SCS ENGINEERS







COMBINED PRELIMINARY ASSESSMENT/ SITE INSPECTION REPORT

Presented to:

SAINT LOUIS FEDERAL CENTER
4300 Goodfellow Boulevard
Saint Louis, Missouri

Presented by:

SCS ENGINEERS
10975 El Monte, Suite 100
Overland Park, Kansas 66211
(913) 451-7510

August 2008
File No.02200070.56

Table of Contents

Section **Page**

List of Figures

List of Appendices

List of Appendices (Cont.)

CONTENTS (Cont.)

List of Acronyms and Abbreviations

AAA	Army Audit Agency
AL	Action Level
ASTM	American Society for Testing and Materials
AT	Assay Technology Labs
bgs	Below Ground Surface
BGS	Below Ground Surface, Inc.
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	Chemical of Concern
cm^2	Square Centimeter
DECC	Defense Enterprise Computing Center
Detech	Detech, Inc.
DFAS	Defense Finance Accounting Service
DHS	Department of Homeland Security
DISA	Defense Information Systems Agency
DOD	Department of Defense
DOL	Department of Labor
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
FSA	Farm Service Agency
FSIS	Food Safety and Inspection Service
FSP	Field Sampling Plan
gm	Gram
GOCO	Government-Owned/Contractor Operated
GRO	Gasoline Range Organics
GSA	General Services Administration
HASP	Health and Safety Plan
HRS	Hazard Ranking System
HUD	U.S. Department of Housing and Urban Development
IAWC	Illinois American Water Company
Kg	Kilogram
kV	Kilovolt
lbs.	Pounds
MCE	Mixed-cellulose ester

CONTENTS (Cont.)

List of Acronyms and Abbreviations (Cont.)

MCL	Maximum Contaminant Level
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
mg/m^3	Milligrams per Cubic Meter
mg/Wipe	Milligrams per Wipe
Mm	Millimeter
MRBCA	Missouri Risk-Based Corrective Action
MSD	Metropolitan Sewer District
msl	Mean Sea Level
NAD271927	North American Datum
NPN	NPN Environmental
OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Energy Response
PA	Preliminary Assessment
PA/SI	Combined Preliminary Assessment/Site Inspection
PAH	Polyaromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PPE	Personal Protective Equipment
PREscore	Preliminary Ranking Evaluation Score
Property	Saint Louis Federal Center at 4300 Goodfellow Boulevard
PVC	Polyvinyl chloride
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RRC	89th Regional Readiness Command
SAP	Sampling and Analysis Plan
SCS	SCS Engineers
SI	Site Inspection
Site	Saint Louis Federal Center at 4300 Goodfellow Boulevard
SLAAP	Saint Louis Army Ammunition Plant
SLAC	Saint Louis Administration Center
SLOP	Saint Louis Ordnance Plant
STL	Severn Trent Laboratories
SVOC	Semi-Volatile Organic Compound

CONTENTS (Cont.)

List of Acronyms and Abbreviations (Cont.)

TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substance Control Act
µg	Micrograms
µg/cm^2	Microgram per Square Centimeter
µg/ft^2	Micrograms per Square foot
µg/Kg	Microgram per Kilogram
µg/L	Microgram per Liter
µg/m^2	Microgram per Square Meter
µg/Wipe	Microgram per Wipe
US	United States
USASAC	United States Army Security Assistance Command
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USPS	United States Postal Service
UST	Underground Storage Tank
VA	Department of Veterans Affairs
VOC	Volatile Organic Compound
WP	Work Plan

1.0 INTRODUCTION

At the request of the United States (US) General Services Administration (GSA) under Schedule Contract Number GS-10F-037K, SCS Engineers (SCS) performed a Preliminary Assessment (PA) and Site Inspection (SI) of the Saint Louis Federal Center (Site) located at 4300 Goodfellow Boulevard, Saint Louis, Saint Louis County, Missouri. This combined Preliminary Assessment/Site Inspection (PA/SI) Report was developed in accordance with the Work Plan (WP) dated March 19, 2003 (Reference 1).

In accordance with the WP, SCS conducted several field investigations to complete this PA/SI Report. The following US Environmental Protection Agency (EPA) guidance documents were used to complete this report:

- *Guidance for performing Preliminary Assessments Under CERCLA*, EPA/540/G-91/013, September 1991 (Reference 2).
- *Guidance for performing Site Inspections under the Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA), EPA/540-R-92-021, Interim Final, September 1992 (Reference 3).
- *Improving Site Assessments: Combined PA/SI Assessments*, Office of Solid Waste and Energy Response (OSWER) Directive 9375.2-10FS, October 1999 (Reference 4).

1.1 PURPOSE OF THE PA/SI

The objectives of this PA/SI include the following:

- Characterize and evaluate significant site sources.
- Characterize and evaluate significant pathways.
- Evaluate releases and targets exposed to contamination.
- Collect sufficient field data to support the Hazard Ranking System (HRS) and completion of an EPA Preliminary Ranking Evaluation Score (PREscore) at a later date, if appropriate.

The Site is located in west Saint Louis as shown in Figure 1. Figure 2 details specific Site features. The Site was investigated due to past history as the former Saint Louis Ordnance Plant (SLOP), a weapons manufacturing facility.

The extensive field investigation results have been integrated into the preliminary assessment throughout the report. They are discussed in detail in Section 4 as part of the evaluation of potential contaminant sources, and sample results that exceeded regulatory threshold values are then integrated into the each pathway discussion section.

1.2 SCOPE OF THE SI

The final WP documents (Field Sampling and Analysis Plan (SAP), Site Health and Safety Plan (HASP), and Quality Assurance Project Plan (QAPP) for the SI were submitted to GSA in March 2003. Field investigation activities were conducted from April 2003 until December 2006. The scope of Site activities included the following:

- Initial site visit and subsequent site inspections.
- Soil boring and sample collection.
- Groundwater sample collection.
- Collection of wipe samples.
- Collection of sump water and sediment samples.
- Collection of tunnel water and sediment samples.
- Collection of storm sewer inlet sediment samples.
- Sampling of various waste trenches, vaults, and pits related to Site historical use.
- Indoor ambient air monitoring.

Background soil samples were collected at St. Vincent Park (approximately two miles west of the Site); the 89th Army Reserve Center (immediately west of Goodfellow Boulevard); Schnucks Plaza (approximately one mile southeast of the Site); and from a vacant lot near the intersection of Clara Avenue and Hebert Street (approximately half a mile south of the Site). Figure 3 shows the locations of collected background soil samples, and Table 1 details the results of the laboratory analysis of the samples.

Laboratory analyses of soil, sediment, water, and wipe, samples included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH), metals, and explosives. Laboratory analyses of ambient air samples were also completed for particulate lead, particulate mercury, and mercury vapor quantification. Soil, sediment, water, and wipe samples were collected and sent to Severn Trent Laboratories (STL) in Chicago, Illinois for laboratory analysis. Air samples were sent to Assay Technology AT Labs in Boardman, Ohio for quantification.

1.3 EVALUATION OF ANALYTICAL DATA

This section includes discussions of the data quality review and the application of regulatory target levels in the evaluation of the data.

1.3.1 Data Quality Review

Data quality documentation provided by Severn Trent Laboratories was reviewed for conformance with guidelines established in *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review*, 1999, and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, 2004. Since the data packages were not complete CLP packages, the following elements were reviewed: holding times, calibration verification, blanks, laboratory control samples (LCS) and laboratory control duplicates (LCD), and matrix spike (MS) and matrix spike duplicates (MSD). On the

basis of this review, the overall quality of the data relative to the contaminants of concerns was acceptable, and laboratory qualification of the data was accepted. A few specific data quality issues are discussed below:

- The LCS/LCD percent recoveries and the relative percent differences were outside control limits for many of the explosive wipe samples in several of the data packages. There is no sample volume to re-extract on wipe samples, so the LCS/LCD results could not be corrected. Most of the compounds were only slightly outside control limits and/or were above the control limits. Three exceptions are particularly low recoveries noted for 2,4,6 trinitrotoluene (TNT), 1,3,5 trinitrobenzene (TNB), and tertyl in one or more of the following data packages: 211929, 219204, 211976, and 21964. Of these compounds, TNB and TNT are potential compounds of concern at the site that were detected in a number of wipe and sediment/soil samples. However, since the wipe samples were used for screening purposes (refer to Section 1.3.2), data were not further qualified on the basis of the wipe sample explosive LCS/LCD results. Detected concentrations of TNT and TNB in these samples are assumed to be estimated low.

- LCS percent recoveries were outside control limits for a few analytes and compounds in various data packages. However, the only contaminants of concern affected were Aroclor 1260 in data package 223259 and naphthalene in data package 249132. Since Aroclor 1260 recovery was slightly higher than the upper control limit, detected concentrations in the associated samples are assumed estimated high. Naphthalene recovery was below the control limit. It was not detected in the associated samples, but may be present.

- MS/MSD recoveries were outside control limits for a selected analytes and compounds in various data packages. However, with the exception of the explosive wipe samples discussed above, LCS/LCD results for the analytes and compounds of concern in these packages were generally within control limits. Two exceptions were Aroclor 1260 in data package 223259 and naphthalene in data package 249132, as discussed above. Data were not further qualified on the basis of the MS/MSD results.

- A few analytes and compounds were detected in method blanks in various data packages. However, the majority of these were either detected below the reporting limit in the blank or also detected in the samples at more than ten times the concentration detected in the blank, so data were not further qualified as a result. Copper was detected in the method blank for data package 223220, and the results in three samples in this package that were below ten times the blank concentration are considered non-detect.

- Some metal serial dilutions were outside control limits, but these were not considered significant, and data were not further qualified as a result.

- The holding time was exceeded for the mercury analysis on one sample (104EPAINT). The concentration of mercury detected in the sample is considered estimated low.

- Some surrogate recoveries in selected samples for SVOC and PCB analyses were outside control limits. A few of these were the result of sample dilution. Data were not further qualified as the result of the surrogate recoveries.

1.3.2 Regulatory Target Levels

Because of the significant amount of data to be evaluated, regulatory target levels were used in reviewing the data in Section 4, in order to identify analytes and concentrations warranting further discussion under each pathway. The majority of the guidelines used in determining significant contamination levels for analytical data in various media are found in the "Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance" established by the Missouri Department of Natural Resources (MDNR) in June 2006 (Reference 5).

With the exception of Building 104E, which is used as a child care center, the buildings on the complex are primarily utilized for offices, with some storage, maintenance, and computer lab areas. Therefore, on the basis of current use, occupation, and zoning of the property, shallow soil, sediment, and subsurface soil sample analytical results (with the exception of those in the vicinity of Building 104E) were compared to Table B-7 "Tier 1 Risk-Based Target Levels for Non-Residential Land Use-Soil Type 3 (Clayey Soil)" and Table B-10 "Tier 1 Risk-Based Target Levels for Construction Worker-Soil Type 3 (Clayey Soil)" for combined ingestion, inhalation, and dermal contact. Current or future workers on the property or construction workers are considered to be the populations most likely to be exposed to these media.

Building 104E shallow soil, sediment, and subsurface soil samples were compared to Table B-4 "Tier 1 Risk-Based Target Levels for Residential Land Use-Soil Type 3 (Clayey Soil)" for combined ingestion, inhalation, and dermal contact. This scenario was selected as a more conservative evaluation to use for potential exposure of children.

Tunnel water and groundwater sample analytical results from all areas were compared with Table B-1 "Lowest Default Target Levels-All Soil Types and All Pathways" and Table B-4 "Tier 1 Risk-Based Target Levels for Residential Land Use-Soil Type 3 (Clayey Soil), because of the potential for off-site migration of contaminants in these media.

Wipe sample and paint chip samples from all areas were compared to U.S. Department of Housing and Urban Development (HUD) published threshold values defining lead-based paint and Federal Toxic Substance Control Act (TSCA) polychlorinated biphenyl (PCB) threshold levels for high density and low density populations. The explosive samples were used as a screening tool. In the absence of other regulatory threshold values, wipe and paint chip sample analyses for other constituents were compared to MRBCA non-residential land use and construction worker clayey soil target levels for all areas except Building 104E. Building 104E samples were compared to the previously identified residential standards.

All air monitoring results were compared to Occupational Health and Safety Act (OSHA) 8-hour permissible exposure limits (PELs).

2.0 SITE DESCRIPTION

According to the January 24, 2002 document *Phase I Environmental Site Assessment, Federal Center, 4300 Goodfellow Boulevard, St. Louis, MO 63120*, the Site consists of an irregular shaped parcel approximately 1,400 feet wide on the south side, approximately 2,100 feet wide on the east, approximately 1,700 feet wide on the north, and approximately 2,100 feet wide on the west side (Reference 6).

2.1 LOCATION

The Site is located on a portion of the former SLOP near the western boundary of the city limits of Saint Louis, Missouri as shown in Figure 2. The partially inactive facility lies approximately three miles west of the Mississippi River and a quarter mile south of the intersection of Interstate 70 and Goodfellow Boulevard. The Site address is 4300 North Goodfellow Boulevard, Saint Louis, Missouri 63120. The Site is located in Township 46 North, Range 7 East. The latitude and longitude of the southwest corner of the Site are approximately 38 degrees 41 minutes 21.768 seconds North, and 90 degrees 16 minutes 11.496 seconds West, respectively. The elevation at that point is approximately 572 feet above sea level. The Site is bordered by the former Saint Louis Army Ammunition Plant (SLAAP) on the north; by Mc Nair Street on the east; by Edelle Avenue on the south; and by Goodfellow Boulevard on the west. The 89th Regional Readiness Command (RRC) occupies property to the west of Goodfellow Boulevard, which was also part of the former SLOP. Currently, the primary uses of surrounding properties appear to be for commercial and light industrial purposes.

2.2 CURRENT SITE USE

The Site is located on an irregularly shaped parcel, covering 63.77 acres. The Site has twenty-four buildings, some with basement and sub-basement levels; tunnels for service utilities; and a combined storm water and sanitary sewer collection system. Currently, the Site is owned by the GSA.

The following provides building descriptions and current use for the Site.

- Building 101 – Building 101 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry exterior walls, and a flat tar and rock roof system. The building also contains a full basement and partial sub-basement level. Building 101 was unoccupied at the time of this investigation.

- Building 102 (Sections A, B, and C) – Building 102 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and three freight elevators servicing the main floor levels. Both floors of Building 102 have been converted for use as general office space. Building 102 was unoccupied at the time of this investigation.

- Building 102D – Building 102D is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof

system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. The main floor of the building was most recently utilized by the Department of Defense (DOD) for a photo processing laboratory. The second floor of the building has been converted for use as general office space. Building 102D was unoccupied at the time of this investigation.

- Building 102E – Building 102E is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. Both floors of Building 102E have been converted for use as general office space. The main floor is occupied by the Gateway Metro Credit Union, GSA-Fleet Management/Motor Pool, and a United States Postal Service (USPS) Satellite Office. The second floor of the building was unoccupied.

- Building 103 (Sections A, B, and C) – Building 103 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and three freight elevators servicing the main floor levels. Both floors of Building 103 have been converted for use as general office space. The main floors of the building were occupied by CompuVault, Defense Info. Systems Agency (DISA), Defense Enterprise Computing Center (DECC), MCI-Telecommunications-Alternate Network Operations Center, TechGuard Services, The Newberry Group, and United States Department of Agriculture (USDA) Farm Services Agency (FSA).

- Building 103D – Building 103D is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. Building 103D is occupied by the Public Health Service and is utilized as a health clinic.

- Building 103E – Building 103E is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. Both floors of Building 103E have been converted for use as general office space and were unoccupied.

- Building 103F – Building 103F (previously designated Building 112) is a one-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has an unfinished basement level. Building 103F is utilized by Sodexho as a kitchen and cafeteria serving employees at the Site.

- Building 104 (Sections A, B, C, and D) – Building 104 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and four freight elevators servicing the main floor levels. Both floors of Building 104 are used as general office space and recent remodeling has occurred. The building is

utilized by Snacks and More, USDA Rural Development, and the Department of Veterans Affairs (VA) Records Management Center.

- Building 104E – Building 104E is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. The main floor of the building is utilized by Uncle Sam's Kids, a child care center. The second floor of the building has been converted for use as general office space and was occupied by the GSA-Federal Center Property Management Office.

- Building 104F – Building 104F is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. Both floors of Building 104F have been converted for use as general office space and were occupied by Human Resources Select Services, Inc. and the USDA Office of Inspector General.

- Building 105 (Sections A, B, C, and D) – Building 105 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and four freight elevators servicing the main floor levels. Both floors of Building 105 are used as general office space and a recent remodeling is in the final stages of completion on the northern portion of the building. The southern portion of the building is utilized by the USDA Food Safety and Inspection Service (FSIS).

- Building 105E – Building 105E is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. The main floors of the building have been converted for use as general office space and were occupied by the Army Audit Agency (AAA).

- Building 105F – Building 105F is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a utility crawl space level and one freight elevator servicing the main floor levels. The main floor of building 105F was utilized as a cafeteria; however, it was not in service. The second floor of the building was utilized as general office space. No tenants were located on the second floor of Building 105F.

- Building 105L – Building 105L is a one-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and an arched tar and rubber membrane roof system. The building does not have a basement or utility crawl space level. At the time of this investigation the building was utilized as warehouse space.

- Building 106 – Building 106 is a one-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. This building is of more recent construction than other buildings at the Site and does not have a basement or utility crawl space level. The building serves as the

main gate/guard house and is located adjacent to Goodfellow Boulevard. The building is occupied by Ree's Contract Guard. It should be noted that the Site does have a secondary manned entrance off of Mc Nair Street. There is a small building located at this entrance; however, it does not have a building number. This building is also staffed by Ree's Contract Guard.

- Building 107 – Building 107 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has partial basement and a utility crawl space. The building is utilized as general office space and was occupied by GSA-Telecommunications, GSA-Federal Center Property Management Center, GSA-Technical Support Branch, GSA-Workforce and Technology Development Division, and the Department of Homeland Security (DHS).

- Building 108A – Building 108A is a one-story structure constructed of structural steel columns, a cast-in-place concrete floor, masonry walls, and a flat tar and rock roof system. The building does have a utility crawl space level and access is provided by a series of man ways set into the main floor slab. Building 108A serves as the south primary electrical substation and contains two large oil-filled transformers and electrical switchgear. The electrical transformers are located within concrete secondary containment structures.

- Building 108B – Building 108B is a one-story structure constructed of structural steel columns, a cast-in-place concrete floor, masonry walls, and a flat tar and rock roof system. The building does have a utility crawl space level and access is provided by a series of man ways set into the main floor slab. Building 108B serves as the north primary electrical substation and contains two large oil-filled transformers and electrical switchgear. The electrical transformers are located within concrete secondary containment structures.

- Building 110 – Building 110 is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building also has a full basement level, and all floors are serviced by two freight elevators. The building is utilized as general office and warehouse space and was occupied by the 110 Club, the Defense Finance and Accounting Service (DFAS), and the United States Army Security Assistance Command (USASAC).

- Building 115 – Building 115 is a one-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a small basement level mechanical equipment room and utility crawl space. Building 115 was occupied by Public Health Service and is utilized as a fitness center by employees at the Site.

- Building 122B – Building 122B is a two-story structure constructed of structural steel columns, cast-in-place concrete floors, masonry walls, and a flat tar and rock roof system. The building has a small basement level mechanical equipment room and utility crawl space on the east end of the building. The west end of the building in an open work bay area with two large overhead doors. Building 122B is utilized as

office and maintenance area and is occupied by Bob Holtz Services (mechanical maintenance) and Eastco (janitorial services).

- Building 208B – Building 208B is a one-story structure constructed of structural steel columns, a cast-in-place concrete floor, masonry walls, and a flat tar and rock roof system. The building does have a utility crawl space level and access is provided by a series of man ways set into the main floor slab. Building 208B is used as office and warehouse space by United ANCO.

2.2.1 Topography

On the basis of the United States Geological Survey (USGS) 7.5-Minute Series Clayton, Missouri Topographic Quadrangle, the Site is located on a relatively flat terrace with elevation ranging from approximately 550 feet to 580 feet above sea level, 1927 North American Datum (NAD27) (Reference 7). From Goodfellow Boulevard, the southern portion of the site slopes in a south to east direction. The northern portion of the site slopes in a northeast to east direction from Goodfellow Boulevard.

The Site is located on the northern flank of the Ozark Plateau in the Dissected Till Plains Physiographic Province (Reference 8). The topography of the Dissected Till Plains Province is gently rolling hills with elevations ranging from 500 to 700 feet above sea level.

2.2.2 Drainage

Drainage of the site is generally towards the Mississippi River. The river is located to the north and east of the site. The majority (approximately 85 percent) of the ground surface at the Site is covered by asphalt, concrete, buildings, or other impervious materials. The rest of the ground surface is covered with grass and native vegetation. The site terrain slopes toward the south to northeast, and any surface water that leaves the site will eventually drain through the combined storm/sanitary sewers towards a wastewater treatment facility before discharging into the Mississippi River.

2.2.3 Climate

The consistent pattern of climate in Saint Louis County consists of cold winters and long, hot summers (Reference 9). The moist air from the Gulf of Mexico interacts with drier continental air in the spring and early summer producing heavy rains. Thunderstorms occur on about 50 days each year, with most occurring in the summer. The prevailing wind is from the south. Saint Louis, Missouri has an average annual temperature of 58°F with an average morning relative humidity around 80%. Monthly average temperatures range from 31°F in January to 89°F in July. The total annual precipitation is approximately 39 inches. Historically, the least amount of average precipitation is received during the month of January (2.2 inches), and the most amount of average precipitation is received in May (4.2 inches). The average seasonal snowfall is approximately 19 inches. (References (10 and 11).

2.2.4 Soils

The surface soils at the Site are identified as Urban Land-Upland with 0 to 5 percent slopes. The Urban Land designation is given to areas where asphalt and concrete materials cover over 85 percent of the Site (Reference 12). The ground surface of the Site is covered by fill dirt, streets, parking lots, buildings, and other structures. These objects obscure and their construction has altered the soils such that the identification of the series in not feasible. On the basis of subsurface investigations at the Site, soil below the fill is predominantly silty clay. Additional information pertaining to Site soils can be found in Section 5.0.

2.2.5 Demographic Characteristics

As of November 2006, 1,083 workers were employed at the Site (Reference 13). The worker population consists of 977 tenant employees and 106 contract employees. Additionally, a day care center (Uncle Sam's Kids) is located within Building 104E (Reference 14). The following table identifies the number of tenant and contract employees in each building at the Site.

Building Number	Number of Tenant Employees	Number of Contract Employees
101	None	None
102	None	None
102D	None	None
102E	4	None
103	201	None
103D	5	None
103E	None	None
103F	None	4
104	276	2
104E	22	48**
104F	10	None
105	68	None
105E	33	None
105F	None	None
105L	None	None
106	3	None
107	24	None
108A	None	None
108B	None	None
110	314	2
115	2	None
122	None	50
208B	15***	None

* includes small building located at secondary entrance off of Mc Nair Street.
** includes children and day care center employees.
*** number of employees is estimated.

Approximately 256,078 persons live with a 4-mile radius of the Site boundary as follows (Reference 15):

- 2,072 persons reside within ¼ mile of the Site.
- 5,076 persons reside between ¼ and ½ mile of the Site.
- 20,979 persons reside between ½ and 1 mile of the Site.
- 62,835 persons reside between 1 and 2 miles of the Site.
- 79,598 persons reside between 2 and 3 miles of the Site.
- 85,518 persons reside between 3 and 4 miles of the Site.

2.3 OPERATIONAL HISTORY

Construction of the SLOP began in January 1941 and was completed in May 1942. The ordnance plant was the largest small-arms ammunition installation in the world and embodied three operating divisions. The facility, a Government-Owned/Contractor Operated (GOCO) plant, produced small arms ammunition (.30 caliber and .50 caliber) and components for the 105-mm shells. Plant No. 1 was located on the east side of Goodfellow Boulevard. During World War II buildings 102, 103, 104, and 105 of Plant No. 1 were operated for the production of small arms ammunition. Buildings 102 and 103 housed the production of .30 caliber ammunition, while Buildings 104 and 105 housed the production of .50 caliber ammunition.

The small arms ammunition production within Buildings 102, 103, 104, and 105 consisted of brass cartridge annealing and shaping, powder and primer packing, lead core insertion, and sorting, packaging, and shipping. Powder canning and storage buildings (Buildings 102F, 102H, 103F, 103H, 104G, 104J, 105G, and 105J) sat inside blast proof concrete bunkers (102G, 103G, 104H and 105H) located south of the main production buildings. Powder was moved from the bunkers and brought into Buildings 102D, 103D, 104E, and 105E for packing. Primer was brought into Buildings 102E, 103E, 140F, and 105F for packing. Cartridge annealing and shaping took place in all production buildings, as did sorting, packaging, and shipping of the completed cartridges.

Small buildings (102J, 102K, 103J, 103K, 104M, 104N, 105M, and 105N) adjacent to production buildings were used for storage of oils and lacquer. Oils and lacquer were transferred from storage areas through a series of mechanical piping into the main production buildings. Based on historical documentation and original construction drawings, the oil is believed to have been utilized during shaping and trimming operations and lacquer was utilized as a waterproofing agent applied to completed cartridges.

Current Building 103F (previously designated as Building 112) was originally constructed to shape and form lead cores for munitions. Numerous slug forming machines, five lead presses, and a remelt room operated on the first floor of the building. Documentation indicates lead was melted in this building through at least February 1957. The building was used for storage following decommissioning and is currently utilized as a kitchen and cafeteria.

Steam was generated for heating purposes in the Boiler House (Building 111) and was delivered to buildings across the Site through a series of underground utility tunnels. Natural gas is believed to have been the only fuel source used to fire the boiler system. The boiler house was

decommissioned and removed from the site in approximately 1970. Currently, the complex is heated with smaller roof-mounted boiler units operated with natural gas.

Electrical power enters the Site at two primary locations on the north and south sides of the Site. High voltage electricity (33 kv) enters complex through primary transformer buildings (Buildings 108A and 108B), where it is distributed to various transformer vaults in the main buildings. Documentation indicates that the primary transformers have been replaced and that the fluid in all secondary transformers has been replaced with non-PCB containing oil. However, it is believed that the remainder of the electrical distribution system at the site is largely unchanged.

Cartridge manufacturing ended at Plant No. 1 at the close of World War II. The DOD converted the Site in the 1960's and 1970's to a Federal Office Complex under the management of GSA. The DOD reportedly spent in excess of $50 million dollars in demolition, grading, disposal, and remodeling costs. The four primary munitions manufacturing buildings (102, 103, 104, and 105) were decommissioned and converted into office and warehouse space. The grounds surrounding the buildings were graded and converted into parking and greenspace. The powder bunkers were removed during a redevelopment project in 1980. Paved parking and access roads exist in the areas where the bunkers were located. The Site has been utilized for over 20 years as a federal office complex whose primary tenants have included GSA, USDA, and the DOD.

