011	**970618-LD-24-SL0011**	**6/18/97**	**Benzo(a)anthracene**	**3.5**	**mg/kg**	**2.1**		**TRUE**	
24-SL0011	**970618-LD-24-SL0011**	**6/18/97**	**Benzo(a)pyrene**	**2.1**	**mg/kg**	**0.21**		**TRUE**	
24-SL0012	970618-LD-24-SL0012	6/18/97	Arsenic, Total	13.5 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0012	**970618-LD-24-SL0012**	**6/18/97**	**Benzo(a)pyrene**	**0.66**	**mg/kg**	**0.21**		**TRUE**	
24-SL0013	970618-LD-24-SL0013	6/18/97	Arsenic, Total	7.1 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0014	970618-LD-24-SL0014	6/18/97	Arsenic, Total	19 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0014	**970618-LD-24-SL0014**	**6/18/97**	**Benzo(a)anthracene**	**63**	**mg/kg**	**2.1**		**TRUE**	
24-SL0014	**970618-LD-24-SL0014**	**6/18/97**	**Benzo(a)pyrene**	**36**	**mg/kg**	**0.21**		**TRUE**	
24-SL0014	**970618-LD-24-SL0014**	**6/18/97**	**Benzo(b)fluoranthene**	**33**	**mg/kg**	**2.1**		**TRUE**	
24-SL0014	**970618-LD-24-SL0014**	**6/18/97**	**Indeno(1,2,3-cd)pyrene**	**22**	**mg/kg**	**2.1**		**TRUE**	
24-SL0015	970618-LD-24-SL0015	6/18/97	Arsenic, Total	7.7 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0015	**970618-LD-24-SL0015**	**6/18/97**	**Benzo(a)pyrene**	**0.43**	**mg/kg**	**0.21**		**TRUE**	
24-SL0016	970618-LD-24-SL0016	6/18/97	Arsenic, Total	13.7 J	mg/kg	1.6	25.32	TRUE	FALSE
24-SL0016	**970618-LD-24-SL0016**	**6/18/97**	**Benzo(a)anthracene**	**5.9**	**mg/kg**	**2.1**		**TRUE**	
24-SL0016	**970618-LD-24-SL0016**	**6/18/97**	**Benzo(a)pyrene**	**3.4**	**mg/kg**	**0.21**		**TRUE**	
24-SL0016	**970618-LD-24-SL0016**	**6/18/97**	**Benzo(b)fluoranthene**	**3.6**	**mg/kg**	**2.1**		**TRUE**	
24-SL0016	**970618-LD-24-SL0016**	**6/18/97**	**Dibenzo(a,h)anthracene**	**0.57**	**mg/kg**	**0.21**		**TRUE**	
24-SL0016	**970618-LD-24-SL0016**	**6/18/97**	**Indeno(1,2,3-cd)pyrene**	**3.6**	**mg/kg**	**2.1**		**TRUE**	
26-SB0001	990609-CM-26-SL0001(5-7)	6/9/99	Arsenic, Total	2.3	mg/kg	1.6	12.46	TRUE	FALSE
26-SB0001	990609-CM-26-SL0001(13-15)	6/9/99	Arsenic, Total	3.3	mg/kg	1.6	12.46	TRUE	FALSE
26-SB0001	990609-CM-26-SL0001(9-11)	6/9/99	Arsenic, Total	3.5	mg/kg	1.6	12.46	TRUE	FALSE
26-SB0001	**990609-CM-26-SL0001(13-15)**	**6/9/99**	**Benzene**	**5.5**	**mg/kg**	**1.4**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(9-11)**	**6/9/99**	**Benzene**	**10**	**mg/kg**	**1.4**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(5-7)**	**6/9/99**	**Benzene**	**15**	**mg/kg**	**1.4**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(9-11)**	**6/9/99**	**Benzo(a)anthracene**	**5.4**	**mg/kg**	**2.1**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(9-11)**	**6/9/99**	**Benzo(a)pyrene**	**3.6**	**mg/kg**	**0.21**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(9-11)**	**6/9/99**	**Benzo(b)fluoranthene**	**4.9**	**mg/kg**	**2.1**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(9-11)**	**6/9/99**	**Dibenzo(a,h)anthracene**	**0.51**	**mg/kg**	**0.21**		**TRUE**	
26-SB0001	**990609-CM-26-SL0001(9-11)**	**6/9/99**	**Naphthalene**	**38**	**mg/kg**	**19**		**TRUE**	
26-SB0002	990609-CM-26-SL0002(2-4)	6/9/99	Arsenic, Total	4	mg/kg	1.6	12.46	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
26-SB0002	990609-CM-26-SL0002(4-6)	6/9/99	Arsenic, Total	5.1	mg/kg	1.6	12.46	TRUE	FALSE
26-SB0002	990609-CM-26-SL0002(6-8)	6/9/99	Arsenic, Total	5.3	mg/kg	1.6	12.46	TRUE	FALSE
26-SB0002	**990609-CM-26-SL0002(6-8)**	**6/9/99**	**Benzene**	**2.4**	**mg/kg**	**1.4**		**TRUE**	
26-SB0002	**990609-CM-26-SL0002(2-4)**	**6/9/99**	**Benzene**	**2.9**	**mg/kg**	**1.4**		**TRUE**	
26-SB0002	**990609-CM-26-SL0002(4-6)**	**6/9/99**	**Benzene**	**8.4**	**mg/kg**	**1.4**		**TRUE**	
27-SB0001	990610-CM-27-SL0001(10-12)	6/10/99	Arsenic, Total	4.8	mg/kg	1.6	12.46	TRUE	FALSE
27-SB0001	990610-CM-27-SL0001(2-4)	6/10/99	Arsenic, Total	5.1	mg/kg	1.6	12.46	TRUE	FALSE
27-SB0001	990610-CM-27-SL0001(6-8)	6/10/99	Arsenic, Total	15	mg/kg	1.6	12.46	TRUE	TRUE
27-SB0001	**990610-CM-27-SL0001(10-12)**	**6/10/99**	**Benzene**	**1.6**	**mg/kg**	**1.4**		**TRUE**	
27-SB0001	**990610-CM-27-SL0001(2-4)**	**6/10/99**	**Benzene**	**3.4**	**mg/kg**	**1.4**		**TRUE**	
27-SB0001	**990610-CM-27-SL0001(6-8)**	**6/10/99**	**Chlorobenzene**	**72**	**mg/kg**	**53**		**TRUE**	
27-SB0001	**990610-CM-27-SL0001(2-4)**	**6/10/99**	**Chlorobenzene**	**420**	**mg/kg**	**53**		**TRUE**	
27-SB0001	**990610-CM-27-SL0001(2-4)**	**6/10/99**	**Toluene**	**1000**	**mg/kg**	**220**		**TRUE**	
27-SB0002	990611-CM-27-SL0002(9-11)	6/11/99	Arsenic, Total	10	mg/kg	1.6	12.46	TRUE	FALSE
27-SB0002	990611-CM-27-SL0002(5-7)	6/11/99	Arsenic, Total	11	mg/kg	1.6	12.46	TRUE	FALSE
27-SB0002	**990611-CM-27-SL0002(3-5)**	**6/11/99**	**Arsenic, Total**	**18**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
27-SB0002	**990611-CM-27-SL0002(3-5)**	**6/11/99**	**Benzene**	**8.6**	**mg/kg**	**1.4**		**TRUE**	
27-SB0002	**990611-CM-27-SL0002(5-7)**	**6/11/99**	**Benzene**	**14**	**mg/kg**	**1.4**		**TRUE**	
27-SB0002	**990611-CM-27-SL0002(9-11)**	**6/11/99**	**Chlorobenzene**	**330**	**mg/kg**	**53**		**TRUE**	
27-SB0002	**990611-CM-27-SL0002(3-5)**	**6/11/99**	**Chlorobenzene**	**350**	**mg/kg**	**53**		**TRUE**	
27-SB0002	**990611-CM-27-SL0002(5-7)**	**6/11/99**	**Chlorobenzene**	**6100**	**mg/kg**	**53**		**TRUE**	
29-SB0001	990609-CM-29-SL0001(12-13)	6/9/99	Arsenic, Total	2.9	mg/kg	1.6	12.46	TRUE	FALSE
29-SB0001	990609-CM-29-SL9001	6/9/99	Arsenic, Total	5.5	mg/kg	1.6	12.46	TRUE	FALSE
29-SB0001	990609-CM-29-SL0001(4-6)	6/9/99	Arsenic, Total	5.6	mg/kg	1.6	12.46	TRUE	FALSE
29-SB0001	990609-CM-29-SL0001(8-10)	6/9/99	Arsenic, Total	6.2	mg/kg	1.6	12.46	TRUE	FALSE
29-SB0001	**990609-CM-29-SL9001**	**6/9/99**	**Benzene**	**3.1**	**mg/kg**	**1.4**		**TRUE**	
29-SB0001	**990609-CM-29-SL0001(8-10)**	**6/9/99**	**Benzene**	**3.9**	**mg/kg**	**1.4**		**TRUE**	
29-SB0001	**990609-CM-29-SL0001(4-6)**	**6/9/99**	**Benzene**	**5**	**mg/kg**	**1.4**		**TRUE**	
29-SB0001	**990609-CM-29-SL0001(12-13)**	**6/9/99**	**Benzene**	**6.5**	**mg/kg**	**1.4**		**TRUE**	
29-SB0002	990609-CM-29-SL0002(4-4.5)	6/9/99	Arsenic, Total	4	mg/kg	1.6	12.46	TRUE	FALSE
29-SB0002	**990609-CM-29-SL0002(4-4.5)**	**6/9/99**	**Benzene**	**59**	**mg/kg**	**1.4**		**TRUE**	
2A-SB0001	**960610-CO-02A-SL0001(16-18)**	**6/10/96**	**Arsenic, Total**	**13**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
2A-SB0001	**960610-CO-02A-SL0001(2-4)**	**6/10/96**	**Arsenic, Total**	**14**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
2A-SB0001	**960610-CO-02A-SL0001(2-4)**	**6/10/96**	**Benzo(a)anthracene**	**6.7**	**mg/kg**	**2.1**		**TRUE**	
2A-SB0002	**960610-CO-02A-SL0002(2-4)**	**6/10/96**	**Arsenic, Total**	**24**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
2A-SB0002	**960610-CO-02A-SL0002(2-4)**	**6/10/96**	**Benzo(a)anthracene**	**3.9**	**mg/kg**	**2.1**		**TRUE**	
2B-SB0001	960619-CO-02B-SL0001(2.5-3)	6/19/96	Arsenic, Total	8	mg/kg	1.6	12.46	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
2B-SB0001	**960619-CO-02B-SL0001(2.5-3)**	**6/19/96**	**Benzo(a)pyrene**	**1.6**	**mg/kg**	**0.21**		**TRUE**	
2B-SB0001	**960619-CO-02B-SL0001(2.5-3)**	**6/19/96**	**Benzo(b)fluoranthene**	**2.4**	**mg/kg**	**2.1**		**TRUE**	
31-SB0001	990610-CM-31-SL0001(6-8)	6/10/99	Arsenic, Total	5.2	mg/kg	1.6	12.46	TRUE	FALSE
31-SB0001	990610-CM-31-SL0001(2-4)	6/10/99	Arsenic, Total	5.3	mg/kg	1.6	12.46	TRUE	FALSE
31-SB0001	990610-CM-31-SL0001(0.5-2)	6/10/99	Arsenic, Total	8.4	mg/kg	1.6	25.32	TRUE	FALSE
31-SB0001	**990610-CM-31-SL0001(0.5-2)**	**6/10/99**	**Benzene**	**2.3**	**mg/kg**	**1.4**		**TRUE**	
31-SB0001	**990610-CM-31-SL0001(0.5-2)**	**6/10/99**	**Xylenes**	**160**	**mg/kg**	**90**		**TRUE**	
31-SB0002	990610-CM-31-SL0002(2-4)	6/10/99	Arsenic, Total	4.3	mg/kg	1.6	12.46	TRUE	FALSE
31-SB0002	990610-CM-31-SL0002(4-6)	6/10/99	Arsenic, Total	4.3	mg/kg	1.6	12.46	TRUE	FALSE
31-SB0002	**990610-CM-31-SL0002(2-4)**	**6/10/99**	**Benzene**	**3.3**	**mg/kg**	**1.4**		**TRUE**	
36-SB0001	990611-CM-36-SL0001(4-6)	6/11/99	Arsenic, Total	5.6	mg/kg	1.6	12.46	TRUE	FALSE
36-SB0001	990611-CM-36-SL9001	6/11/99	Arsenic, Total	6	mg/kg	1.6	12.46	TRUE	FALSE
36-SB0001	990611-CM-36-SL0001(6-8)	6/11/99	Arsenic, Total	6.3	mg/kg	1.6	12.46	TRUE	FALSE
36-SB0001	990611-CM-36-SL0001(8-10)	6/11/99	Arsenic, Total	6.7	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW26	970804-LD-38-SL0026(18-20)	8/4/97	Arsenic, Total	1.8 J	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW26	970804-LD-38-SL0026(10-12)	8/4/97	Arsenic, Total	3.3 J	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW26	970804-LD-38-SL9026	8/4/97	Arsenic, Total	3.5 J	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW27	970805-LD-38-SL0027(22-24)	8/5/97	Arsenic, Total	2.3	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW27	970805-LD-38-SL0027(11-13)	8/5/97	Arsenic, Total	4.1	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW28	970807-LD-38-SL0028(13-15)	8/7/97	Arsenic, Total	1.8	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW30	970807-LD-38-SL0030(9-11)	8/7/97	Arsenic, Total	4.3 J	mg/kg	1.6	12.46	TRUE	FALSE
38-SBMW30	970807-LD-38-SL0030(17-19)	8/7/97	Arsenic, Total	5.1 J	mg/kg	1.6	12.46	TRUE	FALSE
39-SBMW34	970805-LD-39-SL0034(10-12)	8/5/97	Arsenic, Total	5.2	mg/kg	1.6	12.46	TRUE	FALSE
39-SBMW36	970804-LD-39-SL9036	8/4/97	Arsenic, Total	3.5 J	mg/kg	1.6	12.46	TRUE	FALSE
39-SBMW36	970804-LD-39-SL0036(5-7)	8/4/97	Arsenic, Total	4.2	mg/kg	1.6	12.46	TRUE	FALSE
39-SBMW36	970804-LD-39-SL0036(10-12)	8/4/97	Arsenic, Total	4.8	mg/kg	1.6	12.46	TRUE	FALSE
3A-SB0001	960611-CO-03A-SL0001(6-8)	6/11/96	Arsenic, Total	10	mg/kg	1.6	12.46	TRUE	FALSE
3A-SB0002	960611-CO-03A-SL0002(8-10)	6/11/96	Arsenic, Total	9	mg/kg	1.6	12.46	TRUE	FALSE
3A-SB0002	**960611-CO-03A-SL9002**	**6/11/96**	**Arsenic, Total**	**96**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
4-SB0001	980626-BT-4-SL9001	6/26/98	Arsenic, Total	2.2	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0001	**980626-BT-4-SL0001(6-8)**	**6/26/98**	**Benzo(a)anthracene**	**3.3 J**	**mg/kg**	**2.1**		**TRUE**	
4-SB0001	**980626-BT-4-SL0001(6-8)**	**6/26/98**	**Benzo(a)pyrene**	**2 J**	**mg/kg**	**0.21**		**TRUE**	
4-SB0001	**980626-BT-4-SL0001(6-8)**	**6/26/98**	**Naphthalene**	**23 J**	**mg/kg**	**19**		**TRUE**	
4-SB0002	980626-BT-4-SL0002(9-11)	6/26/98	Arsenic, Total	3.9	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0002	980626-BT-4-SL0002(5-7)	6/26/98	Arsenic, Total	4.7	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0003	980617-BT-4-SL0003(12-14)	6/17/98	Arsenic, Total	1.7 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0003	980617-BT-4-SL0003(16-18)	6/17/98	Arsenic, Total	1.9 J	mg/kg	1.6	12.46	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
4-SB0003	980617-BT-4-SL0003(14-16)	6/17/98	Arsenic, Total	2.2 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0004	980617-BT-4-SL9004	6/17/98	Arsenic, Total	2.9 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0004	980617-BT-4-SL0004(10-12)	6/17/98	Arsenic, Total	4.6 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0004	**980617-BT-4-SL9004**	**6/17/98**	**Benzo(a)pyrene**	**0.56**	**mg/kg**	**0.21**		**TRUE**	
4-SB0005	980617-BT-4-SL0005(18-20)	6/17/98	Arsenic, Total	3.8 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0005	980617-BT-4-SL0005(8-10)	6/17/98	Arsenic, Total	4.5 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0005	980617-BT-4-SL0005(14-16)	6/17/98	Arsenic, Total	4.7 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0006	980618-BT-4-SL0006(18-20)	6/18/98	Arsenic, Total	3 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0006	980618-BT-4-SL0006(14-16)	6/18/98	Arsenic, Total	3.4 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0006	980618-BT-4-SL0006(7-9)	6/18/98	Arsenic, Total	4.5 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0007	980619-BT-4-SL0007(18-20)	6/19/98	Arsenic, Total	3.3 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0007	980619-BT-4-SL0007(6-8)	6/19/98	Arsenic, Total	3.9 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0007	980619-BT-4-SL0007(12-14)	6/19/98	Arsenic, Total	5.5 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0007	**980619-BT-4-SL0007(12-14)**	**6/19/98**	**Benzo(a)anthracene**	**2.8**	**mg/kg**	**2.1**		**TRUE**	
4-SB0007	**980619-BT-4-SL0007(12-14)**	**6/19/98**	**Benzo(a)pyrene**	**2.1**	**mg/kg**	**0.21**		**TRUE**	
4-SB0009	980620-BT-4-SL0009(16-18)	6/20/98	Arsenic, Total	3.7 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0009	980620-BT-4-SL0009(12-14)	6/20/98	Arsenic, Total	4.9 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0009	980620-BT-4-SL0009(8-10)	6/20/98	Arsenic, Total	6.4 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0010	980620-BT-4-SL0010(20-22)	6/20/98	Arsenic, Total	3.5 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0010	980620-BT-4-SL0010(16-18)	6/20/98	Arsenic, Total	5.1 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0010	980620-BT-4-SL0010(7-9)	6/20/98	Arsenic, Total	6 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0011	980622-BT-4-SL0011(5-7)	6/22/98	Arsenic, Total	5.7 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0011	**980622-BT-4-SL0011(5-7)**	**6/22/98**	**Benzo(a)anthracene**	**22**	**mg/kg**	**2.1**		**TRUE**	
4-SB0011	**980622-BT-4-SL0011(5-7)**	**6/22/98**	**Benzo(a)pyrene**	**16**	**mg/kg**	**0.21**		**TRUE**	
4-SB0011	**980622-BT-4-SL0011(5-7)**	**6/22/98**	**Benzo(b)fluoranthene**	**16**	**mg/kg**	**2.1**		**TRUE**	
4-SB0011	**980622-BT-4-SL0011(5-7)**	**6/22/98**	**Dibenzo(a,h)anthracene**	**4.7**	**mg/kg**	**0.21**		**TRUE**	
4-SB0011	**980622-BT-4-SL0011(5-7)**	**6/22/98**	**Indeno(1,2,3-cd)pyrene**	**9.9**	**mg/kg**	**2.1**		**TRUE**	
4-SB0012	980622-BT-4-SL0012(4-6)	6/22/98	Arsenic, Total	7.6 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0013	980622-BT-4-SL0013(13-15)	6/22/98	Arsenic, Total	3 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0013	980622-BT-4-SL0013(7-9)	6/22/98	Arsenic, Total	3.2 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0013	980622-BT-4-SL0013(11-13)	6/22/98	Arsenic, Total	3.8 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0014	980623-BT-4-SL0014(8-10)	6/23/98	Arsenic, Total	5.2 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0014	980623-BT-4-SL9014	6/23/98	Arsenic, Total	6.5	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0014	**980623-BT-4-SL0014(8-10)**	**6/23/98**	**Benzene**	**3.6 J**	**mg/kg**	**1.4**		**TRUE**	
4-SB0014	**980623-BT-4-SL0014(8-10)**	**6/23/98**	**Benzo(a)anthracene**	**7 J**	**mg/kg**	**2.1**		**TRUE**	
4-SB0014	**980623-BT-4-SL9014**	**6/23/98**	**Benzo(a)pyrene**	**0.83**	**mg/kg**	**0.21**		**TRUE**	
4-SB0014	**980623-BT-4-SL0014(8-10)**	**6/23/98**	**Benzo(a)pyrene**	**3.6 J**	**mg/kg**	**0.21**		**TRUE**	