2.4 PREVIOUS INVESTIGATIONS

A list and summary of the previous investigation documents reviewed in the preparation of this PA/SI Report are presented below.

Memorandum to Benjamin H. Friedman, Assistant Inspector General for Auditing, to John B. Platt, Regional Administrator, dated March 3, 1986 and Stewart Industrial Hygiene Analytical Data dated (Reference 16).

- Four wipe samples collected within transformer vaults in Buildings 102 through 105 contained PCB concentrations ranging from 13,000 micrograms (µg)/wipe to 26,000 µg/wipe.

- A wipe sample collected within Substation 108B was identified at a concentration of 47,000 µg/wipe for PCBs.

- A soil sample was collected from an area near the transformer room and contained PCBs at a concentration of 12 µg/gram (gm). A water sample was collected from a pit within Substation 108B and was identified as containing PCBs at a concentration of 210,000 µg/liter (L).

GSA Routing Slip Form 14 dated 4/17/1989 with attached PCB transformer Status spreadsheet (Reference 17).

- A total of 80 transformers have been "retrofilled" at the 4300 Goodfellow complex. Certificates of disposal have been received for 66 transformers and certificates for the remaining 14 are pending.

Industrial Testing Laboratories, Inc. analytical report dated April 9, 1990 addressed to GSA (Reference 18).

- Aroclor 1248 was not identified in two wood blocks according to the laboratory analytical report.

- The wood blocks were collected from the main floor and second floor of Building 104 near columns B-9 and J-40.

Letter and Analytical Data dated May 23, 1990 prepared by Allan M. Siegel, Director, representing Industrial Testing Laboratories, Inc. to GSA (Reference 19).

- Laboratory analysis of wood block flooring (two samples) submitted for PCBs identified Aroclor 1248 at concentrations of 71 and 2,200 ppm.

Archives Search Report St. Louis Ordnance Plant and St. Louis Ordnance Core Plant dated December, 1993 prepared by Defense Environmental Restoration Program for Formerly Used Defense Sites (Reference 20).

- OEW and CWM activity occurred on most of the properties comprising the SLOP and SLOP Core Plant. Interviews conducted during the investigation revealed no information pertaining to OEW/CWM contamination.

- More than 85 percent of the SLOP is covered by buildings, asphalt, concrete, or other impervious materials. Underlying glacial till, outwash and loess and alluvium composed of permeable sands and gravels is water-yielding. The glacial sediments and alluvium have an average thickness of 100 feet.

Letter and Analytical Report dated March 29, 1995 prepared by Westinghouse Electric Corporation (Reference 21).

- Laboratory analytical results indicate the PCB concentration in transformer oil is 11 parts per million (ppm) Aroclor 1260 in the east transformer of 108A; is 5 ppm Aroclor 1248 in the west transformer of 108A; is10 ppm Aroclor 1260 in the east transformer of 108B; and is 8 ppm Aroclor 1260 in the west transformer of 108B.

- Laboratory analytical results indicate PCB concentration in the soil is 2 ppm Aroclor 1260 near the east end of 108A; is 3 ppm Aroclor 1260 near the west end of 108A; is 45 ppm Aroclor 1254 near the east end of 108B; and is 14 ppm Aroclor 1260 near the west end of 108B.

GSA Procurement Request and Contract Specification dated September 18, 1995 prepared by Monte R. Findley, Field Office Manager (Reference 22).

- Two 7,500 KVA transformers within Substation 108B are to be drained of free flowing liquid PCB containing oil. Approximately 3,050 gallons of oil are contained within each transformer with PCB concentrations ranging from 95 ppm to 150 ppm.

Metropolitan St. Louis Sewer District Industrial Facility Inspection Report dated June 2, 1998 completed by Mike Crocker, Property Manager – Federal Center Director (Reference 23).

- Two underground storage tanks (USTs) containing diesel fuel are located at the facility. The tanks have capacities of 400 and 8,000 gallons and are reportedly registered with MDNR. No leaks have been reported associated with these tanks.

- One above ground storage tank containing gasoline is located at the facility. The tank has a capacity of 250 gallons and is not protected with secondary containment.

SLOP Property Owner Questionnaire dated June 3, 1999 prepared by Michael P. Crocker, Director Federal Center PMC, prepared for the U.S. Army Corps of Engineers (Reference 24).

- The Federal Center is located on plot plan parcels 11, 12, 13, and 14. The Site was operated by Olin Corp. and they manufactured ammunition from 1942 until the 1960's. In the late 1960's and 1970's the Site was completely renovated into office space.

- A photo lab and motor pool operation existed in two small annex buildings. These operations no longer exist and have been renovated into office space.

- A 20,000 UST is located adjacent to the north of Building 103 (within parcel 11) and contains diesel fuel. The tank supports a UPS system and was installed within the last year.

Preliminary Assessment/Site Inspection Report Former St. Louis Ordnance Plant dated June, 2001 prepared by TapanAm Associates, Inc (Reference 25).

- A total of sixteen temporary piezometers and five monitoring wells were installed on and near Hazardous Area Chemical No. 2 (also called the Hanley area) at the former SLOP. The area of investigation is located adjacent to the west side of Goodfellow Boulevard and/or northwest of the Site.

- Free groundwater was encountered at depths ranging from 21 to 26 feet below ground surface (bgs). Potentiometric water level data collected from temporary piezometers was plotted in Surfer 7.0, which indicated general flow direction was towards the east and northeast.

GSA Routing Slip Form 14 dated July 30, 2001 with attached report review summary regarding contamination from munitions production at the SLOP (Reference 26).

- The 1993 USATHMA report concludes that based on interviews with current property owners and a surface site investigation there is no evidence suggesting that any OEW or CWM contamination remains on the Federal Center property. GSA has inferred from various statements found in the document that the focus of this investigation was for live ordnance and that it cannot be assumed that chemical contamination does not exist in GSA buildings.

- Extensive renovation of buildings previously used in the production of munitions has occurred; however, the exact nature of production in these buildings is not stated.

- Due to renovation efforts since the munitions production in buildings used by GSA ceased, GSA believes it is not likely that occupants of these buildings are exposed to dangerous levels of chemical contamination that may exist. However, it is recommended that sampling in these buildings be undertaken to confirm this assumption.

Phase I Environmental Site Assessment 4300 Goodfellow Boulevard, St. Louis, Missouri dated January 24, 2002 prepared by Marc Enviro Services LLC (Reference 6).

- Processing issues associated with manufacturing of ammunition at the Site include copper, lead, steel, zinc, brass, solvents, acid baths, oil lubrication of cartridges, lubricant cooling in cutting processes, petroleum hydrocarbons, PCBs, lacquer sealant, primers, and propellants.

- Powder storage facilities located south of Buildings 102 through 105 were removed in the late 1970s during a major renovation of the Site.

- The combined sanitary/storm sewer system was constructed in the late 1940s and contains brick lined manholes.

- Building 112 (currently identified as Building 103F) contained a lead shop which was used to re-melt previously used or discarded lead in order to recycle the material.

- Lead was delivered to the lead shop in 90-pound cylinders, where it was pressed and extruded to form slender wires. Further cutting and forming was done to create the slugs. Scrap called “weep” was created in the extrusion press and the swaging machine. The weep was re-melted in the lead shop to form cylinders for re-use.

- Buildings 108A and 108B were constructed with earth lined sumps. Drawings indicate a 4-inch oil drain line terminated in the transformer room sumps. Liquid and floating materials were observed in the sumps in 108A.

- Two USTs were installed in 1998 and appear to have state of the art environmental protection built into the containment and monitoring systems. The capacity of the tanks was reported to be 20,000 gallons and 600 gallons.

- Three USTs have been removed from the Site. No further action is required by MDNR pertaining to the 10,000 gallon, 8,000 gallon, and 550 gallon USTs removed from the site.

- Drawing No.: GEN-E-4044-Field Checked 7/25/1953 indicates extensive use of transite pipe for underground electrical conduit between buildings 101, 102, 103, 110, and 112. The lines led to pull boxes with depth typically 3 to 4 feet bgs.

Project Information Retrieval System Findings Report April 27, 2002, U.S. Army Corps of Engineers, Rock Island District and U.S. Army Engineering Support Center, Huntsville (Reference 27).

- Prior to construction of Plant No. 1, in 1941, the Site was owned by General Electric. The 329-acre ordnance plant property was bordered by residential neighborhoods.

- The main facility was divided into five areas and the Core Plant. Areas No. 1 and No. 5 were used for small arms ammunition production, and the Federal Center is located within former Plant No. 1.

- Conversations with GSA officials revealed that an underground tunnel system exists and that casings have been discovered in these tunnels.

- A site inspection conducted on November 23, 1993 found that manufacturing buildings 102 through 105 were used by GSA as office buildings. All powder storage bunkers on GSA property were removed and replaced by paved parking and streets.

- A RAC 5 score was derived for the St. Louis Ordnance Plant based on the archival search, site visit, and interviews. It was recommended that Huntsville conduct no further action on the Formerly Used Defense Site.

Mold Contamination Inspection Report dated July 16, 2002 prepared by Professional Abatement and Remediation Technologies (Reference 28).

- A preliminary survey of mold contamination within Building 105 was completed to identify the most apparent sources of water infiltration and moisture build-up within the building and to determine the extent of residual biological contamination.

- Several areas were identified as containing significant mold colonies and additional problem areas were observed as having the potential for microbial growth.

- Remediation of the problem areas is a viable solution and can be completed with out contaminating additional areas of the building.

St. Louis Ordnance Plant Site Operational History Report dated April 28, 2003 prepared by Dynamac Corporation (Reference 29).

- Original SLOP facilities placed in operation and the first expansion was approximately 86 percent complete on December 1, 1941.

- Expansion of SLOP continued through February 3, 1942 and peak production occurred in January 1943.

- SLOP was designated the St. Louis Administration Center (SLAC), and was used for storage and administration of military records in February 1945.

- In preparation of the decommissioning of Weldon Spring, 100,076 pounds (lbs.) of lead were removed and shipped to SLOP. A total of 100,076 lbs. of lead from Weldon Spring was re-melted in Building 112 (currently identified at Building 103F) at SLOP in January and February 1957. After re-melting, it was moved to a salvage area and sold for scrap.

- A fire at SLOP destroyed the north half of Building 105L on June 2, 1964. The warehouse building was being leased by Continental Machine Corp., Rellim International Corp., and the Good Taste Cookie Company.

Small Arms Firing Range (SAFR) Remediation Report dated March 18, 2003 prepared by SCS Engineers (Reference 30).

- During August and September, 2002 SCS Engineers remediated a SAFR located in the basement level of Building 105.

- Approximately 36,000 square feet of the basement was under containment during the remediation of the SAFR. A total of 30 cubic yards of hazardous waste including bullet pit sand, water rinsate, rinsate filters, and miscellaneous material were transported to Peoria Disposal Company in Peoria, Illinois.

- Post remediation confirmation wipe sampling was completed on selected surfaces in and around the former range. Results indicated the remediation was successful in mitigating the presence of lead in the area of the former SAFR.

3.0 FIELD ACTIVITIES

During performance of the combined PA/SI, several field investigations were conducted to address the areas of environmental concern. The activities conducted during these field investigations included the collection of:

- Wipe samples
- Paint chip samples
- Shallow soil and sediment samples
- Subsurface soil samples
- Groundwater samples
- Sump and tunnel water samples
- Indoor, ambient air samples

In general, exterior surface soil samples were not collected based on the following:

- Knowledge of historical processes and where they were located inside the buildings.
- Lack of soil exposure at the site, which is paved or covered with vegetation in almost all areas.
- Current site occupants, which are predominantly workers.
- Previous sampling at the site, including surface soil sampling for lead around the child care center in Building 104E.

Some sample collection employed intrusive sampling techniques, such as concrete coring and process pipe cutting, to access sample locations. Collection of deep soil and groundwater samples was completed utilizing direct push soil probing technology. Field sampling activities and laboratory sample analysis were performed in accordance with procedures defined in the WP, dated March 19, 2002, unless otherwise noted. Individual sample locations and analyses are described in more detail (as associated with specific buildings/contaminant sources) in Section 4.

3.1 WIPE SAMPLING

During the combined PA/SI, wipe samples were collected inside buildings and the utility tunnel system for laboratory analysis. Wipe sample locations were selected at random within each defined area. Defined areas were established based on potential exposure hazard (occupied buildings), changes in surface color or texture, proximity to process areas, and/or spatial considerations. Wipe samples were collected using American Society for Testing & Materials (ASTM), Occupational Safety and Health Administration (OSHA), and HUD protocols. All wipe samples were collected from an area 100 square centimeters (cm^2) using cut gauze pads containing appropriate solvent/preservatives (PCBs-hexane, explosives-acetonitrile, metals-nitric acid or deionized water, etc.).

It should be noted that wipe samples collected on or before July 24, 2003 for metals analysis, including lead, utilized dilute concentrations of nitric acid (5% to 10% by volume) as a preservative. Wipe samples collected after July 24, 2003 for lead analysis utilized deionized water to lift and collect surface particulate matter. A review of analytical data indicates that 57

of 62 wipe samples collected with nitric acid contained concentrations of lead in excess of MRBCA post-abatement non-residential standards of 200 micrograms per square foot (µg/ft^2) for floor surfaces (or approximately 0.021 mg/Wipe). Conversely 18 of 26 wipe samples collected with deionized water contained concentrations of lead in excess of MRBCA post-remediation non-residential standards. It is unknown whether the nitric acid acted to soften lead-based paint which presented elevated concentrations in the wipe samples or if the surfaces sampled on and before July 24, 2003 simply contained particulate with higher concentrations of lead.

3.1.1 Logging of Sample Parameters

All sample locations were documented in the field log and pictures of the sample locations were taken.

3.1.2 Wipe Sample Collection

Each wipe sample was collected from a predetermined location. Wipe samples were collected from exposed walls, concrete floors, and from exposed steel ceiling girders depending on sample location. All wipe samples were collected by removing the pre-soaked gauze pad from the sample container and wiping an area of approximately 100 cm^2. Upon collection, wipe samples were immediately stored in the same laboratory-supplied jars for analysis. Once capped and sealed, sample containers were placed on ice in a cooler, and held until the end of the day of field investigation. At the end of the day of field investigation, the sample containers were shipped on ice under a proper chain-of-custody via overnight express delivery service to STL in University Park, Illinois.

3.1.3 Chemical Analysis

Wipe samples were analyzed by STL for pre-selected analyses. Analyses were based on potential contaminants of concern associated with known building processes and historical review.

3.2 PAINT CHIP SAMPLING

Each paint chip sample was collected from a predetermined location. Paint chip samples were collected from exposed walls; structural steel beams; and from walls and framing within and around freight elevators. All paint chip samples were collected with stainless steel sampling equipment. The sample was immediately stored in clean, laboratory-supplied jars for analysis. Once capped and sealed, the sample container was placed on ice in a cooler and held until the end of the day of field investigation. At the end of the day of field investigation, the sample container was shipped on ice under a proper chain-of-custody via overnight express delivery service to STL in University Park, Illinois.

3.2.1 Chemical Analysis

Paint chip samples were analyzed by STL for total lead and total mercury by SW-846 Method 6010B and 7471A. Analyses were based on potential contaminants of concern associated with known building processes and historical review.

3.3 SHALLOW SOIL AND SEDIMENT SAMPLING

During the combined PA/SI, shallow soil samples were collected from the basement level or crawl space inside the buildings for laboratory analysis. Sediment samples were collected from sumps, pits, collection trenches, and process piping within buildings. Storm sewer inlets and utility tunnels were also sampled at various locations across the complex for laboratory analysis. Shallow soil and sediment sample locations were selected at random within each defined area. Defined areas were established based on proximity to potential hazard exposure, changes in surface color or texture, proximity to process areas, and/or spatial considerations. Some samples were collected at multiple depths to determine the extent of contamination. Depths ranged from near surface to approximately 48-inches bgs.

3.3.1 Logging of Sample Parameters

The materials encountered at each location were classified in the field for each location by an SCS Geologist. The classification procedure included texture descriptions of soils according to the Unified Soil Classification System (USCS). Included in the descriptions are principal and minor soil constituents, moisture content, soil color, plasticity of cohesive soils, gradation of non-cohesive soils, consistency, and other visible features. In addition, unusual odors, discoloration, and other indicators of potential contamination were noted.

3.3.2 Shallow Soil and Sediment Sample Collection

Each shallow soil and sediment sample was collected from a predetermined depth by removing the cover material to expose the sample interval. Soil and sediment samples were collected with stainless steel sampling equipment. Shallow soil and sediment samples were immediately stored in clean, laboratory-supplied jars for analysis. Once capped and sealed, sample containers were placed on ice in a cooler, and held until the end of the day of field investigation. At the end of the day of field investigation, the sample containers were shipped on ice under a proper chain-of-custody via overnight express delivery service to STL in University Park, Illinois.

Samples analyzed for VOCs were collected using SW-846 Method 5035. At each sample location, three containers were filled with 5 grams of soil collected discreetly using an En Core™ sampler. Method 5035 requires that these three containers be placed in sealed bags and shipped overnight to the laboratory for preservation and analysis.

3.3.3 Chemical Analysis

Shallow soil and sediment samples were analyzed by STL for pre-selected analyses determined on the basis of the specific sample location. Analyses were based on potential contaminants of concern associated with known building processes and historical review.

3.4 SUBSURFACE SOIL SAMPLING

Subsurface soil samples were collected using direct-push soil probing technology. Direct-push borings were located around buildings and at former building locations across the Site. Probe locations included areas surrounding existing structures, such as main production buildings and electrical substations. Probe locations also included former powder canning and storage

buildings and areas with former USTs. Figure 5 illustrates the locations of the direct-push soil borings.

Probing was performed by Detech, Inc. (Detech) of Lawrence, Kansas and Below Ground Surface, Inc. (BGS) of Lawrence, Kansas. Detech and BGS performed direct-push soil sampling using a truck-mounted Geoprobe® unit equipped with a pneumatic hammer and hollow, two-inch diameter probe rods. At each location, continuous soil cores were collected using a continuous-barrel sampler two feet in length. Soil cores were removed from the sampler using disposable acetate liners. Subsurface soil cores were collected until the target depth (typically twenty feet bgs) or refusal was reached.

When the acetate liners were removed from the continuous-barrel sampler, a handheld photoionization detector (PID) was used to screen vapors for VOCs in the headspace above the soil core.

3.5 LOGGING OF SUBSURFACE MATERIALS

The materials encountered in the borings were classified in the field for each boring by a SCS geologist. The classification procedure included texture descriptions of soils according to the USCS. Included in the descriptions are principal and minor soil constituents, moisture content, soil color, plasticity of cohesive soils, gradation of non-cohesive soils, consistency, and other visible features. In addition, unusual odors, discoloration, and other indicators of potential contamination were noted.

3.5.1 Subsurface Soil Sample Collection

Discrete soil samples were extracted directly from the acetate liner and continuous-barrel sampler using a clean, decontaminated stainless steel utensil. Upon extraction from the acetate liners, soil samples were immediately stored in clean, laboratory-supplied jars for analysis. Once capped and sealed, sample containers were placed on ice in a cooler, and held until the end of the day of field investigation. At the end of the day of field investigation, the sample containers were shipped on ice under a proper chain-of-custody via overnight express delivery service to STL in University Park, Illinois

Samples analyzed for VOCs samples were collected using SW-846 Method 5035. At each sample location, three containers were filled with 5 grams of soil collected discreetly using an En Core™ sampler. Method 5035 requires that these three containers be placed in sealed bags and shipped overnight to the laboratory for preservation and analysis.

Most soil samples recovered across the Site were of sufficient volume that individual samples were submitted from each location. However direct-push soil sampling recovered insufficient quantities of material suitable for laboratory testing at several locations. Consequently, proportionate sample material from related borings was combined into a single composite sample at these locations. Subsurface soils were composited in three locations. These locations included SB1-SB4 advanced in the area of former Building 111; SB13 and SB14 advanced in the area of former Building 102F; and SB15 and SB16 advanced in the area of Building 102H.

3.5.2 Chemical Analysis

Subsurface soil samples were analyzed by STL for pre-selected analyses. Analyses were based on potential contaminants of concern identified on the basis of known building processes and historical review.

3.6 GROUNDWATER SAMPLING

Groundwater samples were collected from temporary monitoring points that were installed following the completion of subsurface soil borings. The monitoring points consisted of 1-inch polyvinyl chloride (PVC) screen and casing that extended from the base of the bore hole to ground surface level. Screened sections for all monitoring points were ten feet in length and contained a slot width of 0.01-inch. A hydrated bentonite seal was placed in the annulus between the outside of the PVC casing and the inside of the probe hole. Plugs and caps were utilized to secure a watertight seal at the top of each temporary monitoring point. The monitoring points were left in-place for a period not exceeding 60 days. Following the completion of all groundwater sample collection, the screen and casing was pulled from the probe hole and the void was backfilled with hydrated bentonite.

3.6.1 Groundwater Sample Collection

Groundwater samples were collected using disposable polyethylene tubing with a stainless steel check-ball. Upon collection, groundwater water samples were immediately stored in clean, laboratory-supplied jars for analysis. Once capped and sealed, sample containers were placed on ice in a cooler, and held until the end of the day of field investigation. At the end of the day of field investigation, the sample containers were shipped on ice under a proper chain-of-custody via overnight express delivery service to STL in University Park, Illinois.

3.6.2 Chemical Analysis

Groundwater samples were analyzed by STL for pre-selected analyses. Analyses were based on potential contaminants of concern identified on the basis of known building processes and historical review.

3.7 SUMP AND TUNNEL WATER SAMPLING

Sump and tunnel water samples were collected from water sources found inside the basement level building or inside utility tunnel system. Sample collection points included water sources found on tunnel floors and inside sump pits. Sump and tunnel water sample locations were selected at random within each defined area. Defined areas were established based on proximity to potential hazard exposure, changes in surface color or texture, proximity to process areas, and/or spatial considerations.

3.7.1 Logging of Sample Parameters

All sample locations were documented in the field log and pictures of the sample locations were taken.

3.7.2 Tunnel Water Sample Collection

Sump and tunnel water samples were collected using either a decontaminated, polyethylene dipper or decontaminated, polyethylene swing sampler. Upon collection, tunnel water samples were immediately stored in clean, laboratory-supplied jars for analysis. Once capped and sealed, sample containers were placed on ice in a cooler, and held until the end of the day of field investigation. At the end of the day of field investigation, the sample containers were shipped on ice under a proper chain-of-custody via overnight express delivery service to STL in University Park, Illinois.

3.7.3 Chemical Analysis

Sump and tunnel water samples were analyzed by STL for pre-selected analyses. Analyses were based on potential contaminants of concern identified on the basis of known building processes and historical review.

3.8 AIR MONITORING

Air monitoring was performed by NPN Environmental (NPN) of Saint Louis, Missouri. Passive vapor ambient air samples, personnel samples, and ambient air monitoring samples were collected from inside several buildings across the Site

3.8.1 Air Sample Collection

NPN collected the passive vapor ambient air samples on ChemDisk^{TM} gold film media badges over the sample duration. The personnel and ambient air monitoring samples were collected with calibrated pumps on closed-face 37 millimeter (mm) 0.8 micron mixed-cellulose ester (MCE) filter cassettes over the sample duration. Air samples were shipped under a proper chain-of-custody via overnight express delivery service to Assay Technology AT Labs in Boardman, Ohio.

3.8.2 Chemical Analysis

Analysis of ambient air sample were based on potential contaminants of concern identified from wipe, shallow soil, and sediment sample analytical results. Passive vapor ambient air samples were analyzed by Assay Technology AT Labs for mercury vapor by OSHA Method 140. Personnel samples were analyzed for lead by OSHA Method 125. Ambient air monitoring samples were analyzed by Assay Technology AT Labs for particulate mercury by OSHA Method 145 and lead by OSHA Method 125.

4.0 POTENTIAL CONTAMINANT SOURCES

This section identifies the potential contaminant sources at the site by buildings and buildings series based on known historical uses. Information summarized below regarding these potential sources was used in selecting sampling locations and analyses for the SI. The results of SI sampling and analysis in each area are then discussed in the remainder of this section. Data summary tables referenced in this section present detected concentrations of analytes. The complete analytical data are provided in Appendix I (on compact disk).

Based on references previously identified and listed in Section 2.4, the following list identifies potential contaminant sources at the Site.

- Building 101 – Building 101 was utilized for administrative purposes during operation of Plant No. 1. A review of original construction drawings and details indicates that the basement and sub-basement levels of the building contained a mechanical room, battery room, and transformer vault room. Possible contaminant sources include building mechanical equipment, transformers, and batteries. Potential contaminants associated with these possible sources include PCBs and metals (primarily lead). No other potential contaminant sources were identified within Building 101 during the investigation.

- Building 102 – Building 102 (Sections A, B, and C) contained equipment utilized for the production of 0.30 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building 102 consisted of brass cartridge annealing and shaping, powder and primer packing, lead core insertion, sorting, packaging, and shipping. Cartridge manufacturing ended at Plant No. 1 at the close of World War II. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 102 was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 102 has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained four transformer vault rooms; a scrap bailer pit; settling tanks; sumps; and a large amount of process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained the main production areas; a scrap salvage room; a battery storage room; and two annealing laboratories. The second floor of the building contained production areas and a gas mixing equipment room. The crawl space and basement levels still contain four transformer vaults, the majority of the original process piping, a scrap bailer pit, a settling tank and several sumps. Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), batteries, scrap metals, and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 102 during the investigation.

- Building 102D – Building 102D was utilized as a powder loading building in association with production of 0.30 caliber ammunition during operation of Plant Number 1. Powder was brought into Building 102D from former storage buildings 102F and 102H, located to the south of Building 102D. Small arms ammunition production in Building Series 102D consisted of powder charging and powder seating operations. Assembled components were transferred from Building 102D to Building 102 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 102D was utilized for many years as a warehouse space, until the main floor was renovated into a photo laboratory and the second floor was converted to general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 102D has been utilized as a photo development laboratory and general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained a main production area; a powder room; three powder charging rooms; three seating rooms; and three crimping rooms. The second floor of the building contained a production area and a bridge leading from Building 102D to Building 102, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping and also contain piping believed to be associated with operation of the former DOD photo laboratory. Possible contaminant sources include building mechanical equipment; production equipment (including process piping) associated with the production of small arms ammunition; and production equipment (including process piping and chemical feed pumps) associated with operation of the former DOD photo laboratory. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 102D during the investigation.

- Building 102E – Primer insertion was completed in Building 102E, in association with production of 0.30 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building Series 102E consisted of primer insertion operations. Assembled components were transferred from Building 102E to Building 102 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 102E was utilized for many years as a warehouse space, until the building was renovated into general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 102E has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained main production areas and a laboratory. The second floor of the building contained a production area and a bridge leading from Building 102E to Building 102, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building

mechanical equipment; production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, and metals. No other potential contaminant sources were identified within Building 102E during the investigation.

- Former Buildings 102F, 102G, and 102H – Former Buildings 102F and 102G were utilized as a powder canning (102F), and powder storage (102H). Building 102H was actually a cast-in-place concrete barricade structure surrounding Buildings 102F and 102G. Building 102F and 102G were small wood frame buildings, each containing approximately 400 square feet. Powder from these buildings was transported directly to Building 102D for assembly of components of 0.30 caliber ammunition during operation of Plant No. 1. After World War II, the munitions bunker (former Buildings 102F, 102G, and 102H) was utilized for storage purposes. The munitions bunker was removed during a site redevelopment project in 1980. Paved parking and access roads exist in the areas where the bunker was located. Possible contaminant sources include containers storing powder associated with the production of small arms ammunition. Potential contaminants associated with these sources include explosive compounds. No other potential contaminant sources were identified within Buildings 102F, 102G, and 102H during the investigation.

- Former Buildings 102J and 102K – Buildings 102J and 102K were utilized for oil storage. The buildings were small masonry structures placed directly adjacent to Buildings 102D and 102E. The buildings were single-story structures and each contained approximately 150 square feet. Oil from these buildings was transported directly to Building 102, where it was used as a lubricant in the manufacture and assembly of components of 0.30 caliber ammunition during operation of Plant No. 1. Sometime after World War II, the buildings were removed, and the areas now contain concrete sidewalks or landscaping. Possible contaminant sources include containers storing lubricating oil associated with the production of small arms ammunition. Potential contaminants associated with these sources include VOCs and petroleum hydrocarbon compounds. No other potential contaminant sources were identified within Buildings 102J and 102K during the investigation.

- Building 103 – Building 103 (Sections A, B, and C) contained equipment utilized for the production of 0.30 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building 103 consisted of brass cartridge annealing and shaping, powder and primer packing, lead core insertion, sorting, packaging, and shipping. Cartridge manufacturing ended at Plant No. 1 at the close of World War II. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 103 was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 103 has been utilized as general office space. A DOD computer lab is located in the north end of Building 103 and a back-up power generation system has been installed to support the lab in the event that power in interrupted. The power generation system is powered by diesel fuel that is stored in two USTs (one with 20,000 gallon capacity and one

with 600 gallon capacity) located to the north of the building. The USTs were installed in 1998 and reportedly utilized state of the art environmental protections. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained four transformer vault rooms; a scrap bailer pit; settling tanks; sumps; and a large amount of process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained the main production areas; a scrap salvage room; a battery storage room; and a draw and anneal laboratory. The second floor of the building contained production areas and a gas mixing equipment room. The crawl space and basement levels contain four transformer vaults, approximately 50 percent of the original process piping, a scrap bailer pit and several sumps. Possible contaminant sources include USTs, building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), batteries, scrap metals, and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include TPH, PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 103 during the investigation.

- Building 103D – Building 103D was utilized as a powder loading building in association with production of 0.30 caliber ammunition during operation of Plant Number 1. Powder was brought into Building 103D from former storage buildings 103F and 103H, located to the south of Building 103D. Small arms ammunition production in Building Series 103D consisted of powder charging and powder seating operations. Assembled components were transferred from Building 103D to Building 103 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 103D was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 103D has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained a main production area, a powder room, three powder charging rooms, three seating rooms, and three crimping rooms. The second floor of the building contained a production area and a bridge leading from Building 103D to Building 103, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building mechanical equipment and production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 103D during the investigation.

- Building 103E – Primer insertion was completed in Building 103E, in association with production of 0.30 caliber ammunition during operation of Plant Number 1.

Small arms ammunition production in Building Series 103E consisted of primer insertion operations. Assembled components were transferred from Building 103E to Building 103 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 103E was utilized for many years as a warehouse space, until the building was renovated into general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 103E has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained main production areas and a laboratory. The second floor of the building contained a production area and a bridge leading from Building 103E to Building 103, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building mechanical equipment and production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, and metals. No other potential contaminant sources were identified within Building 103E during the investigation.

- Former Buildings 103F, 103G, and 103H – Former Buildings 103F and 103G were utilized as a powder canning (103F) and powder storage (103H). Building 103H was actually a cast-in-place concrete barricade structure surrounding Buildings 103F and 103G. Building 103F and 103G were small wood frame buildings, each containing approximately 400 square feet. Powder from these buildings was transported directly to Building 103D for assembly of components of 0.30 caliber ammunition during operation of Plant No. 1. After World War II, the munitions bunker (former Buildings 103F, 103G, and 103H) was utilized for storage purposes. The munitions bunker was removed during a site redevelopment project in 1980. Paved parking and access roads exist in the areas where the bunker was located. Possible contaminant sources include containers storing powder associated with the production of small arms ammunition. Potential contaminants associated with these sources include explosive compounds. No other potential contaminant sources were identified within Buildings 103F, 103G, and 103H during the investigation.

- Current Building 103F (previously designated Building 112) – This building contained a lead shop, which manufactured 30 and 50 caliber lead slugs during operation of Plant No. 1. Original construction drawings indicate the basement level of the building contained the lower level of the re-melt room, slug wash water settling tanks, and lead press and scale pit foundations, and a transformer room. The main floor of the building housed five 1,350 ton lead-presses, 55 slug-forming machines, slug washers, and a lead re-melt room. Information suggests that the lead shop may have been active through the early 1950's, and that decommissioning of the lead shop occurred after at least 1957. The basement level currently contains lead press foundations, settling tanks, and the majority of the original process piping. Basement level access to the lower level of the re-melt room has been sealed off and appears to

have been filled with granular material. Additionally, the lead press foundations have also been filled with granular material. The main floor of Building 103F is currently utilized as a kitchen and cafeteria serving employees at the site. The building is currently known as Building 103F. Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), and scrap metals. Potential contaminants associated with these sources include PCBs, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 103F during the investigation.

- Former Buildings 103J and 103K – Buildings 103J and 103K were utilized for oil storage. The buildings were small masonry buildings placed directly adjacent to Buildings 103D and 103E. The buildings were single-story structures and each contained approximately 150 square feet. Oil from these buildings was transported directly to Building 103, where it was used as a lubricant in the manufacture and assembly of components of 0.30 caliber ammunition during operation of Plant No. 1. Sometime after World War II, the buildings were removed and the areas now contain concrete sidewalks or landscaping. Possible contaminant sources include containers storing lubricating oil associated with the production of small arms ammunition. Potential contaminants associated with these sources include VOCs and petroleum hydrocarbon compounds. No other potential contaminant sources were identified within Buildings 103J and 103K during the investigation.

- Building 104 – Building 104 (Sections A, B, C, and D) contained equipment utilized for the production of 0.50 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building 104 consisted of brass cartridge annealing and shaping, powder and primer packing, lead core insertion, sorting, packaging, and shipping. Cartridge manufacturing ended at Plant No. 1 at the close of World War II. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 104 was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 104 has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained six transformer vault rooms, an anneal quench trench, a scrap bailer pit, settling tanks, sumps, and a large amount of process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained the main production areas, an anneal control laboratory, a scrap salvage room, and an annealing laboratory. The second floor of the building contained production areas, a gas mixing room, and a soap mixing room. The crawl space and basement levels currently contain six transformer vaults, approximately 25 percent of the original process piping, a scrap bailer pit and an annealing quench trench. Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), scrap metals, and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs,

explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 104 during the investigation.

- Building 104E – Building 104E was utilized as a powder loading building in association with production of 0.50 caliber ammunition during operation of Plant Number 1. Powder was brought into Building 104E from former storage buildings 104G and 104J, located to the south of Building 104E. Small arms ammunition production in Building Series 104E consisted of powder charging and powder seating operations. Assembled components were transferred from Building 104E to Building 104 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 104E was utilized for many years as a warehouse space, until it was renovated to general office space and a child care center in the 1960s or 1970s. Since renovation in the 1960s or 1970s, the main floor of Building 104E has been utilized as a child care center and the second floor has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained a main production area, a powder room, three powder charging rooms, three seating rooms, and three crimping rooms. The second floor of the building contained a production area and a bridge leading from Building 104E to Building 104, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building mechanical equipment and production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 104E during the investigation.

- Building 104F – Primer insertion was completed in Building 104F, in association with production of 0.50 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building Series 104F consisted of primer insertion operations. Assembled components were transferred from Building 104F to Building 104 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 104F was utilized for many years as a warehouse space, until the building was renovated into general office space in the 1960s or 1970s. Since renovation in the 1960s or 1970s, Building 104F has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained main production areas and a laboratory. The second floor of the building contained a production area and a bridge leading from Building 104F to Building 104, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building mechanical

equipment and production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, and metals. No other potential contaminant sources were identified within Building 104F during the investigation.

- Former Buildings 104G, 104H, and 104J – Former Buildings 104G and 104J were utilized as a powder canning (104G) and powder storage (104J). Building 104H was actually a cast-in-place concrete barricade structure surrounding Buildings 104G and 104J. Building 104G and 104J were small wood frame buildings, each containing approximately 400 square feet. Powder from these buildings was transported directly to Building 104E for assembly of components of 0.50 caliber ammunition during operation of Plant No. 1. After World War II, the munitions bunker (former Buildings 104G, 104H, and 104J) was utilized for storage purposes. The munitions bunker was removed during a site redevelopment project in 1980. Paved parking and access roads exist in the areas where the bunker was located. Possible contaminant sources include containers storing powder associated with the production of small arms ammunition. Potential contaminants associated with these sources include explosive compounds. No other potential contaminant sources were identified within Buildings 104G, 104H, and 104J during the investigation.

- Former Buildings 104K – Building 104K was utilized as a water softener plant servicing Plant No. 1. Building 104K was a free-standing structure containing approximately 2,000 square feet and was located between Buildings 103 and 104. According to historical drawings of the building, the entire basement area of Building 104K was utilized for water storage and salt storage and the main floor consisted of an equipment room. After World War II, the building was utilized for storage purposes until it was removed during a site redevelopment project in 1980. Paved parking and access roads exist in the area where the building was located. Possible contaminant sources include the basement level salt storage tank and containers storing chemicals associated with operation of the treatment system. Potential contaminants associated with these sources include metals. No other potential contaminant sources were identified within Building 104K during the investigation.

- Former Buildings 104L – Building 104L was utilized as a chemical storage building servicing Plant No. 1. Building 104L was a free-standing structure containing approximately 1,000 square feet and was located between Buildings 103 and 104, adjacent to Building 104K. According to historical drawings of the building, the entire basement area of Building 104L was utilized as a tank storage room. Acid and caustic solutions in Building 104L were stored in two large aboveground storage tanks (ASTs). The fill lines to the tanks extended from Building 104L to an adjacent rail spur where bulk liquids were delivered by rail car. The main floor of the building contained a truck room and a work room. After World War II, the building was utilized for storage purposes until it was removed during a site redevelopment project in 1980. Paved parking and access roads exist in the area where the building was located. Possible contaminant sources include ASTs storing acids and caustics associated with the production of small arms ammunition. Potential contaminants

associated with these sources include metals. No other potential contaminant sources were identified within Building 104L during the investigation.

- Former Buildings 104M and 104N – Buildings 104M and 104N were utilized for oil storage. The buildings were small free-standing masonry buildings located between Buildings 104E and 104F. The buildings were single-story structures and each contained approximately 150 square feet. Oil from these buildings was transported directly to Building 104, where it was used as a lubricant in the manufacture and assembly of components of 0.30 caliber ammunition during operation of Plant No. 1. Sometime after World War II, the buildings were removed and the areas contain concrete sidewalks or landscaping. Possible contaminant sources include containers storing lubricating oil associated with the production of small arms ammunition. Potential contaminants associated with these sources include VOCs and petroleum hydrocarbon compounds. No other potential contaminant sources were identified within Buildings 104M and 104N during the investigation.

- Building 105 – Building 105 (Sections A, B, C, and D) contained equipment utilized for the production of 0.50 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building 105 consisted of brass cartridge annealing and shaping, powder and primer packing, lead core insertion, sorting, packaging, and shipping. Cartridge manufacturing ended at Plant No. 1 at the close of World War II. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 105 was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. Since renovation, Building 105 has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained six transformer vault rooms, an anneal quench trench, a scrap bailer pit, settling tanks, sumps, and a large amount of process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained the main production areas, an anneal control laboratory, a scrap salvage room, and an annealing laboratory. The second floor of the building contained production areas, a gas mixing room, and a soap mixing room. Additionally, a SAFR was located in the basement level of Building 105, near the south end of the structure. The firing range was not identified on original construction drawings; however, it was observed during performance of a Phase I ESA conducted by SCS in 2002. The SAFR was remediated by SCS in September 2002. The crawl space and basement levels currently contain six transformer vaults, approximately 10 percent of the original process piping, a scrap bailer pit and an annealing quench trench. Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), scrap metals, and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 105 during the investigation.

- Building 105E – Building 105E was utilized as a powder loading building in association with production of 0.50 caliber ammunition during operation of Plant Number 1. Powder was brought into Building 105E from former storage buildings 105G and 105J, located to the south of Building 105E. Small arms ammunition production in Building Series 105E consisted of powder charging and powder seating operations. Assembled components were transferred from Building 105E to Building 105 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 105E was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained a main production area, a powder room, three powder charging rooms, three seating rooms, and three crimping rooms. The second floor of the building contained a production area and a bridge leading from Building 105E to Building 105, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building mechanical equipment; production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 105E during the investigation.

- Building 105F – Primer insertion was completed in Building 105F, in association with production of 0.50 caliber ammunition during operation of Plant Number 1. Small arms ammunition production in Building Series 105F consisted of primer insertion operations. Assembled components were transferred from Building 105F to Building 105 for incorporation in production assembly areas. After World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 105F was utilized for many years as a warehouse space, until the building was renovated into a kitchen/cafeteria and general office space in the 1960s or 1970s. Since renovation , the main floor of Building 105F has been utilized as a kitchen/cafeteria and the second floor has been utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained process piping utilized to handle liquids sourced from operations on the main floors of the building. The first floor of the building contained main production areas and a laboratory. The second floor of the building contained a production area and a bridge leading from Building 105F to Building 105, which could have been used as a transport route for completed components. The crawl space and basement levels contain the majority of the original process piping. Possible contaminant sources include building mechanical equipment; production equipment (including process piping) associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, and metals. No other

potential contaminant sources were identified within building 105F during the investigation.

- Former Buildings 105G, 105H, and 105J – Former Buildings 104G and 104J were utilized as a powder canning (105G) and powder storage (105J). Building 105H was actually a cast-in-place concrete barricade structure surrounding Buildings 105G and 105J. Building 105G and 105J were small wood frame buildings, each containing approximately 400 square feet. Powder from these buildings was transported directly to Building 105E for assembly of components of 0.50 caliber ammunition during operation of Plant No. 1. After World War II, the munitions bunker (former Buildings 105G, 105H, and 105J) was utilized for storage purposes. The munitions bunker was removed during a site redevelopment project in 1980. Paved parking and access roads exist in the areas where the bunker was located. Possible contaminant sources include containers storing powder associated with the production of small arms ammunition. Potential contaminants associated with these sources include explosive compounds. No other potential contaminant sources were identified within Buildings 105G, 105H, and 105J during the investigation.

- Buildings 105L – Building 105L was utilized as a warehouse and kitchen during operation of Plant No. 1. A fire in 1964 destroyed the north half of the building, which was being utilized by three tenants as warehouse space. The building continues to be utilized for storage purposes, and no potential contaminant sources were identified within Building 105L during the investigation.

- Former Buildings 105M and 105N – Buildings 105M and 105N were utilized for oil storage. The buildings were small free-standing masonry buildings located between Buildings 105E and 105F. The buildings were single-story structures, and each contained approximately 150 square feet. Oil from these buildings was transported directly to Building 105, where it was used as a lubricant in the manufacture and assembly of components of 0.50 caliber ammunition during operation of Plant No. 1. Sometime after World War II, the buildings were removed and the areas now contain concrete sidewalks or landscaping. Possible contaminant sources include containers storing lubricating oil associated with the production of small arms ammunition. Potential contaminants associated with these sources include VOCs and petroleum hydrocarbon compounds. No other potential contaminant sources were identified within Buildings 105M and 105N during the investigation.

- Building 107 – Building 107 was utilized as a personnel building during operation of Plant No. 1. After World War II Building 107 was utilized as general office space. A review of original construction drawings and details indicates that the basement and crawl space levels of the building contained a transformer vault room. Possible contaminant sources include transformers. Potential contaminants associated with these possible sources include PCBs. No other potential contaminant sources were identified within Building 107 during the investigation.

- Building 108A – Building 108A was constructed as the south primary substation for Plant No. 1. A review of original construction drawings and details indicates that the

crawl space level of the building appears to contain two transformer pits and transformer oil overflow piping. The first floor of the building contained two large oil filled transformers mounted on rails, a 13.2 kilovolt (kV) switch room, a 33 kV switch room, and a boiler house transformer room. The building currently contains two oil-filled transformers and electrical switchgear on the main floor and two transformer vault pits and associated piping in the crawl space level. Possible contaminant sources include the transformers and other oil filled electrical equipment. Potential contaminants associated with these sources include TPH, and PCBs. No other potential contaminant sources were identified within Building 108A during the investigation.

- Building 108B – Building 108B was constructed as the north primary substation for Plant No. 1. A review of original construction drawings and details indicates that the crawl space level of the building appears to contain two transformer pits and transformer oil overflow piping. The first floor of the building contained two large oil filled transformers mounted on rails, a 13.2 kilovolt (kV) switch room, and a 33 kV switch room. The building currently contains two oil-filled transformers and electrical switchgear on the main floor and two transformer vault pits and associated piping in the crawl space level. Possible contaminant sources include the transformers and other oil filled electrical equipment. Potential contaminants associated with these sources include TPH, and PCBs. No other potential contaminant sources were identified within Building 108B during the investigation.

- Building 110 – Building 110 was utilized as a tool and gauge shop during operation of Plant Number 1. Sometime after World War II the equipment was removed and disposed of or transported to alternate locations for subsequent storage. Building 110 was utilized for many years as a warehouse space, until it was renovated to general office space in the 1960s or 1970s. A review of original construction drawings and details indicates that the basement level of the building contained two transformer vault rooms, an oil storage room, a battery room, and a tank room. The first floor of the building contained a forge shop, a production area, and an oil extractor. The second floor of the building contained production area. The basement level currently contains two transformer vaults, and storage tank saddles indicating where ASTs were formerly located. Possible contaminant sources include the ASTs, building mechanical equipment, transformers, and oil handling piping and equipment associated with the tool and gauge shop. Potential contaminants associated with these sources include TPH, PCBs, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 110 during the investigation.

- Former Building 111 – Former Building 111 was utilized as a boiler house during operation of Plant Number 1. The building was located directly north of Building 108A. Original construction drawings were not available for this building; however, it is known to have operated utilizing natural gas. Demolition of the building occurred in the 1970s, and the basement level was backfilled with crushed limestone fill material. The area where Building 111 was located is now covered with an asphalt parking lot. Possible contaminant sources include the building mechanical equipment and equipment associated with the power plant. Potential contaminants

associated with these sources include TPH, PCBs, and metals. No other potential contaminant sources were identified associated with former Building 111 during the investigation.

- Building 115 – Building 115 contained a truck garage during operation of Plant No. 1. Original construction drawings indicate the basement level of the building contained a mechanical equipment room and the main floor contained a large truck storage room. Three USTs and a fuel pump island were located to the north of the building. The UST system was reportedly contained a 10,000 gallon fuel tank, 8,000 gallon fuel tank, and 550 gallon waste oil tank. The fuel pump island and the three USTs have reportedly been removed. The area where the fuel pump island and USTs were located is now covered by an asphalt parking lot. Possible contaminant sources include the USTs; building mechanical equipment; and degreasing chemicals, oil, and lubricants associated with the truck garage. Potential contaminants associated with these sources include TPH, PCBs, metals, and VOCs. No other potential contaminant sources were identified within Building 115 during the investigation.

- Building 122B – Building 122B was constructed and utilized as a service building during operation of Plant No. 1. Original construction drawings contained limited information. The building has always been utilized as a maintenance area for building and grounds crews. Possible contaminant sources include the cleaning chemicals, degreasing chemicals, oil, and lubricants associated with operation of the facility. Potential contaminants associated with these sources include TPH, metals, and VOCs. No other potential contaminant sources were identified within Building 122B during the investigation.

- Former Buildings 136A, B, E, and F – Former Buildings 136A, B, E, and F served as fire equipment storage buildings during operation of Plant No. 1. The buildings were scattered across the Site. Original construction drawings were not available for these building; however, they are shown on historical plan drawings of the Site. The free-standing buildings appear to consist of approximately 400 square feet each. Demolition of the buildings is believed to have occurred in the 1970s. The area where Building 136A, B, and F was located is now covered with an asphalt parking lot. The area where Building 136E was located is a grass-covered landscaped area. Possible contaminant sources include fuel tanks associated with fire trucks. Potential contaminants associated with these sources include VOCs and metals. No other potential contaminant sources were identified associated with former Building 136A, B, E, and F during the investigation.

- Former Buildings 137A – Former Building 137A served as a building and grounds workshop during operation of Plant No. 1. The building was located to the south of Building 103F (previously designated Building 112). Original construction drawings were not available for this building; however, it is shown on historical plan drawings of the Site. The free-standing building appears to consist of approximately 400 square feet. Demolition of the building is believed to have occurred in the 1970s. The area where Building 137A was located is now covered with an asphalt parking lot. Possible contaminant sources include fuel tanks associated with maintenance

equipment; containers of paint; cleaning chemicals; and lubricating oils associated with building and grounds maintenance operations. Potential contaminants associated with these sources include VOCs and metals. No other potential contaminant sources were identified associated with former Building 137A during the investigation.

- Building 141C – Building 141C serves as a pump house and contains mechanical equipment. The building is located at the south end of Parking Lot D and was not constructed as part of Plant No. 1. Original construction drawings were not available for this building. The free-standing building appears to consist of approximately 400 square feet. Possible contaminant sources include mechanical equipment located within the building. Potential contaminants associated with these sources include PCBs and metals. No other potential contaminant sources were identified associated with Building 141C during the investigation.

- Utility tunnel complex – The utility tunnels extend between all former production buildings (102 Series, 103 Series, 104 Series and 105 Series Buildings), current and former administrative buildings (Buildings 101 and 107), the tool and gauge shop (Building 110), the former lead shop (current Building 103F, previously designated Building 112), and the former truck garage (Building 115) at the Site. Original construction drawings indicate that the tunnel sections located at the Site are Sections 1-3 and 14-19. The tunnels are approximately 7 feet in height and are approximately 6 feet wide and contain numerous water, electrical, and communication lines. Approximately 4500 linear feet of utility tunnels exist under the Site. Historically, the utility tunnel system connected with the Core Plant to the south, the SLAAP to the north, Hazardous Area Number 2 to the west (across Goodfellow Boulevard), and to the powder storage and proofing areas located east of the SLOP. Cinder block walls have since been constructed within the tunnels at the edge of the Site, effectively limiting access to it from off-site areas. Numerous sump pumps have been installed within the tunnel system to remove perched groundwater that infiltrates through voids in the tunnel floor and walls. These pumps operate automatically to discharge collected water to the combined storm and sanitary sewer system. Possible contaminant sources include electrical equipment; and impacted sediment and groundwater entering from other areas outside the tunnel system. Potential contaminants associated with these sources include PCBs, explosives, and metals. No other potential contaminant sources were identified associated with the utility tunnel complex during the investigation.

- Combined storm and sanitary sewer system – A combined storm and sanitary sewer system was installed at the Site when Plant No. 1 was constructed. The practice of combining storm and sanitary lines was common prior to implementation of modern construction codes and regulations. Original construction drawings indicate that the lines range in size from 4 inches to 24 inches in diameter, and that main lines exit the Site at three locations, on the northern, southern, and eastern sides of the Site. The combined system was responsible for transporting waste liquids generated during operation of Plant No. 1. Oil water separators and/or settling tanks were not identified on construction drawings or observed during the site investigation of the Site. Liquid and suspended sediments flushed through the system during operation of

Plant No. 1 most likely contained explosive compounds, VOCs, SVOCs, PCBs, and metals. Much of the original combined system is still being utilized at the Site and some residual contaminants may exist. The existing system discharges to City of St. Louis combined storm and sanitary sewer system.

- Railroad Track System – An extensive railroad track system was installed to move materials to and from production facilities while Plant No. 1 was in operation. A series of tracks entered the south end of the Site where they branched out and extended to Buildings 102, 103, 104, 105, 110, and 111. With exception of Building 110, the tracks extended to loading docks on the exterior to the buildings. Building 110 contained an indoor loading dock system adjacent to the railroad tracks. The tracks entered Building 110 from the east and ran the entire length of the building. After operation of Plant No. 1 ended the tracks were not utilized at the Site. In some cases the tracks, ties, and ballast rock were simply paved over. It is not known what percentage of the track system remains in-place at the Site. The railroad track system was utilized to transport large quantities of brass and lead stock to the facility and to ship assembled 0.30 caliber and 0.50 caliber ammunition from the facility. Contaminants associated with the railroad track system could include metals, PCBs, and SVOCs.

4.1 BUILDING 101

Possible contaminant sources in Building 101 include building mechanical equipment, transformers, and batteries. Potential contaminants associated with these possible sources include PCBs and metals (primarily lead).

4.1.1 Subsurface Soil Sampling

In September 2002, four soil borings were advanced at locations near Building 101. Boring 101-1, 101-2, and 101-3 were placed along the eastside of Building 101 and boring 104-4 was placed along the west side of the building. Figure 5 details the locations of the soil borings in the area of Building 101.

4.1.1.1 Logging of Subsurface Materials

Soil cores from borings 101-1, 101-2, 101-3, and 101-4 registered readings below the detection limits of the PID. No groundwater was encountered during the probing effort around Building 101.

4.1.1.2 Chemical Analysis

Pre-selected analyses for the samples collected around Building 101 included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 101. Only analytes with reported concentrations above laboratory quantitative limits are listed. Complete laboratory data packages for all samples collected are located in Appendix F and I.

No PCBs were detected above laboratory quantitative limits in the soil samples collected near Building 101and analyzed for PCBs (101-1 and 101-2).

No explosives were detected above laboratory quantitative limits in the soil samples collected near Building 101and analyzed for explosives (101-1 and 101-2).