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
4-SB0014	**980623-BT-4-SL0014(8-10)**	**6/23/98**	**Benzo(b)fluoranthene**	**4.8 J**	**mg/kg**	**2.1**		**TRUE**	
4-SB0015	980623-BT-4-SL0015(8-10)	6/23/98	Arsenic, Total	4.5	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0016	980623-BT-4-SL0016(1-3)	6/23/98	Arsenic, Total	7.8	mg/kg	1.6	25.32	TRUE	FALSE
4-SB0017	980623-BT-4-SL0017(6-8)	6/23/98	Arsenic, Total	7.4	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0018	980624-BT-4-SL0018(3-5)	6/24/98	Arsenic, Total	4.2 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0019	980624-BT-4-SL0019(6-8)	6/24/98	Arsenic, Total	2.3 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0019	**980624-BT-4-SL0019(6-8)**	**6/24/98**	**Benzo(a)pyrene**	**1.1**	**mg/kg**	**0.21**		**TRUE**	
4-SB0020	980624-BT-4-SL0020(7-9)	6/24/98	Arsenic, Total	4.1 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0024	980624-BT-4-SL0024(10-12)	6/24/98	Arsenic, Total	4.4 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0024	980624-BT-4-SL0024(18-20)	6/24/98	Arsenic, Total	5.4 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0024	980624-BT-4-SL0024(6-8)	6/24/98	Arsenic, Total	11.6 J	mg/kg	1.6	12.46	TRUE	FALSE
4-SB0024	**980624-BT-4-SL0024(6-8)**	**6/24/98**	**Xylenes**	**760**	**mg/kg**	**90**		**TRUE**	
5-SB0001	960611-CO-05-SL0001(11-13)	6/12/96	Arsenic, Total	7	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0001	960611-CO-05-SL0001(9-11)	6/12/96	Arsenic, Total	8	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0001	960611-CO-05-SL0001(1-3)	6/11/96	Arsenic, Total	20	mg/kg	1.6	25.32	TRUE	FALSE
5-SB0001	**960611-CO-05-SL0001(1-3)**	**6/11/96**	**Benzo(a)anthracene**	**4.8**	**mg/kg**	**2.1**		**TRUE**	
5-SB0001	960611-CO-05-SL0001(1-3)	6/11/96	Benzo(a)pyrene	5.1	mg/kg	0.21	11.42	TRUE	FALSE
5-SB0001	960611-CO-05-SL0001(1-3)	6/11/96	Benzo(b)fluoranthene	5.1	mg/kg	2.1	37.42	TRUE	FALSE
5-SB0002	960612-CO-05-SL0002(15-17)	6/12/96	Arsenic, Total	3	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0002	960612-CO-05-SL0002(1-3)	6/12/96	Arsenic, Total	7	mg/kg	1.6	25.32	TRUE	FALSE
5-SB0002	960612-CO-05-SL0002(11-13)	6/12/96	Arsenic, Total	8	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0002	**960612-CO-05-SL0002(1-3)**	**6/12/96**	**Benzo(a)anthracene**	**7.1**	**mg/kg**	**2.1**		**TRUE**	
5-SB0002	**960612-CO-05-SL0002(11-13)**	**6/12/96**	**Benzo(a)pyrene**	**1.2**	**mg/kg**	**0.21**		**TRUE**	
5-SB0002	**960612-CO-05-SL0002(15-17)**	**6/12/96**	**Benzo(a)pyrene**	**2.4**	**mg/kg**	**0.21**		**TRUE**	
5-SB0002	960612-CO-05-SL0002(1-3)	6/12/96	Benzo(a)pyrene	5.2	mg/kg	0.21	11.42	TRUE	FALSE
5-SB0002	**960612-CO-05-SL0002(15-17)**	**6/12/96**	**Benzo(b)fluoranthene**	**2.2**	**mg/kg**	**2.1**		**TRUE**	
5-SB0002	**960612-CO-05-SL0002(1-3)**	**6/12/96**	**Benzo(b)fluoranthene**	**5.2**	**mg/kg**	**2.1**		**TRUE**	
5-SB0002	**960612-CO-05-SL0002(15-17)**	**6/12/96**	**Indeno(1,2,3-cd)pyrene**	**4.1**	**mg/kg**	**2.1**		**TRUE**	
5-SB0002	**960612-CO-05-SL0002(11-13)**	**6/12/96**	**Naphthalene**	**26**	**mg/kg**	**19**		**TRUE**	
5-SB0004	**960613-CO-05-SL0004(7-9)**	**6/13/96**	**Antimony, Total**	**59**	**mg/kg**	**41**		**TRUE**	
5-SB0004	960613-CO-05-SL0004(1-3)	6/13/96	Arsenic, Total	7	mg/kg	1.6	25.32	TRUE	FALSE
5-SB0004	960613-CO-05-SL0004(9-11)	6/13/96	Arsenic, Total	8	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0004	960613-CO-05-SL0004(7-9)	6/13/96	Arsenic, Total	9	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0004	**960613-CO-05-SL0004(7-9)**	**6/13/96**	**Benzo(a)pyrene**	**1.3**	**mg/kg**	**0.21**		**TRUE**	
5-SB0005	960613-CO-05-SL0005(5-7)	6/13/96	Arsenic, Total	8	mg/kg	1.6	12.46	TRUE	FALSE
5-SB0005	960613-CO-05-SL0005(1-3)	6/13/96	Arsenic, Total	10	mg/kg	1.6	25.32	TRUE	FALSE
5-SB0005	**960613-CO-05-SL9005**	**6/13/96**	**Arsenic, Total**	**22**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
5-SB0005	**960613-CO-05-SL0005(1-3)**	**6/13/96**	**Benzo(a)anthracene**	**5.1**	**mg/kg**	**2.1**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(5-7)**	**6/13/96**	**Benzo(a)pyrene**	**7.8**	**mg/kg**	**0.21**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(1-3)**	**6/13/96**	**Benzo(b)fluoranthene**	**4.6**	**mg/kg**	**2.1**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(5-7)**	**6/13/96**	**Benzo(b)fluoranthene**	**6.8**	**mg/kg**	**2.1**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(1-3)**	**6/13/96**	**Dibenzo(a,h)anthracene**	**0.43**	**mg/kg**	**0.21**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(1-3)**	**6/13/96**	**Indeno(1,2,3-cd)pyrene**	**3**	**mg/kg**	**2.1**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(5-7)**	**6/13/96**	**Indeno(1,2,3-cd)pyrene**	**7.9**	**mg/kg**	**2.1**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(1-3)**	**6/13/96**	**Naphthalene**	**23**	**mg/kg**	**19**		**TRUE**	
5-SB0005	**960613-CO-05-SL9005**	**6/13/96**	**Naphthalene**	**49**	**mg/kg**	**19**		**TRUE**	
5-SB0005	**960613-CO-05-SL0005(5-7)**	**6/13/96**	**Naphthalene**	**51**	**mg/kg**	**19**		**TRUE**	
6-SB0001	960615-CO-06-SL0001(6-8)	6/15/96	Arsenic, Total	7.8	mg/kg	1.6	12.46	TRUE	FALSE
6-SB0001	960615-CO-06-SL9001	6/15/96	Arsenic, Total	7.8	mg/kg	1.6	25.32	TRUE	FALSE
6-SB0001	960615-CO-06-SL0001(1-2)	6/15/96	Arsenic, Total	10	mg/kg	1.6	25.32	TRUE	FALSE
6-SB0001	**960615-CO-06-SL0001(12-14)**	**6/15/96**	**Arsenic, Total**	**13**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
6-SB0001	960615-CO-06-SL0001(0-1)	6/15/96	Arsenic, Total	15	mg/kg	1.6	25.32	TRUE	FALSE
6-SB0001	960615-CO-06-SL0001(0-1)	6/15/96	Benzo(b)fluoranthene	6.5	mg/kg	2.1	37.42	TRUE	FALSE
7-SB0001	960615-CO-07-SL0001(6-8)	6/15/96	Arsenic, Total	5.3	mg/kg	1.6	12.46	TRUE	FALSE
7-SB0001	960615-CO-07-SL0001(4-6)	6/15/96	Arsenic, Total	9.4	mg/kg	1.6	12.46	TRUE	FALSE
7-SB0001	**960615-CO-07-SL0001(4-6)**	**6/15/96**	**Benzo(a)anthracene**	**29**	**mg/kg**	**2.1**		**TRUE**	
7-SB0001	**960615-CO-07-SL0001(6-8)**	**6/15/96**	**Benzo(a)pyrene**	**0.51**	**mg/kg**	**0.21**		**TRUE**	
7-SB0001	**960615-CO-07-SL0001(4-6)**	**6/15/96**	**Benzo(a)pyrene**	**24**	**mg/kg**	**0.21**		**TRUE**	
7-SB0001	**960615-CO-07-SL0001(4-6)**	**6/15/96**	**Benzo(b)fluoranthene**	**23**	**mg/kg**	**2.1**		**TRUE**	
7-SB0001	**960615-CO-07-SL0001(4-6)**	**6/15/96**	**Naphthalene**	**200**	**mg/kg**	**19**		**TRUE**	
7-SB0002	960617-CO-07-SL9002	6/17/96	Arsenic, Total	8.3	mg/kg	1.6	12.46	TRUE	FALSE
7-SB0002	960617-CO-07-SL0002(6-8)	6/17/96	Arsenic, Total	10	mg/kg	1.6	12.46	TRUE	FALSE
7-SB0002	**960617-CO-07-SL0002(4-6)**	**6/17/96**	**Arsenic, Total**	**36**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
8-SB0001	**960617-CO-08-SL0001(2-4)**	**6/17/96**	**Arsenic, Total**	**16**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
9-SB0001	960614-CO-09-SL0001(6-8)	6/14/96	Arsenic, Total	8	mg/kg	1.6	12.46	TRUE	FALSE
9-SB0001	**960614-CO-09-SL0001(4-6)**	**6/14/96**	**Arsenic, Total**	**15**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
EI #01	050418-EI1 (0-2)	4/18/05	Arsenic, Total	12	mg/kg	1.6	25.32	TRUE	FALSE
EI #01	**050418-EI1 (0-2)**	**4/18/05**	**Benzo(a)anthracene**	**13**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #01	**050418-EI1 (0-2)**	**4/18/05**	**Benzo(a)pyrene**	**15**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
EI #01	050418-EI1 (0-2)	4/18/05	Benzo(b)fluoranthene	20	mg/kg	2.1	37.42	TRUE	FALSE
EI #01	**050418-EI1 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**4**	**mg/kg**	**0.21**		**TRUE**	
EI #01	**050418-EI1 (0-2)**	**4/18/05**	**Indeno(1,2,3-cd)pyrene**	**7.1**	**mg/kg**	**2.1**		**TRUE**	
EI #02	050418-EI2(0-2)	4/18/05	Arsenic, Total	14	mg/kg	1.6	25.32	TRUE	FALSE
EI #03	**050418-EI3 (0-2)**	**4/18/05**	**Arsenic, Total**	**37**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
EI #03	050418-EI3 (0-2)	4/18/05	Benzo(a)anthracene	8.5	mg/kg	2.1	9.42	TRUE	FALSE
EI #03	050418-EI3 (0-2)	4/18/05	Benzo(a)pyrene	9.8	mg/kg	0.21	11.42	TRUE	FALSE
EI #03	050418-EI3 (0-2)	4/18/05	Benzo(b)fluoranthene	13	mg/kg	2.1	37.42	TRUE	FALSE
EI #03	**050418-EI3 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**2.4**	**mg/kg**	**0.21**		**TRUE**	
EI #03	**050418-EI3 (0-2)**	**4/18/05**	**Indeno(1,2,3-cd)pyrene**	**4.3**	**mg/kg**	**2.1**		**TRUE**	
EI #04	050418-EI4 (0-2)	4/18/05	Arsenic, Total	8.8	mg/kg	1.6	25.32	TRUE	FALSE
EI #04	**050418-EI4 (0-2)**	**4/18/05**	**Benzo(a)anthracene**	**110**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #04	**050418-EI4 (0-2)**	**4/18/05**	**Benzo(a)pyrene**	**110**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
EI #04	**050418-EI4 (0-2)**	**4/18/05**	**Benzo(b)fluoranthene**	**140**	**mg/kg**	**2.1**	**37.42**	**TRUE**	**TRUE**
EI #04	**050418-EI4 (0-2)**	**4/18/05**	**Benzo(k)fluoranthene**	**33**	**mg/kg**	**21**		**TRUE**	
EI #04	**050418-EI4 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**22**	**mg/kg**	**0.21**		**TRUE**	
EI #04	**050418-EI4 (0-2)**	**4/18/05**	**Indeno(1,2,3-cd)pyrene**	**60**	**mg/kg**	**2.1**		**TRUE**	
EI #05	050418-EI5 (0-2)	4/18/05	Arsenic, Total	11	mg/kg	1.6	25.32	TRUE	FALSE
EI #05	050418-EI5 (0-2)	4/18/05	Benzo(a)pyrene	4.2	mg/kg	0.21	11.42	TRUE	FALSE
EI #05	050418-EI5 (0-2)	4/18/05	Benzo(b)fluoranthene	5.8	mg/kg	2.1	37.42	TRUE	FALSE
EI #05	**050418-EI5 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**1.3**	**mg/kg**	**0.21**		**TRUE**	
EI #06	050418-EI6 (0-2)	4/18/05	Arsenic, Total	15	mg/kg	1.6	25.32	TRUE	FALSE
EI #06	**050418-EI6 (0-2)**	**4/18/05**	**Benzo(a)anthracene**	**9.9**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #06	050418-EI6 (0-2)	4/18/05	Benzo(a)pyrene	11	mg/kg	0.21	11.42	TRUE	FALSE
EI #06	050418-EI6 (0-2)	4/18/05	Benzo(b)fluoranthene	14	mg/kg	2.1	37.42	TRUE	FALSE
EI #06	**050418-EI6 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**3.1**	**mg/kg**	**0.21**		**TRUE**	
EI #06	**050418-EI6 (0-2)**	**4/18/05**	**Indeno(1,2,3-cd)pyrene**	**4.5**	**mg/kg**	**2.1**		**TRUE**	
EI #07	**050418-FDS05**	**4/18/05**	**Arsenic, Total**	**120**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
EI #07	**050418-EI7 (0-2)**	**4/18/05**	**Arsenic, Total**	**160**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
EI #08	**050418-EI8 (0-2)**	**4/18/05**	**Arsenic, Total**	**26**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
EI #08	050418-EI8 (0-2)	4/18/05	Benzo(a)pyrene	1.5	mg/kg	0.21	11.42	TRUE	FALSE
EI #08	**050418-EI8 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**0.39**	**mg/kg**	**0.21**		**TRUE**	
EI #09	050418-EI9 (0-2)	4/18/05	Arsenic, Total	20	mg/kg	1.6	25.32	TRUE	FALSE
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Benzo(a)anthracene**	**110**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Benzo(a)pyrene**	**84**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Benzo(b)fluoranthene**	**99**	**mg/kg**	**2.1**	**37.42**	**TRUE**	**TRUE**
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Benzo(k)fluoranthene**	**51**	**mg/kg**	**21**		**TRUE**	
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Dibenzo(a,h)anthracene**	**13**	**mg/kg**	**0.21**		**TRUE**	
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Indeno(1,2,3-cd)pyrene**	**26**	**mg/kg**	**2.1**		**TRUE**	
EI #09	**050418-EI9 (0-2)**	**4/18/05**	**Naphthalene**	**64**	**mg/kg**	**19**		**TRUE**	
EI #10	050418-EI10 (0-2)	4/18/05	Arsenic, Total	23	mg/kg	1.6	25.32	TRUE	FALSE
EI #11	050418-EI11 (0-2)	4/18/05	Arsenic, Total	20	mg/kg	1.6	25.32	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
EI #11	050418-EI11 (0-2)	4/18/05	Benzo(a)pyrene	0.54 J	mg/kg	0.21	11.42	TRUE	FALSE
EI #12	**050418-EI12 (0-2)**	**4/18/05**	**Arsenic, Total**	**47**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
EI #13	050418-EI13(0-2)ES13	4/19/05	Arsenic, Total	15	mg/kg	1.6	25.32	TRUE	FALSE
EI #13	**050418-EI13(0-2)ES13**	**4/19/05**	**Benzo(a)anthracene**	**15**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #13	**050418-EI13(0-2)ES13**	**4/19/05**	**Benzo(a)pyrene**	**19**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
EI #13	050418-EI13(0-2)ES13	4/19/05	Benzo(b)fluoranthene	20	mg/kg	2.1	37.42	TRUE	FALSE
EI #13	**050418-EI13(0-2)ES13**	**4/19/05**	**Dibenzo(a,h)anthracene**	**5.1**	**mg/kg**	**0.21**		**TRUE**	
EI #13	**050418-EI13(0-2)ES13**	**4/19/05**	**Indeno(1,2,3-cd)pyrene**	**7**	**mg/kg**	**2.1**		**TRUE**	
EI #14	050418-EI14(0-2)ES14	4/19/05	Arsenic, Total	6.5	mg/kg	1.6	25.32	TRUE	FALSE
EI #14	**050418-EI14(0-2)ES14**	**4/19/05**	**Benzo(a)anthracene**	**39**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #14	**050418-EI14(0-2)ES14**	**4/19/05**	**Benzo(a)pyrene**	**35**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
EI #14	050418-EI14(0-2)ES14	4/19/05	Benzo(b)fluoranthene	28	mg/kg	2.1	37.42	TRUE	FALSE
EI #14	**050418-EI14(0-2)ES14**	**4/19/05**	**Dibenzo(a,h)anthracene**	**7.2**	**mg/kg**	**0.21**		**TRUE**	
EI #14	**050418-EI14(0-2)ES14**	**4/19/05**	**Indeno(1,2,3-cd)pyrene**	**11**	**mg/kg**	**2.1**		**TRUE**	
EI #15	050418-EI15(0-2)ES15	4/19/05	Arsenic, Total	6.3	mg/kg	1.6	25.32	TRUE	FALSE
EI #16	050418-EI16(0-2)ES16	4/19/05	Arsenic, Total	15	mg/kg	1.6	25.32	TRUE	FALSE
EI #16	050418-EI16(0-2)ES16	4/19/05	Benzo(a)anthracene	2.4	mg/kg	2.1	9.42	TRUE	FALSE
EI #16	050418-EI16(0-2)ES16	4/19/05	Benzo(a)pyrene	4.6	mg/kg	0.21	11.42	TRUE	FALSE
EI #16	050418-EI16(0-2)ES16	4/19/05	Benzo(b)fluoranthene	4.7	mg/kg	2.1	37.42	TRUE	FALSE
EI #16	**050418-EI16(0-2)ES16**	**4/19/05**	**Dibenzo(a,h)anthracene**	**1**	**mg/kg**	**0.21**		**TRUE**	
EI #17	**050418-EI17(0-2)ES17**	**4/19/05**	**Arsenic, Total**	**26**	**mg/kg**	**1.6**	**25.32**	**TRUE**	**TRUE**
EI #17	050418-EI17(0-2)ES17	4/19/05	Benzo(a)anthracene	4.3	mg/kg	2.1	9.42	TRUE	FALSE
EI #17	050418-EI17(0-2)ES17	4/19/05	Benzo(a)pyrene	6.6	mg/kg	0.21	11.42	TRUE	FALSE
EI #17	050418-EI17(0-2)ES17	4/19/05	Benzo(b)fluoranthene	8	mg/kg	2.1	37.42	TRUE	FALSE
EI #17	**050418-EI17(0-2)ES17**	**4/19/05**	**Dibenzo(a,h)anthracene**	**1.8**	**mg/kg**	**0.21**		**TRUE**	
EI #17	**050418-EI17(0-2)ES17**	**4/19/05**	**Indeno(1,2,3-cd)pyrene**	**3.3**	**mg/kg**	**2.1**		**TRUE**	
EI #18	050418-EI18(0-2)ES18	4/19/05	Arsenic, Total	9.1	mg/kg	1.6	25.32	TRUE	FALSE
EI #18	050418-EI18(0-2)ES18	4/19/05	Benzo(a)anthracene	2.2	mg/kg	2.1	9.42	TRUE	FALSE
EI #18	050418-EI18(0-2)ES18	4/19/05	Benzo(a)pyrene	2.3	mg/kg	0.21	11.42	TRUE	FALSE
EI #18	050418-EI18(0-2)ES18	4/19/05	Benzo(b)fluoranthene	3.4	mg/kg	2.1	37.42	TRUE	FALSE
EI #18	**050418-EI18(0-2)ES18**	**4/19/05**	**Dibenzo(a,h)anthracene**	**0.62**	**mg/kg**	**0.21**		**TRUE**	
EI #19	050418-EI19(0-2)ES19	4/19/05	Arsenic, Total	8.5	mg/kg	1.6	25.32	TRUE	FALSE
EI #20	050418-EI20(0-2)ES20	4/19/05	Arsenic, Total	5.5	mg/kg	1.6	25.32	TRUE	FALSE
EI #21	050418-EI21(0-2)ES21	4/19/05	Arsenic, Total	13	mg/kg	1.6	25.32	TRUE	FALSE
EI #21	**050418-EI21(0-2)ES21**	**4/19/05**	**Benzo(a)anthracene**	**47**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
EI #21	**050418-EI21(0-2)ES21**	**4/19/05**	**Benzo(a)pyrene**	**72**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
EI #21	**050418-EI21(0-2)ES21**	**4/19/05**	**Benzo(b)fluoranthene**	**85**	**mg/kg**	**2.1**	**37.42**	**TRUE**	**TRUE**

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
EI #21	**050418-EI21(0-2)ES21**	**4/19/05**	**Benzo(k)fluoranthene**	**25**	**mg/kg**	**21**		**TRUE**	
EI #21	**050418-EI21(0-2)ES21**	**4/19/05**	**Dibenzo(a,h)anthracene**	**17**	**mg/kg**	**0.21**		**TRUE**	
EI #21	**050418-EI21(0-2)ES21**	**4/19/05**	**Indeno(1,2,3-cd)pyrene**	**25**	**mg/kg**	**2.1**		**TRUE**	
EI #22	050418-EI22 (0-2)	4/21/05	Arsenic, Total	13	mg/kg	1.6	25.32	TRUE	FALSE
MW-07	980629-BT-13-SL0007(15-17)	6/29/98	Arsenic, Total	4.4	mg/kg	1.6	12.46	TRUE	FALSE
MW-07	980629-BT-13-SL0007(9-11)	6/29/98	Arsenic, Total	7	mg/kg	1.6	12.46	TRUE	FALSE
MW-08	980630-BT-13-SL0008(9-11)	6/30/98	Arsenic, Total	2.2	mg/kg	1.6	12.46	TRUE	FALSE
MW-08	980630-BT-13-SL0008(5-7)	6/30/98	Arsenic, Total	2.6	mg/kg	1.6	12.46	TRUE	FALSE
MW-09	980629-BT-13-SL0009(9-11)	6/29/98	Arsenic, Total	3	mg/kg	1.6	12.46	TRUE	FALSE
MW-09	980629-BT-13-SL9009	6/29/98	Arsenic, Total	3.3	mg/kg	1.6	12.46	TRUE	FALSE
MW-09	980629-BT-13-SL0009(17-19)	6/29/98	Arsenic, Total	6.2	mg/kg	1.6	12.46	TRUE	FALSE
MW-13S	980630-BT-22-SL0013(8-10)	6/30/98	Arsenic, Total	5.2	mg/kg	1.6	12.46	TRUE	FALSE
MW-17S	980701-BT-22-SL0017(11-13)	7/1/98	Arsenic, Total	2.7	mg/kg	1.6	12.46	TRUE	FALSE
MW-17S	980701-BT-22-SL0017(6-8)	7/1/98	Arsenic, Total	4.6	mg/kg	1.6	12.46	TRUE	FALSE
MW-21	970806-LD-23-SL9021	8/6/97	Arsenic, Total	2 J	mg/kg	1.6	12.46	TRUE	FALSE
MW-21	970806-LD-23-SL0021(20-22)	8/6/97	Arsenic, Total	2.2 J	mg/kg	1.6	12.46	TRUE	FALSE
MW-21	970806-LD-23-SL0021(14-16)	8/6/97	Arsenic, Total	3.6 J	mg/kg	1.6	12.46	TRUE	FALSE
MW-29	970807-LD-38-SL0029(19-21)	8/7/97	Arsenic, Total	2.1	mg/kg	1.6	12.46	TRUE	FALSE
MW-33	970808-LD-39-SL0033(11-13)	8/8/97	Arsenic, Total	5	mg/kg	1.6	12.46	TRUE	FALSE
MW-35	970808-LD-39-SL0035(10-12)	8/8/97	Arsenic, Total	2.7	mg/kg	1.6	12.46	TRUE	FALSE
MW-37	970808-LD-38-SL0037(4-6)	8/8/97	Arsenic, Total	2	mg/kg	1.6	12.46	TRUE	FALSE
MW-37	970808-LD-38-SL0037(8-10)	8/8/97	Arsenic, Total	3.5	mg/kg	1.6	12.46	TRUE	FALSE
MW-52	000711-CM-00-SL0052(0-2)	7/11/00	Arsenic, Total	7.9	mg/kg	1.6	25.32	TRUE	FALSE
MW-52	**000711-CM-00-SL0052(4-6)**	**7/11/00**	**Arsenic, Total**	**15**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
MW-52	**000711-CM-00-SL0052(8-10)**	**7/11/00**	**Arsenic, Total**	**16**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
MW-53	000712-CM-00-SL0053(4-6)	7/12/00	Arsenic, Total	9.2	mg/kg	1.6	12.46	TRUE	FALSE
MW-53	**000712-CM-00-SL0053(8-10)**	**7/12/00**	**Arsenic, Total**	**16**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
MW-53	**000712-CM-00-SL0053(2-4)**	**7/12/00**	**Arsenic, Total**	**18**	**mg/kg**	**1.6**	**12.46**	**TRUE**	**TRUE**
MW-53	**000712-CM-00-SL0053(4-6)**	**7/12/00**	**Benzene**	**2.6**	**mg/kg**	**1.4**		**TRUE**	
MW-53	**000712-CM-00-SL0053(8-10)**	**7/12/00**	**Benzene**	**3.9**	**mg/kg**	**1.4**		**TRUE**	
MW-54	000712-CM-31-SL0054(16-18)	7/12/00	Arsenic, Total	6.8	mg/kg	1.6	12.46	TRUE	FALSE
MW-54	000712-CM-31-SL0054(8-10)	7/12/00	Arsenic, Total	8.1	mg/kg	1.6	12.46	TRUE	FALSE
MW-54	000712-CM-31-SL0054(2-4)	7/12/00	Arsenic, Total	9.9	mg/kg	1.6	12.46	TRUE	FALSE
MW-54	000712-CM-31-SL9054	7/12/00	Arsenic, Total	11	mg/kg	1.6	12.46	TRUE	FALSE
MW-54	**000712-CM-31-SL0054(2-4)**	**7/12/00**	**Benzo(a)pyrene**	**0.42**	**mg/kg**	**0.21**		**TRUE**	
MW-54	**000712-CM-31-SL0054(8-10)**	**7/12/00**	**Benzo(a)pyrene**	**0.42**	**mg/kg**	**0.21**		**TRUE**	
MW-55	000711-CM-27-SL0055(6-8)	7/11/00	Arsenic, Total	9.2	mg/kg	1.6	12.46	TRUE	FALSE

TABLE 4-2
Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
MW-55	000711-CM-27-SL0055(2.5-4)	7/11/00	Arsenic, Total	12	mg/kg	1.6	12.46	TRUE	FALSE
MW-55	000711-CM-27-SL0055(4-6)	7/11/00	Arsenic, Total	12	mg/kg	1.6	12.46	TRUE	FALSE
MW-55	**000711-CM-27-SL0055(2.5-4)**	**7/11/00**	**Benzene**	**1.5**	**mg/kg**	**1.4**		**TRUE**	
MW-59	**000713-CO-07-SL0059(2-4)**	**7/13/00**	**Benzo(a)anthracene**	**170**	**mg/kg**	**2.1**		**TRUE**	
MW-59	**000713-CO-07-SL0059(2-4)**	**7/13/00**	**Benzo(a)pyrene**	**130**	**mg/kg**	**0.21**		**TRUE**	
MW-59	**000713-CO-07-SL0059(2-4)**	**7/13/00**	**Benzo(b)fluoranthene**	**100**	**mg/kg**	**2.1**		**TRUE**	
MW-59	**000713-CO-07-SL0059(2-4)**	**7/13/00**	**Benzo(k)fluoranthene**	**110**	**mg/kg**	**21**		**TRUE**	
MW-59	**000713-CO-07-SL0059(2-4)**	**7/13/00**	**Indeno(1,2,3-cd)pyrene**	**67**	**mg/kg**	**2.1**		**TRUE**	
MW-59	**000713-CO-07-SL0059(2-4)**	**7/13/00**	**Naphthalene**	**1000**	**mg/kg**	**19**		**TRUE**	
SB-1	950615-FW-00-SL0001(0-2)	6/15/95	Arsenic, Total	11	mg/kg	1.6	25.32	TRUE	FALSE
SB-1	950615-FW-00-SL0001(8-10)	6/15/95	Arsenic, Total	7.2	mg/kg	1.6	12.46	TRUE	FALSE
SB-1	950615-FW-00-SL0001(14-16)	6/15/95	Arsenic, Total	4.3	mg/kg	1.6	12.46	TRUE	FALSE
SB-1	950615-FW-00-SL0001(0-2)	6/15/95	Barium, Total	44	mg/kg	1.6	101.72	TRUE	FALSE
SB-1	950615-FW-00-SL0001(8-10)	6/15/95	Barium, Total	85	mg/kg	1.6	144.34	TRUE	FALSE
SB-1	950615-FW-00-SL0001(14-16)	6/15/95	Barium, Total	100	mg/kg	1.6	144.34	TRUE	FALSE
SB-1	950615-FW-00-SL0001(8-10)	6/15/95	Beryllium, Total	1.8	mg/kg	1.6	3.44	TRUE	FALSE
SB-1	950615-FW-00-SL0001(14-16)	6/15/95	Beryllium, Total	2.2	mg/kg	1.6	3.44	TRUE	FALSE
SB-1	950615-FW-00-SL0001(0-2)	6/15/95	Copper, Total	8.2	mg/kg	1.6	15.94	TRUE	FALSE
SB-1	950615-FW-00-SL0001(8-10)	6/15/95	Copper, Total	18	mg/kg	1.6	32.66	TRUE	FALSE
SB-1	950615-FW-00-SL0001(14-16)	6/15/95	Copper, Total	32	mg/kg	1.6	32.66	TRUE	FALSE
SB-1	950615-FW-00-SL0001(0-2)	6/15/95	Lead, Total	23	mg/kg	1.6	28	TRUE	FALSE
SB-1	950615-FW-00-SL0001(8-10)	6/15/95	Lead, Total	8.7	mg/kg	1.6	20.9	TRUE	FALSE
SB-1	950615-FW-00-SL0001(14-16)	6/15/95	Lead, Total	9.7	mg/kg	1.6	20.9	TRUE	FALSE
SB-1	950615-FW-00-SL0001(0-2)	6/15/95	Nickel, Total	4.7	mg/kg	1.6	15.66	TRUE	FALSE
SB-1	950615-FW-00-SL0001(8-10)	6/15/95	Nickel, Total	22	mg/kg	1.6	57.28	TRUE	FALSE
SB-2	950615-FW-00-SL0002(12-14)	6/15/95	Beryllium, Total	2.5	mg/kg	0.21	3.44	TRUE	FALSE
SB-2	950615-FW-00-SL0002(0-2)	6/15/95	Copper, Total	6.7	mg/kg	2.1	15.94	TRUE	FALSE
SB-2	950615-FW-00-SL0002(8-10)	6/15/95	Copper, Total	20	mg/kg	2.1	32.66	TRUE	FALSE
SB-4	950629-FW-00-SL0004(36-38)	6/29/95	Nickel, Total	28	mg/kg	19	57.28	TRUE	FALSE
SB-5	950719-FW-00-SL0005(2-4)	7/19/95	Lead, Total	11	mg/kg	1.3	20.9	TRUE	FALSE
SB-5	950719-FW-00-SL0005(4-6)	7/19/95	Lead, Total	8	mg/kg	1.3	20.9	TRUE	FALSE
SB-5	950719-FW-00-SL0005(0-2)	7/19/95	Nickel, Total	4.7	mg/kg	1.3	15.66	TRUE	FALSE
SB-6	950719-FW-00-SL0006(0-2)	7/19/95	Barium, Total	72	mg/kg	0.11	101.72	TRUE	FALSE
SB-6	950719-FW-00-SL0006(10-12)	7/19/95	Barium, Total	45	mg/kg	0.11	144.34	TRUE	FALSE
SB-6	950719-FW-00-SL0006(20-22)	7/19/95	Barium, Total	14	mg/kg	0.11	144.34	TRUE	FALSE
SB-6	950719-FW-00-SL0006(0-2)	7/19/95	Beryllium, Total	0.58	mg/kg	0.11	1.2	TRUE	FALSE
SWMU38-1	050418-SWMU38-1(0-2)SWMU38-1	4/19/05	Arsenic, Total	11	mg/kg	1.6	25.32	TRUE	FALSE

TABLE 4-2

Onsite Soil Results in Excess of EPA Region 9 Preliminary Remediation Goals for Industrial Soil Compared to 2X Background Concentrations

Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Industrial Soil PRG	2X Background	Exceeds PRG	Exceeds Background
SWMU38-1	050418-FDS07 FDS-07	4/19/05	Arsenic, Total	12	mg/kg	1.6	25.32	TRUE	FALSE
SWMU38-1	**050418-SWMU38-1(0-2)SWMU38-1**	**4/19/05**	**Benzo(a)anthracene**	**28**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
SWMU38-1	**050418-FDS07 FDS-07**	**4/19/05**	**Benzo(a)anthracene**	**50**	**mg/kg**	**2.1**	**9.42**	**TRUE**	**TRUE**
SWMU38-1	**050418-SWMU38-1(0-2)SWMU38-1**	**4/19/05**	**Benzo(a)pyrene**	**60**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
SWMU38-1	**050418-FDS07 FDS-07**	**4/19/05**	**Benzo(a)pyrene**	**68**	**mg/kg**	**0.21**	**11.42**	**TRUE**	**TRUE**
SWMU38-1	**050418-SWMU38-1(0-2)SWMU38-1**	**4/19/05**	**Benzo(b)fluoranthene**	**43**	**mg/kg**	**2.1**	**37.42**	**TRUE**	**TRUE**
SWMU38-1	**050418-FDS07 FDS-07**	**4/19/05**	**Benzo(b)fluoranthene**	**71**	**mg/kg**	**2.1**	**37.42**	**TRUE**	**TRUE**
SWMU38-1	**050418-SWMU38-1(0-2)SWMU38-1**	**4/19/05**	**Benzo(k)fluoranthene**	**24**	**mg/kg**	**21**		**TRUE**	
SWMU38-1	**050418-SWMU38-1(0-2)SWMU38-1**	**4/19/05**	**Dibenzo(a,h)anthracene**	**9.4**	**mg/kg**	**0.21**		**TRUE**	
SWMU38-1	**050418-FDS07 FDS-07**	**4/19/05**	**Dibenzo(a,h)anthracene**	**14**	**mg/kg**	**0.21**		**TRUE**	
SWMU38-1	**050418-SWMU38-1(0-2)SWMU38-1**	**4/19/05**	**Indeno(1,2,3-cd)pyrene**	**17**	**mg/kg**	**2.1**		**TRUE**	
SWMU38-1	**050418-FDS07 FDS-07**	**4/19/05**	**Indeno(1,2,3-cd)pyrene**	**24**	**mg/kg**	**2.1**		**TRUE**	

Notes:

Bold results indicate an exceedance of the EPA Region 9 Primary Remedial Goal for industrial soil and 2 times the calculated background concentration (if available).