Mercury was detected above laboratory quantitative limits in the four subsurface soil samples, and the reported concentrations for all of the samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detections of mercury ranged between 0.038 mg/Kg to 0.089 mg/Kg.

All reported concentrations of remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from borings 101-1, 101-2, 101-3, and 101-4.

4.2 BUILDING SERIES 102

Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), batteries, scrap metals, photo laboratory chemicals and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs.

4.2.1 Wipe Sampling

Twenty-eight wipe samples were collected in Building 102 Sections A, B, and C; Building 102D, and Building 102E for laboratory analysis.

4.2.1.1 Building 102

The analysis of the eighteen wipe samples collected from Sections A, B, and C within Building 102 included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 6, 6A, 7, and 7A detail the locations where the wipe samples were collected, and Table 3-2 presents a summary of the analytical results.

Aroclor 1260 was detected in three of fourteen wipe samples collected and analyzed for PCBs, and the reported concentrations in one of those samples (102FLOOR2WS) exceeded the TSCA maximum allowable concentration of 10 µg/cm^2 for high density human occupation. The concentration of Aroclor 1260 identified in sample 102FLOOR2WS was 15 µg/cm^2. Wipe samples 102FLOOR1WS2 and 102FLOOR2WS105 had reported concentrations of 0.022 µg/cm^2 and 0.060 µg/cm^2, respectively. In addition, Aroclor 1242 was detected in wipe sample 102FLOOR1WS2 at a reported concentration of 0.019 µg/cm^2. No PCBs were detected above laboratory quantitative limits in any of the other wipe samples.

Three wipe samples were collected and analyzed for explosive compounds. All detected concentrations of explosive analytes were below the MRBCA levels for the construction worker

and the non-residential with clayey soil scenarios. The compounds 1,3-dinitrobenze and 2,4,6-TNT both were detected in wipe sample 102FLOOR1WS1 at the reported concentrations of 1.4 µg/Wipe. No explosives were detected above laboratory quantitative limits in any of the other wipe samples analyzed for explosives.

Eight wipe samples were collected and analyzed for mercury. Mercury was detected above laboratory quantitative limits in all of the wipes samples collected and analyzed for mercury. The concentrations of mercury ranged from 0.13 µg/Wipe to 3,900 µg/Wipe. Detected concentrations of mercury were below MRBCA levels for the construction worker and the non-residential with clayey soil scenarios.

Four wipe samples were collected and analyzed for lead. All of the wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2 (or approximately 0.021 mg/Wipe). Detected concentrations of lead ranged from 15,793 µg/ft^2 to 1,114,800 µg/ft^2. The wipe samples were collected from the crawl space level (102CS ANNEALING WIPE) from within elevator shafts (102FLOOR1WS1 and 102FLOOR1WS2); and from a structural steel I-beam located above the suspended ceiling near column B-12 (102FLOOR2WS).

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.2.1.2 Building 102D

The seven wipe samples collected from Building 102D were analyzed for PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 6 and 7 detail the locations where the wipe samples were collected and Table 3-3 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in any of the wipe samples collected and analyzed for PCBs.

Four wipe samples were collected and analyzed for explosives. The compound 1,3,5-trinitrobenze was detected in wipe sample 102DCS CHEM FEED at the reported concentration of 40 µg/Wipe, below the MRBCA levels for the construction worker and the non-residential with clayey soil scenarios. No explosives were detected above laboratory quantitative limits in any of the other wipe samples analyzed for explosives.

Seven wipe samples were collected and analyzed for mercury. Mercury was detected above laboratory quantitative limits in all of the wipes samples, and the concentration in one of the wipe samples (102DCS CHEM FEED) exceeded the MRBCA levels for the construction worker scenario of 21,600 µg/Kg. Detected concentrations of mercury ranged from 0.047 to 33,000 µg/Wipe.

Four wipe samples were collected and analyzed for lead. All of the wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 222 µg/ft^2 to 29,728 µg/ft^2. The wipe

samples were collected from the crawl space level (102DCS CHEM FEED and 102DCS WIPE) from within elevator shaft (102D ELEVATOR SHAFT FLOOR 1); and from an area above the suspended ceiling near column L-39 (102D WIPE FLOOR 1).

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.2.1.3 Building 102E

The three wipe samples collected from Building 102E were analyzed for PCBs by Method 8082, mercury by Method 7471A, and metals by Method 6010B. Figures 6 and 7 details the locations where the wipe samples were collected and Table 3-4 presents a summary of the analytical results.

One wipe sample was collected and analyzed for PCBs. No PCBs were detected above laboratory quantitative limits in the wipe sample.

Mercury was identified in all three wipe samples collected in building 102E. Detected concentrations of mercury ranged from 0.06 µg/Wipe to 1,400 µg/Wipe, below the MRBCA levels for the construction worker and the non-residential with clayey soil scenarios.

One wipe sample was collected and analyzed for lead. Lead was detected above the MRBCA post-abatement clearance level for non-residential standards of 200 µg/ft^2. The detected concentration of lead was 761,780 µg/ft^2. The wipe sample (102ECSWS) was collected from a concrete surface in the crawl space level of the building.

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe sample.

4.2.2 Paint Chip Sampling

Nine paint chip samples were collected from main floor levels of Buildings 102, 102D, and 102E. Figures 6 and 6A detail the locations where the paint chip samples were collected and Tables 3-5, 3-6, and 3-7 present a summary of the analytical results.

Mercury was detected in all nine samples collected and analyzed. Detected concentrations of mercury ranged from 1.2 mg/kilogram (Kg) to 21 mg/Kg, below the MRBCA levels for the construction worker and the non-residential with clayey soil scenarios of 21.6 mg/Kg and 630 mg/Kg, respectively.

Mercury use in interior latex paint was banned by the EPA in 1990. However, mercury-containing paint applied prior to 1990 may exist within the surface coat or beneath numerous layers of paint within the structure. The concentrations of mercury identified within samples collected from Buildings 102, 102D, and 102E are not considered to be elevated. Additionally, research indicates that the amount and concentration of mercury vapor released by the paint decreases as the paint cures.

4.2.3 Shallow Soil and Sediment Sampling

A total of 51 shallow soil and sediment samples were collected from the basement level or crawl space beneath Sections A, B, and C of Building 102; Building 102D; and Building 102E.

It should be noted that several samples collected from within Building 102 were mislabeled in the field. The mislabeled samples are 102D SS-8, 102D SS-9, 102D SS-10, 102D SS-11, 102D SS-12, 102D SS-13, and 102D SS-14. The sample identifications indicate that they were collected within Building 102D; however, they were actually collected from within Building 102.

4.2.3.1 Building 102

The analysis of the 22 shallow soil and sediment samples collected from the crawl space beneath Sections A, B, and C within Building 102 included PCBs by Method 8082; explosives by Method 8330; cyanide by Method 9014/9010B; phosphorous by Method 4500PE; mercury by Method 7471A; metals by Method 6010B; SVOCs by Method 8270C; and VOCs by Method 8260B. Figures 7 and 7A detail the locations where the shallow soil and sediment samples were collected and Table 3-8 presents a summary of the analytical results.

Aroclor 1260 was detected above laboratory quantitative limits in two of the nine shallow soil and sediment samples analyzed for PCBs. Concentrations of Aroclor 1260 ranged from 400 µg/Kg (102D SS-11) to 1,900 µg/Kg (102CS CHEM FEDD PUMP), below the MRBCA levels for the construction worker and the non-residential with clayey soil scenarios.

Aroclor 1242 was detected above laboratory quantitative limits in one of the nine shallow soil and sediment samples analyzed for PCBs, and the reported concentration in this sample (102CS CHEM FEED PUMP DRAIN) was below the MRBCA levels for the construction worker and the non-residential with clayey soil scenarios. The reported concentrations of Aroclor 1242 for sample 102CS CHEM FEED PUMP DRAIN was 190 µg/Kg. No other PCBs were detected above laboratory quantitative limits in the shallow soil and sediment samples.

Ten shallow soil and soil and sediment samples were collected and analyzed for explosive compounds. Explosive compounds 1,3,5-trinitrobenzene, nitrobenzene, 2,6-dinitrotoluene, and 4-nitrotoluene were identified in sample 102CS CHEM FEED PUMP DRAIN and 2-amino-4, 6-dinitrotoluene was detected in 102D SS-8. The detected concentrations of the explosive compounds were below MRBCA levels for the construction worker and the non-residential with clayey soil scenarios. All reported concentrations of the remaining explosive analytes were below laboratory quantitative limits in the shallow soil and sediment samples collected from the basement level of Building 102 and analyzed for explosives.

Cyanide was detected above laboratory quantitative limits in two of the four shallow soil and sediment samples analyzed for cyanide, and reported concentrations in these two samples (102CS CHEM FEED PUMP and 102CS CHEM FEED PUMP DRAIN) were below MRBCA levels for the construction worker and the non-residential with clayey soil scenarios of 28,500 mg/Kg and 12,300 mg/Kg, respectively. The reported concentrations of cyanide for samples

102CS CHEM FEED PUMP and 102CS CHEM FEED PUMP DRAIN were 0.25 and 0.56 mg/Kg, respectively.

Four soil and sediment samples were collected and analyzed for phosphorous. Phosphorous was detected above laboratory quantitative limits in all soil and sediment samples analyzed for phosphorous (102CS ANNEALING SED, 102CS CHEM FEED PUMP, 102CS CHEM FEED PUMP DRAIN, and 102CSCONCRETE BASIN), and reported concentrations in these samples ranged between 36 to 520 mg/Kg. Currently, no MRBCA levels for the construction worker and the non-residential with clayey soil scenarios has been established for this analyte.

Arsenic was detected above the MRBCA level for the non-residential with clayey soil scenario in four of sixteen samples collected and analyzed for arsenic. Samples 102D SS-8, 102D SS-9, 102D SS-11, 102D SS-13, and 102D SS-14 contained arsenic concentrations of 17 mg/Kg, 570 mg/Kg, 200 mg/Kg, 30 mg/Kg, and 18 mg/Kg, respectively. Samples 102D SS-8, 102D SS-9, 102D SS-11, and 102D SS-13 were collected from within steel process pipe systems. Sample 102D SS-14 was collected from the top of an open settling tank constructed of wood. The MRBCA level for the non-residential with clayey soil scenario is 15.9 mg/Kg. None of the detected concentrations exceeded the MRBCA level for the construction worker scenario of 654mg/Kg.

Copper was detected above the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in two of sixteen samples collected and analyzed for copper. Sample 102D SS-13 and 102 SED-1 contained copper concentrations of 230,000 mg/Kg and 170,000 mg/Kg, respectively. As previously discussed, sample 102D SS-13 was collected from within a steel process pipe. Sample 102 SED-1 was collected from an opening leading to a former scrap bailer pit. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios is 102,000 mg/Kg and 38,100 mg/Kg, respectively.

Lead was detected above the MRBCA level for the non-residential with clayey soil scenario in seven of nineteen samples collected and analyzed for lead. Samples 102D SS-8, 102D SS-10, 102D SS-11, 102D SS-13, 102CSSS103, 102CSSS104, and 102CSSS106 contained lead concentrations of 2,100 mg/Kg, 1,100 mg/Kg, 880 mg/Kg, 2,500 mg/Kg, 2,900 mg/Kg, 2,300 mg/Kg, and 1,300 mg/Kg, respectively. As previously discussed, samples 102D SS-8, 102D SS-10, 102D SS-11, and 102D SS-13 were collected from process piping and a settling tank. Samples 102CSSS103, 102CSSS104, and 102CSSS106 were collected immediately adjacent to process piping systems. The MRBCA level for the non-residential with clayey soil scenario is 660 mg/Kg. MDNR has not established a MRBCA level for the construction worker scenario for this analyte.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the shallow soil and sediment samples.

Polynuclear aromatic hydrocarbon (PAH) compounds benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene were detected above the MRBCA level for the non-residential with clayey soil scenario in nine of thirteen soil and sediment samples analyzed for SVOCs. Additionally, benzo(a)pyrene exceeded the MRBCA

level for the construction worker scenario. The maximum concentrations of benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene identified were 180,000 µg/Kg, 190,000 µg/Kg, 150,000 µg/Kg, 76,000 µg/Kg, and 24,000 µg/Kg, respectively. These samples were collected from within process piping systems; from within a settling tank; from the entrance to a former scrap bailer; and from soils immediately adjacent to former process systems.

All reported concentrations of the remaining SVOC analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios

All reported concentrations of VOCs were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the three sediment samples collected from the basement level of Building 102 and analyzed for VOCs.

4.2.3.2 Building 102D

The analysis of the 28 shallow soil and sediment samples collected from the crawl space beneath Building 102D included PCBs by Method 8082, explosives by Method 8330; cyanide by Method 9014/9010B; phosphorous by Method 4500PE; mercury by Method 7471A; metals by Method 6010B; SVOCs by Method 8270C; and toxicity characteristic leaching procedure (TCLP) analysis for silver by Method 1311. Figure 7 details the locations where the shallow soil and sediment samples were collected and Table 3-9 presents a summary of the analytical results.

Sixteen shallow soil and sediment samples were collected and analyzed for PCBs and explosives. No PCBs or explosives were detected above laboratory quantitative limits in the samples collected in Building 102D.

Cyanide was detected above laboratory quantitative limits in all three sediment samples analyzed for cyanide, and reported concentrations in these three samples (102DCS CHEM FEED SED, 102DSC SED, and 102D CORNER SPILL) were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios of 28,500 mg/Kg and 12,300 mg/Kg, respectively. Detections of cyanide ranged from 0.19 to 24 mg/Kg.

Phosphorous was detected above laboratory quantitative limits in all three sediment samples analyzed for phosphorous (102DCS CHEM FEED SED, 102DSC SED, and 102D CORNER SPILL), and reported concentrations in these three samples ranged from 140 mg/Kg to 520 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Arsenic was detected above laboratory quantitative limits in all 22 shallow soil and sediment samples collected and analyzed for arsenic. Sample 102CS CHEM FEED SED. contained arsenic at a concentration of 46 mg/Kg, which is greater than the MRBCA level for the non-residential with clayey soil scenario of 15.9 mg/Kg. However, it is not greater than the MRBCA level for the construction worker scenario, which is 654 mg/Kg. This sample was collected in the basement level near a former chemical feed pump.

Silver was detected above laboratory quantitative limits in six of 22 shallow soil and sediment samples. However, none of the concentrations exceeded MRBCA levels for the construction worker and non-residential with clayey soil scenarios of 10,600 mg/Kg and 4,480 mg/Kg, respectively. Detected silver concentrations in the samples ranged from 10 mg/Kg to 680 mg/Kg. Samples 102D DRAIN 1, 102D DRAIN 2, and 102D DRAIN 3 were further analyzed by TCLP for leachable silver. The reported TCLP concentrations were below regulatory levels listed in 40 CFR, Chapter 1, Part 216.24 "Identification and Listing of Hazardous Waste" of the EPA Register to define Resource Conservation and Recovery Act (RCRA) toxicity characteristic Hazardous Waste (Reference 31). The guidance document contains "Table 1 – Maximum Concentrations of Contaminants for the Toxicity Characteristic," which lists contaminants of concern (COCs) and their respective TCLP threshold concentrations. The table lists silver with a threshold concentration of 5.0 mg/L. TCLP concentrations of silver ranged from below quantitative limits to 0.2 mg/L in sediment samples 102D DRAIN 1, 102D DRAIN 2, 102D DRAIN 3.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

SVOC compounds benzoic acid, naphthalene, 2-methylnaphthalene, acenaphthalene, fluorine, diethyl phthalate, phenanthrene, anthracene, di-n-butyl-phthalate, fluoranthene, pyrene, butyl benzyl phthalate, benzo(a)anthracene, chrysene, bis(2-ethylhexyl) phthalate, di-n-octyl phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(ghi)perylene were identified in six samples. All reported concentrations of SVOC analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the shallow soil and sediment samples.

4.2.3.3 Building 102E

The one shallow soil sample collected from the crawl beneath Building 102E was analyzed for PCBs by Method 8082, explosives by Method 8330; cyanide by Method 9014/9010B; phosphorous by Method 4500PE; mercury by Method 7471A; and metals by Method 6010B. Figure 7 details the locations where the shallow soil and sediment samples were collected and Table 3-10 presents a summary of the analytical results.

No PCBs or explosives were detected above laboratory quantitative limits in the shallow soil sample.

Cyanide was detected above laboratory quantitative limits at a reported concentration of 0.22 mg/Kg. This concentration is below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios of 28,500 mg/Kg and 12,300 mg/Kg, respectively.

Phosphorous was detected above laboratory quantitative limits at a reported concentration of 160 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

All reported concentrations of metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil sample.

4.2.4 Subsurface Soil Sampling

Ten soil borings were advanced at locations near Building Series 102. Figure 5 details the locations of the soil borings in the area of Building Series 102.

4.2.4.1 Building 102

Boring SB23 and boring SB25 were placed near the southwestern and northwestern sides of Building 102, respectively. Borings SB32 and SB33 were placed near the southeastern side of Building 102. Borings SB25 and SB33 encountered probe refusal at approximate depths of 18.5 and 12 feet bgs, respectively. Borings SB23 and SB32 were advanced to their target depths of 20 feet bgs.

4.2.4.1.1 Logging of Subsurface Materials

In general, the materials encountered at boring SB23 primarily consisted of varying amounts of dry to moist clay until its target depth of 20 feet bgs. The materials encountered at boring SB25 primarily consisted of varying amounts of dry to wet clay overlying a shale formation at approximately 18.5 feet.

The materials encountered at borings SB32 and SB33 primarily consisted of varying amounts of dry to moist clay until its target depth of 20 feet bgs and probe refusal at a depth of 12 feet bgs, respectively. In addition, boring SB33 encountered top of rock (shale) at approximately nine feet bgs.

PID screening of the soil cores from the two probe locations near Building 102 did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 102.

4.2.4.1.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 102 Sections A, B, and C included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 102.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 102.

Mercury was detected above laboratory quantitative limits in the four subsurface soil samples, and the reported concentrations for all of the samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detections of mercury ranged between 0.0068 mg/Kg to 0.065 mg/Kg.

All reported concentrations of remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from borings SB23, SB25, SB32, and SB33.

4.2.4.2 Building 102D

Borings SB24 and SB25 were placed near the southwestern and northeastern sides of Building 102D, respectively. Borings SB24 and SB25 encountered probe refusal at approximate depths of 16 and 18.5 feet bgs, respectively.

4.2.4.2.1 Logging of Subsurface Materials

In general, the materials encountered at borings SB24 and SB25 primarily consisted of varying amounts of dry to wet clay until refusal at approximately 16 and 18.5 feet, respectively. During the advancement of boring SB24, the SCS geologist noted an odor from the material recovered at a depth of 7.5 to 9 feet bgs (moist, green clay). In addition, boring SB24 encountered top of rock (red shale) at approximately 15 feet bgs and SB25 encountered shale at approximately 18.5 feet bgs. PID screening of the soil cores from the two probe locations near Building 102D did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 102D.

4.2.4.2.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 102D included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, metals by Method 6010B, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 102D.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 102D.

Mercury was detected above laboratory quantitative limits in the two subsurface soil samples, and the reported concentrations for these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged between 0.046 mg/Kg and 0.061 mg/Kg.

All reported concentrations of remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the subsurface soil samples collected from borings SB24 and SB25.

No VOCs were detected above laboratory quantitative limits in the one subsurface soil sample collected around Building 102D and analyzed for VOCs (SB24).

4.2.4.3 Building 102E

Borings SB25 and SB26 were placed near the southwestern and northwestern sides of Building 102E, respectively. Borings SB25 and SB26 encountered probe refusal at approximate depths of 18.5 and 16 feet bgs, respectively.

4.2.4.3.1 Logging of Subsurface Materials

In general, the materials encountered at borings SB25 and SB26 primarily consisted of varying amounts of dry to wet clay until refusal at approximately 18.5 and 16 feet, respectively. In addition, SB25 encountered refusal at a shale formation located approximately 18.5 feet bgs, and SB26 encountered top of rock (red shale) at approximately 15 feet bgs. PID screening of the soil cores from the two probe locations near Building 102E did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 102E.

4.2.4.3.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 102E included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 102E.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 102E.

All reported concentrations of metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from borings SB25 and SB26.

4.2.4.4 Former Buildings 102F, 102G, and 102H

Borings SB13, SB14, SB15, and SB16 were placed within the area of former Buildings 102F, 102G, and 102H. Borings SB13, SB14, SB15 encountered probe refusal at approximate depths of 6, 6, and 9 feet bgs, respectively. Boring SB16 was advanced to its target depth of 20 feet bgs.

4.2.4.4.1 Logging of Subsurface Materials

In general, the materials encountered at boring locations SB13, SB14, and SB15 consisted of varying amounts of clay, sand, gravel, and debris fill until refusal at approximately 6, 6, and 9 feet bgs, respectively. The materials encountered at boring SB16 generally consisted of varying amounts of dry to wet clay and sand until its target depth of 20 feet bgs. PID screening of the soil cores from the four probe locations near Buildings 102F, 102G, and 102H did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Buildings 102F, 102G, and 102H.

4.2.4.4.2 Chemical Analysis

Direct-push soil sampling at boring locations SB13, SB14, SB15, and SB16 recovered insufficient quantities of material suitable for laboratory testing from the individual borings. Consequently, proportionate sample material from SB13 and SB14 was combined into a single composite sample, and proportionate sample material from SB15 and SB16 was combined into another composite sample.

Pre-selected analyses for samples collected around former Buildings 102F, 102G, and 102H included explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around former Buildings 102F, 102G, and 102H.
No explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around former Buildings 102F, 102G, and 102H.

All reported concentrations of metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the discrete and composite subsurface soil samples collected from borings SB13, SB14, SB15, and SB16.

4.2.4.5 Former Building 102J

Boring SB25 was placed in the in the general area where former Building 102J had previously been located. Boring SB25 encountered probe refusal at approximately 18.5 feet bgs.

4.2.4.5.1 Logging of Subsurface Materials

In general, the materials encountered at boring SB25 primarily consisted of varying amounts of dry to wet clay until refusal at approximately 18.5 feet bgs. PID screening of the soil cores from the probe located near Building 102J did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 102J.

4.2.4.5.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 102D included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected in the area of former Building 102J.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of former Building 102J.

All reported concentrations of metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from boring SB25.

4.2.5 Air Monitoring

On September 4, 2003, SCS Engineers utilized an HG253 portable mercury vapor analyzer manufactured by Genesis Laboratory Systems to collect and analyze ambient air within Buildings 102, 102D, and 102E. A total of five ambient air samples were collected within Building 102. Sampling locations within Building 102 included an area on the main floor near the north elevator, an area near a transformer vault in Section B, an area within the crawl space level near the annealing trench, an area on the main floor near column F8, and an area near column B12. Mercury vapor concentrations ranged from below detectible limits to 0.0008 mg/cubic meter (m^3) at the areas sampled within Building 102. Three ambient air samples were

collected within Building 102D. Sampling locations within Building 102D included an area within the crawl space level, an area within the former photo lab area on the main floor, and an area on the second floor above the former photo lab. Mercury vapor concentrations ranged from 0.0003 to 0.0005 mg/m^3 at areas sampled within Building 102D. One ambient air sample was collected within Building 102E. The sample was collected on the main floor and contained a mercury vapor concentration of 0.0005 mg/m^3. None of the samples exceeded the OSHA PEL for mercury vapor of 0.05 mg/m^3.

In September 2003, four ambient air samples were collected at two locations in Buildings 102 and 102D. The samples included passive ambient air samples for mercury vapor collected on ChemDisk™ gold film media badges and ambient air particulate samples collected using sampling pumps on closed-face 37 millimeter 0.8 micron MCE filter cassettes. A passive vapor ambient air sample and ambient air monitoring sample were collected from near the freight elevator in Building 102, and a passive vapor ambient air sample and ambient air monitoring sample were collected from the basement level or crawl space inside Building 102D.

Passive vapor ambient air samples were analyzed by Assay Technology AT Labs for mercury vapor by OSHA Method 140, and Table 3-11 presents the passive vapor ambient air monitoring results. Ambient air monitoring samples were analyzed by Assay Technology AT Labs for particulate mercury by OSHA Method 145, and Table 3-11 presents the ambient air monitoring results.

Mercury was not detected above laboratory quantitative limits in any of the four ambient air samples.

4.3 BUILDING SERIES 103

Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), batteries, scrap metals, photo laboratory chemicals and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs.

4.3.1 Wipe Sampling

Twelve wipe samples were collected in Building 103 Sections A, B, and C; Building 103D; and Building 103E for laboratory analysis.

4.3.1.1 Building 103

Six wipe samples were collected from Sections A, B, and C within Building 103 included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 8, 8A, 9, and 9A detail the locations where the wipe samples were collected, and Table 3-12 presents a summary of the analytical results.

Aroclor 1260 was detected in five of the six wipe samples below the TSCA maximum allowable concentration of 10 µg/cm^2 for high density human occupation. Detected concentrations of Aroclor 1260 ranged from 0.024 µg/cm^2 to 0.46 µg/cm^2.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

One explosive compound, 1,3,5-trinitrobenzene, was detected in one of six wipe samples (103CSWS2) collected and analyzed for explosives. 1,3,5-trinitrobenzene was detected at a concentration of 240 µg/Wipe. The detected concentration of 1,3,5-trinitrobenzene is below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other explosives were detected above laboratory quantitative limits in any of the wipe samples analyzed for explosives.

Mercury was detected above laboratory quantitative limits in all six wipes samples collected and analyzed for mercury; however, none of the concentrations was in excess of MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged between 150 µg/Wipe to 9,100 µg/Wipe.

Six wipe samples were collected and analyzed for lead. All of the wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 1,672 µg/ft^2 to 63,172 µg/ft^2. The wipe samples were collected from the crawl space level (103CSWS1, 103CSWS2, 103CSWS3, and 103CSWS4) from an I-beam located above the suspended ceiling on the first floor near column G-39 (103CWS1); and from an I-beam located above the suspended ceiling on the second floor between columns D-37 and E-37 (103CWS2).

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.3.1.2 Building 103D

The four wipe samples collected from Building 103D were analyzed for PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 8 and 9 detail the locations where the wipe samples were collected and Table 3-13 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in any of the wipe samples.

The explosive compound 1,3,5-trinitrobenze was detected in wipe sample 103DWS1 at the reported concentration of 2.2 µg/Wipe, and the explosive compound 2-amino-4,6-dinitrotoluene was detected in wipe sample 103DCSWS2 at the reported concentration of 3.5 µg/Wipe. All detected concentrations of explosive analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other explosives were detected above laboratory quantitative limits in any of the wipe samples analyzed for explosives.