Background concentrations are reported as 2X the average concentration in surface soil (0-2 ft) and subsurface soil (2+ ft), respectively.

J - The analyte was below the quantitation limit. The value is an estimate.

Table 4-4

Comparison of Offsite Soil Analytical Results to Residential Soil PRGs and Average Background Concentrations

Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Sample Type	Analyte	Result	Units	Residential Soil PRG	Background Average X2	Exceeds Residential PRG?	Exceeds Background Avg?
OSE #1	050418-OSE1(0-2)OSE#1	4/20/05	N	Arsenic, Total	20	mg/kg	0.39	25.32	TRUE	FALSE
OSE #1	050418-OSE1(0-2)OSE#1	4/20/05	N	Benzo(a)pyrene	0.16	mg/kg	0.062	11.42	TRUE	FALSE
OSE #2	050418-OSE2 (0-2)	4/21/05	N	Arsenic, Total	20	mg/kg	0.39	25.32	TRUE	FALSE
OSE #2	050418-OSE2 (0-2)	4/21/05	N	Benzo(a)pyrene	0.44	mg/kg	0.062	11.42	TRUE	FALSE
OSE #2	050418-OSE2 (0-2)	4/21/05	N	Benzo(b)fluoranthene	0.68	mg/kg	0.62	37.42	TRUE	FALSE
OSE #2	050418-OSE2 (0-2)	4/21/05	N	Chrysene	0.43	mg/kg	62	12.28	FALSE	FALSE
OSE #3	**050418-OSE3(0-2)OSE#3**	**4/20/05**	**N**	**Arsenic, Total**	**42**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSE #3	050418-OSE3(0-2)OSE#3	4/20/05	N	Benzo(a)pyrene	0.064	mg/kg	0.062	11.42	TRUE	FALSE
OSE #4	**050418-OSE4 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**38**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSE #4	050418-OSE4 (0-2)	4/21/05	N	Benzo(a)pyrene	0.11	mg/kg	0.062	11.42	TRUE	FALSE
OSE #5	**050418-OSE5(0-2)OSE#5**	**4/20/05**	**N**	**Arsenic, Total**	**26**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSE #5	050418-OSE5(0-2)OSE#5	4/20/05	N	Benzo(a)pyrene	0.051	mg/kg	0.062	11.42	FALSE	FALSE
OSE #6	050418-OSE6(0-2)OSE#6	4/20/05	N	Arsenic, Total	24	mg/kg	0.39	25.32	TRUE	FALSE
OSE #6	050418-OSE6(0-2)OSE#6	4/20/05	N	Benzo(a)pyrene	0.14	mg/kg	0.062	11.42	TRUE	FALSE
OSE #7	**050418-OSE7 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**29**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSE #7	050418-OSE7 (0-2)	4/21/05	N	Benzo(a)pyrene	0.28	mg/kg	0.062	11.42	TRUE	FALSE
OSE #7	050418-OSE7 (0-2)	4/21/05	N	Bis(2-ethylhexyl)phthalate	0.61	mg/kg	35	8.86	FALSE	FALSE
OSE #7	050418-OSE7 (0-2)	4/21/05	N	Pyrene	0.39	mg/kg	230	14.86	FALSE	FALSE
OSE #8	**050418-OSE8 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**32**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSE #8	**050418-FDS02**	**4/21/05**	**FD**	**Arsenic, Total**	**31**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSE #8	050418-FDS02	4/21/05	FD	Benzo(a)pyrene	0.096	mg/kg	0.062	11.42	TRUE	FALSE
OSE #8	050418-OSE8 (0-2)	4/21/05	N	Benzo(a)pyrene	0.13	mg/kg	0.062	11.42	TRUE	FALSE
OSES #1	050418-OSES1(0-2)OSES#1	4/20/05	N	Arsenic, Total	24	mg/kg	0.39	25.32	TRUE	FALSE
OSES #1	050418-OSES1(0-2)OSES#1	4/20/05	N	Benzo(a)pyrene	0.17	mg/kg	0.062	11.42	TRUE	FALSE
OSES #2	**050418-OSES2(0-2)OSES#2**	**4/20/05**	**N**	**Arsenic, Total**	**27**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSES #2	050418-OSES2(0-2)OSES#2	4/20/05	N	Benzo(a)pyrene	0.16	mg/kg	0.062	11.42	TRUE	FALSE
OSES #3	**050418-FDS01 FDS01**	**4/20/05**	**FD**	**Arsenic, Total**	**32**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Arsenic, Total	25	mg/kg	0.39	25.32	TRUE	FALSE
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Benzo(a)anthracene	0.57	mg/kg	0.62	9.42	FALSE	FALSE
OSES #3	050418-FDS01 FDS01	4/20/05	FD	Benzo(a)anthracene	1.9	mg/kg	0.62	9.42	TRUE	FALSE
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Benzo(a)pyrene	0.55	mg/kg	0.062	11.42	TRUE	FALSE
OSES #3	050418-FDS01 FDS01	4/20/05	FD	Benzo(a)pyrene	1.1	mg/kg	0.062	11.42	TRUE	FALSE
OSES #3	050418-FDS01 FDS01	4/20/05	FD	Benzo(b)fluoranthene	1.7	mg/kg	0.62	37.42	TRUE	FALSE

Table 4-4
Comparison of Offsite Soil Analytical Results to Residential Soil PRGs and Average Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Sample Type	Analyte	Result	Units	Residential Soil PRG	Background Average X2	Exceeds Residential PRG?	Exceeds Background Avg?
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Benzo(b)fluoranthene	0.94	mg/kg	0.62	37.42	TRUE	FALSE
OSES #3	050418-FDS01 FDS01	4/20/05	FD	Chrysene	0.46	mg/kg	62	12.28	FALSE	FALSE
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Chrysene	1.1	mg/kg	62	12.28	FALSE	FALSE
OSES #3	050418-FDS01 FDS01	4/20/05	FD	Fluoranthene	1.5	mg/kg	230	34	FALSE	FALSE
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Fluoranthene	1	mg/kg	230	34	FALSE	FALSE
OSES #3	050418-FDS01 FDS01	4/20/05	FD	Pyrene	1.7	mg/kg	230	14.86	FALSE	FALSE
OSES #3	050418-OSE3(0-2)OSES#3	4/20/05	N	Pyrene	1.1	mg/kg	230	14.86	FALSE	FALSE
OSS #1	050418-OSS1 (0-2)	4/21/05	N	Arsenic, Total	20	mg/kg	0.39	25.32	TRUE	FALSE
OSS #1	050418-OSS1 (0-2)	4/21/05	N	Benzo(a)pyrene	0.22	mg/kg	0.062	11.42	TRUE	FALSE
OSS #1	050418-OSS1 (0-2)	4/21/05	N	Benzo(b)fluoranthene	0.41	mg/kg	0.62	**37.42**	FALSE	FALSE
OSS #1	050418-OSS1 (0-2)	4/21/05	N	Bis(2-ethylhexyl)phthalate	2.2	mg/kg	35	8.86	FALSE	FALSE
OSS #1	050418-OSS1 (0-2)	4/21/05	N	Pyrene	0.37	mg/kg	230	14.86	FALSE	FALSE
OSS #10	050418-OSS10 (0-2)	4/21/05	N	Arsenic, Total	23	mg/kg	0.39	25.32	TRUE	FALSE
OSS #10	**050418-FDS03**	**4/21/05**	**FD**	**Arsenic, Total**	**29**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #10	050418-FDS03	4/21/05	FD	Benzo(a)pyrene	0.12	mg/kg	0.062	11.42	TRUE	FALSE
OSS #10	050418-OSS10 (0-2)	4/21/05	N	Benzo(a)pyrene	0.15	mg/kg	0.062	11.42	TRUE	FALSE
OSS #10	050418-OSS10 (0-2)	4/21/05	N	Pyrene	0.38	mg/kg	230	14.86	FALSE	FALSE
OSS #11	**050418-OSS11 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**36**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #11	050418-OSS11 (0-2)	4/21/05	N	Benzo(a)pyrene	0.074	mg/kg	0.062	11.42	TRUE	FALSE
OSS #12	050418-OSS12 (0-2)	4/21/05	N	Arsenic, Total	23	mg/kg	0.39	25.32	TRUE	FALSE
OSS #12	050418-OSS12 (0-2)	4/21/05	N	Benzo(a)pyrene	0.33	mg/kg	0.062	11.42	TRUE	FALSE
OSS #12	050418-OSS12 (0-2)	4/21/05	N	Benzo(b)fluoranthene	0.4	mg/kg	0.62	**37.42**	FALSE	FALSE
OSS #12	050418-OSS12 (0-2)	4/21/05	N	Fluoranthene	0.43	mg/kg	230	34	FALSE	FALSE
OSS #12	050418-OSS12 (0-2)	4/21/05	N	Pyrene	0.61	mg/kg	230	14.86	FALSE	FALSE
OSS #13	**050418-OSS13 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**40**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #13	050418-OSS13 (0-2)	4/21/05	N	Benzo(a)pyrene	0.39	mg/kg	0.062	11.42	TRUE	FALSE
OSS #13	050418-OSS13 (0-2)	4/21/05	N	Benzo(b)fluoranthene	0.55	mg/kg	0.62	**37.42**	FALSE	FALSE
OSS #13	050418-OSS13 (0-2)	4/21/05	N	Chrysene	0.6	mg/kg	62	12.28	FALSE	FALSE
OSS #13	050418-OSS13 (0-2)	4/21/05	N	Fluoranthene	0.6	mg/kg	230	34	FALSE	FALSE
OSS #13	050418-OSS13 (0-2)	4/21/05	N	Pyrene	0.64	mg/kg	230	14.86	FALSE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Arsenic, Total	23	mg/kg	0.39	25.32	TRUE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Benzo(a)anthracene	3.2	mg/kg	0.62	9.42	TRUE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Benzo(a)pyrene	5.2	mg/kg	0.062	11.42	TRUE	FALSE

Table 4-4
Comparison of Offsite Soil Analytical Results to Residential Soil PRGs and Average Background Concentrations
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Sample Type	Analyte	Result	Units	Residential Soil PRG	Background Average X2	Exceeds Residential PRG?	Exceeds Background Avg?
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Benzo(b)fluoranthene	8.5	mg/kg	0.62	37.42	TRUE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Chrysene	3.9	mg/kg	62	12.28	FALSE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Fluoranthene	3.2	mg/kg	230	34	FALSE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Naphthalene	0.49	mg/kg	5.6	26.28	FALSE	FALSE
OSS #14	050418-OSS14 (0-2)	4/21/05	N	Pyrene	6.4	mg/kg	230	14.86	FALSE	FALSE
OSS #15	**050418-OSS15 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**34**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Benzo(a)anthracene	3.4	mg/kg	0.62	9.42	TRUE	FALSE
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Benzo(a)pyrene	4.4	mg/kg	0.062	11.42	TRUE	FALSE
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Benzo(b)fluoranthene	8.3	mg/kg	0.62	37.42	TRUE	FALSE
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Chrysene	4.8	mg/kg	62	12.28	FALSE	FALSE
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Fluoranthene	4.6	mg/kg	230	34	FALSE	FALSE
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Naphthalene	0.76	mg/kg	5.6	26.28	FALSE	FALSE
OSS #15	050418-OSS15 (0-2)	4/21/05	N	Pyrene	4	mg/kg	230	14.86	FALSE	FALSE
OSS #2	0050418-0SS2 (0-2) OSS #2	4/22/05	N	Arsenic, Total	10	mg/kg	0.39	25.32	TRUE	FALSE
OSS #2	0050418-0SS2 (0-2) OSS #2	4/22/05	N	Benzo(a)pyrene	0.079	mg/kg	0.062	11.42	TRUE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Arsenic, Total	24	mg/kg	0.39	25.32	TRUE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Benzo(a)anthracene	2.8	mg/kg	0.62	9.42	TRUE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Benzo(a)pyrene	4.7	mg/kg	0.062	11.42	TRUE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Benzo(b)fluoranthene	6.9	mg/kg	0.62	37.42	TRUE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Chrysene	3.9	mg/kg	62	12.28	FALSE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Fluoranthene	2.6	mg/kg	230	34	FALSE	FALSE
OSS #3	0050418-0SS3 (0-2) OSS #3	4/22/05	N	Pyrene	2.2	mg/kg	230	14.86	FALSE	FALSE
OSS #4	050418-OSS4 (0-2)	4/21/05	N	Arsenic, Total	6.7	mg/kg	0.39	25.32	TRUE	FALSE
OSS #4	050418-OSS4 (0-2)	4/21/05	N	Benzo(a)pyrene	0.26	mg/kg	0.062	11.42	TRUE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Arsenic, Total	20	mg/kg	0.39	25.32	TRUE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Benzo(a)anthracene	0.56	mg/kg	0.62	9.42	FALSE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Benzo(a)pyrene	0.66	mg/kg	0.062	11.42	TRUE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Benzo(b)fluoranthene	0.71	mg/kg	0.62	37.42	TRUE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Chrysene	0.67	mg/kg	62	12.28	FALSE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Fluoranthene	1.4	mg/kg	230	34	FALSE	FALSE
OSS #5	0050418-0SS5 (0-2) OSS #5	4/22/05	N	Pyrene	1.1	mg/kg	230	14.86	FALSE	FALSE
OSS #6	**0050418-0SS6 (0-2) OSS #6**	**4/22/05**	**N**	**Arsenic, Total**	**39**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #6	0050418-0SS6 (0-2) OSS #6	4/22/05	N	Benzo(a)pyrene	0.18	mg/kg	0.062	11.42	TRUE	FALSE

Table 4-4

Comparison of Offsite Soil Analytical Results to Residential Soil PRGs and Average Background Concentrations

Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Sample Type	Analyte	Result	Units	Residential Soil PRG	Background Average X2	Exceeds Residential PRG?	Exceeds Background Avg?
OSS #7	**050418-OSS7 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**35**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #7	050418-OSS7 (0-2)	4/21/05	N	Benzo(a)pyrene	0.3	mg/kg	0.062	11.42	TRUE	FALSE
OSS #7	050418-OSS7 (0-2)	4/21/05	N	Benzo(b)fluoranthene	0.49	mg/kg	0.62	**37.42**	FALSE	FALSE
OSS #7	050418-OSS7 (0-2)	4/21/05	N	Chrysene	0.41	mg/kg	62	12.28	FALSE	FALSE
OSS #7	050418-OSS7 (0-2)	4/21/05	N	Fluoranthene	0.51	mg/kg	230	34	FALSE	FALSE
OSS #7	050418-OSS7 (0-2)	4/21/05	N	Pyrene	0.56	mg/kg	230	14.86	FALSE	FALSE
OSS #8	050418-OSS8 (0-2)	4/21/05	N	Arsenic, Total	15	mg/kg	0.39	25.32	TRUE	FALSE
OSS #8	050418-OSS8 (0-2)	4/21/05	N	Benzo(a)pyrene	0.29	mg/kg	0.062	11.42	TRUE	FALSE
OSS #8	050418-OSS8 (0-2)	4/21/05	N	Benzo(b)fluoranthene	0.46	mg/kg	0.62	**37.42**	FALSE	FALSE
OSS #8	050418-OSS8 (0-2)	4/21/05	N	Pyrene	0.43	mg/kg	230	14.86	FALSE	FALSE
OSS #9	**050418-OSS9 (0-2)**	**4/21/05**	**N**	**Arsenic, Total**	**49**	**mg/kg**	**0.39**	**25.32**	**TRUE**	**TRUE**
OSS #9	050418-OSS9 (0-2)	4/21/05	N	Benzo(a)anthracene	1.1	mg/kg	0.62	9.42	TRUE	FALSE
OSS #9	050418-OSS9 (0-2)	4/21/05	N	Benzo(a)pyrene	1.3	mg/kg	0.062	11.42	TRUE	FALSE
OSS #9	050418-OSS9 (0-2)	4/21/05	N	Benzo(b)fluoranthene	1.6	mg/kg	0.62	37.42	TRUE	FALSE
OSS #9	050418-OSS9 (0-2)	4/21/05	N	Chrysene	1.5	mg/kg	62	12.28	FALSE	FALSE
OSS #9	050418-OSS9 (0-2)	4/21/05	N	Fluoranthene	1.9	mg/kg	230	34	FALSE	FALSE
OSS #9	050418-OSS9 (0-2)	4/21/05	N	Pyrene	2.4	mg/kg	230	14.86	FALSE	FALSE
OSW #1	050418-OSW1 (0-2) OSW #1	4/22/05	N	Arsenic, Total	13	mg/kg	0.39	25.32	TRUE	FALSE
OSW #1	050418-OSW1 (0-2) OSW #1	4/22/05	N	Benzo(a)pyrene	0.068	mg/kg	0.062	11.42	TRUE	FALSE
OSW #2	050418-FDS04 FDS-04	4/22/05	FD	Arsenic, Total	12	mg/kg	0.39	25.32	TRUE	FALSE
OSW #2	050418-OSW2 (0-2) OSW #2	4/22/05	N	Arsenic, Total	11	mg/kg	0.39	25.32	TRUE	FALSE
OSW #2	050418-OSW2 (0-2) OSW #2	4/22/05	N	Benzo(a)pyrene	0.049	mg/kg	0.062	11.42	FALSE	FALSE
OSW #2	050418-FDS04 FDS-04	4/22/05	FD	Benzo(a)pyrene	0.063	mg/kg	0.062	11.42	TRUE	FALSE
OSW #3	050418-OSW3 (0-2) OSW #3	4/22/05	N	Arsenic, Total	12	mg/kg	0.39	25.32	TRUE	FALSE
OSW #3	050418-OSW3 (0-2) OSW #3	4/22/05	N	Benzo(a)pyrene	0.051	mg/kg	0.062	11.42	FALSE	FALSE
OSW #4	050418-OSW4 (0-2) OSW #4	4/22/05	N	Arsenic, Total	7.2	mg/kg	0.39	25.32	TRUE	FALSE
OSW #4	050418-OSW4 (0-2) OSW #4	4/22/05	N	Benzo(a)pyrene	0.24	mg/kg	0.062	11.42	TRUE	FALSE
OSW #4	050418-OSW4 (0-2) OSW #4	4/22/05	N	Fluoranthene	0.39	mg/kg	230	34	FALSE	FALSE
OSW #5	050418-OSW5 (0-2) OSW #5	4/22/05	N	Arsenic, Total	12	mg/kg	0.39	25.32	TRUE	FALSE
OSW #5	050418-OSW5 (0-2) OSW #5	4/22/05	N	Benzo(a)pyrene	0.044	mg/kg	0.062	11.42	FALSE	FALSE
OSW #6	050418-OSW6 (0-2) OSW #6	4/22/05	N	Arsenic, Total	10	mg/kg	0.39	25.32	TRUE	FALSE
OSW #6	050418-OSW6 (0-2) OSW #6	4/22/05	N	Benzo(a)pyrene	0.088	mg/kg	0.062	11.42	TRUE	FALSE
OSW #7	050418-OSW7 (0-2) OSW #7	4/22/05	N	Arsenic, Total	9.1	mg/kg	0.39	25.32	TRUE	FALSE

Table 4-4

Comparison of Offsite Soil Analytical Results to Residential Soil PRGs and Average Background Concentrations

Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Sample Type	Analyte	Result	Units	Residential Soil PRG	Background Average X2	Exceeds Residential PRG?	Exceeds Background Avg?
OSW #7	050418-OSW7 (0-2) OSW #7	4/22/05	N	Benzo(a)pyrene	0.091	mg/kg	0.062	11.42	TRUE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Arsenic, Total	16	mg/kg	0.39	25.32	TRUE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Benzo(a)anthracene	5.4	mg/kg	0.62	9.42	TRUE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Benzo(a)pyrene	6.2	mg/kg	0.062	11.42	TRUE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Benzo(b)fluoranthene	6.5	mg/kg	0.62	37.42	TRUE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Chrysene	5.9	mg/kg	62	12.28	FALSE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Fluoranthene	8	mg/kg	230	34	FALSE	FALSE
OSW #8	050418-OSW8 (0-2) OSW #8	4/22/05	N	Pyrene	6.7	mg/kg	230	14.86	FALSE	FALSE
OSW #9	050418-OSW9 (0-2) OSW #9	4/22/05	N	Arsenic, Total	11	mg/kg	0.39	25.32	TRUE	FALSE
OSW #9	050418-OSW9 (0-2) OSW #9	4/22/05	N	Benzo(a)pyrene	0.057	mg/kg	0.062	11.42	FALSE	FALSE

Notes:

Bold results indicate an exceedance of the EPA Region 9 Primary Remedial Goal for residential soil and 2 times background.

Background concentrations are reported as 2X the average concentration in surface soil (0-2 ft) and subsurface soil (2+ ft), respectively.

N - native soil sample

FD - duplicate soil sample

TABLE 5-1
Comparison of Surface Water Analytical Results to National Recommended Water Quality Criteria for Human Health
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Type	Date	Analyte	Result	Units	Screening Criteria	Exceeds Screening Level
22-SW0001	**980801-BT-22-SW9001**	**FD**	**8/1/98**	**Benzo(a)anthracene**	**11**	**µg/L**	**0.018**	**TRUE**
22-SW0001	**980801-BT-22-SW9001**	**FD**	**8/1/98**	**Chrysene**	**13**	**µg/L**	**0.018**	**TRUE**
22-SW0001	980801-BT-22-SW9001	FD	8/1/98	Cyanide, Total	140	µg/L	140	FALSE
22-SW0001	**980801-BT-22-SW0001**	**N**	**8/1/98**	**Cyanide, Total**	**150**	**µg/L**	**140**	**TRUE**
22-SW0001	980801-BT-22-SW9001	FD	8/1/98	Fluoranthene	20	µg/L	140	FALSE
22-SW0001	980801-BT-22-SW9001	FD	8/1/98	Pyrene	15	µg/L	4000	FALSE
22-SW0001	980801-BT-22-SW0001	N	8/1/98	Zinc, Total	40	µg/L	26000	FALSE
22-SW0001	980801-BT-22-SW9001	FD	8/1/98	Zinc, Total	20	µg/L	26000	FALSE
25-SW0001	980801-BT-25-SW0001	N	8/1/98	Chlorobenzene	6	µg/L	1600	FALSE
25-SW0001	980801-BT-25-SW0001	N	8/1/98	Fluoranthene	10	µg/L	140	FALSE
25-SW0001	980801-BT-25-SW0001	N	8/1/98	Toluene	7	µg/L	15000	FALSE
25-SW0001	980801-BT-25-SW0001	N	8/1/98	Zinc, Total	320	µg/L	26000	FALSE
SW-1	950608-FW-00-SW9001	FD	6/8/95	Cyanide, Total	11	µg/L	140	FALSE
SW-10	010602-BT-00-SW0010	N	6/2/01	Cyanide, Total	30 J	µg/L	140	FALSE
SW-11	010602-BT-00-SW0011	N	6/2/01	Cyanide, Total	30 J	µg/L	140	FALSE
SW-11	010602-BT-00-SW0011	N	6/2/01	Zinc, Total	180 J	µg/L	26000	FALSE
SW-13	010601-BT-00-SW0013	N	6/1/01	Cyanide, Total	20 J	µg/L	140	FALSE
SW-14	010601-BT-00-SW0014	N	6/1/01	Cyanide, Total	40 J	µg/L	140	FALSE
SW-14	010601-BT-00-SW0014	N	6/1/01	Zinc, Total	260 J	µg/L	26000	FALSE
SW-16	010601-BT-00-SW0016	N	6/1/01	Cyanide, Total	140	µg/L	140	FALSE
SW-16	010601-BT-00-SW9016	FD	6/1/01	Cyanide, Total	130	µg/L	140	FALSE
SW-17	010601-BT-00-SW0017	N	6/1/01	Cyanide, Total	120 J	µg/L	140	FALSE
SW-18	**010604-BT-00-SW0018**	**N**	**6/4/01**	**Cyanide, Total**	**250**	**µg/L**	**140**	**TRUE**
SW-19	010604-BT-00-SW0019	N	6/4/01	Cyanide, Total	120	µg/L	140	FALSE
SW-2	950608-FW-00-SW0002	N	6/8/95	Cyanide, Total	67	µg/L	140	FALSE
SW-2	950608-FW-00-SW0002	N	6/8/95	Zinc, Total	37	µg/L	26000	FALSE
SW-20	010604-BT-00-SW0020	N	6/4/01	Cyanide, Total	120 J	µg/L	140	FALSE
SW-20	010604-BT-00-SW0020	N	6/4/01	Zinc, Total	240 J	µg/L	26000	FALSE
SW-3	950609-FW-00-SW0003	N	6/9/95	Cyanide, Total	51	µg/L	140	FALSE
SW-4	950608-FW-00-SW0004	N	6/8/95	Cyanide, Total	17	µg/L	140	FALSE
SW-4	950608-FW-00-SW0004	N	6/8/95	Zinc, Total	31	µg/L	26000	FALSE
SW-5	950609-FW-00-SW0005	N	6/9/95	Cyanide, Total	130	µg/L	140	FALSE

TABLE 5-1
Comparison of Surface Water Analytical Results to National Recommended Water Quality Criteria for Human Health
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Type	Date	Analyte	Result	Units	Screening Criteria	Exceeds Screening Level
SW-5	950609-FW-00-SW0005	N	6/9/95	Zinc, Total	52	µg/L	26000	FALSE
SW-7	010602-BT-00-SW0007	N	6/2/01	Cyanide, Total	50 J	µg/L	140	FALSE
SW-9	010602-BT-00-SW0009	N	6/2/01	Cyanide, Total	20 J	µg/L	140	FALSE

Notes:
Results compared to National Recommended Water Quality Criteria for Human Health
Bold results indicate an exceedance of the comparison criteria.
J - The result was below the quantitation limit. The reported value is an estimate.

TABLE 5-2
Sediment Analytical Results Exceeding Residential Soil PRG Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Residential Soil PRG	Esceeds Residential PRG?
SD-10	010531-BT-00-SD0010	5/31/01	Antimony, Total	110	mg/kg	3.1	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Antimony, Total	49	mg/kg	3.1	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Antimony, Total	50	mg/kg	3.1	TRUE
22-SD0001	980730-BT-22-SD0001	7/30/98	Arsenic, Total	9.8	mg/kg	0.39	TRUE
22-SD0001	980730-BT-22-SD9001	7/30/98	Arsenic, Total	8.5	mg/kg	0.39	TRUE
22-SD0002	980731-BT-22-SD0002	7/31/98	Arsenic, Total	4.3	mg/kg	0.39	TRUE
22-SD0004	980731-BT-22-SD0004	7/31/98	Arsenic, Total	12	mg/kg	0.39	TRUE
22-SD0005	980731-BT-22-SD0005	7/31/98	Arsenic, Total	9.4	mg/kg	0.39	TRUE
22-SD0006	980731-BT-22-SD0006	7/31/98	Arsenic, Total	9.5	mg/kg	0.39	TRUE
22-SD0007	980731-BT-22-SD0007	7/31/98	Arsenic, Total	21	mg/kg	0.39	TRUE
22-SD0008	980731-BT-22-SD0008	7/31/98	Arsenic, Total	9.4	mg/kg	0.39	TRUE
35SS #1	050418-35SS1(0-2)	4/19/05	Arsenic, Total	20	mg/kg	0.39	TRUE
35SS #2	050418-35SS2(0-2)	4/19/05	Arsenic, Total	25	mg/kg	0.39	TRUE
35SS #3	050418-35SS3(0-2)	4/19/05	Arsenic, Total	12	mg/kg	0.39	TRUE
35SS #3	050418-FDS06	4/19/05	Arsenic, Total	13	mg/kg	0.39	TRUE
35SS #4	050418-35SS4(0-2)	4/19/05	Arsenic, Total	28	mg/kg	0.39	TRUE
35SS #5	050418-35SS5(0-2)	4/19/05	Arsenic, Total	22	mg/kg	0.39	TRUE
FMCSS #1	050418-FMCSS1(0-2)	4/20/05	Arsenic, Total	6.6	mg/kg	0.39	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Arsenic, Total	9.6	mg/kg	0.39	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Arsenic, Total	12	mg/kg	0.39	TRUE
FMCSS #4	050418-FMCSS4(0-2)	4/20/05	Arsenic, Total	9.3	mg/kg	0.39	TRUE
FMCSS #5	050418-FMCSS5(0-2)	4/20/05	Arsenic, Total	12	mg/kg	0.39	TRUE
SD-1	950608-FW-00-SD0001	6/8/95	Arsenic, Total	15	mg/kg	0.39	TRUE
SD-1	950608-FW-00-SD9001	6/8/95	Arsenic, Total	34	mg/kg	0.39	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Arsenic, Total	8.8 J	mg/kg	0.39	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Arsenic, Total	16 J	mg/kg	0.39	TRUE
SD-12	010601-BT-00-SD0012	6/1/01	Arsenic, Total	15 J	mg/kg	0.39	TRUE
SD-13	010601-BT-00-SD0013	6/1/01	Arsenic, Total	3.5 J	mg/kg	0.39	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Arsenic, Total	5 J	mg/kg	0.39	TRUE
SD-15	010601-BT-00-SD0015	6/1/01	Arsenic, Total	7.6 J	mg/kg	0.39	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Arsenic, Total	3.5 J	mg/kg	0.39	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Arsenic, Total	3.6 J	mg/kg	0.39	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Arsenic, Total	4.7 J	mg/kg	0.39	TRUE
SD-18	010604-BT-00-SD0018	6/4/01	Arsenic, Total	7.3 J	mg/kg	0.39	TRUE
SD-19	010604-BT-00-SD0019	6/4/01	Arsenic, Total	4.4 J	mg/kg	0.39	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Arsenic, Total	14	mg/kg	0.39	TRUE
SD-21	010604-BT-00-SD0021	6/4/01	Arsenic, Total	4.1 J	mg/kg	0.39	TRUE
SD-3	950609-FW-00-SD0003	6/9/95	Arsenic, Total	11	mg/kg	0.39	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Arsenic, Total	18	mg/kg	0.39	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Arsenic, Total	12	mg/kg	0.39	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Arsenic, Total	5.6 J	mg/kg	0.39	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Arsenic, Total	6.7 J	mg/kg	0.39	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Arsenic, Total	6.3 J	mg/kg	0.39	TRUE
22-SD0007	980731-BT-22-SD0007	7/31/98	Barium, Total	630	mg/kg	540	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Barium, Total	630 J	mg/kg	540	TRUE
22-SD0007	980731-BT-22-SD0007	7/31/98	Benzene	4.4 J	mg/kg	0.64	TRUE
22-SD0002	980731-BT-22-SD0002	7/31/98	Benzo(a)anthracene	3.6	mg/kg	0.62	TRUE
22-SD0004	980731-BT-22-SD0004	7/31/98	Benzo(a)anthracene	5.7	mg/kg	0.62	TRUE
22-SD0005	980731-BT-22-SD0005	7/31/98	Benzo(a)anthracene	15	mg/kg	0.62	TRUE
22-SD0008	980731-BT-22-SD0008	7/31/98	Benzo(a)anthracene	34	mg/kg	0.62	TRUE
35SS #2	050418-35SS2(0-2)	4/19/05	Benzo(a)anthracene	14	mg/kg	0.62	TRUE
35SS #3	050418-FDS06	4/19/05	Benzo(a)anthracene	0.91	mg/kg	0.62	TRUE

TABLE 5-2
Sediment Analytical Results Exceeding Residential Soil PRG Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Residential Soil PRG	Esceeds Residential PRG?
FMCSS #1	050418-FMCSS1(0-2)	4/20/05	Benzo(a)anthracene	1.5	mg/kg	0.62	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Benzo(a)anthracene	6.2	mg/kg	0.62	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Benzo(a)anthracene	10	mg/kg	0.62	TRUE
FMCSS #4	050418-FMCSS4(0-2)	4/20/05	Benzo(a)anthracene	0.88	mg/kg	0.62	TRUE
FMCSS #5	050418-FMCSS5(0-2)	4/20/05	Benzo(a)anthracene	0.77	mg/kg	0.62	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Benzo(a)anthracene	2.6	mg/kg	0.62	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Benzo(a)anthracene	6.6	mg/kg	0.62	TRUE
SD-13	010601-BT-00-SD0013	6/1/01	Benzo(a)anthracene	2.9	mg/kg	0.62	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Benzo(a)anthracene	2	mg/kg	0.62	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Benzo(a)anthracene	1.3	mg/kg	0.62	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Benzo(a)anthracene	1.9	mg/kg	0.62	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Benzo(a)anthracene	2.5	mg/kg	0.62	TRUE
SD-19	010604-BT-00-SD0019	6/4/01	Benzo(a)anthracene	1.3	mg/kg	0.62	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Benzo(a)anthracene	74	mg/kg	0.62	TRUE
SD-20	010604-BT-00-SD0020	6/4/01	Benzo(a)anthracene	22	mg/kg	0.62	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Benzo(a)anthracene	59	mg/kg	0.62	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Benzo(a)anthracene	9.6	mg/kg	0.62	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Benzo(a)anthracene	11	mg/kg	0.62	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Benzo(a)anthracene	9.1	mg/kg	0.62	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Benzo(a)anthracene	9.3	mg/kg	0.62	TRUE
22-SD0001	980730-BT-22-SD0001	7/30/98	Benzo(a)pyrene	4.9 J	mg/kg	0.062	TRUE
22-SD0001	980730-BT-22-SD9001	7/30/98	Benzo(a)pyrene	4.3	mg/kg	0.062	TRUE
22-SD0002	980731-BT-22-SD0002	7/31/98	Benzo(a)pyrene	3	mg/kg	0.062	TRUE
22-SD0003	980731-BT-22-SD0003	7/31/98	Benzo(a)pyrene	22	mg/kg	0.062	TRUE
22-SD0004	980731-BT-22-SD0004	7/31/98	Benzo(a)pyrene	8.7	mg/kg	0.062	TRUE
22-SD0005	980731-BT-22-SD0005	7/31/98	Benzo(a)pyrene	9.4	mg/kg	0.062	TRUE
22-SD0006	980731-BT-22-SD0006	7/31/98	Benzo(a)pyrene	6.2	mg/kg	0.062	TRUE
22-SD0008	980731-BT-22-SD0008	7/31/98	Benzo(a)pyrene	36	mg/kg	0.062	TRUE
35SS #1	050418-35SS1(0-2)	4/19/05	Benzo(a)pyrene	0.78	mg/kg	0.062	TRUE
35SS #2	050418-35SS2(0-2)35SS2	4/19/05	Benzo(a)pyrene	20	mg/kg	0.062	TRUE
35SS #3	050418-35SS3(0-2)	4/19/05	Benzo(a)pyrene	1.3	mg/kg	0.062	TRUE
35SS #3	050418-FDS06	4/19/05	Benzo(a)pyrene	1.1	mg/kg	0.062	TRUE
35SS #4	050418-35SS4(0-2)	4/19/05	Benzo(a)pyrene	2.8	mg/kg	0.062	TRUE
35SS #5	050418-35SS5(0-2)	4/19/05	Benzo(a)pyrene	0.11	mg/kg	0.062	TRUE
FMCSS #1	050418-FMCSS1(0-2)	4/20/05	Benzo(a)pyrene	2.1	mg/kg	0.062	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Benzo(a)pyrene	9	mg/kg	0.062	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Benzo(a)pyrene	11	mg/kg	0.062	TRUE
FMCSS #4	050418-FMCSS4(0-2)	4/20/05	Benzo(a)pyrene	1.1	mg/kg	0.062	TRUE
FMCSS #5	050418-FMCSS5(0-2)	4/20/05	Benzo(a)pyrene	0.89	mg/kg	0.062	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Benzo(a)pyrene	2.3	mg/kg	0.062	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Benzo(a)pyrene	6.7	mg/kg	0.062	TRUE
SD-13	010601-BT-00-SD0013	6/1/01	Benzo(a)pyrene	3	mg/kg	0.062	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Benzo(a)pyrene	2.2	mg/kg	0.062	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Benzo(a)pyrene	1.4	mg/kg	0.062	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Benzo(a)pyrene	1.8	mg/kg	0.062	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Benzo(a)pyrene	2.5	mg/kg	0.062	TRUE
SD-18	010604-BT-00-SD0018	6/4/01	Benzo(a)pyrene	0.95	mg/kg	0.062	TRUE
SD-19	010604-BT-00-SD0019	6/4/01	Benzo(a)pyrene	2.1	mg/kg	0.062	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Benzo(a)pyrene	82	mg/kg	0.062	TRUE
SD-20	010604-BT-00-SD0020	6/4/01	Benzo(a)pyrene	24	mg/kg	0.062	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Benzo(a)pyrene	54	mg/kg	0.062	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Benzo(a)pyrene	9.6	mg/kg	0.062	TRUE

TABLE 5-2
Sediment Analytical Results Exceeding Residential Soil PRG Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Residential Soil PRG	Esceeds Residential PRG?
SD-7	010531-BT-00-SD0007	5/31/01	Benzo(a)pyrene	9.2	mg/kg	0.062	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Benzo(a)pyrene	9	mg/kg	0.062	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Benzo(a)pyrene	9.9	mg/kg	0.062	TRUE
35SS #1	050418-35SS1(0-2)	4/19/05	Benzo(b)fluoranthene	0.86	mg/kg	0.62	TRUE
35SS #2	050418-35SS2(0-2)	4/19/05	Benzo(b)fluoranthene	30	mg/kg	0.62	TRUE
35SS #3	050418-35SS3(0-2)	4/19/05	Benzo(b)fluoranthene	1.4	mg/kg	0.62	TRUE
35SS #3	050418-FDS06	4/19/05	Benzo(b)fluoranthene	1.2	mg/kg	0.62	TRUE
35SS #4	050418-35SS4(0-2)	4/19/05	Benzo(b)fluoranthene	3.5	mg/kg	0.62	TRUE
FMCSS #1	050418-FMCSS1(0-2)	4/20/05	Benzo(b)fluoranthene	2	mg/kg	0.62	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Benzo(b)fluoranthene	9.8	mg/kg	0.62	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Benzo(b)fluoranthene	12	mg/kg	0.62	TRUE
FMCSS #4	050418-FMCSS4(0-2)	4/20/05	Benzo(b)fluoranthene	1.4	mg/kg	0.62	TRUE
FMCSS #5	050418-FMCSS5(0-2)	4/20/05	Benzo(b)fluoranthene	1.1	mg/kg	0.62	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Benzo(b)fluoranthene	2.5	mg/kg	0.62	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Benzo(b)fluoranthene	6	mg/kg	0.62	TRUE
SD-13	010601-BT-00-SD0013	6/1/01	Benzo(b)fluoranthene	2.7	mg/kg	0.62	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Benzo(b)fluoranthene	2.3	mg/kg	0.62	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Benzo(b)fluoranthene	1.3	mg/kg	0.62	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Benzo(b)fluoranthene	1.7	mg/kg	0.62	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Benzo(b)fluoranthene	2.7	mg/kg	0.62	TRUE
SD-18	010604-BT-00-SD0018	6/4/01	Benzo(b)fluoranthene	0.9	mg/kg	0.62	TRUE
SD-19	010604-BT-00-SD0019	6/4/01	Benzo(b)fluoranthene	2.1	mg/kg	0.62	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Benzo(b)fluoranthene	100	mg/kg	0.62	TRUE
SD-20	010604-BT-00-SD0020	6/4/01	Benzo(b)fluoranthene	25	mg/kg	0.62	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Benzo(b)fluoranthene	65	mg/kg	0.62	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Benzo(b)fluoranthene	12	mg/kg	0.62	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Benzo(b)fluoranthene	8.1	mg/kg	0.62	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Benzo(b)fluoranthene	7.8	mg/kg	0.62	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Benzo(b)fluoranthene	7.4	mg/kg	0.62	TRUE
35SS #2	050418-35SS2(0-2)	4/19/05	Benzo(k)fluoranthene	9.8	mg/kg	6.2	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Benzo(k)fluoranthene	130	mg/kg	6.2	TRUE
SD-20	010604-BT-00-SD0020	6/4/01	Benzo(k)fluoranthene	13	mg/kg	6.2	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Benzo(k)fluoranthene	17	mg/kg	6.2	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Benzo(k)fluoranthene	6.8	mg/kg	6.2	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Benzo(k)fluoranthene	8.5	mg/kg	6.2	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Cadmium, Total	6.4	mg/kg	3.7	TRUE
SD-12	010601-BT-00-SD0012	6/1/01	Cadmium, Total	13	mg/kg	3.7	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Cadmium, Total	6.8	mg/kg	3.7	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Cadmium, Total	9 J	mg/kg	3.7	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Cadmium, Total	5.5 J	mg/kg	3.7	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Cadmium, Total	8.1	mg/kg	3.7	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Cadmium, Total	4.9	mg/kg	3.7	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Cadmium, Total	5.5	mg/kg	3.7	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Chrysene	69	mg/kg	62	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Copper, Total	390 J	mg/kg	310	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Copper, Total	420 J	mg/kg	310	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Copper, Total	1200 J	mg/kg	310	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Copper, Total	2500 J	mg/kg	310	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Copper, Total	1600 J	mg/kg	310	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Copper, Total	610 J	mg/kg	310	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Copper, Total	740 J	mg/kg	310	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Copper, Total	3200 J	mg/kg	310	TRUE

TABLE 5-2
Sediment Analytical Results Exceeding Residential Soil PRG Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Residential Soil PRG	Esceeds Residential PRG?
35SS #1	050418-35SS1(0-2)	4/19/05	Dibenzo(a,h)anthracene	0.16	mg/kg	0.062	TRUE
35SS #2	050418-35SS2(0-2)	4/19/05	Dibenzo(a,h)anthracene	5.6	mg/kg	0.062	TRUE
35SS #3	050418-35SS3(0-2)	4/19/05	Dibenzo(a,h)anthracene	0.38	mg/kg	0.062	TRUE
35SS #3	050418-FDS06	4/19/05	Dibenzo(a,h)anthracene	0.41	mg/kg	0.062	TRUE
35SS #4	050418-35SS4(0-2)	4/19/05	Dibenzo(a,h)anthracene	0.92	mg/kg	0.062	TRUE
FMCSS #1	050418-FMCSS1(0-2)	4/20/05	Dibenzo(a,h)anthracene	0.36	mg/kg	0.062	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Dibenzo(a,h)anthracene	1.3	mg/kg	0.062	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Dibenzo(a,h)anthracene	2.2	mg/kg	0.062	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Dibenzo(a,h)anthracene	1.5	mg/kg	0.062	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Dibenzo(a,h)anthracene	2.7	mg/kg	0.062	TRUE
FMCSS #4	050418-FMCSS4(0-2)	4/20/05	Dibenzo(a,h)anthracene	0.29	mg/kg	0.062	TRUE
FMCSS #5	050418-FMCSS5(0-2)	4/20/05	Dibenzo(a,h)anthracene	0.15	mg/kg	0.062	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Dibenzo(a,h)anthracene	0.61	mg/kg	0.062	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Dibenzo(a,h)anthracene	1.4	mg/kg	0.062	TRUE
SD-13	010601-BT-00-SD0013	6/1/01	Dibenzo(a,h)anthracene	0.98	mg/kg	0.062	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Dibenzo(a,h)anthracene	0.69	mg/kg	0.062	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Dibenzo(a,h)anthracene	0.48	mg/kg	0.062	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Dibenzo(a,h)anthracene	0.81	mg/kg	0.062	TRUE
SD-20	010604-BT-00-SD0020	6/4/01	Dibenzo(a,h)anthracene	6.6	mg/kg	0.062	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Dibenzo(a,h)anthracene	9.1	mg/kg	0.062	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Dibenzo(a,h)anthracene	1.9	mg/kg	0.062	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Dibenzo(a,h)anthracene	1.8	mg/kg	0.062	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Dibenzo(a,h)anthracene	2.5	mg/kg	0.062	TRUE
22-SD0003	980731-BT-22-SD0003	7/31/98	Indeno(1,2,3-cd)pyrene	11	mg/kg	0.62	TRUE
22-SD0008	980731-BT-22-SD0008	7/31/98	Indeno(1,2,3-cd)pyrene	13	mg/kg	0.62	TRUE
35SS #2	050418-35SS2(0-2)	4/19/05	Indeno(1,2,3-cd)pyrene	11	mg/kg	0.62	TRUE
35SS #4	050418-35SS4(0-2)	4/19/05	Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.62	TRUE
FMCSS #2	050418-FMCSS2(0-2)	4/20/05	Indeno(1,2,3-cd)pyrene	2.3	mg/kg	0.62	TRUE
FMCSS #3	050418-FMCSS3(0-2)	4/20/05	Indeno(1,2,3-cd)pyrene	3.9	mg/kg	0.62	TRUE
SD-10	010531-BT-00-SD0010	5/31/01	Indeno(1,2,3-cd)pyrene	1.5	mg/kg	0.62	TRUE
SD-11	010601-BT-00-SD0011	6/1/01	Indeno(1,2,3-cd)pyrene	3.9	mg/kg	0.62	TRUE
SD-13	010601-BT-00-SD0013	6/1/01	Indeno(1,2,3-cd)pyrene	1.9	mg/kg	0.62	TRUE
SD-14	010601-BT-00-SD0014	6/1/01	Indeno(1,2,3-cd)pyrene	1.4	mg/kg	0.62	TRUE
SD-16	010601-BT-00-SD0016	6/1/01	Indeno(1,2,3-cd)pyrene	0.88	mg/kg	0.62	TRUE
SD-16	010601-BT-00-SD9016	6/1/01	Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.62	TRUE
SD-17	010601-BT-00-SD0017	6/1/01	Indeno(1,2,3-cd)pyrene	1.4	mg/kg	0.62	TRUE
SD-18	010604-BT-00-SD0018	6/4/01	Indeno(1,2,3-cd)pyrene	0.81	mg/kg	0.62	TRUE
SD-19	010604-BT-00-SD0019	6/4/01	Indeno(1,2,3-cd)pyrene	1.5	mg/kg	0.62	TRUE
SD-20	010604-BT-00-SD0020	6/4/01	Indeno(1,2,3-cd)pyrene	15	mg/kg	0.62	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Indeno(1,2,3-cd)pyrene	25	mg/kg	0.62	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Indeno(1,2,3-cd)pyrene	7.9	mg/kg	0.62	TRUE
SD-7	010531-BT-00-SD0007	5/31/01	Indeno(1,2,3-cd)pyrene	4.8	mg/kg	0.62	TRUE
SD-8	010531-BT-00-SD0008	5/31/01	Indeno(1,2,3-cd)pyrene	4.8	mg/kg	0.62	TRUE
SD-9	010531-BT-00-SD0009	5/31/01	Indeno(1,2,3-cd)pyrene	5.3	mg/kg	0.62	TRUE
22-SD0006	980731-BT-22-SD0006	7/31/98	Naphthalene	7.1	mg/kg	5.6	TRUE
22-SD0008	980731-BT-22-SD0008	7/31/98	Naphthalene	8.8	mg/kg	5.6	TRUE
SD-4	950608-FW-00-SD0004	6/8/95	Naphthalene	9.6	mg/kg	5.6	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Naphthalene	30	mg/kg	5.6	TRUE
SD-2	950608-FW-00-SD0002	6/8/95	Thallium, Total	2.5	mg/kg	0.52	TRUE
22-SD0001	980730-BT-22-SD0001	7/30/98	Vanadium, Total	16	mg/kg	7.8	TRUE
22-SD0001	980730-BT-22-SD9001	7/30/98	Vanadium, Total	16	mg/kg	7.8	TRUE
22-SD0008	980731-BT-22-SD0008	7/31/98	Vanadium, Total	16	mg/kg	7.8	TRUE

TABLE 5-2
Sediment Analytical Results Exceeding Residential Soil PRG Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Residential Soil PRG	Esceeds Residential PRG?
SD-1	950608-FW-00-SD0001	6/8/95	Vanadium, Total	44	mg/kg	7.8	TRUE
SD-1	950608-FW-00-SD9001	6/8/95	Vanadium, Total	95	mg/kg	7.8	TRUE
SD-5	950609-FW-00-SD0005	6/9/95	Vanadium, Total	27	mg/kg	7.8	TRUE
SD-12	010601-BT-00-SD0012	6/1/01	Zinc, Total	2500 J	mg/kg	2300	TRUE

Notes:
All sediment results compared to EPA Region 9 Primary Remedial Goals for residential soil.
J - The result is below the quantitiation limit. The reported value is an estimate.