Mercury was detected above laboratory quantitative limits in all of the wipe samples; however, none of the concentrations was in excess of MRBCA levels for the construction worker and non-

residential with clayey soil scenarios. Detected concentrations of mercury ranged between 41 µg/Wipe to 3,500 µg/Wipe.

Four wipe samples were collected and analyzed for lead. All of the wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 362 µg/ft^2 to 120,770 µg/ft^2. The wipe samples were collected from the crawl space level (103DCSWS1 and 103DCSWS2) from above the suspended ceiling near column D-3 on the second floor of the building (103DWS1); and from within an elevator shaft (103DWS2).

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.3.1.3 Building 103E

The two wipe samples collected from Building 103E were analyzed for PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 8 and 9 detail the locations where the wipe samples were collected and Table 3-14 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in any of the wipe samples.

The explosive compound 2-amino-4,6-dinitrotoluene was detected in wipe samples 103ECSWS1 and 103ECSWS2 at the reported concentrations of 4.4 and 8.6 µg/Wipe, respectively. The explosive compound 4-amino-2,6-dinitrotoluene was detected in wipe sample 103ECSWS1 at the reported concentration of 2 µg/Wipe. All detected concentrations of explosive analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other explosives were detected above laboratory quantitative limits in any of the wipe samples analyzed for explosives.

Mercury was detected above laboratory quantitative limits in both wipes samples; however, the concentrations were below MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 14 µg/Wipe to 94 µg/Wipe.

Two wipe samples were collected and analyzed for lead. Both wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 75,249 µg/ft^2 to 306,570 µg/ft^2. Both wipe samples were collected from the crawl space level of the building.

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.3.1.4 Building 103F

Thirty-six wipe samples were collected in Building 103F (previously designated Building 112) for laboratory analysis. The wipe sample analyses included PCBs by Method 8082 and metals

by Method 6010B. Figures 10 and 10A detail the locations where the wipe samples were collected, and Table 3-15 presents a summary of the analytical results.

Aroclor 1260 was detected in twelve of the fourteen wipe samples analyzed for PCBs. Reported concentrations ranged between of 0.0042 µg/cm^2 and 0.21 µg/cm^2, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

Twenty-eight wipe samples were collected and analyzed for lead. Lead was detected above laboratory quantitative limits in all wipe samples collected and analyzed for lead, and the concentrations in twenty of the wipe samples exceeded MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 11 µg/ft^2 to 86,397 µg/ft^2. The wipe samples containing lead in excess of 200 µg/ft^2 were collected from the crawl space level, with exception of sample 112 WS-4. Sample 112 WS-4 was collected near the center of the east wall of the cafeteria.

All reported concentrations of remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.3.2 Shallow Soil and Sediment Sampling

A total of eight shallow soil and sediment samples were collected from the basement level or crawl space beneath Sections A, B, and C of Building 103; Building 103D, and Building 103E.

4.3.2.1 Building 103

The analysis of the four shallow soil and sediment samples collected from Sections A, B, and C beneath Building 103 included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figures 9 and 9A detail the locations where the shallow soil and sediment samples were collected, and Table 3-16 presents a summary of the analytical results.

No PCBs or explosives were detected above laboratory quantitative limits in any of the shallow soil and sediment samples.

Cyanide was detected above laboratory quantitative limits in one of the four shallow soil and sediment samples, and the reported concentration in this sample (103CSSOIL1) was below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios of 28,500 mg/Kg and 12,300 mg/Kg, respectively. The reported concentration of cyanide for sample 103CSSOIL1 was 0.28 mg/Kg.

Phosphorous was detected above laboratory quantitative limits in all four shallow soil and sediment samples, and reported concentrations in these samples ranged between 25 to 250 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenario has been established for this analyte.

Mercury was detected above laboratory quantitative limits in all four shallow soil and sediment samples collected from the basement level of Building 103, and the reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.067 mg/Kg to 0.37 mg/Kg.

All reported concentrations of remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

Several SVOCs were detected in all four samples; however, none of the concentrations detected exceeded the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples collected from the basement level of Building 103.

Trichlorofluoromethane was detected in three of four shallow soil and sediment samples obtained from within Building 103. The detected concentrations ranged from 4.5 µg/Kg to 41 µg/Kg, which is below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other VOC compounds were detected above laboratory quantitative limits in the four shallow soil and sediment samples collected from the basement level of Building 103.

4.3.2.2 Building 103D

The analysis of the two shallow soil samples collected from beneath Building 103D included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figure 9 details the locations where the shallow samples were collected, and Table 3-17 presents a summary of the analytical results.

No PCBs, explosives, or cyanide were detected above laboratory quantitative limits in the shallow soil samples.

Phosphorous was detected above laboratory quantitative limits in the two shallow soil samples, and reported concentrations in these samples ranged between 250 to 290 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

Mercury was detected above laboratory quantitative limits in both shallow soil samples collected from the basement level of Building 103D, and the reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.056 mg/Kg to 0.84 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios .

Several PAH compounds were detected in the two shallow soil samples; however, none of the concentrations detected exceeded the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All reported concentrations of the remaining SVOC analytes were also below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil samples collected from the basement level of Building 103D.

Acetone was detected in the two shallow soil samples obtained from within Building 103D. The detected concentrations ranged from 31 µg/Kg to 52 µg/Kg, which is below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Additionally, acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in shallow soils in the basement level of Building 103D. No other VOC compounds were detected above laboratory quantitative limits in the two shallow soil samples collected from the basement level of Building 103.

4.3.2.3 Building 103E

The analysis of the two shallow soil samples collected from beneath Building 103E included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figure 9 details the locations where the shallow samples were collected, and Table 3-18 presents a summary of the analytical results.

No PCBs or explosives were detected above laboratory quantitative limits in the shallow soil samples.

Cyanide was detected above laboratory quantitative limits in both shallow soil samples, and reported concentrations in both samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios of 28,500 mg/Kg and 12,300 mg/Kg, respectively. The reported concentrations of cyanide ranged from 0.18 mg/Kg to 0.23 mg/Kg.

Phosphorous was detected above laboratory quantitative limits in the two shallow soil samples, and reported concentrations in these samples ranged between 1.3 mg/Kg to 1.5 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

Mercury was detected above laboratory quantitative limits in both shallow soil samples, and the reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.044 mg/Kg to 0.07 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil samples.

PAH compounds fluoranthene, pyrene, and chrysene were detected in the one shallow soil sample collected and analyzed for SVOCs; however, none of the concentrations detected

exceeded the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All reported concentrations of the remaining SVOC analytes were below laboratory quantitative limits in the shallow soil sample.

Trichlorofluoromethane was detected in one of two shallow soil samples obtained from within Building 103E. Trichlorofluoromethane was detected at a concentration of 7.6 µg/Kg, below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other VOC compounds were detected above laboratory quantitative limits in the two shallow soil samples.

4.3.2.4 Building 103F

A total of 114 shallow soil and sediment samples were collected from the basement level inside Building 103F (previously designated Building 112). Pre-selected analyses for samples collected inside Building 103F included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, and SVOCs by Method 8270C. Figure 10B details the locations where the shallow soil and sediment samples were collected, and Table 3-19 presents a summary of the analytical results.

All reported concentrations of explosives were below laboratory quantitative limits in the five shallow soil samples collected and analyzed for explosives (112CSSS1, 112CSSS2, 112CSSS3, 112CSSS4, and 112CSSS5).

Aroclor 1260 was detected above laboratory quantitative limits in 30 of the 83 shallow soil and sediment samples analyzed for PCBs; however, all reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detections of Aroclor 1260 ranged from 5.9 µg/Kg to 3,000 µg/Kg. No other PCBs were detected above laboratory quantitative limits in the shallow soil and sediment samples.

Cyanide was detected above laboratory quantitative limits in three of the five shallow soil samples analyzed for cyanide, and reported concentrations in these three samples (112CSSS1, 112CSSS4, and 112CSSS5) were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detections of cyanide ranged from 0.18 mg/Kg to 0.69 mg/Kg.

Phosphorous was detected above laboratory quantitative limits in the five shallow soil samples analyzed for phosphorous (112CSSS1, 112CSSS2, 112CSSS3, 112CSSS4, and 112CSSS5), and reported concentrations in these five samples ranged from 25 mg/Kg to 580 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits in 40 of the 44 shallow soil and sediment samples analyzed for mercury, and the reported concentration in one sediment sample (SS-12) exceeded the MRBCA level for the construction worker scenario. Excluding the sample where the reported mercury concentration exceeded the screening level (22 mg/kg in SS-12),

detections of mercury ranged from 0.0077 mg/Kg to 0.53 mg/Kg. Sample SS-12 was collected from within a steel process pipe extending from former press vaults.

Antimony was detected above laboratory quantitative limits in 61 of the 99 shallow soil and sediment samples analyzed for antimony, and reported concentrations in two of the sediment samples (21,000 mg/kg in SS-8 and 10,000mg/kg in SS-18) exceeded the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The sediments were collected immediately adjacent to a former lead re-melt room (SS-8) and washer settling tanks (SS-18). Additionally, the reported concentration of antimony in sediment sample SS-12 (960mg/kg) was in excess of the MRBCA level for the non-residential with clayey soil scenario. Detected concentrations of antimony ranged from 0.99 mg/Kg to 21,000 mg/Kg. Excluding the samples where reported antimony concentrations exceeded the screening levels, detections of antimony ranged from 0.99 mg/Kg to 74 mg/Kg.

Arsenic was detected above laboratory quantitative limits in 99 of the 100 shallow soil and sediment samples analyzed for arsenic, and reported concentrations in five of the samples [SS-8, SS-12, SS-18, 112 SS 27 (SHALLOW), and 112 SS 28 (SHALLOW)] exceeded the MRBCA level for the non-residential with clayey soil scenario of 15.9 mg/Kg. The five arsenic concentrations that exceeded the MRBCA level ranged from 20 mg/kg to 560 mg/kg. Excluding these samples, detections of arsenic ranged from 0.91 mg/Kg to 13.0 mg/Kg. As previously discussed, samples SS-8 and SS-12 were collected from locations very near former process operations and sample SS-12 was collected from within a steel process pipe. Samples 112 SS 27 (SHALLOW) and 112 SS 20 (SHALLOW) were collected from four to eight inches bgs in the area immediately adjacent to the lead press vault foundations.

Lead was detected above laboratory quantitative limits in the 110 shallow soil and sediment samples analyzed for lead, and reported concentrations in sixteen of the samples exceeded the MRBCA level for the non-residential with clayey soil scenario of 660 mg/Kg. The sixteen concentrations that exceeded the MRBCA level ranged from 760 mg/kg to 240,000 mg/kg. Excluding these samples, detections of lead ranged from 2.1 mg/Kg to 630 mg/Kg. Samples containing concentrations of lead in excess of 660 mg/Kg were obtained from within process piping and from surface soils and sediments located immediately adjacent to process piping and former process systems. Currently, no MRBCA level for the construction worker scenario has been established for this analyte.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

The PAH compound benzo(a)pyrene was detected at a concentration of 9,000 µg/Kg in one shallow soil sample analyzed for SVOCs (112CSSS1), which is above the MRBCA level for the non-residential with clayey soil scenario. The MRBCA level for the non-residential with clayey soil scenario for benzo(a)pyrene is 2,110 µg/Kg. All reported concentrations of the remaining SVOC analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the five shallow soil samples collected and analyzed for SVOCs.

4.3.3 Subsurface Soil Sampling

Eight soil borings were advanced at locations near Building Series 103. Figure 5 details the locations of the soil borings in the area of Building Series 103.

4.3.3.1 Building 103

Three of the eight borings (SB18, SB19, and SB34) were placed near Building 103. Borings SB18 and SB19 were placed near the northeastern side of Building 103, and boring SB34 was placed near the southeastern side of Building 103. Borings SB18, SB19, and SB34 were advanced to their target depths of 20 feet bgs.

4.3.3.1.1 Logging of Subsurface Materials

In general, the material encountered at boring locations SB18 and SB19 consisted of varying amounts of clay, sand, and gravel until their target depths of 20 feet bgs. PID screening of the soil cores from SB18 and SB19 did not register readings above the detection limit.

The material encountered at boring location SB34 consisted of dry to moist clay until its target depths of twenty feet bgs. VOC field screening on soil cores collected from SB34 registered readings of approximately 1.2 ppm using the PID, and odors were noted during boring advancement from a depth of approximately 1 to 3 feet bgs. No saturated zones were encountered during the probing effort around Building 103.

4.3.3.1.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 103 Sections A, B, and C included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, metals by Method 6010B, VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 103.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 103.

Mercury was detected above laboratory quantitative limits in all three of the subsurface soil samples, and the reported concentrations for all of the samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.024 mg/Kg to 0.035 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the subsurface soil samples collected from borings SB18, SB19, and SB34.

Acetone was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from SB34. The detected concentration of acetone in the subsurface soil sample collected from boring SB34 was 9.8 µg/Kg. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not a compound of concern at the Site based on known historical uses.

No other VOCs were detected above laboratory quantitative limits in the subsurface soil sample collected and analyzed for VOCs.

4.3.3.2 Building 103D

Borings SB31 and SB32 were placed near the southwestern and northwestern sides of Building 103D, respectively. Borings SB31 and SB32 were advanced to their target depths of twenty feet bgs.

4.3.3.2.1 Logging of Subsurface Materials

In general, the materials encountered at borings SB31 and SB32 primarily consisted of varying amounts of dry to wet clay until their target depths of 20 feet bgs. PID screening of the soil cores from the two probe locations near Building 103D did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 103D.

4.3.3.2.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 103D included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 103D.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 103D.

Mercury was detected above laboratory quantitative limits in the two subsurface soil samples, and the reported concentrations for these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury were 0.0068 mg/Kg and 0.033 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from borings SB31 and SB32.

4.3.3.3 Building 103E

Boring SB33 was placed near the northwestern side of Building 103E. Boring SB33 encountered probe refusal at an approximate depth of 12 feet bgs.

4.3.3.3.1 Logging of Subsurface Materials

In general, the materials encountered at boring SB33 primarily consisted of varying amounts of dry to moist clay until probe refusal at a depth of 12 feet bgs. In addition, boring SB33 encountered top of rock (shale) at approximately 9 feet bgs. PID screening of the soil cores from the probe located near Building 103E did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 103E.

4.3.3.3.2 Chemical Analysis

Pre-selected analyses for the sample collected around Building 103E included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected around Building 103E.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of Building 103E.

Mercury was detected above laboratory quantitative limits in the subsurface soil sample, and the reported concentration for this sample was below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported concentration of mercury for SB33 was 0.011 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from boring SB33.

4.3.3.4 Former Buildings 103F, 103G, and 103H

Borings SB10 and SB11 were placed within the area of former Buildings 103F, 103G, and 103H. Boring SB11 encountered probe refusal at depth of approximately three feet bgs. Boring SB10 was advanced to its target depths of twenty feet bgs.

4.3.3.4.1 Logging of Subsurface Materials

In general, the materials encountered at boring location SB10 consisted of dry to moist clay until its target depth of 20 feet bgs. During the advancement of boring SB10, the SCS geologist noted an odor from the material recovered at a depth of 6 to 7.5 feet bgs (moist, light green clay). Soil cores from SB10 did not register readings above the detection limit of the PID.

The materials encountered at boring SB11 generally consisted of debris until refusal at 3 feet bgs. VOC field screening on soil cores collected from SB11 registered readings of approximately 1.2 ppm using the PID.

No saturated zones were encountered during the probing effort around Buildings 103F, 103G, and 103H.

4.3.3.4.2 Chemical Analysis

Pre-selected analyses for samples collected around former Buildings 103F, 103G, and 103H included explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around former Buildings 103F, 103G, and 103H.

No explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around former Buildings 103F, 103G, and 103H.

Mercury was detected above laboratory quantitative limits in the two subsurface soil samples, and the reported concentrations for these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury were 0.0047 mg/Kg and 0.024 mg/Kg.
All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the two subsurface soil samples collected from borings SB10 and SB11.

4.3.3.5 Building 103F

Two soil borings were advanced at locations near Building 103F (previously designated Building 112). Borings SB29 and SB30 were placed near the east and west sides of Building 103F, respectively. Borings SB29 and SB30 were advanced to their target depths of 20 feet bgs. Figure 5 details the locations of the soil borings in the area of Building 103F.

4.3.3.5.1 Logging of Subsurface Materials

In general, the material encountered at boring locations SB29 and SB30 consisted of varying amounts of dry to moist silt and clay until their target depths of 20 feet bgs. PID screening of the soil cores from the two probe locations near Building 103F did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 103F.

4.3.3.5.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 103F included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 103F.

No PCBs or explosives were detected above laboratory quantitative limits in any of the soil samples collected around Building 103F.

Mercury was detected at a concentration 0.038 mg/Kg and 0.029 mg/Kg in samples collected from boring SB29 and SB30, respectively. These concentrations are below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from borings SB29 and SB30.

4.3.4 Air Monitoring

On September 4, 2003, SCS Engineers utilized a HG253 portable mercury vapor analyzer manufactured by Genesis Laboratory Systems to collect and analyze ambient air within Buildings 103, 103D, and 103E. Five ambient air samples were collected within Building 103. Sampling locations within Building 103 included an area on the main floor near column G39, an area on the main floor near the freight elevator; an area on the main floor near column E34, an

area on the second floor near column D37, and an area on the second floor near column E33. Mercury vapor concentrations ranged from 0.0012 to 0.0023 mg/m^3 at the areas sampled within Building 103. Three ambient air samples were collected within Building 103D. Sampling locations within Building 103D included an area within the crawl space level near column D3, an area on the main floor, and an area on the second floor near the south stairwell. Mercury vapor concentrations ranged from 0.0005 to 0.0008 mg/m^3 at areas sampled within Building 103D. Two ambient air samples were collected on the main floor and second floor within Building 103E. Mercury vapor concentrations were 0.0003 to 0.0023 mg/m^3 at areas sampled within Building 103E. The ambient air samples contained mercury vapor concentrations below the OSHA PEL for mercury vapor of 0.05 mg/m^3.

In September 2003, four ambient air samples were collected at two locations in Buildings 103 and 103D. A passive vapor ambient air sample and ambient air monitoring sample were collected from near the office area of the second floor of Building 103, and a passive vapor ambient air sample and ambient air monitoring sample were collected from the air handler room of the second floor of Building 103D.

Passive vapor ambient air samples were analyzed by Assay Technology AT Labs for mercury vapor by OSHA Method 140, and Table 3-11 presents the passive vapor ambient air monitoring results. Ambient air monitoring samples were analyzed by Assay Technology AT Labs for particulate mercury by OSHA Method 145, and Table 3-11 presents the ambient air monitoring results.

Particulate mercury was not detected above laboratory quantitative limits in the two ambient air monitoring samples.

Reported mercury vapor concentrations were not detected above laboratory quantitative limits in one passive vapor ambient air sample (103C). Sample 103D, collected from the air handler room of the second floor of Building 103D, contained mercury vapor concentrations above laboratory quantitative limits, but below the OSHA PEL of 0.05 mg/m^3. The reported exposure of mercury vapor in sample 103D was 0.0050 mg/m^3.

In September 2003 and April 2004, six air samples were collected in Building 103F for particulate lead analysis. Four ambient air monitoring samples and two personnel samples were collected in the basement level of Building 103F (previously designated Building 112). Three of the ambient air samples were collected under the cafeteria, around the lead press vault, and around the south scale pit. The fourth ambient air monitoring sample was collected at the tank wash area and north scale pit. The two personnel samples were affixed to separate SCS personnel during shallow soil and sediment collection over the sample duration.

Ambient air and personnel monitoring samples were analyzed by Assay Technology AT Labs for lead, and Table 3-11 presents the ambient air and personnel monitoring results. Reported lead concentrations were not detected above laboratory quantitative limits in three ambient air monitoring samples (112-3A, 112-5A, and 112C). Sample 112-4A, collected around the lead press vault, contained lead levels above laboratory quantitative limits but below the OSHA PEL of 0.05 mg/m^3 and OSHA Action Level (AL) of 0.03 mg/m^3. The reported exposure of lead in sample 112-4A was 0.0017 mg/m^3.

Both personnel monitoring samples contained lead levels above laboratory quantitative limits but below the OSHA PEL and AL. Reported exposures of lead in samples 112-1P and 112-2P were 0.0013 and 0.0015 mg/m^3, respectively.

4.4 BUILDING SERIES 104

Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), scrap metals, and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs.

4.4.1 Wipe Sampling

Nine wipe samples were collected in Building 104 Sections A, B, C, and D; Building 104E; and Building 104F for laboratory analysis.

4.4.1.1 Building 104

The analysis of the four wipe samples collected from Sections A, B, C, and D within Building 104 included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 11, 11A, 12, and 12A detail the locations where the wipe samples were collected, and Table 3-20 presents a summary of the analytical results.

Aroclor 1260 was identified in two of four wipe samples, ranging from 0.026 µg/cm^2 to 0.27 µg/cm^2, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

No explosives were detected above laboratory quantitative limits in any of the wipe samples.

Mercury was detected above laboratory quantitative limits in all of the wipes samples; however, none of the concentrations were in excess of the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 180 µg/Wipe to 7,200 µg/Wipe.

Four wipe samples were collected and analyzed for lead. All four wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 650 µg/ft^2 to 929,000 µg/ft^2. The wipe samples were collected from the crawl space level (104CSWS1 and 104CSWS2); from within an elevator shaft (104CWS1); and from above the suspended ceiling near column 50-H (104DWS1).

Concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.4.1.2 Building 104E

The four wipe samples collected from Building 104E were analyzed for PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 11 and 12 detail the locations where the wipe samples were collected, and Table 3-21 presents a summary of the analytical results.

Aroclor 1260 was detected in two of four samples collected and analyzed for PCBs. Detected concentrations ranged from 0.0057 µg/cm^2 to 0.013 µg/cm^2, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

No explosives were detected above laboratory quantitative limits in any of the wipe samples.

Mercury was detected above laboratory quantitative limits in all of the wipes samples, and the reported concentration in all four wipe samples collected and analyzed for mercury. Detections of mercury ranged between 14 and 2,900 µg/Wipe (0.14 to 29.0 µg/cm^2), below the MRBCA levels for the residential with clayey soil scenario of 46.3 mg/Kg.

Four wipe samples were collected and analyzed for lead. All four wipe samples contained lead in excess of the HUD interim dust lead standard for floor surfaces of 40 µg/ft^2 (or approximately 0.004 mg/Wipe). Detected concentrations of lead ranged from 1,021 µg/ft^2 to 1,207,700 µg/ft^2. The wipe samples were collected from the crawl space level (104ECSWS1 and 104ECSWS2); and from above the suspended ceiling near columns O-52 (104EWS1) and M-45 (104EWS2).

All reported concentrations of the remaining metals were below the MRBCA levels for the residential clayey soil scenario.

4.4.1.3 Building 104F

The one wipe sample collected from Building 104F was analyzed for PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figures 11 and 12 detail the locations where the wipe samples were collected, and Table 3-22 presents a summary of the analytical results.

No PCBs or explosives were detected above laboratory quantitative limits in the wipe sample.

Mercury was detected above laboratory quantitative limits in the wipe sample at a reported concentration below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported concentration of mercury was 97 µg/Wipe.

One wipe sample was collected and analyzed for lead. Lead was detected in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. The detected concentration of lead was 1,858 µg/ft^2. Wipe sample 104FCSWS was collected from within the crawl space level of the building.

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe sample.

4.4.2 Paint Chip Sampling

One paint chip sample was collected from Building 104E. The sample 104EPAINT was analyzed by STL for lead by Method 6010B and mercury by Method 7471A. Figure 11 details the location where the paint chip sample was collected and Table 3-23 presents a summary of the analytical results.

Mercury was detected in sample 104EPAINT at a concentration of 2.3 mg/Kg, below the MRBCA levels for the residential clayey soil scenario of 46.3 mg/Kg. Mercury used in interior latex paint was banned by the EPA in 1990. However, mercury-containing paint applied prior to 1990 exists within many structures. Mercury-containing paint may exist within the surface coat or beneath numerous layers of pain within the structure. The concentrations of mercury identified within sample collected from Building 104E is not considered to be elevated. Additionally, research indicates that the amount and concentration of mercury vapor released by the paint decreases as the paint cures.

HUD defines lead-based paint as “paint or other surface coatings that contain lead equal to or exceeding 0.5 percent by weight or 5,000 ppm by weight”. Lead was detected below the HUD threshold level of 5,000 mg/Kg (ppm) in sample 104EPAINT at a reported concentration of 380 mg/Kg.

4.4.3 Shallow Soil and Sediment Sampling

A total of nine shallow soil and sediment samples were collected from the basement level or crawl space beneath Sections A, B, C, and D of Building 104; Building 104E; and Building 104F.

4.4.3.1 Building 104

The analysis of the five shallow soil and sediment samples collected from Sections A, B, C, and D beneath Building 104 included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, and SVOCs by Method 8270C. Figures 12 and 12A detail the location where the shallow soil and sediment samples were collected, and Table 3-24 presents a summary of the analytical results.

Aroclor 1260 was detected in two of five shallow soil and sediment samples collected and analyzed for PCBs. However, detected concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of Aroclor 1260 were21 µg/Kg and 100 µg/Kg.

No other PCBs were detected above laboratory quantitative limits in any of the shallow soil and sediment samples.

Four samples were collected and analyzed for explosives. No explosives were detected above laboratory quantitative limits in any of the sediment samples collected and analyzed for explosives.

Four sediment samples were collected and analyzed for cyanide. Cyanide was not detected above laboratory quantitative limits in any of sediment samples collected and analyzed for cyanide.

Phosphorous was detected above laboratory quantitative limits in the four sediment samples, and reported concentrations in these samples ranged from 51 mg/Kg to 380 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

Mercury was detected above laboratory quantitative limits in the shallow soil and sediment samples; however, detected concentration were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged between 0.023 mg/Kg to 0.68 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

Several SVOCs were identified in the shallow soil sample collected from the railroad track subgrade adjacent to Building 104 (104RRTRACK SUBGRD). However, all identified SVOCs were detected at concentrations below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

4.4.3.2 Building 104E

The analysis of the two shallow soil samples collected from beneath Building 104E included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A. and metals by Method 6010B. Figure 12 details the location where the shallow soil samples were collected, and Table 3-25 presents a summary of the analytical results. The samples were collected from surface soil in a crawl space beneath the building.

Aroclor 1260 was detected in one of two shallow soil samples collected and analyzed for PCBs. However, the detected concentration was below the MRBCA levels for the residential with clayey soil scenarios. The detected concentration of Aroclor 1260 was 22 µg/Kg.

No other PCBs were detected above laboratory quantitative limits in any of the shallow soil samples.

No explosives or cyanide were detected above laboratory quantitative limits in the shallow soil samples.