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-01	980724-BT-13-GW0001	7/24/98	Barium, Total	220	µg/L	2000	MCL	FALSE
MW-01	980724-BT-13-GW0001	7/24/98	Cyanide, Total	40 J	µg/L	200	MCL	FALSE
MW-01	**980724-BT-13-GW0001**	**7/24/98**	**Naphthalene**	**18**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-01	980724-BT-13-GW0001	7/24/98	Zinc, Total	30	µg/L	1100	tap water	FALSE
MW-02	980727-BT-13-GW0002	7/27/98	Barium, Total	130	µg/L	2000	MCL	FALSE
MW-02	980727-BT-13-GW0002	7/27/98	Cyanide, Total	20	µg/L	200	MCL	FALSE
MW-02	980727-BT-13-GW0002	7/27/98	Zinc, Total	70	µg/L	1100	tap water	FALSE
MW-05D	980724-BT-13-GW0005D	7/24/98	Barium, Total	70	µg/L	2000	MCL	FALSE
MW-05D	980724-BT-13-GW0005D	7/24/98	Cyanide, Total	60	µg/L	200	MCL	FALSE
MW-05D	980724-BT-13-GW0005D	7/24/98	Zinc, Total	30	µg/L	1100	tap water	FALSE
MW-05S	980724-BT-13-GW0005S	7/24/98	Barium, Total	130	µg/L	2000	MCL	FALSE
MW-05S	980724-BT-13-GW0005S	7/24/98	Cyanide, Total	150 J	µg/L	200	MCL	FALSE
MW-05S	980724-BT-13-GW0005S	7/24/98	Zinc, Total	140	µg/L	1100	tap water	FALSE
MW-07	980724-BT-13-GW0007	7/24/98	Barium, Total	90	µg/L	2000	MCL	FALSE
MW-07	980724-BT-13-GW0007	7/24/98	Cyanide, Total	40	µg/L	200	MCL	FALSE
MW-07	980724-BT-13-GW0007	7/24/98	Zinc, Total	170	µg/L	1100	tap water	FALSE
MW-08	980725-BT-13-GW0008	7/25/98	Barium, Total	110	µg/L	2000	MCL	FALSE
MW-08	980725-BT-13-GW9008	7/25/98	Barium, Total	120	µg/L	2000	MCL	FALSE
MW-08	980725-BT-13-GW9008	7/25/98	Cyanide, Total	110 J	µg/L	200	MCL	FALSE
MW-08	**980725-BT-13-GW0008**	**7/25/98**	**Cyanide, Total**	**320 J**	**µg/L**	**200**	**MCL**	**TRUE**
MW-08	980725-BT-13-GW0008	7/25/98	Zinc, Total	110 J	µg/L	1100	tap water	FALSE
MW-08	980725-BT-13-GW9008	7/25/98	Zinc, Total	60 J	µg/L	1100	tap water	FALSE
MW-09	980727-BT-13-GW0009	7/27/98	Barium, Total	20	µg/L	2000	MCL	FALSE
MW-09	**980727-BT-13-GW0009**	**7/27/98**	**Cyanide, Total**	**320**	**µg/L**	**200**	**MCL**	**TRUE**
MW-09	980727-BT-13-GW0009	7/27/98	Zinc, Total	40	µg/L	1100	tap water	FALSE
MW-10	980728-BT-13-GW0010	7/28/98	Barium, Total	180	µg/L	2000	MCL	FALSE
MW-10	**980728-BT-13-GW0010**	**7/28/98**	**Benzene**	**340**	**µg/L**	**5**	**MCL**	**TRUE**
MW-10	980728-BT-13-GW0010	7/28/98	Chlorobenzene	29	µg/L	100	MCL	FALSE
MW-10	**980728-BT-13-GW0010**	**7/28/98**	**Naphthalene**	**11**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-10	980728-BT-13-GW0010	7/28/98	Toluene	180	µg/L	1000	MCL	FALSE
MW-10	980728-BT-13-GW0010	7/28/98	Xylenes	6	µg/L	10000	MCL	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-10	980728-BT-13-GW0010	7/28/98	Zinc, Total	40	µg/L	1100	tap water	FALSE
MW-11	980727-BT-13-GW0011	7/27/98	Barium, Total	80	µg/L	2000	MCL	FALSE
MW-11	980727-BT-13-GW0011	7/27/98	Chromium, Total	10 J	µg/L	100	MCL	FALSE
MW-11	980727-BT-13-GW0011	7/27/98	Zinc, Total	30	µg/L	1100	tap water	FALSE
MW-12	980727-BT-13-GW0012	7/27/98	Barium, Total	100	µg/L	2000	MCL	FALSE
MW-12	**980727-BT-13-GW0012**	**7/27/98**	**Bis(2-ethylhexyl)phthalate**	**110**	**µg/L**	**6**	**MCL**	**TRUE**
MW-12	980727-BT-13-GW0012	7/27/98	Cyanide, Total	70	µg/L	200	MCL	FALSE
MW-12	980727-BT-13-GW0012	7/27/98	Zinc, Total	60	µg/L	1100	tap water	FALSE
MW-13D	980731-BT-22-GW0013D	7/31/98	Barium, Total	40 J	µg/L	2000	MCL	FALSE
MW-13D	980731-BT-22-GW0013D	7/31/98	Chromium, Total	30	µg/L	100	MCL	FALSE
MW-13D	980731-BT-22-GW0013D	7/31/98	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-13D	980731-BT-22-GW0013D	7/31/98	Nickel, Total	20	µg/L	73	tap water	FALSE
MW-13D	980730-BT-22-GW0013D	7/30/98	Toluene	63	µg/L	1000	MCL	FALSE
MW-13D	980730-BT-22-GW0013D	7/30/98	Xylenes	52	µg/L	10000	MCL	FALSE
MW-13D	980731-BT-22-GW0013D	7/31/98	Zinc, Total	170	µg/L	1100	tap water	FALSE
MW-13S	980729-BT-22-GW0013S	7/29/98	Barium, Total	440	µg/L	2000	MCL	FALSE
MW-13S	**980729-BT-22-GW0013S**	**7/29/98**	**Bis(2-ethylhexyl)phthalate**	**15**	**µg/L**	**6**	**MCL**	**TRUE**
MW-13S	981015-BT-22-GW9013S	10/15/98	Cyanide, Total	20	µg/L	200	MCL	FALSE
MW-13S	980729-BT-22-GW0013S	7/29/98	Zinc, Total	90	µg/L	1100	tap water	FALSE
MW-16D	**980729-BT-22-GW0016D**	**7/29/98**	**Arsenic, Total**	**90**	**µg/L**	**10**	**MCL**	**TRUE**
MW-16D	980729-BT-22-GW0016D	7/29/98	Barium, Total	230	µg/L	2000	MCL	FALSE
MW-16D	**980729-BT-22-GW0016D**	**7/29/98**	**Bis(2-ethylhexyl)phthalate**	**16**	**µg/L**	**6**	**MCL**	**TRUE**
MW-16D	981015-BT-22-GW0016D	10/15/98	Cyanide, Total	20	µg/L	200	MCL	FALSE
MW-16D	980729-BT-22-GW0016D	7/29/98	Zinc, Total	20	µg/L	1100	tap water	FALSE
MW-16S	980728-BT-22-GW0016S	7/28/98	Arsenic, Total	10	µg/L	10	MCL	FALSE
MW-16S	980728-BT-22-GW0016S	7/28/98	Barium, Total	140	µg/L	2000	MCL	FALSE
MW-16S	980728-BT-22-GW0016S	7/28/98	Chromium, Total	30	µg/L	100	MCL	FALSE
MW-16S	980728-BT-22-GW0016S	7/28/98	Cyanide, Total	50	µg/L	200	MCL	FALSE
MW-16S	980728-BT-22-GW0016S	7/28/98	Nickel, Total	20	µg/L	73	tap water	FALSE
MW-16S	980728-BT-22-GW0016S	7/28/98	Zinc, Total	360	µg/L	1100	tap water	FALSE
MW-17D	010618-BT-22-GW0017D	6/18/01	Acenaphthene	16	µg/L	37	tap water	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-17D	010618-BT-22-GW0017D	6/18/01	Arsenic, Total	10	µg/L	10	MCL	FALSE
MW-17D	010618-BT-22-GW0017D	6/18/01	Barium, Total	600 J	µg/L	2000	MCL	FALSE
MW-17D	010618-BT-22-GW0017D	6/18/01	Cyanide, Total	100 J	µg/L	200	MCL	FALSE
MW-17S	010609-BT-22-GW9017S	6/9/01	Acenaphthene	35	µg/L	37	tap water	FALSE
MW-17S	**010609-BT-22-GW0017S**	**6/9/01**	**Acenaphthene**	**38 J**	**µg/L**	**37**	**tap water**	**TRUE**
MW-17S	980728-BT-22-GW0017	7/28/98	Acenaphthene	33	µg/L	37	tap water	FALSE
MW-17S	980728-BT-22-GW0017	7/28/98	Acetone	250	µg/L	5475	tap water	FALSE
MW-17S	010609-BT-22-GW0017S	6/9/01	Arsenic, Total	10	µg/L	10	MCL	FALSE
MW-17S	010609-BT-22-GW9017S	6/9/01	Arsenic, Total	10	µg/L	10	MCL	FALSE
MW-17S	**980728-BT-22-GW0017**	**7/28/98**	**Arsenic, Total**	**50**	**µg/L**	**10**	**MCL**	**TRUE**
MW-17S	010609-BT-22-GW0017S	6/9/01	Barium, Total	440 J	µg/L	2000	MCL	FALSE
MW-17S	010609-BT-22-GW9017S	6/9/01	Barium, Total	420 J	µg/L	2000	MCL	FALSE
MW-17S	980728-BT-22-GW0017	7/28/98	Barium, Total	500	µg/L	2000	MCL	FALSE
MW-17S	050418-MW17 MW-17	4/27/05	Benzene	1 U	µg/L	5		FALSE
MW-17S	**010609-BT-22-GW0017S**	**6/9/01**	**Benzene**	**15**	**µg/L**	**5**	**MCL**	**TRUE**
MW-17S	**010609-BT-22-GW9017S**	**6/9/01**	**Benzene**	**18**	**µg/L**	**5**	**MCL**	**TRUE**
MW-17S	**980728-BT-22-GW0017**	**7/28/98**	**Benzene**	**15**	**µg/L**	**5**	**MCL**	**TRUE**
MW-17S	010609-BT-22-GW9017S	6/9/01	Cyanide, Total	190 J	µg/L	200	MCL	FALSE
MW-17S	**010609-BT-22-GW0017S**	**6/9/01**	**Cyanide, Total**	**230 J**	**µg/L**	**200**	**MCL**	**TRUE**
MW-17S	980728-BT-22-GW0017	7/28/98	Cyanide, Total	90	µg/L	200	MCL	FALSE
MW-17S	010609-BT-22-GW0017S	6/9/01	Fluorene	19 J	µg/L	24	tap water	FALSE
MW-17S	010609-BT-22-GW9017S	6/9/01	Fluorene	18	µg/L	24	tap water	FALSE
MW-17S	980728-BT-22-GW0017	7/28/98	Fluorene	20	µg/L	24	tap water	FALSE
MW-17S	**980728-BT-22-GW0017**	**7/28/98**	**Phenanthrene**	**15**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-17S	010609-BT-22-GW9017S	6/9/01	Toluene	2	µg/L	1000	MCL	FALSE
MW-17S	980728-BT-22-GW0017	7/28/98	Toluene	3	µg/L	1000	MCL	FALSE
MW-17S	980728-BT-22-GW0017	7/28/98	Zinc, Total	690	µg/L	1100	tap water	FALSE
MW-18	980728-BT-22-GW0018	7/28/98	Acenaphthene	14	µg/L	37	tap water	FALSE
MW-18	**980728-BT-22-GW0018**	**7/28/98**	**Arsenic, Total**	**20**	**µg/L**	**10**	**MCL**	**TRUE**
MW-18	980728-BT-22-GW0018	7/28/98	Barium, Total	830	µg/L	2000	MCL	FALSE
MW-18	**980728-BT-22-GW0018**	**7/28/98**	**Bis(2-ethylhexyl)phthalate**	**10**	**µg/L**	**6**	**MCL**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-18	980728-BT-22-GW0018	7/28/98	Cyanide, Total	120	µg/L	200	MCL	FALSE
MW-18	980728-BT-22-GW0018	7/28/98	Zinc, Total	60	µg/L	1100	tap water	FALSE
MW-19	980729-BT-22-GW0019	7/29/98	Barium, Total	660	µg/L	2000	MCL	FALSE
MW-19	981016-BT-22-GW0019	10/16/98	Cyanide, Total	20	µg/L	200	MCL	FALSE
MW-19	**980729-BT-22-GW0019**	**7/29/98**	**Naphthalene**	**14**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-19	980729-BT-22-GW0019	7/29/98	Zinc, Total	50	µg/L	1100	tap water	FALSE
MW-21	970818-LD-23-GW0021	8/18/97	Barium, Total	140	µg/L	2000	MCL	FALSE
MW-21	970818-LD-23-GW0021	8/18/97	Chromium, Total	20	µg/L	100	MCL	FALSE
MW-21	970818-LD-23-GW0021	8/18/97	Cyanide, Total	50	µg/L	200	MCL	FALSE
MW-21	970818-LD-23-GW0021	8/18/97	Nickel, Total	20	µg/L	73	tap water	FALSE
MW-22	970818-LD-23-GW0022	8/18/97	Acetone	110	µg/L	5475	tap water	FALSE
MW-22	970818-LD-23-GW0022	8/18/97	Barium, Total	50	µg/L	2000	MCL	FALSE
MW-22	970818-LD-23-GW0022	8/18/97	Zinc, Total	50	µg/L	1100	tap water	FALSE
MW-23	970818-LD-23-GW0023	8/18/97	Barium, Total	90	µg/L	2000	MCL	FALSE
MW-23	970818-LD-23-GW0023	8/18/97	Chromium, Total	10	µg/L	100	MCL	FALSE
MW-23	970818-LD-23-GW0023	8/18/97	Zinc, Total	110	µg/L	1100	tap water	FALSE
MW-24	970818-LD-23-GW0024	8/18/97	Barium, Total	70	µg/L	2000	MCL	FALSE
MW-24	970818-LD-23-GW0024	8/18/97	Chromium, Total	10	µg/L	100	MCL	FALSE
MW-24	970818-LD-23-GW0024	8/18/97	Nickel, Total	20	µg/L	73	tap water	FALSE
MW-24	970818-LD-23-GW0024	8/18/97	Zinc, Total	90	µg/L	1100	tap water	FALSE
MW-25D	970819-LD-23-GW0025D	8/19/97	Barium, Total	280	µg/L	2000	MCL	FALSE
MW-25D	970819-LD-23-GW9025D	8/19/97	Barium, Total	290	µg/L	2000	MCL	FALSE
MW-25D	970819-LD-23-GW0025D	8/19/97	Chromium, Total	30	µg/L	100	MCL	FALSE
MW-25D	970819-LD-23-GW9025D	8/19/97	Chromium, Total	30	µg/L	100	MCL	FALSE
MW-25D	970819-LD-23-GW0025D	8/19/97	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-25D	970819-LD-23-GW9025D	8/19/97	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-25D	970819-LD-23-GW0025D	8/19/97	Nickel, Total	40	µg/L	73	tap water	FALSE
MW-25D	970819-LD-23-GW9025D	8/19/97	Nickel, Total	40	µg/L	73	tap water	FALSE
MW-25D	970819-LD-23-GW0025D	8/19/97	Zinc, Total	90	µg/L	1100	tap water	FALSE
MW-25D	970819-LD-23-GW9025D	8/19/97	Zinc, Total	110	µg/L	1100	tap water	FALSE
MW-25S	970819-LD-23-GW0025S	8/19/97	Barium, Total	100	µg/L	2000	MCL	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-25S	970819-LD-23-GW0025S	8/19/97	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-25S	970819-LD-23-GW0025S	8/19/97	Zinc, Total	60	µg/L	1100	tap water	FALSE
MW-26	970821-LD-38-GW0026	8/21/97	Acetone	120	µg/L	5475	tap water	FALSE
MW-26	970821-LD-38-GW0026	8/21/97	Barium, Total	260	µg/L	2000	MCL	FALSE
MW-26	**010619-LD-39-GW0026**	**6/19/01**	**Benzene**	**14**	**µg/L**	**5**	**MCL**	**TRUE**
MW-26	**990619-LD-38-GW0026**	**6/19/99**	**Benzene**	**14**	**µg/L**	**5**	**MCL**	**TRUE**
MW-26	**970821-LD-38-GW0026**	**8/21/97**	**Benzene**	**13**	**µg/L**	**5**	**MCL**	**TRUE**
MW-26	010619-LD-39-GW0026	6/19/01	Chlorobenzene	41	µg/L	100	MCL	FALSE
MW-26	970821-LD-38-GW0026	8/21/97	Chromium, Total	20	µg/L	100	MCL	FALSE
MW-26	990619-LD-38-GW0026	6/19/99	Ethylbenzene	5	µg/L	700	MCL	FALSE
MW-26	010619-LD-39-GW0026	6/19/01	Toluene	66	µg/L	1000	MCL	FALSE
MW-26	990619-LD-38-GW0026	6/19/99	Toluene	26	µg/L	1000	MCL	FALSE
MW-26	970821-LD-38-GW0026	8/21/97	Toluene	7	µg/L	1000	MCL	FALSE
MW-26	010619-LD-39-GW0026	6/19/01	Xylenes	19	µg/L	10000	MCL	FALSE
MW-26	990619-LD-38-GW0026	6/19/99	Xylenes	29	µg/L	10000	MCL	FALSE
MW-26	970821-LD-38-GW0026	8/21/97	Xylenes	23	µg/L	10000	MCL	FALSE
MW-26	970821-LD-38-GW0026	8/21/97	Zinc, Total	200	µg/L	1100	tap water	FALSE
MW-27	970819-LD-38-GW0027	8/19/97	Barium, Total	80	µg/L	2000	MCL	FALSE
MW-28	970819-LD-38-GW0028	8/19/97	Barium, Total	140	µg/L	2000	MCL	FALSE
MW-29	970819-LD-38-GW0029	8/19/97	Barium, Total	510	µg/L	2000	MCL	FALSE
MW-29	970819-LD-38-GW0029	8/19/97	Trichloroethene	3	µg/L	5	MCL	FALSE
MW-29	970819-LD-38-GW0029	8/19/97	Zinc, Total	60	µg/L	1100	tap water	FALSE
MW-30D	970821-LD-38-GW0030D	8/21/97	Acetone	120	µg/L	5475	tap water	FALSE
MW-30D	970821-LD-38-GW0030D	8/21/97	Barium, Total	500	µg/L	2000	MCL	FALSE
MW-30S	970821-LD-38-GW0030S	8/21/97	Acetone	1000	µg/L	5475	tap water	FALSE
MW-30S	970821-LD-38-GW0030S	8/21/97	Barium, Total	130	µg/L	2000	MCL	FALSE
MW-30S	970821-LD-38-GW0030S	8/21/97	Chromium, Total	10	µg/L	100	MCL	FALSE
MW-30S	970821-LD-38-GW0030S	8/21/97	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-30S	970821-LD-38-GW0030S	8/21/97	Zinc, Total	180	µg/L	1100	tap water	FALSE
MW-31	970821-LD-39-GW0031	8/21/97	Acetone	120	µg/L	5475	tap water	FALSE
MW-31	970821-LD-39-GW0031	8/21/97	Barium, Total	120	µg/L	2000	MCL	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-31	970821-LD-39-GW0031	8/21/97	Cyanide, Total	30	µg/L	200	MCL	FALSE
MW-32	970821-LD-39-GW0032	8/21/97	Barium, Total	30	µg/L	2000	MCL	FALSE
MW-32	**010610-LD-39-GW0032**	**6/10/01**	**Cyanide, Total**	**410 J**	**µg/L**	**200**	**MCL**	**TRUE**
MW-32	**990619-LD-39-GW0032**	**6/19/99**	**Cyanide, Total**	**360**	**µg/L**	**200**	**MCL**	**TRUE**
MW-32	**970821-LD-39-GW0032**	**8/21/97**	**Cyanide, Total**	**380**	**µg/L**	**200**	**MCL**	**TRUE**
MW-33	970820-LD-39-GW0033	8/20/97	Barium, Total	100	µg/L	2000	MCL	FALSE
MW-33	970820-LD-39-GW0033	8/20/97	Cyanide, Total	140	µg/L	200	MCL	FALSE
MW-34D	970821-LD-39-GW0034D	8/21/97	Acetone	66	µg/L	5475	tap water	FALSE
MW-34D	970821-LD-39-GW0034D	8/21/97	Barium, Total	30	µg/L	2000	MCL	FALSE
MW-34D	**970821-LD-39-GW0034D**	**8/21/97**	**Benzene**	**6**	**µg/L**	**5**	**MCL**	**TRUE**
MW-34D	970821-LD-39-GW0034D	8/21/97	Chromium, Total	10	µg/L	100	MCL	FALSE
MW-34D	970821-LD-39-GW0034D	8/21/97	Copper, Total	30	µg/L	1300	MCL	FALSE
MW-34D	**970821-LD-39-GW0034D**	**8/21/97**	**Lead, Total**	**40**	**µg/L**	**15**	**MCL**	**TRUE**
MW-34D	970821-LD-39-GW0034D	8/21/97	Xylenes	7	µg/L	10000	MCL	FALSE
MW-34D	970821-LD-39-GW0034D	8/21/97	Zinc, Total	210	µg/L	1100	tap water	FALSE
MW-34S	970820-LD-39-GW0034S	8/20/97	Barium, Total	20	µg/L	2000	MCL	FALSE
MW-34S	970820-LD-39-GW9034S	8/20/97	Barium, Total	20	µg/L	2000	MCL	FALSE
MW-34S	990618-LD-39-GW0034S	6/18/99	Cyanide, Total	170	µg/L	200	MCL	FALSE
MW-34S	**970820-LD-39-GW0034S**	**8/20/97**	**Cyanide, Total**	**210**	**µg/L**	**200**	**MCL**	**TRUE**
MW-34S	**970820-LD-39-GW9034S**	**8/20/97**	**Cyanide, Total**	**220**	**µg/L**	**200**	**MCL**	**TRUE**
MW-35	970821-LD-39-GW0035	8/21/97	Barium, Total	70	µg/L	2000	MCL	FALSE
MW-35	970821-LD-39-GW0035	8/21/97	Cyanide, Total	70	µg/L	200	MCL	FALSE
MW-36	970821-LD-39-GW0036	8/21/97	Barium, Total	20	µg/L	2000	MCL	FALSE
MW-36	**970821-LD-39-GW0036**	**8/21/97**	**Silver, Total**	**240**	**µg/L**	**18**	**tap water**	**TRUE**
MW-36	970821-LD-39-GW0036	8/21/97	Zinc, Total	50	µg/L	1100	tap water	FALSE
MW-37	970821-LD-38-GW0037	8/21/97	Barium, Total	70	µg/L	2000	MCL	FALSE
MW-37	970821-LD-38-GW0037	8/21/97	Zinc, Total	50	µg/L	1100	tap water	FALSE
MW-38	**990621-BT-13-GW0038**	**6/21/99**	**2-Methylnaphthalene**	**16**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-38	990621-BT-13-GW0038	6/21/99	Barium, Total	220	µg/L	2000	MCL	FALSE
MW-38	**990621-BT-13-GW0038**	**6/21/99**	**Benzene**	**12**	**µg/L**	**5**	**MCL**	**TRUE**
MW-38	990621-BT-13-GW0038	6/21/99	Carbon disulfide	6	µg/L	1042.86	tap water	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-38	990621-BT-13-GW0038	6/21/99	Cyanide, Total	60	µg/L	200	MCL	FALSE
MW-38	**990621-BT-13-GW0038**	**6/21/99**	**Naphthalene**	**420**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-38	990621-BT-13-GW0038	6/21/99	Toluene	2	µg/L	1000	MCL	FALSE
MW-38	990621-BT-13-GW0038	6/21/99	Xylenes	14	µg/L	10000	MCL	FALSE
MW-38	990621-BT-13-GW0038	6/21/99	Zinc, Total	320	µg/L	1100	tap water	FALSE
MW-39	990621-BT-13-GW0039	6/21/99	Barium, Total	200	µg/L	2000	MCL	FALSE
MW-39	990621-BT-13-GW0039	6/21/99	Chromium, Total	20	µg/L	100	MCL	FALSE
MW-39	990621-BT-13-GW0039	6/21/99	Copper, Total	50	µg/L	1300	MCL	FALSE
MW-39	**990621-BT-13-GW0039**	**6/21/99**	**Lead, Total**	**20**	**µg/L**	**15**	**MCL**	**TRUE**
MW-39	**990621-BT-13-GW0039**	**6/21/99**	**Naphthalene**	**17**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-39	990621-BT-13-GW0039	6/21/99	Zinc, Total	240	µg/L	1100	tap water	FALSE
MW-40	990618-BT-13-GW0040	6/18/99	1,2,4-Trichlorobenzene	12	µg/L	70	MCL	FALSE
MW-40	**990618-BT-13-GW0040**	**6/18/99**	**2-Methylnaphthalene**	**15**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-40	990618-BT-13-GW0040	6/18/99	Acenaphthene	15	µg/L	37	tap water	FALSE
MW-40	990618-BT-13-GW0040	6/18/99	Barium, Total	90	µg/L	2000	MCL	FALSE
MW-40	**990618-BT-13-GW0040**	**6/18/99**	**Benzene**	**16**	**µg/L**	**5**	**MCL**	**TRUE**
MW-40	990618-BT-13-GW0040	6/18/99	Chlorobenzene	19	µg/L	100	MCL	FALSE
MW-40	990618-BT-13-GW0040	6/18/99	Fluoranthene	11	µg/L	150	tap water	FALSE
MW-40	990618-BT-13-GW0040	6/18/99	Fluorene	10	µg/L	24	tap water	FALSE
MW-40	**990618-BT-13-GW0040**	**6/18/99**	**Naphthalene**	**98**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-40	**990618-BT-13-GW0040**	**6/18/99**	**Phenanthrene**	**23**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-40	990618-BT-13-GW0040	6/18/99	Toluene	12	µg/L	1000	MCL	FALSE
MW-40	990618-BT-13-GW0040	6/18/99	Zinc, Total	90	µg/L	1100	tap water	FALSE
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**2-Methylnaphthalene**	**33**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**2-Methylnaphthalene**	**29**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-41	990617-BT-13-GW9041	6/17/99	Acenaphthene	36	µg/L	37	tap water	FALSE
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Acenaphthene**	**39**	**µg/L**	**37**	**tap water**	**TRUE**
MW-41	990617-BT-13-GW0041	6/17/99	Anthracene	25	µg/L	180	tap water	FALSE
MW-41	990617-BT-13-GW9041	6/17/99	Anthracene	25	µg/L	180	tap water	FALSE
MW-41	990617-BT-13-GW0041	6/17/99	Barium, Total	200	µg/L	2000	MCL	FALSE
MW-41	990617-BT-13-GW9041	6/17/99	Barium, Total	190	µg/L	2000	MCL	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-41	990617-BT-13-GW0041	6/17/99	Benzene	5 U	µg/L	5		FALSE
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Benzene**	**6**	**µg/L**	**5**	**MCL**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Benzo(a)anthracene**	**23**	**µg/L**	**0.092**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Benzo(a)anthracene**	**23**	**µg/L**	**0.092**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Benzo(a)pyrene**	**29**	**µg/L**	**0.2**	**MCL**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Benzo(a)pyrene**	**28**	**µg/L**	**0.2**	**MCL**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Benzo(b)fluoranthene**	**23**	**µg/L**	**0.092**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Benzo(b)fluoranthene**	**23**	**µg/L**	**0.092**	**tap water**	**TRUE**
MW-41	990617-BT-13-GW0041	6/17/99	Benzo(g,h,i)perylene	13	µg/L	18	tap water	FALSE
MW-41	990617-BT-13-GW9041	6/17/99	Benzo(g,h,i)perylene	14	µg/L	18	tap water	FALSE
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Benzo(k)fluoranthene**	**21**	**µg/L**	**0.92**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Benzo(k)fluoranthene**	**29**	**µg/L**	**0.92**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Chrysene**	**26**	**µg/L**	**9.2**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Chrysene**	**25**	**µg/L**	**9.2**	**tap water**	**TRUE**
MW-41	990617-BT-13-GW0041	6/17/99	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Cyanide, Total**	**260**	**µg/L**	**200**	**MCL**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Cyanide, Total**	**250**	**µg/L**	**200**	**MCL**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Dibenzofuran**	**17**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Dibenzofuran**	**16**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-41	990617-BT-13-GW0041	6/17/99	Fluoranthene	140	µg/L	150	tap water	FALSE
MW-41	990617-BT-13-GW9041	6/17/99	Fluoranthene	140	µg/L	150	tap water	FALSE
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Fluorene**	**31**	**µg/L**	**24**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Fluorene**	**30**	**µg/L**	**24**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Indeno(1,2,3-cd)pyrene**	**15**	**µg/L**	**0.092**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Indeno(1,2,3-cd)pyrene**	**14**	**µg/L**	**0.092**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Lead, Total**	**28**	**µg/L**	**15**	**MCL**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Lead, Total**	**23**	**µg/L**	**15**	**MCL**	**TRUE**
MW-41	990617-BT-13-GW0041	6/17/99	Mercury, Total	2	µg/L	2	MCL	FALSE
MW-41	990617-BT-13-GW9041	6/17/99	Mercury, Total	1	µg/L	2	MCL	FALSE
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Naphthalene**	**84**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Naphthalene**	**65**	**µg/L**	**0.62**	**tap water**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Phenanthrene**	**120**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Phenanthrene**	**120**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW0041**	**6/17/99**	**Pyrene**	**69**	**µg/L**	**18**	**tap water**	**TRUE**
MW-41	**990617-BT-13-GW9041**	**6/17/99**	**Pyrene**	**73**	**µg/L**	**18**	**tap water**	**TRUE**
MW-41	990617-BT-13-GW0041	6/17/99	Zinc, Total	170	µg/L	1100	tap water	FALSE
MW-41	990617-BT-13-GW9041	6/17/99	Zinc, Total	120	µg/L	1100	tap water	FALSE
MW-42	990617-BT-13-GW0042	6/17/99	Arsenic, Total	10	µg/L	10	MCL	FALSE
MW-42	990617-BT-13-GW0042	6/17/99	Barium, Total	220	µg/L	2000	MCL	FALSE
MW-42	990617-BT-13-GW0042	6/17/99	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-42	990617-BT-13-GW0042	6/17/99	Cyanide, Total	120	µg/L	200	MCL	FALSE
MW-42	990617-BT-13-GW0042	6/17/99	Zinc, Total	100	µg/L	1100	tap water	FALSE
MW-43	990617-BT-13-GW0043	6/17/99	Arsenic, Total	10	µg/L	10	MCL	FALSE
MW-43	990617-BT-13-GW0043	6/17/99	Barium, Total	120	µg/L	2000	MCL	FALSE
MW-43	990617-BT-13-GW0043	6/17/99	Zinc, Total	70	µg/L	1100	tap water	FALSE
MW-44	990621-BT-13-GW0044	6/21/99	Barium, Total	220	µg/L	2000	MCL	FALSE
MW-44	990621-BT-13-GW0044	6/21/99	Cyanide, Total	40	µg/L	200	MCL	FALSE
MW-44	990621-BT-13-GW0044	6/21/99	Zinc, Total	70	µg/L	1100	tap water	FALSE
MW-45	010616-BT-22-GW0045	6/16/01	Barium, Total	120 J	µg/L	2000	MCL	FALSE
MW-45	010616-BT-22-GW0045	6/16/01	Cyanide, Total	70 J	µg/L	200	MCL	FALSE
MW-47	010620-BT-22-GW0047	6/20/01	Barium, Total	390 J	µg/L	2000	MCL	FALSE
MW-47	**010620-BT-22-GW0047**	**6/20/01**	**Bis(2-ethylhexyl)phthalate**	**150**	**µg/L**	**6**	**MCL**	**TRUE**
MW-47	010620-BT-22-GW0047	6/20/01	Chromium, Total	20 J	µg/L	100	MCL	FALSE
MW-48	010616-LD-24-GW0048	6/16/01	Barium, Total	180 J	µg/L	2000	MCL	FALSE
MW-48	010616-LD-24-GW0048	6/16/01	Cyanide, Total	30 J	µg/L	200	MCL	FALSE
MW-49D	000728-CM-00-GW0049D	7/28/00	Acetone	240	µg/L	5475	tap water	FALSE
MW-49D	000728-CM-00-GW0049D	7/28/00	Barium, Total	300 J	µg/L	2000	MCL	FALSE
MW-49D	**000728-CM-00-GW0049D**	**7/28/00**	**Bis(2-ethylhexyl)phthalate**	**23**	**µg/L**	**6**	**MCL**	**TRUE**
MW-49D	990618-CM-00-GW00P13D	6/18/99	Toluene	3	µg/L	1000	MCL	FALSE
MW-49D	**000728-CM-00-GW0049D**	**7/28/00**	**Vinyl chloride**	**3**	**µg/L**	**2**	**MCL**	**TRUE**
MW-49D	**990618-CM-00-GW00P13D**	**6/18/99**	**Vinyl chloride**	**18**	**µg/L**	**2**	**MCL**	**TRUE**
MW-49S	000728-CM-00-GW0049S	7/28/00	Barium, Total	20 J	µg/L	2000	MCL	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-49S	000728-CM-00-GW9049	7/28/00	Barium, Total	10 J	µg/L	2000	MCL	FALSE
MW-49S	**010406-CM-00-GW0049S**	**4/6/01**	**Benzene**	**110**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-49S	**000728-CM-00-GW0049S**	**7/28/00**	**Benzene**	**100**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-49S	**000728-CM-00-GW9049**	**7/28/00**	**Benzene**	**100**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-49S	**990618-CM-00-GW00P13S**	**6/18/99**	**Benzene**	**120**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-49S	**000728-CM-00-GW0049S**	**7/28/00**	**Bis(2-ethylhexyl)phthalate**	**22**	**µg/L**	**6**	**MCL**	**TRUE**
MW-49S	**000728-CM-00-GW9049**	**7/28/00**	**Bis(2-ethylhexyl)phthalate**	**17**	**µg/L**	**6**	**MCL**	**TRUE**
MW-49S	010406-CM-00-GW0049S	4/6/01	Chlorobenzene	120	µg/L	390	Vapor Intrusion	FALSE
MW-49S	000728-CM-00-GW0049S	7/28/00	Chlorobenzene	9	µg/L	390	Vapor Intrusion	FALSE
MW-49S	000728-CM-00-GW9049	7/28/00	Chlorobenzene	8	µg/L	390	Vapor Intrusion	FALSE
MW-49S	990618-CM-00-GW00P13S	6/18/99	Chlorobenzene	5 U	µg/L	100	MCL	FALSE
MW-49S	000728-CM-00-GW0049S	7/28/00	Cyanide, Total	30	µg/L	200	MCL	FALSE
MW-49S	000728-CM-00-GW9049	7/28/00	Cyanide, Total	30	µg/L	200	MCL	FALSE
MW-49S	**010406-CM-00-GW0049S**	**4/6/01**	**Iron, Dissolved**	**22000**	**µg/L**			
MW-49S	**010406-CM-00-GW0049S**	**4/6/01**	**Iron, Total**	**21000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-49S	**010406-CM-00-GW0049S**	**4/6/01**	**Manganese, Dissolved**	**13000**	**µg/L**			
MW-49S	**010406-CM-00-GW0049S**	**4/6/01**	**Manganese, Total**	**13000**	**µg/L**	**88**	**tap water**	**TRUE**
MW-49S	010406-CM-00-GW0049S	4/6/01	Toluene	56	µg/L	1500	Vapor Intrusion	FALSE
MW-49S	000728-CM-00-GW0049S	7/28/00	Toluene	2	µg/L	1500	Vapor Intrusion	FALSE
MW-49S	000728-CM-00-GW9049	7/28/00	Toluene	2	µg/L	1500	Vapor Intrusion	FALSE
MW-49S	000728-CM-00-GW0049S	7/28/00	Trichloroethene	2	µg/L	5	Vapor Intrusion	FALSE
MW-49S	000728-CM-00-GW9049	7/28/00	Trichloroethene	2	µg/L	5	Vapor Intrusion	FALSE
MW-49S	**010406-CM-00-GW0049S**	**4/6/01**	**Vinyl chloride**	**170**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-49S	**000728-CM-00-GW0049S**	**7/28/00**	**Vinyl chloride**	**450**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-49S	**000728-CM-00-GW9049**	**7/28/00**	**Vinyl chloride**	**470**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-49S	**990618-CM-00-GW00P13S**	**6/18/99**	**Vinyl chloride**	**41**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-49S	010406-CM-00-GW0049S	4/6/01	Xylenes	6	µg/L	23000	Vapor Intrusion	FALSE
MW-50	000728-CM-00-GW0050	7/28/00	Barium, Total	30 J	µg/L	2000	MCL	FALSE
MW-50	**010405-CM-00-GW0050**	**4/5/01**	**Benzene**	**18**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-50	**000728-CM-00-GW0050**	**7/28/00**	**Benzene**	**7**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-50	**000728-CM-00-GW0050**	**7/28/00**	**Bis(2-ethylhexyl)phthalate**	**11**	**µg/L**	**6**	**MCL**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-50	000728-CM-00-GW0050	7/28/00	Chlorobenzene	7	µg/L	390	Vapor Intrusion	FALSE
MW-50	**010405-CM-00-GW0050**	**4/5/01**	**Iron, Dissolved**	**6100**	**µg/L**			
MW-50	**010405-CM-00-GW0050**	**4/5/01**	**Iron, Total**	**6000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-50	**010405-CM-00-GW0050**	**4/5/01**	**Manganese, Dissolved**	**12000**	**µg/L**			
MW-50	**010405-CM-00-GW0050**	**4/5/01**	**Manganese, Total**	**12000**	**µg/L**	**88**	**tap water**	**TRUE**
MW-50	000728-CM-00-GW0050	7/28/00	Toluene	3	µg/L	1500	Vapor Intrusion	FALSE
MW-50	010405-CM-00-GW0050	4/5/01	trans-1,2-Dichloroethene	12	µg/L	180	Vapor Intrusion	FALSE
MW-50	**010405-CM-00-GW0050**	**4/5/01**	**Vinyl chloride**	**360**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-50	**000728-CM-00-GW0050**	**7/28/00**	**Vinyl chloride**	**96**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-50	000728-CM-00-GW0050	7/28/00	Zinc, Total	120	µg/L	1100	tap water	FALSE
MW-51	010405-CM-00-GW0051	4/5/01	1,1-Dichloroethene	7	µg/L	7	MCL	FALSE
MW-51	000727-CM-00-GW0051	7/27/00	Barium, Total	40 J	µg/L	2000	MCL	FALSE
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Benzene**	**30**	**µg/L**	**5**	**MCL**	**TRUE**
MW-51	**000727-CM-00-GW0051**	**7/27/00**	**Benzene**	**100 U**	**µg/L**	**5**	**MCL**	**TRUE**
MW-51	010405-CM-00-GW0051	4/5/01	Chlorobenzene	5 U	µg/L	100	MCL	FALSE
MW-51	**000727-CM-00-GW0051**	**7/27/00**	**Chlorobenzene**	**110**	**µg/L**	**100**	**MCL**	**TRUE**
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Iron, Dissolved**	**5700**	**µg/L**			
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Iron, Total**	**13000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Manganese, Dissolved**	**570**	**µg/L**			
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Manganese, Total**	**600**	**µg/L**	**88**	**tap water**	**TRUE**
MW-51	000727-CM-00-GW0051	7/27/00	Phenol	24	µg/L	10949.9	tap water	FALSE
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Tetrachloroethene**	**15**	**µg/L**	**5**	**MCL**	**TRUE**
MW-51	**000727-CM-00-GW0051**	**7/27/00**	**Tetrachloroethene**	**410**	**µg/L**	**5**	**MCL**	**TRUE**
MW-51	010405-CM-00-GW0051	4/5/01	Toluene	3	µg/L	1000	MCL	FALSE
MW-51	000727-CM-00-GW0051	7/27/00	Toluene	46	µg/L	1000	MCL	FALSE
MW-51	010405-CM-00-GW0051	4/5/01	trans-1,2-Dichloroethene	52	µg/L	100	MCL	FALSE
MW-51	000727-CM-00-GW0051	7/27/00	trans-1,2-Dichloroethene	100 U	µg/L	100	MCL	FALSE
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Trichloroethene**	**39**	**µg/L**	**5**	**MCL**	**TRUE**
MW-51	**000727-CM-00-GW0051**	**7/27/00**	**Trichloroethene**	**350**	**µg/L**	**5**	**MCL**	**TRUE**
MW-51	**010405-CM-00-GW0051**	**4/5/01**	**Vinyl chloride**	**810**	**µg/L**	**2**	**MCL**	**TRUE**
MW-51	**000727-CM-00-GW0051**	**7/27/00**	**Vinyl chloride**	**830**	**µg/L**	**2**	**MCL**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-51	000727-CM-00-GW0051	7/27/00	Zinc, Total	50	µg/L	1100	tap water	FALSE
MW-52	000727-CM-00-GW0052	7/27/00	Barium, Total	50 J	µg/L	2000	MCL	FALSE
MW-52	**010406-CM-00-GW0052**	**4/6/01**	**Benzene**	**21**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-52	000727-CM-00-GW0052	7/27/00	Benzene	5 U	µg/L	5		FALSE
MW-52	**000727-CM-00-GW0052**	**7/27/00**	**Bis(2-ethylhexyl)phthalate**	**50**	**µg/L**	**6**	**MCL**	**TRUE**
MW-52	010406-CM-00-GW0052	4/6/01	Chlorobenzene	11	µg/L	390	Vapor Intrusion	FALSE
MW-52	**010406-CM-00-GW0052**	**4/6/01**	**Iron, Dissolved**	**12000**	**µg/L**			
MW-52	**010406-CM-00-GW0052**	**4/6/01**	**Iron, Total**	**11000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-52	**010406-CM-00-GW0052**	**4/6/01**	**Manganese, Dissolved**	**2100**	**µg/L**			
MW-52	**010406-CM-00-GW0052**	**4/6/01**	**Manganese, Total**	**1800**	**µg/L**	**88**	**tap water**	**TRUE**
MW-52	000727-CM-00-GW0052	7/27/00	Phenol	14	µg/L	10949.9	tap water	FALSE
MW-52	**010406-CM-00-GW0052**	**4/6/01**	**Vinyl chloride**	**87**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-52	**000727-CM-00-GW0052**	**7/27/00**	**Vinyl chloride**	**36**	**µg/L**	**2**	**Intrusion**	**TRUE**
MW-52	000727-CM-00-GW0052	7/27/00	Zinc, Total	40	µg/L	1100	tap water	FALSE
MW-53	000727-CM-00-GW0053	7/27/00	Barium, Total	60 J	µg/L	2000	MCL	FALSE
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Benzene**	**2000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-53	**000727-CM-00-GW0053**	**7/27/00**	**Benzene**	**2900**	**µg/L**	**5**	**MCL**	**TRUE**
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Chlorobenzene**	**160**	**µg/L**	**100**	**MCL**	**TRUE**
MW-53	**000727-CM-00-GW0053**	**7/27/00**	**Chlorobenzene**	**270**	**µg/L**	**100**	**MCL**	**TRUE**
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Ethylbenzene**	**2700**	**µg/L**	**700**	**MCL**	**TRUE**
MW-53	**000727-CM-00-GW0053**	**7/27/00**	**Ethylbenzene**	**2000**	**µg/L**	**700**	**MCL**	**TRUE**
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Iron, Dissolved**	**6000**	**µg/L**			
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Iron, Total**	**6000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Manganese, Dissolved**	**6100**	**µg/L**			
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Manganese, Total**	**6100**	**µg/L**	**88**	**tap water**	**TRUE**
MW-53	000727-CM-00-GW0053	7/27/00	Phenol	120	µg/L	10949.9	tap water	FALSE
MW-53	010405-CM-00-GW0053	4/5/01	Toluene	330	µg/L	1000	MCL	FALSE
MW-53	000727-CM-00-GW0053	7/27/00	Toluene	500	µg/L	1000	MCL	FALSE
MW-53	010405-CM-00-GW0053	4/5/01	Trichloroethene	2	µg/L	5	MCL	FALSE
MW-53	**010405-CM-00-GW0053**	**4/5/01**	**Vinyl chloride**	**530**	**µg/L**	**2**	**MCL**	**TRUE**
MW-53	**000727-CM-00-GW0053**	**7/27/00**	**Vinyl chloride**	**600**	**µg/L**	**2**	**MCL**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-53	010405-CM-00-GW0053	4/5/01	Xylenes	2500	µg/L	10000	MCL	FALSE
MW-53	000727-CM-00-GW0053	7/27/00	Xylenes	4900	µg/L	10000	MCL	FALSE
MW-53	000727-CM-00-GW0053	7/27/00	Zinc, Total	50	µg/L	1100	tap water	FALSE
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**2-Methylnaphthalene**	**21**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-54	000727-CM-31-GW0054	7/27/00	Barium, Total	160 J	µg/L	2000	MCL	FALSE
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Benzene**	**38**	**µg/L**	**5**	**MCL**	**TRUE**
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Benzene**	**360**	**µg/L**	**5**	**MCL**	**TRUE**
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Chlorobenzene**	**5500 J**	**µg/L**	**100**	**MCL**	**TRUE**
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Chlorobenzene**	**73000**	**µg/L**	**100**	**MCL**	**TRUE**
MW-54	000727-CM-31-GW0054	7/27/00	Copper, Total	20	µg/L	1300	MCL	FALSE
MW-54	010406-CM-31-GW0054	4/5/01	Ethylbenzene	40	µg/L	700	MCL	FALSE
MW-54	000727-CM-31-GW0054	7/27/00	Ethylbenzene	440	µg/L	700	MCL	FALSE
MW-54	000727-CM-31-GW0054	7/27/00	Fluorene	16	µg/L	24	tap water	FALSE
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Iron, Dissolved**	**6100**	**µg/L**			
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Iron, Total**	**6200**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Manganese, Dissolved**	**2100**	**µg/L**			
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Manganese, Total**	**2100**	**µg/L**	**88**	**tap water**	**TRUE**
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Naphthalene**	**140**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-54	000727-CM-31-GW0054	7/27/00	Nickel, Total	20	µg/L	73	tap water	FALSE
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Phenanthrene**	**19**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-54	000727-CM-31-GW0054	7/27/00	Phenol	20	µg/L	10949.9	tap water	FALSE
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Tetrachloroethene**	**16**	**µg/L**	**5**	**MCL**	**TRUE**
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Tetrachloroethene**	**2100**	**µg/L**	**5**	**MCL**	**TRUE**
MW-54	010406-CM-31-GW0054	4/5/01	Toluene	330	µg/L	1000	MCL	FALSE
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Toluene**	**11000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-54	010406-CM-31-GW0054	4/5/01	Trichloroethene	4	µg/L	5	MCL	FALSE
MW-54	**010406-CM-31-GW0054**	**4/5/01**	**Vinyl chloride**	**23**	**µg/L**	**2**	**MCL**	**TRUE**
MW-54	**000727-CM-31-GW0054**	**7/27/00**	**Vinyl chloride**	**50 U**	**µg/L**	**2**		**TRUE**
MW-54	010406-CM-31-GW0054	4/5/01	Xylenes	130	µg/L	10000	MCL	FALSE
MW-54	000727-CM-31-GW0054	7/27/00	Xylenes	2300	µg/L	10000	MCL	FALSE
MW-54	000727-CM-31-GW0054	7/27/00	Zinc, Total	70	µg/L	1100	tap water	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-55	000727-CM-27-GW0055	7/27/00	1,4-Dichlorobenzene	42	µg/L	75	MCL	FALSE
MW-55	000727-CM-27-GW0055	7/27/00	2-Methylphenol (o-cresol)	120	µg/L	180	tap water	FALSE
MW-55	**000727-CM-27-GW0055**	**7/27/00**	**4-Methylphenol (p-cresol)**	**83**	**µg/L**	**18**	**tap water**	**TRUE**
MW-55	000727-CM-27-GW0055	7/27/00	Barium, Total	140 J	µg/L	2000	MCL	FALSE
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Benzene**	**48000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Benzene**	**48000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-55	**000727-CM-27-GW0055**	**7/27/00**	**Benzene**	**16000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-55	000727-CM-27-GW0055	7/27/00	Benzyl Alcohol	16	µg/L	10949.9	tap water	FALSE
MW-55	**000727-CM-27-GW0055**	**7/27/00**	**Bis(2-ethylhexyl)phthalate**	**28**	**µg/L**	**6**	**MCL**	**TRUE**
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Chlorobenzene**	**240000**	**µg/L**	**100**	**MCL**	**TRUE**
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Chlorobenzene**	**230000**	**µg/L**	**100**	**MCL**	**TRUE**
MW-55	**000727-CM-27-GW0055**	**7/27/00**	**Chlorobenzene**	**190000**	**µg/L**	**100**	**MCL**	**TRUE**
MW-55	000727-CM-27-GW0055	7/27/00	Cyanide, Total	40	µg/L	200	MCL	FALSE
MW-55	000727-CM-27-GW0055	7/27/00	Ethylbenzene	280	µg/L	700	MCL	FALSE
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Iron, Dissolved**	**40000**	**µg/L**			
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Iron, Dissolved**	**39000**	**µg/L**			
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Iron, Total**	**41000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Iron, Total**	**40000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Manganese, Dissolved**	**3100**	**µg/L**			
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Manganese, Dissolved**	**3100**	**µg/L**			
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Manganese, Total**	**3200**	**µg/L**	**88**	**tap water**	**TRUE**
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Manganese, Total**	**3100**	**µg/L**	**88**	**tap water**	**TRUE**
MW-55	000727-CM-27-GW0055	7/27/00	Phenol	3000	µg/L	10949.9	tap water	FALSE
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Toluene**	**81000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Toluene**	**81000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-55	**000727-CM-27-GW0055**	**7/27/00**	**Toluene**	**45000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-55	**010406-CM-27-GW0055**	**4/6/01**	**Xylenes**	**25000 U**	**µg/L**	**10000**		**TRUE**
MW-55	**010406-CM-27-GW9055**	**4/6/01**	**Xylenes**	**25000 U**	**µg/L**	**10000**		**TRUE**
MW-55	000727-CM-27-GW0055	7/27/00	Xylenes	1500	µg/L	10000	MCL	FALSE
MW-55	000727-CM-27-GW0055	7/27/00	Zinc, Total	70	µg/L	1100	tap water	FALSE
MW-56	000727-CM-29-GW0056	7/27/00	2,4-Dimethylphenol	11	µg/L	729.999	tap water	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-56	000727-CM-29-GW0056	7/27/00	2-Methylphenol (o-cresol)	96	µg/L	180	tap water	FALSE
MW-56	**000727-CM-29-GW0056**	**7/27/00**	**4-Methylphenol (p-cresol)**	**110**	**µg/L**	**18**	**tap water**	**TRUE**
MW-56	000727-CM-29-GW0056	7/27/00	Barium, Total	260 J	µg/L	2000	MCL	FALSE
MW-56	**010405-CM-29-GW0056(10.4)**	**4/5/01**	**Benzene**	**110000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Benzene**	**150000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(17.75)**	**4/5/01**	**Benzene**	**170000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-56	**000727-CM-29-GW0056**	**7/27/00**	**Benzene**	**140000**	**µg/L**	**5**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(10.4)**	**4/5/01**	**Chlorobenzene**	**25000 U**	**µg/L**	**100**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Chlorobenzene**	**25000 U**	**µg/L**	**100**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(17.75)**	**4/5/01**	**Chlorobenzene**	**25000 U**	**µg/L**	**100**	**MCL**	**TRUE**
MW-56	**000727-CM-29-GW0056**	**7/27/00**	**Chlorobenzene**	**10000**	**µg/L**	**100**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Iron, Dissolved**	**14000**	**µg/L**			
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Iron, Total**	**13000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Manganese, Dissolved**	**4000 J**	**µg/L**			
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Manganese, Total**	**3600 J**	**µg/L**	**88**	**tap water**	**TRUE**
MW-56	**000727-CM-29-GW0056**	**7/27/00**	**Naphthalene**	**88**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-56	000727-CM-29-GW0056	7/27/00	Phenol	4100	µg/L	10949.9	tap water	FALSE
MW-56	**010405-CM-29-GW0056(10.4)**	**4/5/01**	**Toluene**	**52000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Toluene**	**140000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(17.75)**	**4/5/01**	**Toluene**	**200000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-56	**000727-CM-29-GW0056**	**7/27/00**	**Toluene**	**220000**	**µg/L**	**1000**	**MCL**	**TRUE**
MW-56	**010405-CM-29-GW0056(10.4)**	**4/5/01**	**Xylenes**	**25000 U**	**µg/L**	**10000**		**TRUE**
MW-56	**010405-CM-29-GW0056(13.5)**	**4/5/01**	**Xylenes**	**25000 U**	**µg/L**	**10000**		**TRUE**
MW-56	**010405-CM-29-GW0056(17.75)**	**4/5/01**	**Xylenes**	**25000 U**	**µg/L**	**10000**		**TRUE**
MW-56	000727-CM-29-GW0056	7/27/00	Xylenes	4800	µg/L	10000	MCL	FALSE
MW-56	000727-CM-29-GW0056	7/27/00	Zinc, Total	60	µg/L	1100	tap water	FALSE
MW-57D	**000728-CM-00-GW0057D**	**7/28/00**	**1,2-Dichloroethane**	**80**	**µg/L**	**5**	**MCL**	**TRUE**
MW-57D	000728-CM-00-GW0057D	7/28/00	Barium, Total	130 J	µg/L	2000	MCL	FALSE
MW-57D	000728-CM-00-GW0057D	7/28/00	Chlorobenzene	80	µg/L	100	MCL	FALSE
MW-57D	**000728-CM-00-GW0057D**	**7/28/00**	**Tetrachloroethene**	**13**	**µg/L**	**5**	**MCL**	**TRUE**
MW-57D	000728-CM-00-GW0057D	7/28/00	Toluene	10	µg/L	1000	MCL	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-57D	000728-CM-00-GW0057D	7/28/00	Trichloroethene	4	µg/L	5	MCL	FALSE
MW-57S	000727-CM-00-GW0057S	7/27/00	Barium, Total	290 J	µg/L	2000	MCL	FALSE
MW-57S	**000727-CM-00-GW0057S**	**7/27/00**	**Benzene**	**7**	**µg/L**	**5**	**Intrusion**	**TRUE**
MW-57S	000727-CM-00-GW0057S	7/27/00	Chlorobenzene	88	µg/L	390	Vapor Intrusion	FALSE
MW-57S	000727-CM-00-GW0057S	7/27/00	Phenol	18	µg/L	10949.9	tap water	FALSE
MW-57S	000727-CM-00-GW0057S	7/27/00	Toluene	19	µg/L	1500	Vapor Intrusion	FALSE
MW-57S	000727-CM-00-GW0057S	7/27/00	Zinc, Total	30	µg/L	1100	tap water	FALSE
MW-58	**050418-FDW01**	**4/28/05**	**1-Methylnaphthalene**	**330**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**1-Methylnaphthalene**	**380**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	050418-MW-58	4/28/05	2,4-Dimethylphenol	15	µg/L	729.999	tap water	FALSE
MW-58	**050418-FDW01**	**4/28/05**	**2-Methylnaphthalene**	**510**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**2-Methylnaphthalene**	**540**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**2-Methylnaphthalene**	**270**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	050418-FDW01	4/28/05	2-Methylphenol (o-cresol)	14	µg/L	180	tap water	FALSE
MW-58	050418-MW-58	4/28/05	2-Methylphenol (o-cresol)	17	µg/L	180	tap water	FALSE
MW-58	000726-CO-05-GW0058	7/26/00	2-Methylphenol (o-cresol)	17	µg/L	180	tap water	FALSE
MW-58	**050418-FDW01**	**4/28/05**	**Acenaphthene**	**70**	**µg/L**	**37**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**Acenaphthene**	**93**	**µg/L**	**37**	**tap water**	**TRUE**
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**Acenaphthene**	**56**	**µg/L**	**37**	**tap water**	**TRUE**
MW-58	000726-CO-05-GW0058	7/26/00	Anthracene	10	µg/L	180	tap water	FALSE
MW-58	**050418-FDW01**	**4/28/05**	**Benzene**	**100**	**µg/L**	**5**	**MCL**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**Benzene**	**99**	**µg/L**	**5**	**MCL**	**TRUE**
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**Bis(2-ethylhexyl)phthalate**	**61**	**µg/L**	**6**	**MCL**	**TRUE**
MW-58	**050418-FDW01**	**4/28/05**	**Dibenzofuran**	**88**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**Dibenzofuran**	**130**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**Dibenzofuran**	**69**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-58	050418-FDW01	4/28/05	Ethylbenzene	100	µg/L	700	MCL	FALSE
MW-58	050418-MW-58	4/28/05	Ethylbenzene	100	µg/L	700	MCL	FALSE
MW-58	000726-CO-05-GW0058	7/26/00	Fluoranthene	10	µg/L	150	tap water	FALSE
MW-58	**050418-FDW01**	**4/28/05**	**Fluorene**	**100**	**µg/L**	**24**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**Fluorene**	**130**	**µg/L**	**24**	**tap water**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**Fluorene**	**80**	**µg/L**	**24**	**tap water**	**TRUE**
MW-58	**050418-FDW01**	**4/28/05**	**Naphthalene**	**16000**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**Naphthalene**	**19000**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**Naphthalene**	**5400 U**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**050418-FDW01**	**4/28/05**	**Phenanthrene**	**75**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**050418-MW-58**	**4/28/05**	**Phenanthrene**	**90**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	**000726-CO-05-GW0058**	**7/26/00**	**Phenanthrene**	**71**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-58	050418-FDW01	4/28/05	Toluene	38	µg/L	1000	MCL	FALSE
MW-58	050418-MW-58	4/28/05	Toluene	37	µg/L	1000	MCL	FALSE
MW-58	050418-FDW01	4/28/05	Xylenes	200	µg/L	10000	MCL	FALSE
MW-58	050418-MW-58	4/28/05	Xylenes	210	µg/L	10000	MCL	FALSE
MW-59	**050418-MW 59**	**4/29/05**	**1-Methylnaphthalene**	**190**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	050418-MW 59	4/29/05	2,4-Dimethylphenol	590	µg/L	729.999	tap water	FALSE
MW-59	000726-CO-07-GW0059	7/26/00	2,4-Dimethylphenol	400	µg/L	729.999	tap water	FALSE
MW-59	**050418-MW 59**	**4/29/05**	**2-Methylnaphthalene**	**390**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**2-Methylnaphthalene**	**47**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**2-Methylphenol (o-cresol)**	**510**	**µg/L**	**180**	**tap water**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**2-Methylphenol (o-cresol)**	**480**	**µg/L**	**180**	**tap water**	**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**3 & 4 Methylphenol**	**220**	**µg/L**	**180**	**tap water**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**4-Methylphenol (p-cresol)**	**115**	**µg/L**	**18**	**tap water**	**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**Acenaphthene**	**52**	**µg/L**	**37**	**tap water**	**TRUE**
MW-59	000726-CO-07-GW0059	7/26/00	Acenaphthene	18	µg/L	37	tap water	FALSE
MW-59	000726-CO-07-GW0059	7/26/00	Acenaphthylene	27	µg/L	37	tap water	FALSE
MW-59	050418-MW 59	4/29/05	Anthracene	13	µg/L	180	tap water	FALSE
MW-59	**050418-MW 59**	**4/29/05**	**Benzene**	**1700**	**µg/L**	**5**	**MCL**	**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**Benzo(a)pyrene**	**0.31**	**µg/L**	**0.2**	**MCL**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**Benzo(a)pyrene**	**10 U**	**µg/L**	**0.2**		**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**Dibenzofuran**	**55**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**Dibenzofuran**	**43 =**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-59	050418-MW 59	4/29/05	Ethylbenzene	190 J	µg/L	700	MCL	FALSE
MW-59	**050418-MW 59**	**4/29/05**	**Fluorene**	**130**	**µg/L**	**24**	**tap water**	**TRUE**

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**Fluorene**	**56**	**µg/L**	**24**	**tap water**	**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**Naphthalene**	**16000**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**Naphthalene**	**86 U**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	**050418-MW 59**	**4/29/05**	**Phenanthrene**	**34**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	**000726-CO-07-GW0059**	**7/26/00**	**Phenanthrene**	**61**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-59	050418-MW 59	4/29/05	Phenol	260	µg/L	10949.9	tap water	FALSE
MW-59	000726-CO-07-GW0059	7/26/00	Phenol	89	µg/L	10949.9	tap water	FALSE
MW-59	050418-MW 59	4/29/05	Toluene	200 J	µg/L	1000	MCL	FALSE
MW-59	050418-MW 59	4/29/05	Xylenes	240	µg/L	10000	MCL	FALSE
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**2,4-Dimethylphenol**	**1300**	**µg/L**	**729.999**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**2,4-Dimethylphenol**	**1100**	**µg/L**	**729.999**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**2-Methylnaphthalene**	**680**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**2-Methylnaphthalene**	**660**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**2-Methylphenol (o-cresol)**	**380 J**	**µg/L**	**180**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**2-Methylphenol (o-cresol)**	**250 J**	**µg/L**	**180**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**Acenaphthene**	**180**	**µg/L**	**37**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**Acenaphthene**	**160**	**µg/L**	**37**	**tap water**	**TRUE**
MW-60	000726-CO-00-GW0060	7/26/00	Anthracene	13	µg/L	180	tap water	FALSE
MW-60	000726-CO-00-GW9060	7/26/00	Anthracene	10	µg/L	180	tap water	FALSE
MW-60	000726-CO-00-GW0060	7/26/00	Barium, Total	110	µg/L	2000	MCL	FALSE
MW-60	000726-CO-00-GW9060	7/26/00	Barium, Total	100	µg/L	2000	MCL	FALSE
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**Benzene**	**8600**	**µg/L**	**5**	**MCL**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**Benzene**	**8100**	**µg/L**	**5**	**MCL**	**TRUE**
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**Dibenzofuran**	**120**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**Dibenzofuran**	**110**	**µg/L**	**12.1667**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**Fluorene**	**100**	**µg/L**	**24**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**Fluorene**	**99**	**µg/L**	**24**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW0060**	**7/26/00**	**Phenanthrene**	**78**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-60	**000726-CO-00-GW9060**	**7/26/00**	**Phenanthrene**	**67**	**µg/L**	**0.62**	**tap water**	**TRUE**
MW-60	000726-CO-00-GW0060	7/26/00	Phenol	22	µg/L	10949.9	tap water	FALSE
MW-60	000726-CO-00-GW9060	7/26/00	Phenol	18	µg/L	10949.9	tap water	FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
MW-60	000726-CO-00-GW0060	7/26/00	Toluene	310	µg/L	1000	MCL	FALSE
MW-60	000726-CO-00-GW9060	7/26/00	Toluene	260	µg/L	1000	MCL	FALSE
MW-60	000726-CO-00-GW0060	7/26/00	Xylenes	810	µg/L	10000	MCL	FALSE
MW-60	000726-CO-00-GW9060	7/26/00	Xylenes	900	µg/L	10000	MCL	FALSE
MW-60	000726-CO-00-GW0060	7/26/00	Zinc, Total	30	µg/L	1100	tap water	FALSE
MW-60	000726-CO-00-GW9060	7/26/00	Zinc, Total	80	µg/L	1100	tap water	FALSE
MW-61	000726-CO-00-GW0061	7/26/00	Barium, Total	40	µg/L	2000	MCL	FALSE
MW-61	010404-CO-00-GW0061	4/4/01	Chlorobenzene	7	µg/L	100	MCL	FALSE
MW-61	**010404-CO-00-GW0061**	**4/4/01**	**Iron, Dissolved**	**100000**	**µg/L**			
MW-61	**010404-CO-00-GW0061**	**4/4/01**	**Iron, Total**	**130000**	**µg/L**	**1100**	**tap water**	**TRUE**
MW-61	**010404-CO-00-GW0061**	**4/4/01**	**Manganese, Dissolved**	**33000**	**µg/L**			
MW-61	**010404-CO-00-GW0061**	**4/4/01**	**Manganese, Total**	**38000**	**µg/L**	**88**	**tap water**	**TRUE**
MW-61	000726-CO-00-GW0061	7/26/00	Zinc, Total	40	µg/L	1100	tap water	FALSE
MW-62	010615-BT-04-GW0062	6/15/01	Barium, Total	70 J	µg/L	2000	MCL	FALSE
MW-63	**010620-LD-39-GW0063**	**6/20/01**	**Benzene**	**11**	**µg/L**	**5**	**MCL**	**TRUE**
MW-63	010620-LD-39-GW0063	6/20/01	Chlorobenzene	30	µg/L	100	MCL	FALSE
MW-63	010620-LD-39-GW0063	6/20/01	Chloroform	6	µg/L	80	MCL	FALSE
MW-63	010620-LD-39-GW0063	6/20/01	Toluene	19	µg/L	1000	MCL	FALSE
MW-63	010620-LD-39-GW0063	6/20/01	Xylenes	7	µg/L	10000	MCL	FALSE
MW-64	010620-LD-39-GW0064	6/20/01	Chlorobenzene	7	µg/L	100	MCL	FALSE
MW-65	010609-BT-04-GW0065	6/9/01	Barium, Total	60 J	µg/L	2000	MCL	FALSE
MW-66	010610-LD-39-GW0066	6/10/01	Cyanide, Total	60 J	µg/L	200	MCL	FALSE
MW-67	**010617-LD-39-GW0067**	**6/17/01**	**Cyanide, Total**	**440 J**	**µg/L**	**200**	**MCL**	**TRUE**
MW-68S	010621-BT-37-GW0068S	6/20/01	Barium, Total	80 J	µg/L	2000	MCL	FALSE
MW-68S	**010621-BT-37-GW0068S**	**6/20/01**	**Bis(2-ethylhexyl)phthalate**	**15**	**µg/L**	**6**	**MCL**	**TRUE**
MW-68S	010621-BT-37-GW0068S	6/20/01	Chloroform	18	µg/L	80	MCL	FALSE
MW-68S	010621-BT-37-GW0068S	6/20/01	Cyanide, Total	30	µg/L	200	MCL	FALSE
MW-69	050418-MW-69	4/28/05	Toluene	2.2	µg/L	1500	Vapor Intrusion	FALSE
MW-70	050418-MW70	4/27/05	Toluene	18	µg/L	1500	Vapor Intrusion	FALSE
MW-72	050418-MW72	4/27/05	Toluene	1.3	µg/L	1500	Vapor Intrusion	FALSE
P-15	050418-P15	4/29/05	1,2-Dichloroethane	1 U	µg/L	5		FALSE