Phosphorous was detected above laboratory quantitative limits in the two shallow soil samples, and reported concentrations in these samples ranged from 99 mg/Kg and 330 mg/Kg. Currently, no MRBCA level for the residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits in both shallow soil samples at concentrations below the MRBCA levels for the residential with clayey soil scenarios. Detections of mercury ranged from 0.011 mg/Kg to 0.044 mg/Kg.

Arsenic and beryllium were detected above the MRBCA levels for the residential with clayey soil scenario in sample 104ECSSS1. Arsenic was detected at a concentration of 7.3 mg/Kg and beryllium was detected at a concentration of 1.5 mg/Kg. The MRBCA levels for the residential with clayey soil scenario for arsenic and beryllium are 3.7 mg/Kg and 0.45 mg/Kg, respectively. However, the detected concentrations are below the MRBCA levels for non-residential with clayey soil and construction worker scenarios of 15.9 mg/Kg and 654 mg/Kg for arsenic and 3.19 mg/Kg and 215 mg/Kg for beryllium, respectively. Sample 104ECSSS1 was collected within the top six inches of soil located in the crawl space level of the building.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the residential with clayey soil scenario in the shallow soil samples.

4.4.3.3 Building 104F

The analysis of one shallow soil and one sediment sample collected from beneath Building 104F included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, and metals by Method 6010B. Figure 12 details the location where the shallow soil and sediment samples were collected, and Table 3-26 presents a summary of the analytical results.

No PCBs or explosives were detected above laboratory quantitative limits in the shallow soil and sediment samples.

Cyanide was detected above laboratory quantitative limits in the shallow soil and sediment samples, and reported concentrations in both samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported concentrations of cyanide ranged from 0.28 mg/Kg and 0.43 mg/Kg.

Phosphorous was detected above laboratory quantitative limits in the shallow soil and sediment samples, and reported concentrations in these samples ranged from 40 mg/Kg to 180 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits in the shallow soil and sediment samples, and the reported concentrations in both samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.027 mg/Kg to 0.046 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

4.4.4 Subsurface Soil Sampling

Six soil borings were advanced at locations near Building Series 104. Figure 5 details the locations of the soil borings in the area of Building Series 104.

4.4.4.1 Building 104

One of the six borings (105-4) was placed near Building 104. Boring 105-4 was placed near the southern corner of Building 104 and was advanced to its target depth of 12 feet bgs.

4.4.4.2 Logging of Subsurface Materials

In general, the material encountered at boring location 105-4 consisted of varying amounts of damp clay and silt until its target depths of 20 feet bgs. PID screening of the soil cores from probe located near Building 104 did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 104.

4.4.4.2.1 Chemical Analysis

Pre-selected analyses for samples collected around Building 104 included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 104.

No PCBs, explosives, or cyanide was detected above laboratory quantitative limits in the subsurface soil sample collected in the area of Building 104.

Phosphorous was detected above laboratory quantitative limits in the subsurface soil sample collected and analyzed for phosphorous (105-4). The reported phosphorous concentration in boring 105-4 was 520 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits in the subsurface soil sample collected and analyzed for mercury. The reported concentration for this sample was below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The detected concentration of mercury was 0.073 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected and analyzed for metals.

Several SVOCs were identified in the subsurface soil sample; however, reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All other SVOCs were below laboratory quantitative limits.

Acetone was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from 105-4. The detected concentration of acetone in the sample was 6.9 µg/Kg. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not a contaminant of concern at the site based on known historical uses. No other VOCs were detected above laboratory quantitative limits in the subsurface soil samples collected and analyzed for VOCs.

4.4.4.3 Building 104E

Boring SB28 was placed near the northwestern side of Building 104E. Boring SB28 was advanced to its target depth of 20 feet bgs.

4.4.4.3.1 Logging of Subsurface Materials

In general, the materials encountered at boring SB28 consisted of varying amounts of clay, sand, and gravel until its target depth of 20 feet bgs. PID screening of the soil cores from the probe located near Building 104E did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 104E.

4.4.4.3.2 Chemical Analysis

Pre-selected analyses for the sample collected around Building 104E included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected around Building 104E.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of Building 104E.

Mercury was detected above laboratory quantitative limits in the subsurface soil sample collected from SB28. However, the reported concentration for this sample was below the MRBCA level for the residential with clayey soil scenarios. The reported mercury concentration in boring SB28 was 0.025 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the residential with clayey soil scenarios in the subsurface soil sample collected from boring SB28.

4.4.4.4 Building 104F

Boring SB34 was placed near the northwestern side of Building 104F. Boring SB34 was advanced to its target depth of 20 feet bgs.

4.4.4.4.1 Logging of Subsurface Materials

In general, the material encountered at boring location SB34 consisted of dry to moist clay until its target depth of 20 feet bgs. VOC field screening on soil cores collected from SB34 registered readings of approximately 1.2 ppm using the PID, and odors were noted during boring advancement from a depth of approximately 1 to 3 feet bgs. No saturated zones were encountered during the probing effort around Building 104F.

4.4.4.4.2 Chemical Analysis

Pre-selected analyses for the sample collected around Building 104F included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, metals by Method 6010B, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected around Building 104F.

No PCBs or explosives were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of Building 104F.
Mercury was detected above laboratory quantitative limits in the subsurface soil sample collected from SB34. However, the reported concentration for this sample was below the MRBCA Levels for the construction worker and non-residential with clayey soil scenarios. The reported mercury concentration in boring SB34 was 0.024 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the subsurface soil sample collected from boring SB34.

Acetone was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the soil sample collected from SB34. Acetone was detected at a concentration of 9.8 µg/Kg. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in subsurface soils in the area of SB34. No other VOCs were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 104F.

4.4.4.5 Former Buildings 104G, 104H, and 104J

Borings SB7, SB8, and SB9 were placed within the area of former Buildings 104G, 104H, and 104J. Borings SB8 and SB9 encountered probe refusal at depth of approximately 3 feet bgs. Boring SB7 was advanced to its target depth of 20 feet bgs.

4.4.4.5.1 Logging of Subsurface Materials

In general, the materials encountered at boring location SB7 consisted of dry to moist gravel, sand, and clay until its target depth of 20 feet bgs. The materials encountered at borings SB8 and SB9 generally consisted of gravel, sand, and debris until refusal at 3 feet bgs. PID screening of the soil cores from the probes SB7, SB8, and SB9 located near Buildings 104G, 104H, and 104J did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Buildings 104G, 104H, and 104J.

4.4.4.5.2 Chemical Analysis

Direct-push soil sampling at boring locations SB8 and SB9 recovered insufficient quantities of material suitable for laboratory testing for borings individually. Consequently, proportionate sample material from SB8 and SB9 was combined into a single composite sample. The soil sample recovered from boring SB7 was of sufficient volume that an individual sample was submitted for laboratory analysis.

Pre-selected analyses for samples collected around former Buildings 104G, 104H, and 104J included explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around former Buildings 104G, 104H, and 104J.

No explosives were detected above laboratory quantitative limits in the subsurface soil samples collected around former Buildings 102G, 102H, and 102J.

Mercury was detected above laboratory quantitative limits in the two subsurface soil samples. However, reported concentrations of mercury in these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged between 0.0089 mg/Kg and 0.019 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the two subsurface soil samples collected in the area of former Buildings 102G, 102H, and 102J.

4.4.4.6 Former Buildings 104K and 104L

Boring SB21 was placed within the area of former Building 104K, and boring SB22 was placed along the northern edge of the former location of Building 104L. Both borings SB21 and SB22 encountered probe refusal at a depth of 10 feet bgs. Based on filed screening and analytical data obtained from SB22, 8 additional borings (SB101-SB108) were advanced in the area of Building 104L. Due to probe refusal ranging from 2 feet bgs to 22 feet bgs, groundwater monitoring points were not installed in any of the borings.

4.4.4.6.1 Logging of Subsurface Materials

In general, the materials encountered at boring locations SB21, SB22, SB101, SB103, SB104, and SB105 consisted of a wet, gravelly fill to depths of up to 10 feet bgs. Borings SB21, SB22, SB101, SB104, and SB105 encountered probe refusal at a depth of approximately 10 feet bgs (believed to be concrete slab associated with former Building 104K and 104L). Boring SB103 was advanced to a depth of 17 feet bgs, where refusal was encountered on what also appeared to be a concrete slab. Boring SB102 was advanced to a depth of approximately 22 feet bgs, where dry soils caused probe refusal. Deeper soils encountered in this boring consisted of light brown silty clay soils with minimal moisture content. Borings SB106, SB107, and SB108 encountered refusal at depths ranging from approximately 1 to 2 feet bgs. One soil sample was collected and submitted for laboratory analysis from SB21, SB22, SB101, SB102, SB103, SB104, and SB105. PID screening of the soil cores from all probe locations did not register readings above the

detection limit. No saturated zones were encountered during the probing effort around Buildings 104K, and 104L.

4.4.4.6.2 Chemical Analysis

Pre-selected analyses for samples collected around former Buildings 104K and 104L included PCBs by Method 8082, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected near former Buildings 104K and 104L.

No PCBs were detected above laboratory quantitative limits in the soil sample collected from SB21.

Mercury was detected above the MRBCA level for the construction worker scenario of 21.6 mg/Kg in the soil sample collected from boring SB22. The MRBCA level for the non-residential with clayey soil scenario for this analyte is 630 mg/Kg. Mercury was detected at concentrations of 560 mg/Kg, 0.022 mg/Kg, 0.22 mg/Kg, 3.9 mg/Kg, and 0.19mg/Kg in samples collected from borings SB22, SB101, SB103, SB104, and SB105, respectively. Mercury was not identified above laboratory quantitative limits in subsurface soil samples collected from SB21 and SB102.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits in the SB21 and SB22.

4.4.5 Sump Water Sampling

A water sample was collected from within a sump in the basement level of Building 104F. The sample, TW-2, was analyzed by STL for explosives by Method 8330, mercury by Method 7470A, and metals by Method 6010B. Figure 12 details the location where the sump water sample was collected and Table 3-27 presents a summary of the analytical results.

No explosives and mercury were detected above laboratory quantitative limits in the sump water sample collected within Building 104F.

Mercury was not detected above laboratory quantitative limits in the sump water sample collected within Building 104F.

All reported concentrations of the remaining metal analytes were below the MRBCA Lowest Default Level and the residential standard or below laboratory quantitative limits in the sump water sample.

4.4.6 Air Monitoring

On September 4, 2003, SCS Engineers utilized a HG253 portable mercury vapor analyzer manufactured by Genesis Laboratory Systems to collect and analyze ambient air within Building 104. A total of six ambient air samples were collected within Building 104. Four samples were collected on the main floor of the building within Sections A, B, C, and D and two samples were collected within the crawl space level. Mercury vapor concentrations ranged from below

detectible levels to 0.0005 mg/m^3 at the areas sampled within Building 104. The OSHA PEL for mercury is 0.05 mg/m^3.

In September 2003, four ambient air samples were collected at two locations in Building 104. A passive ambient air sample (mercury vapor) and ambient air monitoring sample (particulate mercury) were collected from near the freight elevator of Building 104, and a passive vapor ambient air sample and ambient air monitoring particulate sample were collected from second floor hallway near the exit at the southern end of Building 104. Sample collection methods were as specified for Building 102.

Passive vapor ambient air samples were analyzed by Assay Technology AT Labs for mercury vapor by OSHA Method 140, and Table 3-11 presents the passive vapor ambient air monitoring results. Ambient air monitoring samples were analyzed by Assay Technology AT Labs for particulate mercury by OSHA Method 145, and Table 3-11 presents the ambient air monitoring results.
Mercury vapor and particulate mercury were not detected above laboratory quantitative limits in the ambient air monitoring samples.

4.5 BUILDING SERIES 105

Possible contaminant sources include building mechanical equipment, transformers, production equipment (including process piping, sumps, settling tanks, etc.), scrap metals, and laboratory chemicals associated with the production of small arms ammunition. Potential contaminants associated with these sources include PCBs, explosives, cyanide, phosphorus, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 105 during the investigation.

4.5.1 Wipe Sampling

Twenty-four wipe samples were collected in Building 105 Sections A, B, C, and D; Building 105E; and Building 105F for laboratory analysis.

4.5.1.1 Building 105

The analysis of the sixteen wipe samples collected from Sections A, B, C, and D within Building105 included PCBs by Method 8082, explosives by Method 8330, and metals by Method 6010B. Figures 13, 13A, 14, and 14A detail the locations where the wipe samples were collected, and Table 3-28 presents a summary of the analytical results.

Aroclor 1260 was detected in ten of the sixteen wipe samples, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation. Reported detections of Aroclor 1260 ranged from 0.0079 µg/cm^2 to 0.18 µg/cm^2.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

Sixteen wipe samples were collected and analyzed for explosive compounds. The explosive compound nitrobenzene was detected in wipe sample 105WS2 at a reported concentration of 3.1

µg/Wipe, and the explosive compound 4-amino-2,6-dinitrotoluene was detected in wipe sample 105WS10 at a reported concentration of 7.4 µg/Wipe. Both detected concentrations of explosive analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other explosives were detected above laboratory quantitative limits in any of the wipe samples.

Sixteen wipe samples were collected and analyzed for lead. Lead was detected above laboratory quantitative limits in all wipe samples collected and analyzed for lead, and the concentrations in thirteen of the wipe samples exceeded MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 51 µg/ft^2 to 353,020 µg/ft^2. Wipe samples with concentrations in excess of 200 µg/ft^2 were collected from the crawl space level (10BCSWS1, 105CCSWS1, and 105DCSWS2); from I-beams above the suspended ceiling (105WS1, 105WS2, 105WS3, 105WS5, 105WS6, 105WS7, 105WS9, and 105WS10); from the floor near column H-18 (105WS4); and from the surface of a masonry wall near column F-26 (105WS8).

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.5.1.2 Building 105E

The four wipe samples collected from Building 105E were analyzed for PCBs by Method 8082, explosives by Method 8330, and metals by Method 6010B. Figures 13 and 14 detail the locations where the wipe samples were collected, and Table 3-29 presents a summary of the analytical results.

Aroclor 1260 was detected in one of four wipe samples, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation. The reported concentration of Aroclor 1260 in wipe sample Bldg105EWS1 was 0.008 µg/cm^2.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

The explosive compound 2,4-dinitrotoluene was detected in wipe sample 105WS1 at a reported concentration of 17 µg/Wipe, below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No other explosives were detected above laboratory quantitative limits in any of the wipe samples.

Four wipe samples were collected and analyzed for lead. All of the wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 232 µg/ft^2 to 78,036 µg/ft^2. The wipe samples were collected from the crawl space level (105ECSWS1 and 105ECSWS2); and from I-beams above the suspended ceiling (Bldg105EWS1 and 105EWS2).

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.5.1.3 Building 105F

The four wipe samples collected from Building 105F were analyzed for PCBs by Method 8082, explosives by Method 8330, and metals by Method 6010B. Figures 13 and 14 detail the locations where the wipe samples were collected, and Table 3-30 presents a summary of the analytical results.

Aroclor 1260 was detected in two of the four wipe samples, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation. Detected concentrations of Aroclor 1260 ranged from 0.0055 µg/cm^2 to 0.016 µg/cm^2.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

No explosives were detected above laboratory quantitative limits in the wipe samples.

Four wipe samples were collected and analyzed for lead. Lead was detected above laboratory quantitative limits in all wipe samples collected and analyzed for lead, and the concentrations in two of the wipe samples exceeded MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 49 µg/ft^2 to 52,953 µg/ft^2. Wipe samples with concentrations in excess of µg/ft^2 (105FWS1 and 105FWS2) were collected from I-beams above the suspended ceiling.

All reported concentrations of the remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.5.2 Shallow Soil and Sediment Sampling

Fifteen shallow soil and sediment samples were collected from the basement level or crawl space beneath Sections A, B, C, and D of Buildings 105; Building 105E, and Building 105F.

4.5.2.1 Building 105

The analysis of the ten shallow soil and sediment samples collected from Sections A, B, C, and D beneath Building 105 included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figures 14 and 14A detail the locations where the shallow soil and sediment samples were collected, and Table 3-31 presents a summary of the analytical results.

Ten shallow soil and sediment samples were collected and analyzed for PCBs. Aroclor 1260 was detected in five shallow soil and sediment samples below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of Aroclor 1260 ranged from 9.7 µg/Kg to 190 µg/Kg.

No other PCBs were detected above laboratory quantitative limits in any of the shallow soil and sediment samples.

No explosives were detected above laboratory quantitative limits in any of the shallow soil and sediment samples.

Cyanide was detected above laboratory quantitative limits in one of the nine shallow soil samples analyzed for cyanide, and the reported concentration in this sample was below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported concentration of cyanide in sample 105BSS1 was 0.41 mg/Kg.

Phosphorous was detected above laboratory quantitative limits in all nine shallow soil and sediment samples analyzed for phosphorous, and reported concentrations in these samples ranged from 120 mg/Kg and 700 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits in all ten of the shallow soil and sediment samples, and the reported concentration in these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.019 mg/Kg and 0.2 mg/Kg.

Arsenic was detected above laboratory quantitative limits in all ten shallow soil and sediment samples, and reported concentrations in the one sediment sample (105 SS-1) exceeded the MRBCA level for the non-residential with clayey soil scenario of 15.9 mg/Kg. Arsenic was detected in sediment sample 105 SS-1 at a concentration of 69 mg/kg. Sample 105 SS-1 was collected from within a steel process pipe adjacent to a former annealing trench. Excluding this sample, detections of arsenic ranged from 3.6 mg/Kg to 7.0 mg/Kg in the shallow soil and sediment samples from this area.

Lead was detected above laboratory quantitative limits in all ten of the shallow soil and sediment samples, and reported concentrations in one sediment sample (105 SS-1) exceeded the MRBCA level for the non-residential with clayey soil scenario of 660 mg/Kg. Lead was detected in sediment sample 105 SS-1 at a concentration of 16,000 mg/Kg. As previously discussed, sample 105 SS-1 was collected from within a steel process pipe adjacent to a former annealing trench. Excluding this sample, detections of lead ranged from 8.1 mg/Kg to 160 mg/Kg in the shallow soil and sediment samples in this area.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

PAH compounds benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, and dibenzo(a,h)anthracene were detected above their respective MRBCA levels for the non-residential with clayey soil scenario in one sediment sample (105 SS-1). As previously discussed, sample 105 SS-1 was collected from within a steel process pipe adjacent to a former annealing trench. All reported concentrations of the remaining SVOC analytes for sample 105 SS-1 were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits. All of the SVOC analytes in the remaining nine shallow soil samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits.

All VOCs were below laboratory quantitative limits in the seven shallow soil samples collected from the basement level of Building 105 and analyzed for VOCs (105ASS1, 105ASS2, 105BSS2, 105BTCSUMP, 105CSS1, 105DCSSS1, and 105DCSSS2).

4.5.2.2 Building 105E

The analysis of the three shallow soil and sediment samples collected from beneath Building 105E included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figure 14 details the locations where the shallow soil and sediment samples were collected, and Table 3-32 presents a summary of the analytical results.

Two shallow soil samples were collected and analyzed for PCBs. No PCBs were detected above laboratory quantitative limits in either of the shallow soil samples collected and analyzed for PCBs (105ESS1 and 105ESS2).

No explosives were detected above laboratory quantitative limits in the shallow soil and sediment samples.

Cyanide was not detected above laboratory quantitative limits in the two shallow soil samples collected and analyzed for cyanide (105ESS1 and 105ESS2).

Phosphorous was detected above laboratory quantitative limits in the two shallow soil samples collected and analyzed for phosphorous (105ESS1 and 105ESS2), and reported concentrations in these samples ranged from 520 mg/Kg to 540 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

Mercury was detected above laboratory quantitative limits in the three shallow soil and sediment samples, and reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.041 mg/Kg to 1.1 mg/Kg.

Arsenic was detected above laboratory quantitative limits in all three shallow soil and sediment samples, and reported concentrations in the one sediment sample (105E SS-1) exceeded the MRBCA level for the non-residential with clayey soil scenario of 15.9 mg/Kg. The detected concentration of arsenic in sediment sample 105E SS-1 was 27 mg/Kg. Excluding this sample, detections of arsenic ranged from 3.4 mg/Kg to 5.3 mg/Kg. Sample 105E SS-1 was collected from a brick-lined sump in the north central portion of the crawl space.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil and sediment samples.

Three shallow soil and sediment samples were collected and submitted for laboratory analysis of SVOCs. Numerous SVOCs were detected in one shallow soil and one sediment sample (105ESS2 and 105E SS-1). However, all reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All of the SVOC analytes in the remaining shallow soil sample (105ESS1) were below laboratory quantitative limits.

All VOCs were below laboratory quantitative limits in all three shallow soil and sediment samples collected from the basement level of Building 105E.

4.5.2.3 Building 105F

The analysis of two shallow soil samples collected from beneath Building 105F included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figure 14 details the locations where the shallow soil samples were collected, and Table 3-33 presents a summary of the analytical results.

No PCBs, explosives, cyanide, or VOCs were detected above laboratory quantitative limits in either of the shallow soil samples.

Phosphorous was detected above laboratory quantitative limits in the shallow soil samples, and reported concentrations in these samples ranged from 220 mg/Kg to 320 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits in the shallow soil samples, and the reported concentrations in both samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.023 mg/Kg to 0.07 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil samples.

Two shallow soil samples were collected and submitted for laboratory analysis of SVOCs. Numerous SVOCs were detected in sample 105FSS2. However, all reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All of the SVOC analytes in the remaining shallow soil sample (105FSS1) were below laboratory quantitative limits.

4.5.3 Subsurface Soil Sampling

Six soil borings were advanced at locations near Building Series 105, as shown on Figure 5.

4.5.3.1 Building 105

Boring 105-5 was placed near the southern corner of Building 105 and was advanced to its target depth of 12 feet bgs.

4.5.3.1.1 Logging of Subsurface Materials

In general, the material encountered at boring location 105-5 consisted of varying amounts of damp clay and silt until its target depth of 12 feet bgs. PID screening of the soil cores from the probe location near Building 105 did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 105.

4.5.3.1.2 Chemical Analysis

Pre-selected analyses for the subsurface soil sample collected in the area of Building 105 included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B; phosphorous by Method 4500PE; mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 105.

No PCBs, explosives, or cyanide were detected above laboratory quantitative limits in the subsurface soil sample collected from boring 105-5.

Phosphorous was detected above laboratory quantitative limits at a concentration of 510 mg/kg in the subsurface soil sample collected from boring 105-5. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios has been established for this analyte.

Mercury was detected above laboratory quantitative limits at 0.039 mg/Kg in the subsurface soil sample collected from boring 105-5. The reported concentration for this sample was below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected and analyzed for metals (105-5).

Numerous SVOCs were identified in the subsurface soil sample collected from boring 105-5. However, all reported concentrations of SVOCs were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All remaining SVOCs were below laboratory quantitative limits in the subsurface soil sample collected from boring 105-5.

Acetone was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from 105-5. Acetone was detected at a concentration of 13.0 µg/Kg. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in subsurface soils in the area of boring 105-5. No other VOCs were detected above laboratory quantitative limits.

4.5.3.2 Building 105E

Borings 105-3 and 105-4 were placed near the southwestern and northwestern sides of Building 105E, respectively. Borings SB105-3 and 105-4 were advanced to their target depths of 12 feet bgs.

4.5.3.2.1 Logging of Subsurface Materials

In general, the material encountered at boring locations 105-3 and 105-4 consisted of varying amounts of damp clay and silt until their target depths of 12 feet bgs. PID screening of the soil cores from the two probe locations near Building 105E did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 105E.

4.5.3.2.2 Chemical Analysis

Pre-selected analyses for the subsurface soil samples collected in the area of Building 105E included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 105E.

No PCBs, explosives, or cyanide were detected above laboratory quantitative limits in the subsurface soil samples collected around Building 105E.

Phosphorous was detected above laboratory quantitative limits in the subsurface soil samples. The reported phosphorous concentrations ranged from 430 mg/Kg to 520 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

Mercury was detected above laboratory quantitative limits in the subsurface soil samples. However, the reported concentrations for these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported mercury concentrations in the subsurface soil samples ranged from 0.029 mg/Kg to 0.073 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from 105-3 and 105-4.

The PAH compound benzo(a)pyrene was detected above the MRBCA level for the non-residential with clayey soil scenario of 2,110 µg/Kg in the subsurface soil sample collected from boring 105-3. Benzo(a)pyrene was detected at a concentration of 3,700 µg/Kg in subsurface soil sample 105-3. All reported concentrations of the remaining SVOC analytes for sample 105-3 were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. No SVOC analytes were detected above the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the 105-4 subsurface soil sample.

Acetone was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from 105-4. Acetone was detected at a concentration of 6.9 µg/Kg. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in subsurface soils in the area of boring 105-5. No other VOCs were detected above laboratory quantitative limits in the subsurface soil sample.

4.5.3.3 Former Buildings 105G, 105H, and 105J

Borings 105-1 and 105-2 were placed within the area of former Buildings 105G, 105H, and 105J. Boring 105-1 encountered probe refusal at a depth of approximately 4 feet bgs. Boring 105-2 was advanced to its target depth of 12 feet bgs.

4.5.3.3.1 Logging of Subsurface Materials

In general, the materials encountered at boring location SB105-1 consisted of damp silt and clay until refusal at 4 feet bgs. The materials encountered at boring location SB105-2 consisted of damp silt and clay until its target depth of 12 feet bgs. PID screening of the soil cores from the two probe locations near Buildings 105G, 105H, and 105J did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Buildings 105G, 105H, and 105J.

4.5.3.3.2 Chemical Analysis

Pre-selected analyses for samples collected around former Buildings 105G, 105H, and 105J included PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B, phosphorous by Method 4500PE, mercury by Method 7471A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around former Buildings 105G, 105H, and 105J.

No PCBs, explosives, cyanide were detected above laboratory quantitative limits in the subsurface soil samples collected around former Buildings 105G, 105H, and 105J.

Phosphorous was detected above laboratory quantitative limits in the subsurface soil samples. The reported phosphorous concentrations ranged from 510 mg/Kg to 600 mg/Kg. Currently, no MRBCA levels for the construction worker and non-residential with clayey soil scenarios have been established for this analyte.

Mercury was detected above laboratory quantitative limits in the subsurface soil samples. However, the reported concentrations for these samples were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported mercury concentration in both subsurface soil samples was 0.022 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from 105-1 and 105-2.

Several SVOCs were detected in the subsurface soil sample collected from boring 105-1. However, all detected concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. All of the SVOC analytes in the subsurface soil sample collected from boring 105-2 were below laboratory quantitative limits.

Acetone, 2-butanone, toluene, 1,2,4-trimethylbenzene, and p-isopropyltoluene were detected below their MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from 105-2. Acetone also was detected below its MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from 105-1. No other VOCs were detected above laboratory quantitative limits in the subsurface soil samples.