TABLE 6-1
Historical Results for Analytes Exceeding Groundwater Comparison Criteria
Sloss Industries, Birmingham, Alabama

Location	Sample ID	Date	Analyte	Result	Units	Action Limit	Comparison Criteria	Exceeds Comparison Criteria
P-15	990619-FW-00-GW00P15	6/19/99	1,2-Dichloroethane	5 U	µg/L	5		FALSE
P-15	050418-P15	4/29/05	Toluene	5.6	µg/L	1500	Vapor Intrusion	FALSE
P-16B	050418-P16B	4/28/05	Toluene	24	µg/L	1500	Vapor Intrusion	FALSE

Notes:
All results compared to EPA MAximum Contaminant Levels (MCL) or, where absent, EPA Region 9 Primary Remedial Goals for tap water.
For wells MW-49S, MW-50, MW-51, MW-52, MW-57S, MW-69, MW-70, MW-71, and MW-72, P-15, and P-12, results compared to the lower of EPA MCL or Region 9 PRG for indoor air vapor intrusion.
U - The result was below the method detection limit.
J - The result was below the quantitiation limit. The reported value is an estimate.

APPENDIX A

Supplemental EI Data Collection

1.0 Introduction

In March 2004, Sloss Industries, Incorporated (Sloss), retained CH2M HILL to implement the February 4, 2005, *Final Data Gap Analysis and Proposed Environmental Indicators (EI) Sampling Plan* ("EI Sampling Plan") for the Birmingham, Alabama, facility. This plan was developed by Arcadis G&M, Inc., and was approved by the U.S. Environmental Protection Agency (EPA), as documented in a March 2005 letter. The EI sampling activities were summarized in a Work Plan (WP) prepared by CH2M HILL, dated April 2005, which was developed from the EI Sampling Plan and 1994 approved Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan, with variations or modifications as noted in this report.

The WP (CH2M HILL, 2005) was designed to provide guidance for installation of monitoring wells and sampling of surface soil, sediment, sludge/waste, and groundwater, as proposed in the EI Sampling Plan (Arcadis, 2005). This document provides resulting data from field investigation activities outlined in the EI Sampling Plan.

2.0 Field Investigation

Sampling activities were performed April 18, 2005, through April 29, 2005, and included the following:

- Onsite and offsite soil sampling
- Surface water and sediment sampling
- Monitoring well installation and groundwater sampling

2.1 Soil and Waste/Sludge Sampling

Surface soil sampling was performed in the Sloss property and surrounding neighborhoods. A total of 22 onsite surface soil samples and 35 offsite surface soil samples were collected during this effort, as shown in Figures 3 and 4. Additionally, 1 sludge/waste sample was collected from SWMU#38, as shown in Figure 3. Table 2-1 presents the total number of native samples collected for surface soil analysis, as well as the sampling stations, IDs, dates, intervals, and location descriptions.

Surface soil samples and the sludge/waste sample were collected in accordance with the EPA-approved RFI WP (1994). Samples were collected with a hand auger from the ground surface to a depth ranging from 0 to 2 feet below ground surface (bgs). Soil was composited in a stainless-steel mixing bowl prior to collection in clean, laboratory-provided sample containers.

Volatile organic compound (VOC) soil sample collection methods deviated slightly from those described in the approved 1994 WP. Sample collection and preparation were performed by SW846–Method 5035 (Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples), rather than WP-approved Encore® sample collection methods, due to the ease of sample collection and instantaneous preservation of samples. Additionally, soil samples were collected from 0 to 6 inches bgs at offsite soil sampling locations (rather than 0 to 2 feet as described in the WP), per the direction of EPA representatives onsite at the time of sampling.

Immediately following sample collection, the samples were labeled appropriately and placed in an iced-cooler. A chain-of-custody (COC) form was updated with each sample collection. The borehole was then filled with remaining tailings, completed with clean backfill material, and compacted. Offsite sampling locations were restored to original ground cover condition (or better) via top soil and various grass seeds. At the finish of each work day, the samples, along with the COC, were packed tightly into iced-coolers, and sent overnight via FedEx to the contracted laboratory (Severn Trent Laboratory [STL]/Mobile, Alabama) for analysis. The samples were analyzed for VOCs (SW8260B), semivolatile organic compounds (SVOCs) and SVOCs-low level (SW8270C), arsenic and chromium (SW6010B), and hexavalent chromium (SW7196A).

Insert Figure 3

Insert Figure 4

2.2 Sediment Sampling

Five sediment samples were collected from Five Mile Creek and the 35th Avenue and Shuttlesworth Drive Drainage area (Figures 3, 4). Sampling stations, IDs, dates, intervals, and location descriptions are presented in Table 2-3.

2.2.1 35th Avenue/Shuttlesworth Drive Drainage

Sediment samples from the 35th Avenue and Shuttlesworth Drive drainage ditch was collected with a hand auger, using techniques described for surface soil sampling. The hand auger was advanced to a depth of 6 inches bgs. Sediment was composited in a stainless-steel mixing bowl prior to collection in laboratory-provided sample containers.

2.2.2 Five Mile Creek

Sediment samples from Five Mile Creek were collected from small sediment deposits along the banks of the creek using a stainless-steel hand shovel. Bedrock, cobbles, and gravel prevented the sampling team from using a hand auger or other methods described in the EI Sampling Plan. The hand shovel was advanced to an approximate depth of 3 inches bgs, depending on depth to refusal. Sediment was composited in a stainless-steel mixing bowl prior to collection in laboratory-provided sample containers.

All sediment samples were stored, logged, shipped, and analyzed in similar fashion to the soil samples.

2.3 Monitoring Well Installation

Four groundwater monitoring wells were installed at the locations shown in Figures 3 and 4. Hollow stem auger (HSA) drilling with split-spoon sampling was employed to continuously collect soil samples, from ground surface to the top of bedrock/refusal, per American Society for Testing and Materials (ASTM)-D 1586-92. Upon retrieval, the split-spoon was opened, and soil classification and organic vapor analyzer/photoionization detector (OVA/PID) field screening was performed by the onsite geologist. At a minimum, the descriptions include rock/soil type, color, grain size, texture, sorting, cementation, accessory minerals, and presence of fossils. Samples are classified using the Unified Soil Classification System (USCS), per ASTM-D 2487-93.

Following the completion of HSA drilling, air rotary drilling methods were employed to ream the borehole to a 10-inch diameter. The borehole was extended 1 foot into bedrock. A small volume of potable water was used during drilling to enhance return of drill cuttings. A 6-inch steel surface casing was installed to the total depth of the borehole. A small amount of bentonite chips were placed into the casing and potable water added to hydrate the bentonite and seal the bottom of the casing. Potable water was placed inside the surface casing to provide ballast to prevent the casing from rising during grouting of the surface casing. The annular space was sealed with neat cement grout consisting of a mixture of Type I Portland cement and 5-percent bentonite. Grout was tremied from the bottom of the borehole to the ground surface. The grout was allowed to cure for a minimum of 24 hours prior to initiation of bedrock drilling.

Air rotary drilling was used to extend a nominal 6-inch-diameter borehole into the bedrock. Filtered air was used as the circulating media. Minor amounts of potable water were used to enhance return of drill cuttings. The borehole was advanced into the bedrock until the drill cuttings were saturated and the borehole appeared to produce sufficient water for a monitoring well. The screened interval of the monitoring well was set by the onsite geologist so that the screened interval of the monitoring well provides representative hydrologic information for the water-bearing zone.

The initial attempt to install the onsite monitoring well (MW-69) into the shallow bedrock aquifer failed. The initial bedrock boring was advanced to a total depth of 104 feet bgs, (approximately 80 feet into bedrock); however, no fractures, solution features, or bedding planes were encountered that produced groundwater. Because the shallow bedrock had been fully penetrated and failed to produce sufficient volumes of groundwater, the well location was moved approximately 30 feet to the west. The second attempt was successful in installing a viable well capable of producing sufficient volumes of groundwater for successful well development and groundwater sampling.

The monitoring well screens are 10 feet of 2-inch-diameter, 0.010-inch, factory-slotted, Schedule 40 polyvinyl chloride (PVC) well screen with threaded, flush joint PVC casing extending to the ground surface (3 feet above land surface for above grade completions). Each well is fitted with a vented PVC cap. Well construction materials conform to ASTM-D 1785, and carry the seal of the National Sanitation Foundation.

The annular space was filled with uniformly graded silica sand from the bottom of the borehole to approximately 2 feet above the top of the well screen using the tremie method. A 2-foot-thick bentonite seal was added via the tremie method above the sand pack to seal the borehole and to prevent surface contamination of the screened zone. The remaining annular space was filled with cement grout (Portland Type I cement, ASTM-C 150) to land surface. Five to 10 percent, by weight, of bentonite chips was added to the grout to prevent shrinking and control the heat of hydration.

Once construction of the wells was completed, development of the wells commenced. Each well was monitored for various parameters while pumping groundwater from the well in a controlled, maintained fashion. Once the parameters equalized under a given flow rate, it was determined that the well was developed and prepared for groundwater sampling.

2.4 Groundwater Sampling

Nine groundwater monitoring wells were sampled during this effort (Table 2-5). Eight wells (MW-58, MW-59, P-15, P-16B, MW-69, MW-70, MW-71, and MW-72) were sampled for analysis of target VOCs and SVOCs. Well MW-17 was sampled for benzene analysis only.

Groundwater sampling procedures followed the approved 1994 RFI WP and 2005 EI WP; however, a general description of groundwater sampling methods is provided here. Water level and well depth measurements were collected in all nine groundwater wells prior to initiating groundwater sampling activities. Well volumes were then calculated for each monitoring well. Pumping rates were sufficiently slow to minimize drawdown within the well. Field parameters (pH, conductivity, temperature, dissolved oxygen, oxidation-reduction potential, and turbidity) were measured in the field using a portable water quality

meter. Wells were purged, using a submersible pump, of a minimum of three well volumes or until water quality parameters had stabilized to within 10 percent on successive well volumes.

Groundwater samples for SVOC analysis were collected directly from the pump discharge. Once these samples were collected, the pump was removed, and groundwater samples for target VOCs were collected using a new, disposable Teflon® bailer.

Groundwater samples were stored, logged, shipped, and analyzed in similar fashion to the soil samples. Groundwater samples, however, were not analyzed for arsenic or the chromiums, and sample ID #050418-MW17 was analyzed for benzene only.

3.0 Results

The results of the EI sampling effort are presented in Appendix D. Attachment 1 presents the results of the data quality evaluation performed on this data set. No discussion of these results is presented here; however, these data have been incorporated into the overall sitewide data set and are discussed in the COED Report.

ATTACHMENT 1

Data Quality Evaluation

Sloss Industries Environmental Indicator (EI) Supplemental Sampling Data Quality Evaluation (DQE)

TO: Kelly Moody/MGM

Blake Snodsmith/MGM

FROM: Kaye Walker/MGM

DATE: June 28, 2005

The purpose of the data quality evaluation (DQE) process is to assess the effect of the overall analytical process on the usability of the data. The two major categories of data evaluation are laboratory performance and matrix interferences. Evaluation of laboratory performance is a check for compliance with the method requirements; either the laboratory did, or did not, analyze the samples within the limits of the analytical method. Evaluation of matrix interferences is more subtle and involves the analysis of several areas of results, including surrogate spike recoveries, matrix spike recoveries, and duplicate sample results.

Introduction Fifty-seven surface soil samples, ten sediment samples, one landfill sample at SWMU38, five existing monitoring well samples, and four new monitoring well samples were collected at Sloss Industries April 18 through April 28, 2005. These samples were collected as part of the EI supplemental sampling and ongoing RCRA Facility Investigation (RFI). All samples were submitted daily during the sampling event to Severn Trent Laboratory (STL), Mobile, Alabama.

The number and type of samples collected are listed by analytical method in Table 1. Field quality control (QC) samples collected included field duplicates (FD), matrix spike/matrix spike duplicates (MS/MSD), field blanks (FB), trip blanks (TB--analyzed for VOCs only), and equipment rinsate blanks (EB). The samples were analyzed for the following analytical fractions:

- VOCs by SW-846 Method 8260B
- SVOCs by SW-846 Method 8270C
- Low level SVOC (benzo[a]pyrene and dibenzo[a,h]anthracene) by SW-846 Method 8270C
- Metals (arsenic and chromium) by SW-846 Method 6010B
- Hexavalent chromium by SW-846 Method 7196A

Table 1 – Analyses Totals by Method

Analytical Method	*Parameter*	Soil	Water	MS/ MSD	FD	EB	FB	TB	Total
SW-846 8260B	Volatiles by GCMS	68	9	6	8	8	2	8	109
SW-846 8270C	Semivolatiles by GCMS	68	8	6	8	8	2	--	100
SW-846 8270C	Low Level Semivolatiles by GCMS	68	8	6	8	8	2	--	100
SW-846 6010B	Arsenic and Chromium	68	--	4	7	5	1	--	85
SW-846 7196A	Hexavalent Chromium	68	--	4	7	5	1	--	85

Four investigation-derived waste (IDW) samples were also collected during this sampling event and submitted to the laboratory for TCLP analysis.

Before the analytical results were released by the laboratory, both the sample and QC data were carefully reviewed to verify sample identity, instrument calibration, detection limits, dilution factors, numerical computations, accuracy of transcriptions, and chemical interpretations. Additionally, the QC data were reduced and the resulting data were reviewed to ascertain whether they were within the laboratory-defined limits for accuracy and precision.

The hardcopy data packages were reviewed by the project chemist using the process outlined in the USEPA guidance document *National Functional Guidelines for Organic Data Review* (October, 1999) and *National Functional Guidelines for Inorganic Data Review* (July, 2002). EPA Level III deliverables were provided by the laboratory for this project. The areas of review included (when applicable to the method):

- chain of custody documentation
- holding times
- laboratory method and field blank analyses
- surrogate compound recoveries
- matrix spike compound recoveries and reproducibility
- bromofluorobenzene (BFB) mass tuning results
- initial and continuing calibration
- second source recoveries
- internal standard area performance summaries
- target compound identification
- laboratory control sample results
- interference check standards
- serial dilutions
- post spike recoveries
- laboratory and blind field duplicate sample results
- detection limits/sensitivity
- electronic data
- deliverable

A data review worksheet was completed for each of these data packages and any non-conformance documented. This data review and validation process is independent of the laboratory's checks and focuses on the usability of the data to support the project data interpretation and decision-making processes.

Data that were not within the acceptance limits were appended with a qualifying flag, which consists of a single or double-letter abbreviation that reflects a problem with the data. The following flags were used in this text:

- **U -** Undetected. Analyte was analyzed for but not detected above the method detection limit.
- **UJ -** Detection limit estimated. Analyte was analyzed for, and qualified as not detected. The result is estimated.
- **J -** Estimated. The analyte was present, but the reported value may not be accurate or precise.
- **R -** Rejected. The data are unusable. (NOTE: Analyte/compound may or may not be present.)

Once the data review and validation process was completed, the entire data set were reviewed for chemical compound frequencies of detection, dilution factors that might affect data usability and patterns of target compound distribution. The data set was also evaluated to identify potential data limitations, uncertainties, or both in the analytical results.

Holding Times

The holding times for each parameter were evaluated according to USEPA SW-846 method requirements. All holding times were met for all parameters, with the exception of the low level SVOC analysis for sample 050418-EI11. Surrogates were not added during the original extraction of this sample and the samples were re-extracted fourteen days out of holding time with surrogate recoveries were within criteria. A “J” qualifier was appended to the reported values for this sample to indicate that they are quantitative estimates due to holding time non-compliance.

Potential Field Sampling and Laboratory Contamination

Four types of blank samples were used to monitor potential contamination introduced during field sampling, sample handling, shipping activities, as well as sample preparation and analysis in the laboratory.

- **Trip Blank (TB)**: A sample of ASTM Type II water that is prepared in the laboratory prior to the sampling event. The water is stored in VOC sample containers and is not opened in the field, and travels back to the laboratory with the other samples for VOC analysis. This blank is used to monitor the potential for sample contamination during the sample container trip. One trip blank should be included in each sample cooler that contains samples for VOC analysis. Eight trip blanks were submitted to STL/Mobile laboratory for VOC analysis.

- **Equipment Rinsate Blank (ERB)**: A sample of the target-free water used for the final rinse during the equipment decontamination process. This blank sample is collected by rinsing the sampling equipment after decontamination and is analyzed for the same analytical parameters as the corresponding samples. This blank is used to monitor potential contamination caused by incomplete equipment decontamination. One equipment rinsate blank should be collected per day of sampling, per type of sampling equipment. Eight equipment rinsate blanks were submitted to STL/Mobile laboratory for VOC, SVOC, low level SVOC analysis. Five equipment blank samples were submitted for arsenic, chromium, and hexavalent chromium analysis.

- **Field Blank or Ambient Blank (FB or AB)**: The field blank is an aliquot of the source water used for equipment decontamination. This blank monitors contamination that may be introduced from the water used for decontamination. One field blank should be collected from each source of decontamination water and analyzed for the same parameters as the associated samples. Two field blank samples were submitted to STL/Mobile laboratory for VOC, SVOC, low level SVOC analysis. One field blank sample was submitted for arsenic, chromium, and hexavalent chromium analysis.

- **Laboratory Method Blank or Method Blank (MB)**: A laboratory method blank is ASTM Type II water that is treated as a sample in that it undergoes the same analytical process as the corresponding field samples. Method blanks are used to monitor laboratory performance and contamination introduced during the analytical procedure. One method blank was prepared and analyzed for every twenty samples or per analytical batch, whichever was more frequent.

According to the EPA Functional Guidelines, concentrations of common organic contaminants detected in samples at less than ten times the concentration of the associated blanks can be attributed to field sampling and laboratory contamination rather than environmental contamination from site activities. Common organic contaminants include acetone, methylene chloride, 2-butanone, and the phthalates. For inorganic and other organic contaminants, five times the concentration detected in the associated blanks (rather than ten times) is used to qualify results as potential field and/or laboratory contamination rather than environmental contamination.

Field and laboratory blanks analyzed for this sampling event were reported as non-detects or less than five times the associated native sample concentrations for all parameters with the exception of the IDW metals method blank. Arsenic, chromium, nickel, selenium, and silver were reported above the laboratory MDL in the method blank. IDW sample results for these metals reported less than five times the method blank concentration were “U” qualified as non-detects in the data summary tables in Appendix D of the COED Report to indicate that they should be considered qualitatively invalid.

General Data Qualifiers

As required by U.S. EPA *Functional Guidelines for Evaluating Data Quality*, all reported values which were qualitatively identified at concentrations below their respective reporting limits (RL) but above the method detection limit (MDL) have been “J” qualified in the data summary tables in Appendix D of the COED Report to indicate that they are quantitative estimates.

Instrument Calibration

Continuing calibration percent differences outside method criteria were reported for several VOCs and SVOCs during the analysis of the soil/sediment and groundwater samples. Relative response factor (RRF) exceedances during continuing calibration indicates a lack of instrument stability, therefore a “J” qualifier was appended to the reported values for these compounds in the data summary tables in Appendix D of the COED Report to indicate that they are quantitative estimates.

Sample results for one compound, benzidine in three of the eight SDGs reported was rejected due to RRF exceedances greater than 75 percent. A “R” qualifier was appended to the benzidine results in these SDGs to indicate that the data are not usable as the presence or absence of these compounds cannot be verified.

Matrix Effects

Surrogate Spike Recovery and Internal Standard Response

Surrogate spike compounds were added to every sample, including field and laboratory blanks as well as field environmental samples and analyzed for VOCs, SVOCs, and low level SVOCs. Surrogate spikes consist of organic compounds which are similar to the method targets in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

Surrogate spike recoveries were used to monitor both laboratory performance and matrix interferences. Surrogate spike recoveries from field and laboratory blanks were used to evaluate laboratory performance because the blanks should represent an "ideal" sample matrix. Surrogate spike recoveries for the field samples were used to evaluate the potential for matrix interferences. According to *Functional Guidelines*, data are not qualified with respect to surrogate recoveries unless one or more VOC surrogates are out of specifications. SVOCs are not qualified unless two or more surrogates, within the same fraction (base/neutral or acid fraction), are out of specification.

Surrogate recoveries outside laboratory criteria were reported for several VOC samples and one SVOC sample. The laboratory reanalyzed most samples with similar results indicating the possible presence of matrix interference and biased sample results. A “J” qualifier was appended to positive sample results for samples with surrogate recoveries outside laboratory criteria and to non-detected samples results for those samples with surrogate recoveries below criteria in the data summary tables in Appendix D of the COED Report to indicate that the reported values are quantitative estimates.

Internal standard calibration involves the comparison of the instrument responses from the target compounds in the sample to the responses of specific standards added to the sample or sample extract prior to injection. Internal standard responses below criteria were reported for several VOC samples indicating the possible presence of matrix interference and biased low sample results. A “J” qualifier

was appended to samples results for those samples with internal standard results outside criteria in the data summary tables in Appendix D of the COED Report to indicate that the reported values are quantitative estimates.

Matrix Spike/Matrix Spike Duplicate Precision and Accuracy

A matrix spike is an aliquot of sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix. The matrix spike duplicate is a sample spiked with identical concentrations of target analyte(s) as the matrix spike. MS/MSDs are used to document the precision and bias of a method in a given sample matrix. For the MS/MSD measurement, three aliquots of a single sample are analyzed; one native sample and two samples spiked with target analytes or compounds. Matrix accuracy is evaluated from the spike recoveries, while precision is evaluated from comparison of the percent recoveries of the MS and MSD.

Organic results are not qualified upon the results of MS/MSD results alone. Evaluation is in conjunction with LCS/LCSD, surrogate, and internal standard (if applicable) results. Soil/sediment samples 050418-EI2, 050418-FMCSS1, 050418-35SS2, 050418-OSE2, and 050418-0SS2 were submitted to the laboratory for VOC, SVOC, low level SVOC, arsenic, chromium, and hexavalent chromium MS/MSD analysis. Groundwater sample 050418-P16B was submitted to the laboratory for VOC, SVOC, and low level SVOC MS/MSD analysis. Most VOC, SVOC, and low level SVOC accuracy and precision results were within established MS/MSD criteria and those compounds reported outside criteria had LCS/LCSD results within criteria with the exception of two compounds. Low MS/MSD and LCS/LCS recoveries were reported for indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene in sample 050418-P16B. A “J” qualifier was appended to the non-detected results for these compounds to indicate that the reported values are quantitative estimates.

MS/MSD recoveries above criteria for chromium were reported for sample 050418-EI2. The matrix spike recoveries outside laboratory control limits indicate the possible presence of matrix interferences in samples of similar matrix. This has been indicated by appending a “J” qualifier to the native sample results along with all chromium samples associated with sample 050418-EI2 in the data summary tables in Appendix D of the COED Report to indicate that the reported values are quantitative estimates.