4.5.3.4 Former Building 105N

Boring SB17 was placed near the southwestern side of former Building 105N. Boring SB17 was advanced to its target depth of 20 feet bgs.

4.5.3.4.1 Logging of Subsurface Materials

In general, the material encountered at boring location SB17 consisted primarily of clay until its target depth of 20 feet bgs. PID screening of the soil cores from the probe location near Building 105N did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 105N.

4.5.3.4.2 Chemical Analysis

Pre-selected analyses for the sample collected in the area of former Building 105N included PCBs by Method 8082, TPH-DRO by Method 8015B, TPH-GRO by Method 8015B MGRO, SVOCs by Method 8270C, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected in the area of former Building 105N.

No PCBs, TPH-DRO, or TPH-GRO were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of former Building 105N.

Trace concentrations of several SVOCs were detected in the subsurface soil sample collected from SB17. However, all concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios or below laboratory quantitative limits.

Acetone was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from SB17. No other VOCs were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of former Building 105N.

4.5.4 Sump Water Sampling

Three sump water samples were collected in the basement level of Building 105 (105SUMPH2O); 105E (105ESUMP); 105F (105FSUMP). The samples were analyzed by STL for PCBs by Method 8082, explosives by Method 8330, cyanide by Method 9014/9010B,

phosphorous by Method 4500PE, mercury by Method 7470A, metals by Method 6010B, SVOCs by Method 8270C, and VOCs by Method 8260B. Figure 14 details the locations where the sump water samples were collected, and Table 3-34 presents a summary of the analytical results.

No PCBs, explosives, cyanide, or VOCs were detected above laboratory quantitative limits in the sump water samples.

Phosphorous was detected above laboratory quantitative limits in the sump water samples. The reported phosphorous concentrations ranged from 0.099 mg/L to 0.34 mg/L. Currently, no MRBCA lowest default level and residential scenario level have been established for this analyte.

Mercury was detected above laboratory quantitative limits in one of the three sump water samples. However, the detected concentration was below the MRBCA lowest default level and below the residential scenario level. Sample 105SUMPH2O had a reported mercury concentration 0.00022 mg/L.

All reported concentrations of the remaining metal analytes were below the MRBCA lowest default and residential scenario levels in the three sump water samples.

The compound bis(2-ethylhexyl)phthalate was detected above the MRBCA lowest default level of 0.006 mg/L in two of the three sump water samples (105SUMPH2O and 105ESUMP). The detected concentrations of bis(2-ethylhexyl)phthalate in samples 105SUMPH2O and 105ESUMP were 0.011 mg/L and 0.023 mg/L, respectively. All reported concentrations of the remaining SVOC analytes were below the MRBCA lowest default and the residential scenario levels.

4.5.5 Air Monitoring

On September 4, 2003, SCS Engineers utilized an HG253 portable mercury vapor analyzer manufactured by Genesis Laboratory Systems to collect and analyze ambient air within Building 105. Three ambient air samples were collected within Building 105. Samples were collected within the crawl space level, on the main floor, and on the second floor of the building. Mercury vapor concentrations were not identified in any of the sampling areas within Building 105. The OSHA PEL for mercury is 0.05 mg/m^3.

4.6 BUILDING SERIES 108

Possible contaminant sources within Building 108A include the transformers and other oil filled electrical equipment. Potential contaminants associated with these sources include TPH, and PCBs. No other potential contaminant sources were identified within Building 108A during the investigation.

4.6.1 Wipe Sampling

Three wipe samples were collected in Building 108A and two wipe samples were collected in Building 108B for laboratory analysis.

4.6.1.1 Building 108A

Building 108A wipe samples were analyzed for PCBs by Method 8082. Figure 15 details the locations where the wipe samples collected, and Table 3-35 presents a summary of the analytical results.

Aroclor 1260 was detected in one of three wipe samples, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation. Aroclor 1260 was detected at a concentration of 0.003 µg/cm^2 in sample 108A WS-3.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

4.6.1.2 Building 108B

Building 108B wipe samples were analyzed for PCBs by Method 8082. Figure 15 details the locations where the wipe samples were collected, and Table 3-36 presents a summary of the analytical results.

Aroclor 1260 was detected in one of two wipe samples, below the Federal TSCA acceptable level of 10 µg/cm^2 for high density human occupation. Aroclor 1260 was detected at a concentration of 0.0033 µg/cm^2 in sample 108B WS-1.

No other PCBs were detected above laboratory quantitative limits in any of the wipe samples.

4.6.2 Shallow Soil Sampling

Prior to commencing subsurface soil collection activities in the areas surrounding Buildings 108A and 108B, every effort was made to obtain accurate locations of utility lines. This included performing utility locates; referencing current and historical electrical drawings; consulting with representatives of the facility maintenance crew; and entering the crawl space level of Buildings 108A and 108B to observe the locations were electrical conduits entered and exited the structures. During inspection of the crawl space level of Building 108B, soils were observed to be discolored and an odor was also noted. A sample of the material exhibiting the greatest discoloration was collected from the upper 4 inches of soil. Stained soil was not observed in the crawl space level of Building 108A; therefore, a shallow soil sample was not collected in this area.

The shallow soil sample collected from Building 108B was analyzed for PCBs by Method 8082 and TPH-DRO by Method 8015B. Figure 15A details the location where the shallow soil sample was collected, and Table 3-37 presents a summary of the analytical results.

Aroclor 1260 was detected above laboratory quantitative limits in soil sample 108BLSSS1. The concentration of PCB Aroclor 1260 in the sample was 1,500 µg/Kg, below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

THP-DRO was detected above laboratory quantitative limits in soil sample 108BLSSS1 at a concentration of 6,400 mg/Kg. The detected concentration of THP-DRO is below the MRBCA levels for the construction worker and the non-residential with clayey soil scenarios.

4.6.3 Subsurface Soil Sampling

Two soil borings (SB39 and SB40) were advanced at locations surrounding Building 108A and two soil borings (SB37 and SB38) were advanced at locations surrounding Building 108B. Based on analytical data, eight additional borings (SB126-SB132) were subsequently advanced in the area of Building 108A and six additional borings (SB109-SB112, SB133 and SB134) were advanced in the area of Building 108B. Additionally, groundwater monitoring points were installed in five of the borings near Building 108A and six monitoring points were installed in the borings near Building 108B. Figure 5 details the locations of the soil borings in the area of Buildings 108A and 108B. Discussion pertaining to monitoring point installation, groundwater sampling, and analytical data is located in Section 4.6.3.

4.6.3.1 Building 108A

Borings SB39, SB40, SB131, and SB132 encountered probe refusal at a depths of 9, 8, 15, and 16 feet bgs, respectively. Borings SB126-SB130 were advanced to their target depths of 20 feet bgs.

4.6.3.1.1 Logging of Subsurface Materials

In general, the material encountered at boring locations SB39 and SB40 generally consisted of varying amounts of dry to moist clay, sand, and gravel until refusal depths of 9 and 8 feet bgs, respectively. Soil cores from borings SB126-SB130 and SB132 consisted of firm to very firm silty clay material with minimal amounts of sand and gravel. Discoloration was observed in SB126 and SB130. The material encountered at boring location SB131 consisted of silty clay fill with a moderate amount of gravel overlying additional fill in the form of crushed limestone fines until refusal. It is anticipated that refusal was caused by the basement floor slab or a portion of the foundation system associated with former Building 111.

Field screening of continuous soil cores recovered from the borings was completed with a PID. A reading of 0.3 ppm was recorded on material recovered from SB130, at depth of 10 to 14 feet bgs. Field screening completed on all other recovered material registered readings below the detection limits of the PID. One soil sample from borings SB39, SB40, and SB127-SB132 and two soil samples from boring SB126 were collected and submitted for laboratory analysis. No saturated zones were encountered during the probing effort around Building 108A.

4.6.3.1.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 108A included PCBs by Method 8082 and TPH by Method 8015B MDRO. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 108A.

Aroclor 1260 was detected in six of eleven subsurface soil samples collected and submitted for laboratory analysis. The concentration of Aroclor 1260 (26,000 µg/kg) was in excess of the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in sample SB1265-1. Excluding this sample, detections of Aroclor 1260 ranged from18 µg/Kg to 3,900 µg/Kg.

No other PCBs were detected above laboratory quantitative limits in the subsurface soil samples collected from the borings around Building 108A.

Three soil samples were collected and analyzed for TPH-DRO. TPH-DRO concentrations were detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in all of the samples. Reported TPH-DRO concentrations ranged from 17 mg/Kg to 4,500 mg/Kg in soil samples collected near Building 108A.

4.6.3.2 Building 108B

Borings SB37, SB38, SB109-SB112, SB133, and SB134 were placed in the area of Building 108B. All borings were advanced to their respective target depths ranging from 20 to 32 feet bgs.

4.6.3.2.1 Logging of Subsurface Materials

In general, the material encountered in all boring locations consisted of silty clay soil containing varying amounts of clay, sand, and gravel until their target depths. Discoloration was observed in material recovered from SB133 at a depth of approximately 16 to 20 feet bgs. PID screening of the soil cores from the probe locations near Building 108B did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 108B. One soil sample from borings SB37 and SB38 and two soil samples from borings SB109-SB112, SB133, and SB134 were collected and submitted for laboratory analysis.

4.6.3.2.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 108B included PCBs by Method 8082 and TPH by Method 8015B MDRO. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 108B.

Aroclor 1260 was detected in three of fourteen subsurface soil samples collected and submitted for laboratory analysis. Aroclor 1260 was detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in samples SB1105-1, SB1125-1, and SB1335-4. The detected concentrations of Aroclor 1260 ranged between 22 µg/Kg and 160 µg/Kg.

No other PCBs were detected above laboratory quantitative limits in the subsurface soil samples collected from the eight borings around Building 108B.

TPH-DRO concentrations were detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in all four of the subsurface soil samples submitted for analysis. Reported TPH-DRO concentrations ranged from 4.8 mg/Kg to 1,000 mg/Kg in soil samples collected near Building 108B.

4.6.4 Groundwater Sampling

Groundwater samples were collected from temporary monitoring points installed in borings that were advanced around Buildings 108A and 108B. Groundwater was not identified during

advancement of the borings; therefore, temporary monitoring points were installed to allow for small quantities of groundwater to be recovered for sampling and analysis.

4.6.4.1 Building 108A

Groundwater samples were collected from temporary monitoring points installed in borings SB126, SB127, SB129, SB130, and SB132. Pre-selected analyses for groundwater samples collected around Building 108A included PCBs by Method 8082 and TPH-DRO by Method 8015B. Figure 5 details the locations where the groundwater samples were collected, and Table 3-38 presents a summary of the analytical results.

Aroclor 1260 was detected in one of five groundwater samples collected and submitted for laboratory analysis. Aroclor 1260 was detected above the MRBCA lowest default and the residential scenario levels in sample SB126. The detected concentration of Aroclor 1260 in sample SB126 was 2.6 µg/L.

No other PCBs were detected above laboratory quantitative limits in the groundwater samples collected from the five temporary monitoring points around Building 108A.

THP-DRO was detected in one groundwater sample collected and submitted for laboratory analysis. TPH-DRO was detected below the MRBCA lowest default level of 32.4 mg/L. Currently, no MRBCA level for the residential scenario has been established for this analyte. The detected concentration of TPH-DRO in sample SB126 was 0.74 mg/L.

4.6.4.2 Building 108B

Groundwater samples for PCB analysis were collected from temporary monitoring points installed in borings SB109, SB110, SB112, SB133, and SB134. Figure 5 details the locations where the groundwater samples were collected, and Table 3-38 presents a summary of the analytical results.

Aroclor 1260 was detected in one of five groundwater samples collected and submitted for laboratory analysis. Aroclor 1260 was detected above the MRBCA lowest default and residential scenario levels in sample SB133. The detected concentration of Aroclor 1260 in sample SB133 was 0.62 µg/L.

No other PCBs were detected above laboratory quantitative limits in the groundwater samples collected from the five temporary monitoring points around Building 108B.

4.7 BUILDING 110

Possible contaminant sources within Building 110 include former ASTs, building mechanical equipment, transformers, and oil handling piping and equipment associated with the tool and gauge shop. Potential contaminants associated with these sources include TPH, PCBs, metals, VOCs, and SVOCs. No other potential contaminant sources were identified within Building 110 during the investigation.

4.7.1 Wipe Sampling

Four wipe samples were collected in Building 110 for laboratory analysis. The wipe sample analysis included PCBs by Method 8082 and metals by Method 6010B. Figure 16 details the locations where the wipe samples were collected, and Table 3-39 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in any of the wipe samples.

Four wipe samples were collected and analyzed for lead. All of the wipe samples contained lead in excess of the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. Detected concentrations of lead ranged from 436 µg/ft^2 to 4,180 µg/ft^2. The wipe samples were collected from tank saddles within the former fuel oil storage room (110WS-1 and 110WS-2); and from a wall and steel column within the former track building (110WS-3 and 110WS-4).

All reported concentrations of remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe samples.

4.7.2 Shallow Soil Sampling

Two shallow soil samples were collected from below the basement floor slab in the room that previously contained two ASTs. Pre-selected analyses for samples collected inside Building 110 included TPH by Method 8015B MDRO and TPH by Method 8015B MGRO. Figure 16 details the locations where the shallow soil samples were collected, and Table 3-40 presents a summary of the analytical results.

All reported concentrations of TPH-DRO and TPH-GRO were below laboratory quantitative limits in the two shallow soil samples.

4.7.3 Subsurface Soil Sampling

Three soil borings were advanced at locations around Building 110. Borings SB27, SB36, and SB41 were placed near the western side of Building 110. Borings SB27 and SB36 were advanced to their target depths of 20 feet bgs. Boring SB41 encountered probe refusal at a depth of 26 feet bgs. Figure 5 details the locations of the soil borings in the area of Building 110.

4.7.3.1.1 Logging of Subsurface Materials

In general, the materials encountered at boring locations SB27, SB36, and SB41 consisted of a dry to moist clay. A slight odor was noted in boring SB41 between approximately 15 to 17 feet bgs. In addition, boring SB41 encountered top of rock (shale) at approximately 23.5 feet bgs. PID screening of the soil cores from the three probe locations near Building 110 did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 110. One soil sample was collected and submitted for laboratory analysis from each soil boring.

4.7.3.1.2 Chemical Analysis

Pre-selected analyses for samples collected around Building 110 included PCBs by Method 8082, TPH by Method 8015B MDRO, TPH by Method 8015B MGRO, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around Building 110.

Three samples were submitted for laboratory analysis of PCBs. No PCBs were detected above laboratory quantitative limits in any of the soil samples collected around Building 110.

TPH-DRO was detected in two of the three subsurface soils samples at reported concentrations below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of TPH-DRO in the area of Building 110 were 3.2 mg/Kg and 26 mg/Kg in borings SB36 and SB41, respectively.

Only one sample was collected and analyzed for TPH-GRO (SB41), and GRO was detected at a reported concentration below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported GRO concentration in boring SB41 was 13 mg/Kg.

Mercury was detected above laboratory quantitative limits in all three of the subsurface soil samples, and the reported concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Reported mercury concentrations ranged from 0.025 mg/Kg to 0.048 mg/Kg.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil samples collected from borings SB27, SB36, and SB41.

4.8 FORMER BUILDING 111

Possible contaminant sources within former Building 111 include the building mechanical equipment and equipment associated with the power plant. Potential contaminants associated with these sources include TPH, PCBs, and metals. No other potential contaminant sources were identified associated with former Building 111 during the investigation.

4.8.1 Subsurface Soil Sampling

Four soil borings (SB1, SB2, SB3, and SB4) were advanced at locations around former Building 111. Additional soil borings were also advanced in the area of former Building 111; however, the purpose of these borings was to investigate potential contaminants sourced from Building 108A, located immediately adjacent to the south of former Building 111. Borings SB1, SB2, SB3, and SB4 were placed within the former location of Building 111. All borings encountered probe refusal at a depth of 9 feet bgs. Figure 5 details the locations of the soil borings in the area of former Building 111.

4.8.1.1.1 Logging of Subsurface Materials

In general, the materials encountered at boring locations SB1, SB2, SB3, and SB4 consisted of a dry to moist, gravelly fill. Borings SB1, SB2, SB3, and SB4 intersected a concrete slab (believed to be the basement floor slab of former Building 111) at a depth of 9 feet bgs, resulting in probe refusal. PID screening of the soil cores from the four probe locations near Building 111 did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 111.

4.8.1.1.2 Chemical Analysis

Direct-push soil sampling at boring locations SB1, SB2, SB3, and SB4 recovered insufficient quantities of material for laboratory testing of discrete samples from each boring. Consequently, proportionate sample material from each of these borings was combined into a single composite sample.

Pre-selected analyses for samples collected around former Building 111 included PCBs by Method 8082, TPH by Method 8015B MDRO, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected around former Building 111.

PCBs were not detected above laboratory quantitative limits in the composite soil sample collected from the four borings within the area of former Building 111.

TPH-DRO concentrations were detected below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Reported TPH-DRO concentration within the composite soil sample was 6 mg/Kg.

Mercury was detected at a concentration of 0.011 mg/Kg in the composite soil sample, which is below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

All reported concentrations of remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the SB1-SB4 composite sample.

4.9 BUILDING 115

Possible contaminant sources in the area of Building 115 include former USTs and fueling island; building mechanical equipment; and degreasing chemicals, oil, and lubricants associated with the truck garage. Potential contaminants associated with these sources include TPH, PCBs, metals, and VOCs. No other potential contaminant sources were identified within the area of Building 115 during the investigation.

4.9.1 Wipe Sampling

One wipe sample was collected in Building 115 for laboratory analysis. The wipe sample was analyzed for PCBs by Method 8082 and metals by Method 6010B. Figure 17 details the location where the wipe sample was collected and Table 3-41 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in the wipe sample.

One wipe samples was collected and analyzed for lead. Lead was detected above the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. The detected concentration of lead was 1,300 µg/ft^2. Wipe sample 115CSWS was collected from within the crawl space level of the building.

All reported concentrations of remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe sample.

4.9.2 Subsurface Soil Sampling

One soil boring (SB20) was advanced at a location near the former UST basin located to the north of Building 115. Based on field screening and analytical data, ten additional borings (SB113-SB122) were subsequently advanced in the area of Building 115. Additionally, groundwater monitoring points were installed in five of the borings (SB116, SB118, SB119, SB121, and SB122). Figure 5 details the locations of the soil borings in the area of Building 103F (previously designated Building 112). Discussion pertaining to monitoring point installation, groundwater sampling, and analytical data is located in Section 4.10.3.

4.9.2.1.1 Logging of Subsurface Materials

In general, the material encountered at boring locations SB20 and SB113-SB122 consisted of silty clay with varying amounts of clay, sand, and gravel. Borings SB114 and SB118 encountered refusal at depths of 23 and 22 feet bgs, respectively. All other soil borings were advanced to their target depths ranging from 20 to 28 feet bgs. VOC field screening on soil cores collected from SB20 registered readings between 2.7 and 94 ppm using the PID. Odors and discoloration were noted during boring advancement of SB20, SB115, SB116, SB118, SB119, and SB122. Soil cores from SB113, SB114, SB117, SB120, and SB121 registered readings below the detection limits of the PID. No saturated zones were encountered during the probing effort around Building 115. One soil sample was collected and submitted for laboratory analysis from each soil boring, with exception of SB115, SB118, SB119, and SB122, where two soil samples were collected and submitted.

4.9.2.1.2 Chemical Analysis

Pre-selected analyses for samples collected near Building 115 and the existing USTs included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, metals by Method 6010B, VOCs by Method 8260B, and TPH-DRO and TPH-GRO by Method 8015M. Table 3-1 presents a summary of analytical results from the subsurface soil samples collected near Building 115 and the existing USTs.

No PCBs were detected above laboratory quantitative limits in the soil sample collected near Building 115 and the existing USTs (SB20).

THP-DRO was detected in all thirteen subsurface soil samples collected and submitted for analysis. Detected concentrations ranged from 4.7 mg/Kg to 110 mg/Kg. The detected concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

TPH-GRO was detected in seven of thirteen samples collected and submitted for analysis. Detected concentrations ranged from 6.8 µg/Kg to 82,000 µg/Kg. The detected concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

Mercury was detected at a concentration of 0.035 mg/Kg in the one subsurface soil sample collected and analyzed for mercury (SB20). The detected concentration of mercury was below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the soil sample collected from boring SB20.

Acetone and 1,1,2,2-tetrachloroethane were detected at concentrations of 130 µg/Kg and 41 µg/Kg, below their respective MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the soil sample collected from SB20. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in subsurface soils in the area of Building 115. No other VOCs were detected above laboratory quantitative limits.

4.9.3 Groundwater Sampling

Groundwater samples were collected from temporary monitoring points installed in borings that were advanced in the area of the former USTs and fueling island. Groundwater was not identified during advancement of the borings; therefore, temporary monitoring points were installed to allow for small quantities of groundwater to be recovered for sampling and analysis.

Groundwater samples were collected from temporary monitoring points installed in borings SB116, SB118, SB119, SB121, and SB122. Pre-selected analyses for samples collected in the area of Building 115 included TPH-DRO and TPH-GRO by Method 8015B. Figure 5 details the locations where the groundwater samples were collected, and Table 3-38 presents a summary of the analytical results.

TPH-DRO was detected below the MRBCA lowest default target level and below the residential with clayey soil scenario level in all five groundwater samples collected and analyzed for TPH-DRO. The detected concentrations of TPH-DRO ranged from 0.093 mg/L to 4.4 mg/L.

TPH-GRO was detected above laboratory detection limits in four of five samples collected and analyzed for TPH-GRO. Detected concentrations were below the MRBCA lowest default target

level and below the residential with clayey soil scenario level. The detected concentrations of TPH-GRO ranged from 20.0 mg/L to 1,900 mg/L.

4.10 FORMER BUILDING SERIES 136

Possible contaminant sources include fuel tanks associated with fire trucks. Potential contaminants associated with these sources include VOCs and metals. No other potential contaminant sources were identified associated with former Buildings 136A, 136B, 136E, and 136F during the investigation.

4.10.1 Subsurface Soil Sampling

One soil boring was advanced at a location near former Building 136A and one soil boring was advanced at a location near former Building 136B. Figure 5 details the locations of the soil borings in the area of former Buildings 136A and 136B.

4.10.1.1 Building 136A

Boring SB12 was placed within the former location of Building 136A. Boring SB12 was advanced to its target depth of 20 feet bgs.

4.10.1.1.1 Logging of Subsurface Materials

In general, the material encountered at boring location SB12 consisted of varying amounts of clay and sand. PID screening of the soil cores from the probe location near Building 136A did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 136A.

4.10.1.1.2 Chemical Analysis

Pre-selected analyses for the subsurface soil sample collected in the area former Building 136A included PCBs by Method 8082, mercury by Method 7471A, metals by Method 6010B, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected in the area of former Building 136A.

No PCBs were detected above laboratory quantitative limits in the subsurface soil sample collected in the area of former Building 136A.

All reported concentrations of mercury and the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from boring SB12.

All reported concentrations of VOCs were below laboratory quantitative limits in the SB12 subsurface soil sample.

4.10.1.2 Building 136B

Boring SB5 was placed within the former location of Building 136B. Boring SB5 was advanced to its target depth of 20 feet bgs.

4.10.1.2.1 Logging of Subsurface Materials

In general, the material encountered at boring location SB5 consisted of dry to moist clay. PID screening of the soil cores from the probe location near Building 136B did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 136B.

4.10.1.2.2 Chemical Analysis

Pre-selected analyses for the subsurface soil sample collected from within the area of former Building 136B included PCBs by Method 8082, mercury by Method 7471A, metals by Method 6010B, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected from within the area of former Building 136B.

No PCBs were detected above laboratory quantitative limits in the subsurface soil sample collected from within the area of former Building 136B.

All reported concentrations of mercury and the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from boring SB5.

Acetone was detected below its MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from SB5. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in subsurface soils in the area of former Building 136B. No other VOCs were detected above laboratory quantitative limits.

4.11 FORMER BUILDING 137A

Possible contaminant sources include fuel tanks associated with maintenance equipment, containers of paint, cleaning chemicals; and lubricating oils associated with building and grounds maintenance operations. Potential contaminants associated with these sources include VOCs and metals. No other potential contaminant sources were identified associated with former Building 137A during the investigation.

4.11.1 Subsurface Soil Sampling

One soil boring was advanced at a location near former Building 137A. Boring SB35 was placed within the former location of Building 137A and was advanced to its target depth of 20 feet bgs. Figure 5 details the location of the soil boring in the area of former Building 137A.

4.11.1.1.1 Logging of Subsurface Materials

In general, the material encountered at boring location SB35 consisted of varying amounts of dry to wet clay and sand until its target depth of 20 feet bgs. PID screening of the soil cores from the probe location near Building 137A did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 137A.

4.11.1.1.2 Chemical Analysis

Pre-selected analyses for the sample collected around former Building 137A included mercury by Method 7471A, metals by Method 6010B, and VOCs by Method 8260B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected around former Building 137A.

All reported concentrations of mercury and the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from boring SB35.

Acetone and was detected below its MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from SB35. Acetone is a common analytical laboratory contaminant that is often observed at low concentrations. Acetone is not expected to be present in subsurface soils in the area of Building 137A. No other VOCs were detected above laboratory quantitative limits.

4.12 BUILDING 141C

Possible contaminant sources include mechanical equipment located within Building 141C. Potential contaminants associated with these sources include PCBs and metals. No other potential contaminant sources were identified associated with former Building 141C during the investigation.

4.12.1 Subsurface Soil Sampling

One soil boring was advanced at a location near Building 141C. Boring SB6 was placed near the east side of Building 141C and was advanced to its target depth of 20 feet bgs. Figure 5 details the location of the soil boring in the area of Building 141C.

4.12.1.1.1 Logging of Subsurface Materials

In general, the material encountered at boring location SB6 consisted of dry to moist clay until its target depth of 20 feet bgs. PID screening of the soil cores from the probe location near Building 141C did not register readings above the detection limit. No saturated zones were encountered during the probing effort around Building 141C.

4.12.1.1.2 Chemical Analysis

Pre-selected analyses for the sample collected around Building 141C included PCBs by Method 8082, mercury by Method 7471A, and metals by Method 6010B. Table 3-1 presents a summary of analytical results from the subsurface soil sample collected around Building 141C.

No PCBs were detected above laboratory quantitative limits in the subsurface soil sample collected near Building 141C.

All reported concentrations of mercury and the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the subsurface soil sample collected from boring SB6.