Hexavalent chromium was not recovered in the MS/MSD samples for 050418-FMCSS1, 050418-OSE2, 050418-35SS2, and 050418-OSS2. The native samples along with all hexavalent chromium samples associated with each MS/MSD sample were reported as non-detects, therefore these results were rejected due to the MS/MSD recoveries below 30 percent. This has been indicated by appending a “R” qualifier to these hexavalent chromium results in the data summary tables in Appendix D of the COED Report.

Samples 050418-OSES3, 050418-OSE8, 050418-OSS10, 050418-OSW2, 050418-EI07, 050418-35SS3, 050418-SWMU38-1, and 050418-MW58 and their blind field duplicate samples 050418-FDS01, 050418-FDS02, 050418-FDS03, 050418-FDS04, 050418-FDS05, 050418-FDS06, 050418-FDS07, and 050418-FDW01, respectively were submitted to the laboratory to evaluate sampling and analytical precision for those compounds determined to be confidently detected. All compounds/analytes were within duplicate precision criteria with the exception of the following:

- benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, and pyrene in sample 050418-OSES3
- pyrene and chromium in 050418-OSS10

- benzo(a)anthracene, benzo(k)fluoranthene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in 050418-35SS3
- acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, carbazole, chrysene, dibenzofuran, fluorene, indeno(1,2,3-cd)pyrene, 1-methylnaphthalene, phenanthrene, pyrene, dibenzo(a,h)anthracene, and chromium in 050418-SWMU38-1
- dibenzofuran and 2,4-dimethylphenol in sample 050418-MW58

Functional Guidelines does not require sample results to be qualified based on field duplicate results. However, the inconsistency between the native and field duplicate results should be noted when assessing the quantitative results for these samples. Field duplicate summaries for each of the samples detailed above are included at the end of this report.

Dilutions

Numerous samples required analysis or re-analysis at dilutions for VOC, SVOC, and/or low level SVOC analysis. These dilutions were required to prevent saturation of the instrument, to allow quantitation of the compounds within the linear range of the calibration curve, and/or to reduce the effects of the matrix on the target compounds. When possible non-detected results and results below the instruments linear range were reported from the original analysis and those compounds exceeding the instruments linear range reported from the diluted analyses. For samples where an undiluted analysis was not possible, higher quantitation limits were reported for compounds which were not detected in the diluted samples. This should be noted when assessing these samples for the qualitative absence of specific organic compounds.

PARCCs

Precision--is defined as the agreement between duplicate results, and was estimated by comparing duplicate matrix spike recoveries and field duplicate sample results. Most MS/MSD and LSC/LCSD precision results were within control limit criteria, indicating that sample matrix did not significantly interfere with the overall analytical process.

Accuracy--is a measure of the agreement between an experimental determination and the true value of the parameter being measured. For the organic analyses, each of the samples was spiked with a surrogate compound and MS, MSD, LCS, and LCSD samples were spiked with a known reference material before preparation. Each of these approaches provides a measure of the matrix effects on the analytical accuracy. The LCS results demonstrate accuracy of the method and the laboratory's ability to meet the method criteria. MS/MSD results establish precision and accuracy of the matrix. Most spike recoveries were within the method acceptance limits with the exception of hexavalent chromium. Four of the five MS/MSD recoveries were less than 30 percent which resulted in the rejection of the hexavalent chromium non-detected sample results associated with these MS/MSD samples.

Representativeness--this criterion is a qualitative measure of the degree to which sample data accurately and precisely represent a characteristic environmental condition. Representativeness is a subjective parameter and is used to evaluate the efficacy of the sampling plan design. Representativeness was demonstrated by providing full descriptions in the project scoping documents of the sampling techniques and the rationale used for selecting sampling locations.

Completeness--is defined as the percentage of measurements that are judged to be valid compared to the total number of measurements made. Data rejected during this evaluation included fifty-three

hexavalent chromium results, eight benzidine results, and those samples which required multiple dilutions due to high native concentrations, as there can only be a single numerical result for compound/analyte reported. Overall, sample analyses were performed within QA/QC criteria resulting in greater than 95% usable data for this sampling event.

Comparability--is another qualitative measure designed to express the confidence with which one data set may be compared to another. Factors that affect comparability are sample collection and handling techniques, sample matrix type, and analytical method. Comparability is limited by the other PARCC parameters because data sets can be compared with confidence only when precision and accuracy are known. Data from this investigation are comparable with other data collected at the site because only EPA approved methods were used to analyze the samples and EPA Level II and III QC data are available to support the quality of the data.

Summary and Conclusions

Conclusions of the data quality evaluation process include:

- The laboratory analyzed the samples according to the approved EPA methods requested by the project as demonstrated by the data deliverables provided.
- Sample results for target compounds/analytes above the MDL but less than the RL were “J” qualified and should be considered as uncertain but indicative of the presence of that compound/analyte at an estimated concentration.
- Most spike recoveries were within the method acceptance limits requiring minimal data qualification with the exception of hexavalent chromium. Four of the five sets of MS/MSD recoveries were reported at less that 30 percent, which resulted in the rejection of the hexavalent chromium non-detected sample results associated with these MS/MSD samples.
- Low MS/MSD and LCS/LCS recoveries were reported for indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene in sample 050418-P16B. A “J” qualifier was appended to the non-detected results for these compounds to indicate that the reported values are quantitative estimates.
- Continuing calibration percent differences outside method criteria were reported for several VOCs and SVOCs during the analysis of the soil/sediment and groundwater samples. Relative response factor (RRF) exceedances during continuing calibration indicates a lack of instrument stability, therefore a “J” qualifier was appended to the reported values for these compounds to indicate that they are quantitative estimates.
- Several groundwater monitoring samples required analysis or re-analysis at dilutions for VOC and SVOC analysis. These dilutions were required to prevent saturation of the instrument, to allow quantitation of the compounds within the linear range of the calibration curve, and/or to reduce the effects of the matrix on the target compounds. The laboratory reported both the native and diluted analyses of each sample. During data evaluation, the target compound results were taken from the dilution yielding concentrations near the mid-point of the instrument’s linear range. Due to high target compound concentrations in some samples, higher quantitation limits were reported for other compounds that were not detected in the diluted sample.
- Eight sets of field duplicate and native samples results were submitted to the laboratory for sample analysis. All compounds/analytes were within duplicate precision criteria with the exception of benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, and pyrene in sample 050418-OSES3, pyrene and chromium in 050418-OSS10, benzo(a)anthracene, benzo(k)fluoranthene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in 050418-35SS3, and dibenzofuran

and 2,4-dimethylphenol in sample 050418-MW58. *Functional Guidelines* does not require sample results to be qualified based on field duplicate results. However, the inconsistency between the native and field duplicate results should be noted when assessing the quantitative results for these samples.

The overall project objectives or PARCCs were met, and the data can be used in the project decision-making process as qualified by the data quality evaluation process and presented in the data summary tables in Appendix D.

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS02/700-2016

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

CONSTITUENT	CONCENTRATION Sample ID		RPD	PASS/FAIL	Comments
	050418-OSES3	050418-FDS01			
Benzo[a]anthracene	570	1900	107.7	Fail	
Benzo[b]fluoranthene	940	1700	57.6	Fail	
Benzo[g,h,i]perylene	360 U	390	200.0	Fail	
Benzo[k]fluoranthene	360 U	560	200.0	Fail	
Chrysene	1100	460	82.1	Fail	
Fluoranthene	1000	1500	40.0	Fail	
Phenanthrene	360 U	370	200.0	Fail	
Pyrene	1100	1700	42.9	Fail	

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS07/700-2233

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

CONSTITUENT	CONCENTRATION Sample ID		RPD	PASS/FAIL	Comments
	050418-MW58	050418-FDW01			
Acenaphthene	93	70	28.2	Pass	
Anthracene	9.9 J	8.3 J	17.6	Pass	
Carbazole	500	440	12.8	Pass	
Dibenzofuran	130	88	38.5	Fail	
2,4-Dimethylphenol	15	9.6 J	43.9	Fail	
Fluorene	130	100	26.1	Pass	
1-Methylnaphthalene	380	330	14.1	Pass	
2-Methylnaphthalene	540	510	5.7	Pass	
2-Methylphenol	16	14	13.3	Pass	
Naphthalene	19000	16000	17.1	Pass	
Phenanthrene	90	75	18.2	Pass	
Benzene	99	100	1.0	Pass	
Toluene	37	38	2.7	Pass	
Ethylbenzene	100	100	0.0	Pass	
Xylene, total	210	200	4.9	Pass	

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS04/700-2047

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

CONSTITUENT	CONCENTRATION Sample ID		RPD	PASS/FAIL	Comments
	050418-OSE8	050418-FDS02			
Benzo[a]pyrene	130	96	30.1	Pass	
Dibenzo[a,h]anthracene	41	39	5.0	Pass	
Arsenic	32.1	31.2	2.8	Pass	
Chromium	73	89.7	20.5	Pass	

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS04/700-2047

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

CONSTITUENT	CONCENTRATION Sample ID		RPD	PASS/FAIL	Comments
	050418-OSS10	050418-FDS03			
Pyrene	380	370 U	200.0	Fail	
Benzo[a]pyrene	150	120	22.2	Pass	
Dibenzo[a,h]anthracene	49	39	22.7	Pass	
Arsenic	23.2	29.4	23.6	Pass	
Chromium	36.6	50.1	31.1	Fail	

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS03/700-1960

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

CONSTITUENT	CONCENTRATION Sample ID		RPD	PASS/FAIL	Comments
	050418-35SS3	050418-FDS06			
Benzo[a]anthracene	530 U	910	200.0	Fail	
Benzo[b]fluoranthene	1400	1200	15.4	Pass	
Benzo[g,h,i]perylene	660	570	14.6	Pass	
Benzo[k]fluoranthene	620	530 U	200.0	Fail	
Bis(2-ethylhexyl)phthalate	1300	1300	0.0	Pass	
Chrysene	1900	1700	11.1	Pass	
Fluoranthene	1600	1600	0.0	Pass	
1-Methylnaphthalene	530 U	890	200.0	Fail	
2-Methylnaphthalene	790	1400	55.7	Fail	
Naphthalene	1100	2000	58.1	Fail	
Phenanthrene	1300	1600	20.7	Pass	
Pyrene	1600	1400	13.3	Pass	
1,2,4-Trichlorobenzene	780	720	8.0	Pass	
Benzo[a]pyrene	1300	1100	16.7	Pass	
Dibenzo[a,h]anthracene	380	410	7.6	Pass	
Arsenic	12	13.4	11.0	Pass	

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS03/700-1960

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

Chromium	53.8	52.7	2.1	Pass	

EVALUATION OF DUPLICATE/REPLICATE ANALYSIS PRECISION
CRITERIA OBJECTIVES
SLOSS03/700-1960

PRECISION OBJECTIVE	AQUEOUS	SOLID/OTHER
VOLATILE ORGANICS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
SEMIVOLATILE ORGANICS/PCDD/PCDF	*WITHIN 30% RPD*	*WITHIN 30% RPD*
PESTICIDES/PCBS	*WITHIN 30% RPD*	*WITHIN 30% RPD*
METALS	*IF <5XQL; ± QL OR ≥5XQL; 20% RPD*	*IF <5XQL; ± 2QL OR ≥5XQL; 20% RPD*
WET CHEMISTRY PARAMETERS	*WITHIN 30% RPD*	*WITHIN 30% RPD*

CONSTITUENT	CONCENTRATION Sample ID		RPD	PASS/FAIL	Comments
	050418-SWMU38-1	050418-FDS07			
Acenaphthene	670	1200	56.7	Fail	
Acenaphthylene	3800	5500	36.6	Fail	
Anthracene	5000	9300	60.1	Fail	
Benzo[a]anthracene	28000	50000	56.4	Fail	
Benzo[b]fluoranthene	43000	71000	49.1	Fail	
Benzo[g,h,i]perylene	22000	38000	53.3	Fail	
Benzo[k]fluoranthene	24000	20000	18.2	Pass	
Carbazole	1700	4100	82.8	Fail	
Chrysene	30000	48000	46.2	Fail	
Dibenzofuran	1500	2900	63.6	Fail	
Fluoranthene	58000	71000	20.2	Pass	
Fluorene	2100	4900	80.0	Fail	
Indeno[1,2,3-cd]pyrene	17000	24000	34.1	Fail	
1-Methylnaphthalene	570	840	38.3	Fail	
2-Methylnaphthalene	1200	1400	15.4	Pass	
Naphthalene	5700	6200	8.4	Pass	
Phenanthrene	18000	29000	46.8	Fail	
Pyrene	32000	90000	95.1	Fail	
Benzo[a]pyrene	60000	68000	12.5	Pass	
Dibenzo[a,h]anthracene	9400	14000	39.3	Fail	
Arsenic	10.8	11.9	9.7	Pass	
Chromium	94.8	68.7	31.9	Fail	

APPENDIX C

Water Well Inventory

Wells Near Sloss Industries in Birmingham, Jefferson County, AL

TO: Barrie Selcoe/HOU

COPIES: Kelly Moody/MGM

FROM: Sam Shannon/MGM

Blake Snodsmith/MGM

DATE: June 29, 2005

PROJECT NUMBER: 327751.EI.04

A survey of water wells within a two mile radius of the Sloss Industries – Birmingham, Alabama Facility has been completed. A search of historical documentation and public repositories has been performed to identify existing water wells within the area.

The most recent publication containing a listing of water supply wells in the Birmingham Area is *Ground-Water Resources of the Birmingham and Cahaba Valleys, Jefferson County, Alabama*, by Tola B. Moffett and Paul H. Moser, Alabama Geological Survey Circular 103, 1978. That report documents the location of two known former or existing water wells within a mile or so of the Sloss Industries property. Note that the exact locations of the wells are not provided in this document – just a dot on a small map of the county. By studying the railroad and highway patterns on the small map in the report and comparing that with better maps, the location of the wells has been estimated as accurately as possible. The first identifier, consisting of letter and then a number, refers to the identifier used on the map in the Alabama Geological Survey report. The two general well locations, both of which are on the Birmingham North 7 ½ minute USGS topographic quadrangle, are as follows:

- [[**W-1**]] SE ¼ of NW ¼ Sec. 7, T. 17 S., R. 2 W.
- [[**V-7**]] N central ½, Sec. 24, T. 17 S., R. 3 W.

The first listed well, **W-1**, was owned by Lone Star Cement Company, and was apparently located on the property adjacent to Sloss near the quarry. That well was reportedly drilled in 1947 to a depth of 300 feet and completed in the Conasauga Limestone. The well was measured in 1952 and produced about 100 gallons per minute (gpm) flow. The well was reported as destroyed in the 1978 report.

The second well, **V-7**, appears to be located about a mile or more due south of the Sloss property, and is owned by Birmingham Stove and Range. The well is 205 feet deep, completed in the Ketona Dolomite, and in 1978 was producing a flow of about 50 gpm. The well had reportedly been a reliable source of water for the site since about 1936.

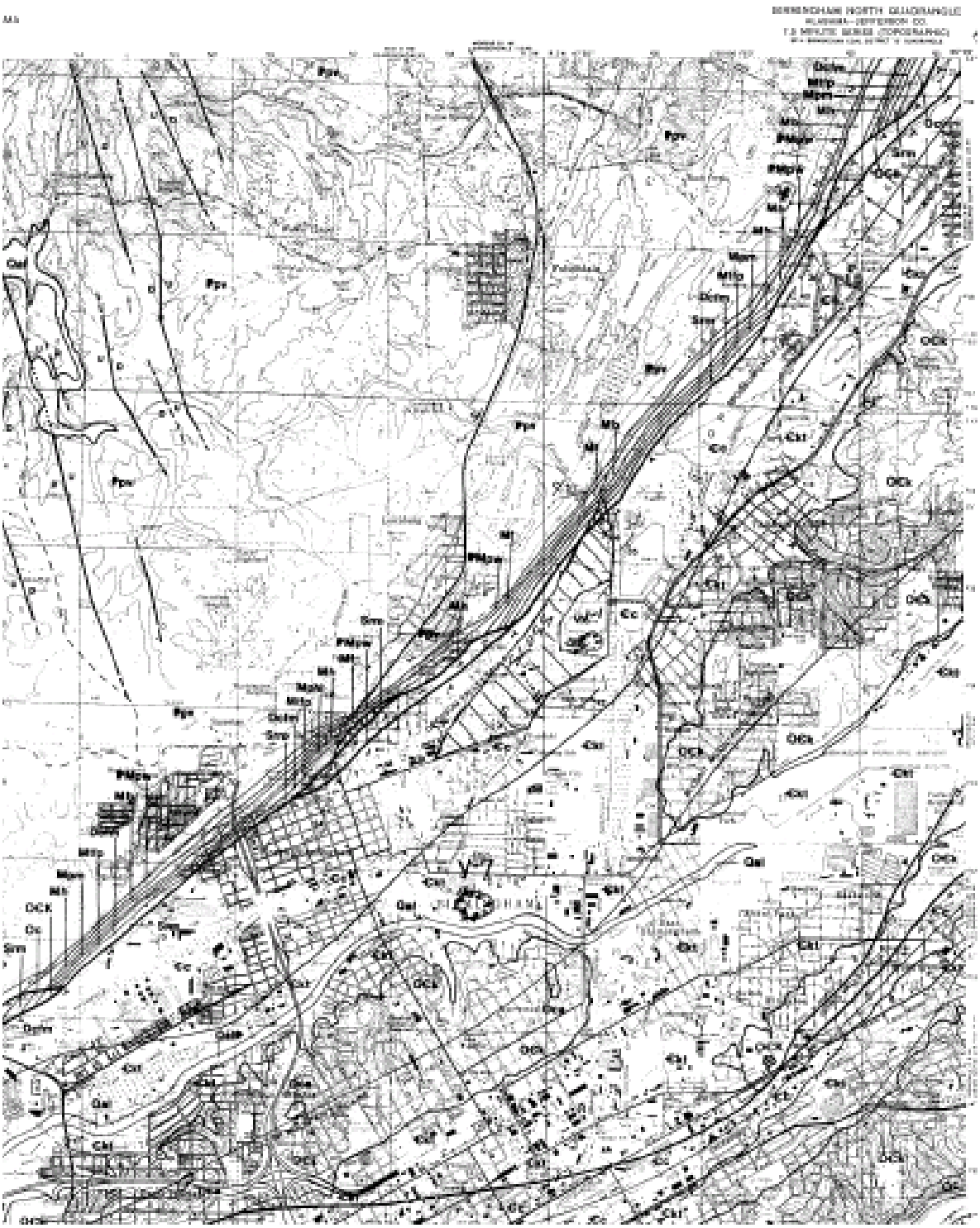
ACTION: We need to contact USGS, Alabama Geological Survey and ADEM water well folks to make sure there are no new wells in the area within 2 or 3 miles of Sloss. The attached figure shows the two wells noted above.

Additionally, CH2M HILL contacted additional state and federal agencies to inquire about water wells existing within a 1 mile radius of Sloss. CH2M HILL contacted the Alabama Department of Environmental Management (ADEM). Mr. Benny Laughlin/ADEM confirmed that ADEM records did not indicate any public supply wells located within 2 miles of the Sloss property, however, he could not verify that private wells do not exist within this area.

CH2M HILL contacted the Water Resources Branch of the U.S. Geological Survey (USGS) regarding water wells known to exist within a 2 mile radius of Sloss. Mr. James Robinson /USGS indicated that the USGS has no database for well information, and contacts ADEM when they have a project involving water wells.

Lastly, CH2M HILL contacted the Geological Survey of Alabama, Hydrogeology Division to inquire about water wells that may exist within a 2 mile radius of Sloss. Mr. Marlon Cook/GSA confirmed that GSA is the "repository for all water well information in the state", however, Ms. Blakeney Gillett/GSA indicated that the GSA does not do inquiries themselves and files are open on a "self serve" basis. Ms. Gillett indicated the files are not well organized and additional files are not organized by section/township/range, but rather located by nearby landmarks. No such search of GSA water well files was completed.

Based on the results of historical document review, discussion with government agencies most-likely to have information regarding water wells near Sloss, and general understanding of the properties neighboring Sloss, it is unlikely that additional water wells exist within this area.



APPENDIX E

Sloss PPE Requirements

Sloss Industries Corporation
New Employee Orientation

SAFETY LITERATURE

Initials

_____ 1 Clinic
_____ 2. Joint Safety & Health Committee
_____ 3. Personal Protective Equipment
_____ 4. Hazard Communication
_____ 5. How to read a MSDS
_____ 6. How to read Labels
_____ 7. Lockout/Tagout
_____ 8. Respirators
_____ 9. Noise
_____ 10. Confined Space
_____ 11. Coke Oven Emissions
_____ 12. Benzene
_____ 13. Machine Guarding
_____ 14. Compressed Gas
_____ 15. Hazardous Waste

OTHER LITERATURE PROVIDED

_____ 1. Sloss Industries Quality Statement
_____ 2. Holiday Schedule
_____ 3. Organizational List
_____ 4. Uniforms

TRAINING MODULES

_____ 1. Orientation Safety Awareness Video

_____ 2. Coke Oven Emissions Video
_____ 2. Coke Oven Emissions Summary
_____ 2. Coke Oven Emissions Standard

_____ 3. Material Safety Data Sheet Booklet
_____ 3. Benzene Video
_____ 3. Benzene MSDS
_____ 3. Benzene Scavenger Hunt

Initials

_____ 4. Confined Space Video
_____ 4. Confined Space Booklet & Review

_____ 5. Hearing Conservation Video
_____ 5. Hearing Booklet & Review

_____ 6. Chemical Safety Video
_____ 6. Haz-Com Booklet & Review
_____ 6. Placarding Card and Labels

_____ 7. Bloodborne Booklet & Review

_____ 8. Lockout / Tagout Video
_____ 8. LO/TO & Electrical Safety Booklet & Review

_____ 9. Fire Extinguisher Booklet & Review

_____ 10. Hand Safety Video
_____ 10. Distribute Safety Supplies / Goodies
_____ 10. PPE Booklet & Review

_____ 11. Avoiding A Painful Back Booklet

_____ 12. Sloss Security Plan Review

_____ 13. Intro to ISO 9000 Video/discussion

_____ 14. ER Episode / Discussion

_____ 15. Railroad Safety Video / Discussion
_____ 15. Railcar repair tags

_____ 16. Emergency Response Program &

_____ 17. 3M Respirator Training Instruction
_____ 17. Respirator Fit Test
_____ 17. Fit Test Acknowledgement

Initials

_____ 18. Extra Hazard Identification Form
To Be Given To Supervisor
_____ 19. Authorization & Verification Form
To Be Given To Supervisor

_____
_____
_____
_____
_____
_____

_____
Employee Name (Print)

_____
Employee Signature

_____
Date

_____
Identification Number

_____
Social Security Number

_____
Job Title

_____
Plant Location

_____
Instructor

SIC HR 03 Revision 06/05

Safety Supplies Issued

Initials	
_____	Hard Hat with Dated New Team Member Sticker & ISO Quality Policy Sticker
_____	Boot Slip Issued by Supervisor
_____	Safety Glasses Slip Issued by Supervisor
_____	Safety Glasses / Dark & Clear
_____	Ear plugs / Two types
_____	Work Gloves
_____	Uniforms Ordered
_____	Coveralls / Temporary Uniforms
_____	Lockout Lock w/ employee name
_____	Hasp or 6 Pack
_____	Lockout Tags / 3 w/Employee Name
_____	Wire Ties / Orange
_____	Respirator with filters
_____	Extra Respirator Filters
_____	Extra Respirator Cleaning Wipes

Employee Name: _____

Date: _____

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment is sometimes required to protect us from hazards. This may mean wearing a seat belt while driving, wearing earplugs while in a high noise area, or wearing a respirator while in a regulated area.

There are many types of personal protective equipment and following is a discussion of some of the common types of equipment used here:

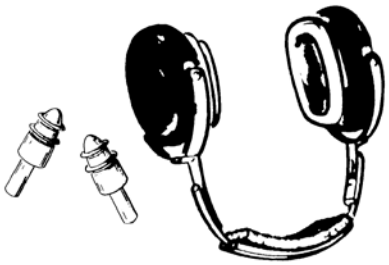
Hard hats protect the head against falling objects, flying objects, and bumps. Hardhat liners are available; they may make wearing hardhat more comfortable during cold weather. However, the suspension in the hard hat must not be removed.

Face shields protect the eyes and face when handling chemicals (goggles must also be worn) when grinding, or when around heat. Face shields should be replaced when they are warped, scratched or old (plastic may become brittle with age)

Welding helmets protect the eyes and face from the splashes of molten metal and the radiation produced by arc welding. **Impact goggles** should be worn under helmets to protect you from flying particles when the helmets are raised. Hand-held shields may be used where the protection of a helmet is not needed, such as for inspecting work, tack welding, and other operations requiring little or no welding.

Eye protection is needed for a variety of hazards such as flying objects, splashes of corrosive liquids or molten metals, dusts, and harmful radiation. Eye injuries not only disable a person but they can disfigure the face. Flying objects such as metal chips, nails, or abrasive grit cause most injuries. Other leading causes of eye injury include: abrasive wheels, corrosive substances, damaging visible or thermal radiation, poisonous gases or fumes.

Ear protection is needed in high noise areas to protect your hearing. A variety of earplugs and muffs are available from central stores.



Gloves protect fingers and hands from cuts, scratches, bruises, burns, and chemical exposure. The proper glove must be matched to the job.

- Electricians wear rubber gloves.
- Rubber, neoprene, vinyl gloves, viton, and butyl are used when handling chemicals (depending on which chemicals are being handled).
- Leather gloves are able to resist sparks, moderate heat, chips, and rough objects. They provide some cushioning against blows. They are generally used for heavy-duty work.
- Cotton fabric gloves are suitable for protection against dirt, slivers, chafing, and abrasions. They are not heavy enough to use in handling rough, sharp, or heavy materials.

Safety shoes protect the feet and toes from falling objects. Safety shoes may provide other benefits such as thermal insulation, water resistant, or extra traction.

Respirators protect your health by removing contamination from the air. ors are mainly used in regulated areas, when repairing malfunctioning equipr luring emergencies. Respirators must be matched to each task; there are ferent combinations of respirators and cartridges that must be considered. Car ust be replaced when you can smell the contaminant. Filters must be replaced whe breathe through.

Flame resistant clothing or uniforms are required in some areas of the plant.

Personal Protective Equipment will only help to protect you from hazards and injury if you are actually wearing it and wearing it properly.

PPE Requirements:

Hard hats, safety glasses, steel toed boots, and long pants are required in all operating areas, in addition, the following protective equipment is required in the areas listed below. It is your responsibility to wear your protective equipment and take care of it.

Additional PPE Requirements:

Coke Plant:

NIOSH/MSHA approved dust/mist respirator

- Ground level & top of ovens & bench, between pinion walls from outside pusher track to outside quench track
- Above ground of screening station
- Wharf
- Under Coal Dump
- Top of light oil storage in By-Products

Flame retardant clothing (greens) & Wooden shoe protectors (optional)

- Coke ovens

Hearing protection is required in posted areas, as follows:

- #1 Pump house
- Exhauster Building
- Coal Dump (underneath)
- Coal Silos
- Screening station
- Rod Mill
- Coal Mills

Slag Wool Plant:

NIOSH/MSHA approved dust/mist respirator

- Cupola floor, 2nd & 3rd floor
- Top of silos
- Bag house

Flame retardant clothing

- Cupola floor, 2nd & 3rd floor

Hearing protection

- Cupola floor, 2nd & 3rd floor

- Top of silos
- Bag house
- Compressor room
- Granular Area

Utilities:

Hearing protection

- Around generators
- When putting on generator:

Goggles & Face shield

- Inside boilers