4.13 UTILITY TUNNEL COMPLEX

Possible contaminant sources in the utility tunnels include electrical equipment; and impacted sediment and groundwater entering from other areas outside the tunnel system. Potential contaminants associated with these sources include PCBs, explosives, and metals. No other potential contaminant sources were identified associated with the utility tunnel complex during the investigation.

4.13.1 Wipe Sampling

Two wipe samples were collected in the utility tunnel complex for laboratory analysis. The wipe sample analysis included PCBs by Method 8082, explosives by Method 8330, and metals by Method 6010B. Figure 18 details the locations where the wipe samples were collected, and Table 4-42 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in either of the wipe samples.

No explosives were detected above laboratory quantitative limits in the wipe sample collected and analyzed for explosives (105EFTUNNELWS1).

One wipe sample was collected and analyzed for lead. Lead was detected above the MRBCA post-abatement clearance levels for non-residential standards of 200 µg/ft^2. The detected concentration of lead was 901 µg/ft^2.

All reported concentrations of remaining metals were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the wipe sample collected and analyzed for metals (105EFTUNNELWS1).

4.13.2 Paint Chip Sampling

Two paint chip samples were collected from the utility tunnel complex. The samples (TUNNEL ELEC.CON.PAINT and TUNNEL H20 PIPE PAINT) were analyzed by STL for lead by

Method 6010B and mercury by Method 7471A. Figure 18 details the locations where the paint chip samples were collected, and Table 3-43 presents a summary of the analytical results.

Paint chip samples TUNNEL ELEC.CON.PAINT and TUNNEL H20 PIPE PAINT had reported lead concentrations of 4,500 mg/Kg and 15,000 mg/Kg, respectively. HUD defines lead-based paint as "paint or other surface coatings that contain lead equal to or exceeding 0.5 percent by weight or 5,000 ppm by weight". Lead was detected above the HUD threshold level of 5,000 mg/Kg (ppm) in sample TUNNEL H20 PIPE PAINT at a reported concentration of 15,000 mg/Kg.

4.13.3 Sediment Sampling

Nine sediment samples were collected from the utility tunnel complex. Pre-selected analyses for samples collected inside the utility tunnel complex included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figure 18 details the locations where the sediment samples were collected, and Table 3-44 presents a summary of the analytical results.

No PCBs were detected above laboratory quantitative limits in any of the sediment samples collected and analyzed for PCBs (TS-2, B104 T.SED IN SUMP, TS-1, and B112 T SED FAR SOUTH).

No explosives were detected above laboratory quantitative limits in the sediment sample collected and analyzed for explosives (TS-1).

Mercury was detected above laboratory quantitative limits in the three sediment samples analyzed for mercury (B104 T.SED IN SUMP, TS-1, and TUNNEL SUMP 1). However, all detected concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. Detected concentrations of mercury ranged from 0.2 mg/Kg to 1.1 mg/Kg.

Arsenic was detected above laboratory quantitative limits in the three sediment samples analyzed for arsenic (B104 T.SED IN SUMP, TS-1, and TUNNEL SUMP 1). The reported concentration in two sediment samples (TS-1 and TUNNEL SUMP 1) exceeded the MRBCA level for non-residential with clayey soil scenario. Detected concentrations of arsenic ranged from 5.4 mg/Kg to 34 mg/Kg.

Lead was detected above laboratory quantitative limits in all eight sediment samples, and reported concentrations in seven of the samples exceeded the MRBCA levels for the non-residential with clayey soil scenarios. Detections of lead ranged from 230 mg/Kg to 8,300 mg/Kg. Currently, no MRBCA level for the construction worker scenario has been established for this analyte.

All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the sediment samples collected and analyzed for metals.

4.13.4 Tunnel Water Sampling

Two tunnel water samples were collected in the utility tunnel complex. The samples were analyzed by STL for explosives by Method 8330, mercury by Method 7470A, and metals by Method 6010B. Figure 18 details the locations where the tunnel water samples were collected, and Table 3-45 presents a summary of the analytical results.

No explosives were detected above laboratory quantitative limits in the tunnel water samples collected within the utility tunnel complex.

Mercury was detected above laboratory quantitative limits in one of two water samples collected and analyzed. However, the detected concentration of mercury was below the MRBCA lowest default and the residential with clayey soil scenario levels. The detected mercury concentration was 0.00025 mg/L.

Lead was detected above laboratory quantitative limits and exceeded the MRBCA lowest default level of 0.015 mg/L in one of the tunnel water samples (TW-3). The reported lead concentrations ranged between below laboratory quantitative limits to 0.14 mg/L. Currently, no MRBCA level for the residential scenario has been established for this analyte.

All reported concentrations of the remaining metal analytes were below the MRBCA lowest default level and the residential with clayey soil scenarios or below laboratory quantitative limits in the tunnel water samples.

4.13.5 Air Monitoring

In September 2003, four ambient air samples were collected at two locations in the utility tunnel complex. A passive vapor ambient air sample and ambient air monitoring sample were collected from the utility tunnels near Building 103, and a passive vapor ambient air sample and ambient air monitoring sample were collected from the utility tunnels near Building 104. Passive vapor ambient air sampling and ambient air monitoring were performed as specified for Building 102.

Passive vapor ambient air samples were analyzed by Assay Technology AT Labs for mercury vapor by OSHA Method 140, and Table 3-11 presents the passive vapor ambient air monitoring results. Ambient air monitoring samples were analyzed by Assay Technology AT Labs for particulate mercury by OSHA Method 145, and Table 3-11 presents the ambient air monitoring results.

Particulate mercury was not detected above laboratory quantitative limits in the two ambient air monitoring samples.

Reported mercury vapor concentrations were not detected above laboratory quantitative limits in one passive vapor ambient air sample (104T). Sample 103T, collected from the utility tunnels near Building 103, contained mercury vapor concentrations above laboratory quantitative limits but below the OSHA PEL of 0.05 mg/m^3. The reported exposure of mercury vapor in sample 103T was 0.0045 mg/m^3.

4.14 COMBINED STORM AND SANITARY SEWER SYSTEM

Oil water separators and/or settling tanks were not identified on construction drawings or observed during the site investigation of the Site. Liquid and suspended sediments flushed through the system during operation of Plant No. 1 most likely contained explosive compounds, VOCs, SVOCs, PCBs, and metals. Much of the original combined system is still being utilized at the Site and some residual contaminants may exist.

A total of eighteen storm sewer inlets and manholes were opened across the site in order to collect sediment samples from the combined storm and sanitary sewer system. Four storm sewer inlets contained sufficient quantities of material suitable for laboratory analysis. Pre-selected analyses for the sample collected from the storm sewer inlets included PCBs by Method 8082, explosives by Method 8330, mercury by Method 7471A, and metals by Method 6010B. Figure 19 details the locations where the sediment samples were collected, and Table 3-46 presents a summary of the analytical results.

- Aroclor 1260 was detected in one of the four sediment samples, below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The reported concentration of Aroclor 1260 in sample SI-1 was 12 µg/Kg. No other PCBs were detected above laboratory quantitative limits in any of the sediment samples collected from the storm sewer inlets.

- No explosives were detected above laboratory quantitative limits in any of the sediment samples collected from the storm sewer inlets.

- Lead was detected at a concentration of 1,900 mg/kg in sediment sample SI-4, which is above the MRBCA level for the non-residential with clayey soil scenario of 660 mg/Kg. Excluding this sample, detections of lead ranged between 14 mg/Kg and 610 mg/Kg. Currently, no MRBCA level has been established for the construction worker scenario for this analyte.

- All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the sediment samples collected from the storm sewer inlets.

4.15 RAILROAD TRACK SYSTEM

The railroad track system was utilized to transport large quantities of brass and lead stock to the facility and to ship assembled 0.30 caliber and 0.50 caliber ammunition from the facility. Contaminants associated with the railroad track system could include metals, PCBs, and SVOCs.

One shallow soil sample was collected from beneath an existing railroad track system that was uncovered adjacent to the east side of Building 104. Pre-selected analyses for the sample collected from the railroad track system included PCBs by Method 8082, SVOCs by Method 8270C, mercury by Method 7471A, and metals by Method 6010B. Figure 20 details the location

where the shallow soil sample was collected, and Table 3-47 presents a summary of the analytical results.

- No PCBs were detected above laboratory quantitative limits in the shallow soil sample collected from beneath the existing railroad track system.
- Mercury was detected at a concentration of 0.029 mg/Kg, below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.
- All reported concentrations of the remaining metal analytes were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in the shallow soil sample.
- Trace concentrations of several SVOCs were detected in the shallow soil sample. All detected concentrations were below the MRBCA levels for the construction worker and non-residential with clayey soil scenarios.

4.16 SITE CONTAMINANTS SUMMARY

The contaminants of concern at the Site include PCBs, explosives, TPH, cyanide, metals, SVOCs, and VOCs. The following sections identify and discuss samples containing elevated concentrations of COCs. In addition to the discussion below, a spreadsheet detailing contaminant exceedances within the various areas sampled has been prepared and is located in Appendix G.

4.16.1 PCBs

PCBs were detected at elevated concentrations in wipe, subsurface soil, and groundwater samples collected in Building 102 and near Buildings 108A and 108B. All elevated concentrations of PCBs were in the form of Aroclor 1260.

One wipe sample collected from within an elevator shaft in Building 102 contained Aroclor 1260 at a concentration in excess of the TSCA maximum allowable concentration of 10 µg/cm^2. Sample 102FLOOR2WS contained Aroclor 1260 at a concentration of 15 µg/cm^2.

One subsurface soil sample collected adjacent to Building 108A contained Aroclor 1260 in excess of the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The concentration of Aroclor 1260 in sample SB1265-1 was 26,000 µg/Kg. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios for PCBs are 21,800 µg/Kg and 7,380 µg/Kg, respectively.

Aroclor 1260 was detected in excess of the MRBCA lowest default and the residential scenario levels in one groundwater sample collected adjacent to Building 108A. The detected concentration of Aroclor 1260 in sample SB126 was 2.6 µg/L. The MRBCA lowest default target level and the MRBCA level for residential scenarios are 0.0335 µg/L and 0.0524 µg/L, respectively.

Aroclor 1260 was detected in excess of the MRBCA levels for residential scenarios in one groundwater sample collected adjacent to Building 108B. The detected concentrations of Aroclor 1260 in sample SB133 was 0.62 µg/L.

4.16.2 Metals

Metals detected at elevated concentrations in wipe, paint, shallow soil, sediment, subsurface soil and water samples include antimony, arsenic, copper, lead, and mercury. Samples with elevated concentrations of metals were collected from Buildings 102, 102D, 103F, 105, 105E; former Building 104L; and the utility tunnel complex.

4.16.2.1 Antimony

Antimony was detected in excess of the MRBCA level for the construction worker scenario in three sediment samples collected in the basement level of Building 103F. Additionally, two of these samples contained concentrations of antimony in excess of the MRBCA level for the non-residential with clayey soil scenario. Detected concentrations of antimony in these samples ranged from 960 mg/Kg to 21,000 mg/Kg.

4.16.2.2 Arsenic

Arsenic was detected in excess of the MRBCA level for the non-residential with clayey soil scenario in fifteen shallow soil and sediment samples collected from Buildings 102, 102D, 103F, 105, 105E and the utility tunnel complex. Arsenic concentrations in these samples ranged from 16.0 mg/Kg to 570 mg/Kg. The MRBCA level for the non-residential with clayey soil scenario is 15.9 mg/Kg. None of the detected concentrations exceeded the MRBCA level for the construction worker scenario of 654 mg/Kg.

Arsenic was detected in excess of the MRBCA level for the residential with clayey soil scenario in one shallow soil sample collected from Building 104E. The arsenic concentration in sample 104ECSSS1 was 7.3 mg/Kg, and the MRBCA level for the residential with clayey soil scenario is 3.7 mg/Kg. However, the detected concentration is below the MRBCA levels for non-residential with clayey soil and construction worker scenarios of 15.9 mg/Kg and 654 mg/Kg, respectively.

4.16.2.3 Beryllium

Beryllium was detected in excess of the MRBCA level for the residential with clayey soil scenario in one shallow soil sample collected from Building 104E. Shallow soil sample 104ECSSS1 contained beryllium at a concentration of 1.5 mg/Kg. The MRBCA level for the residential with clayey soil scenario for beryllium is 0.45 mg/Kg. However, the detected concentration is below the MRBCA levels for non-residential with clayey soil and construction worker scenarios of 3.19 mg/Kg and 215 mg/Kg, respectively.

4.16.2.4 Copper

Copper was detected at reported concentrations above the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in two sediment samples collected from

beneath Building 102. Sample 102D SS-13 and 102 SED-1 contained copper concentrations of 230,000 mg/Kg and 170,000 mg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios is 102,000 mg/Kg and 38,100 mg/Kg, respectively.

4.16.2.5 Lead

Lead was detected at concentrations above the MRBCA post-abatement clearance level for non-residential standards of 200 µg/ft^2 for floor surfaces (or approximately 0.021 mg/Wipe) in 73 of 84 wipe samples collected in Buildings 102, 102D, 102E, 103, 103D, 103E, 103F, 104, 104F, 105, 105E, 105F, 110, 115, and the utility tunnel complex. As previously discussed in Section 3.1, it is unknown whether the nitric acid acted to soften lead-based paint which presented elevated concentrations in the wipe samples or if the surfaces sampled on and before July 24, 2003 simply contained particulate with higher concentrations of lead.

Four wipe samples collected from Building 104E contained lead in excess of the HUD interim dust lead standard for floor surfaces of 40 µg/ft^2 (or approximately 0.004 mg/Wipe). Detected concentrations of lead ranged from 1.021 µg/ft^2 to 1,207,700 µg/ft^2.

Lead was detected at concentrations above the MRBCA level for the non-residential with clayey soil scenario in thirty-two shallow soil and sediment samples collected from Buildings 102, 103F, 105, the utility tunnel complex, and a storm sewer inlet. Lead concentrations in these samples ranged from 760 mg/Kg to 240,000 mg/Kg. The MRBCA level for the non-residential with clayey soil scenario is 660 mg/Kg. MDNR has not established a MRBCA level for the construction worker scenario for this analyte.

Lead was detected at a concentration above the HUD threshold level for lead-based paint in a sample collected from the exterior surface of a water pipe located within the utility tunnel complex. The sample (TUNNEL H20 PIPE PAINT) contained lead at a concentration of 15,000 mg/Kg. HUD defines lead-based paint as containing 0.5 percent by weight or 5,000 mg/Kg.

Lead concentrations exceeded the MRBCA lowest default level of 0.015 mg/L in one tunnel water sample (TW-3). The detected concentration of lead in sample TW-3 was 0.14 mg/L.

4.16.2.6 Mercury

Mercury was identified in excess of the MRBCA level for the construction worker scenario in one wipe sample collected from Building 102D. Sample 102DCS CHEM FEED contained mercury at a concentration of 33,000 µg/Wipe. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 630,000 µg/Kg and 21,600 µg/Kg, respectively.

Mercury was detected at a reported concentration above the MRBCA level for the construction worker scenario in one subsurface soil sample collected from the area where former Building 104L was located. Additionally, one sediment sample collected from Building 103F contained mercury in excess of the MRBCA level for the construction worker scenario. Mercury

concentrations in these samples ranged from 22 mg/Kg in sediment sample SS-12 to 560 mg/Kg in subsurface soil sample SB22.

4.16.3 SVOCs

SVOCs benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene were detected at elevated concentrations in shallow soil and sediment samples collected in Buildings 102, 103F, 105 and from one subsurface soil sample collected from SB105-3. Additionally, bis(2-ethylhexyl) phthalate was detected at elevated concentrations in two sump water samples collected from within Building 105 and 105E.

4.16.3.1 Benzo(a)anthracene

The PAH compound benzo(a)anthracene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one shallow soil sample (102CSSS104) and two sediment samples (102D SS-9 and 105 SS-1) collected from Buildings 102 and 105. The concentrations of benzo(a)anthracene in samples 102CSSS104, 102D SS-9, and 105 SS-1 were 48,000 µg/Kg, 180,000 µg/Kg, and 32,000 µg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 1,190,000 µg/Kg and 21,100 µg/Kg, respectively.

4.16.3.2 Benzo(b)fluoranthene

The PAH compound benzo(b)fluoranthene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one shallow soil sample (102CSSS104) and three sediment samples (102D SS-9, 102D SS-11, and 105 SS-1) collected from Buildings 102 and 105. The concentrations of benzo(b)fluoranthene in samples 102CSSS104, 102D SS-9, 102D SS-11, and 105 SS-1 were 50,000 µg/Kg, 190,000 µg/Kg, 33,000 µg/Kg, and 29,000 µg/Kg respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 1,160,000 µg/Kg and 21,100 µg/Kg, respectively.

4.16.3.3 Benzo(a)pyrene

The PAH compound benzo(a)pyrene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in four shallow soil samples (102CSSS104, 102CSSS105, 102CSSS108, and 112CSSS1), seven sediment samples (102D SS-8, 102D SS-9, 102D SS-10, 102D SS-11, 102D SS-13, 102D SS-14, and 105 SS-1), and one subsurface soil sample (105-3) collected from Buildings 102, 103F, and 105. Additionally, sediment sample 102D SS-9 contained benzo(a)pyrene in excess of the MRBCA level for the construction worker scenario. The concentrations of benzo(a)pyrene in samples 102CSSS104, 102CSSS105, 102CSSS108, 112CSSS1, 102D SS-8, 102D SS-9, 102D SS-10, 102D SS-11, 102D SS-13, 102D SS-14, and 105 SS-1, and 105-3 were 42,000 µg/Kg, 6,200 µg/Kg, 2,200 µg/Kg, 9,000 µg/Kg, 7,800 µg/Kg, 150,000 µg/Kg, 2,600 µg/Kg, 26,000 µg/Kg, 4,800 µg/Kg, 8,900 µg/Kg, 26,000 µg/Kg, and 3,700 µg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 119,000 µg/Kg and 2,110 µg/Kg, respectively.

4.16.3.4 Indeno(1,2,3-cd)pyrene

The PAH compound indeno(1,2,3-cd)pyrene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one sediment sample (102D SS-9) collected from Building 102. The concentrations of indeno(1,2,3-cd)pyrene in samples 102D SS-9 was 76,000 µg/Kg. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 724,000 µg/Kg and 12,800 µg/Kg, respectively.

4.16.3.5 Dibenzo(a,h)anthracene

The PAH compound dibenzo(a,h)anthracene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one shallow soil sample (102CSSS104) and five sediment samples (102D SS-8, 102D SS-9, 102D SS-11, and 102D SS-14, and 105 SS-1) collected from Buildings 102 and 105. The concentrations of dibenzo(a,h)anthracene in samples 102CSSS104, 102D SS-8, 102D SS-9, 102D SS-11, and 102D SS-14 were 4,000 µg/Kg, 3,500 µg/Kg, 24,000 µg/Kg, 5,100 µg/Kg, 2,200 µg/Kg, and 6,300 µg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 119,000 µg/Kg and 2,110 µg/Kg, respectively.

4.16.3.6 Bis(2-ethylhexyl) phthalate

The compound bis(2-ethylhexyl) phthalate was detected at reported concentrations above the MRBCA lowest default level of 0.006 mg/L in two sump water samples collected from Buildings 105 and 105E. Samples 105SUMPH2O and 105ESUMP contained concentrations of bis(2-ethylhexyl) phthalate of 11 µg/L and 23 µg/L, respectively.

5.0 GROUNDWATER PATHWAY

5.1 SITE GEOLOGY

5.1.1 Soils

The soils beneath the Site are comprised largely of a thin layer of yellowish-brown silty clay fill material overlying native loess silts and clays. Traces of fine/medium sand and gravel were found at depth during direct-push operations. Varying quantities of sand and gravel were identified intermixed with silts and clays in lenses and layers throughout the depths investigated. Soils encountered during crawl space sampling activities appeared to be yellowish-brown silty clay fill material with medium to high moisture content.

Prior to development the Site had a natural grade sloping from west to east. Historical aerial photographs and topographic maps indicate a change in elevation of approximately 40 feet from the west side of the Site (near Goodfellow Boulevard) to the east side of the Site. During original development of the Site for Plant No. 1, soils were excavated from the western portion of the Site and placed as fill on the eastern portion of the Site. This mass grading was completed to allow all production buildings and support buildings to be built at approximately the same elevation and to allow rail access to the Site.

5.1.2 Bedrock

Early Pennsylvanian-age rocks of the Marmaton and Cherokee Groups make up the bedrock beneath the Site and are thought to be approximately 100 feet thick (Reference 32). Underlying the Pennsylvanian-age rocks are the Mississippian-age rocks of the St. Genevieve Limestone, followed by the St. Louis Limestone formations.

The St. Louis area has a monocline structure that gently dips to the northeast. The structural attitude of the beds results from the compressional, tensional, and uplifting forces, which created a series of faults and fractures evidenced by anticlinal, synclinal, and fault zone structures located in the area (Reference 25). The Federal Center is located approximately 1.5 miles east of the Cheltenham Syncline and approximately 2.5 and 5 miles west of the Florissant Dome and the St. Louis Fault Zone, respectively.

Shale was encountered, in several borings during direct-push activities, at a depths ranging from approximately 12 to 26 feet bgs. Borings in which shale was identified (SB24, SB25, SB26, SB33, and SB41) were located on the western portion of the Site. Based on this information, it is anticipated that the shale formation slopes from west of east across the Site.

5.2 SITE HYDROLOGY

Water was identified in sixteen borings (SB109-SB112, SB116, SB118, SB119, SB121, SB122, SB126, SB127, SB129, SB130, and SB132-SB134) advanced by direct-push equipment. Water levels measured in temporary piezometers installed in these borings ranged from 7.26 to 23.90 feet bgs.

Free water was also encountered during crawl space soil sampling activities in several locations in Building 103F. Water was encountered from 12 to 18 inches bgs in areas where soil samples collected near process piping. Additionally, groundwater was observed entering areas of the utility tunnel system.

Groundwater flow direction was established for this area during a PA/SI completed at a site adjacent to the Federal Center. TapanAm Associates established a groundwater flow direction towards the east and northeast at a site located on the west side of Goodfellow Boulevard in a 2001 investigation (Reference 25). The direction was based on potentiometric water level data collected from temporary piezometers. Based on the potentiometric water level data collected from the temporary monitoring points on October 11, 2006, the groundwater flow direction appears to be towards the northeast. Groundwater sampled during the October 2006 field activities at the Federal Center was observed to be of very limited quantity, and the majority of the monitoring points were dry at the end of sampling.

Regionally, groundwater of any volume and quality is found primarily in fractures, solution cavities, and along bedding planes of the Mississippian limestone strata that lie beneath the younger Pennsylvanian rocks. Generally, the Pennsylvanian shales of this area are relatively impermeable, and yield very little water. However, the Cherokee Formation is an exception, which may contain small amounts of groundwater in the thin sandy shales and sandstone units that comprise this formation (Reference 25).

It is expected that groundwater derived from the Cherokee Formation could be encountered at a depth of approximately 80 to 120 feet beneath the surface in the area of the Federal Center. Additionally, it is likely that one or more perched systems exist, although these systems are expected to be quite thin and very poor producers. Groundwater wells in the St. Louis area (Mississippian rock units) are classified as low producers with an average yield of less than 50 gallon per minute.

5.3 TARGETS

The shallow groundwater aquifer at the Site appears to be of limited quantity and is not currently used as a drinking water source. Furthermore, due to its limited quantity, future development appears impractical.

The MDNR was contacted to determine the locations of wells located within a 4-mile radius of the Site (see Appendix D). There were no domestic, heat pump, or irrigation wells located within this radius. One well, with an “unidentified” use is located within two to three miles of the Site (see Figure 21). The well, with an unspecified depth, is located at 1390 Ferguson Road and is owned by Southwestern Bell. It is identified in the MDNR database as “reconstructed.” The owner also has a monitoring well located at the same address, so it assumed that this well is a monitoring well (Reference 33).

There are no public drinking wells or wellhead protection areas within a 4-mile radius of the Site. All drinking water within a five mile radius of the Site is provided by the city water supplies. City water supplies are developed from the Missouri River and Mississippi River at

collection intakes upgradient of the Site (see Section 6.2.2.3). Additionally, no wells used for irrigation of commercial food crops, for irrigation of commercial forage crops, or for livestock watering were identified within a 4-mile radius of the Site.

5.4 ANALYTICAL RESULTS

Laboratory analysis of fifteen groundwater samples was completed for PCBs, TPH-DRO, and TPH-GRO. The groundwater samples were collected adjacent to the main transformer buildings (Buildings 108A and 108B) and in an area where former USTs and a fueling pump island were located (Building 115).

Aroclor 1260 was detected in excess of the MRBCA lowest default and the residential scenario levels in one groundwater sample collected adjacent to Building 108A and in one groundwater sample collected adjacent to 108B. The detected concentrations of Aroclor 1260 in samples SB126 and SB133 were 2.6 µg/L and 0.62 µg/L, respectively. The MRBCA lowest default target level and the MRBCA level for residential scenarios (domestic water use) are 0.0335 µg/L and 0.0524 µg/L, respectively.

THP-DRO and TPH-GRO were not identified in excess of MRBCA lowest default levels in any of the groundwater samples collected in the area of Buildings 115 and 108A.

5.5 CONCLUSIONS

There is considered to be a minimal risk to resident and non-resident populations from this pathway. This is based on the Site geology and hydrogeology characteristics and regional water use. Shallow groundwater aquifers are not utilized for any purpose at the Site, due to the limited quality and quantity of the groundwater, and future use is not anticipated. The Federal Center is connected to city water supplies, as are all surrounding residences and business. Only one well believed to be a monitoring well was identified within the search radius. PCBs are relatively insoluble, and the concentrations detected in the samples from the borings near Buildings 108A and 108B may have been associated with suspended sediment in the groundwater samples.

6.0 SURFACE WATER PATHWAY

6.1 SITE CONDITIONS

Surface water pathways at the Site include surface water runoff, water within the combined sanitary/storm sewer lines, and water within the tunnel system. Because of the City of St. Louis combined sanitary and storm sewer system in the area, the collected water only discharges directly to surface water during heavy precipitation events. Both surface water and sediment samples were collected to evaluate the release of hazardous substances to the surface water pathway.

6.2 TARGETS

In excess of 85 percent of the Site is covered by paved parking areas, paved access roads, and buildings. The remaining area is landscaped with sod, small plants, shrubs, and trees. The surface elevation on the Site ranges from approximately 580 feet above mean sea level (msl) near the western Site boundary to approximately 550 feet msl near the eastern Site boundary (Reference 7). Surface water flowing from the area of the Site is directed towards the east to the Mississippi River by engineered channels and drainage-ways.

6.2.1 Surface Water Runoff

Overland drainage from the Site generally flows toward the east into onsite storm water inlets. A review of the sewer system plans at the Site indicates the complex is serviced by a combined sanitary/storm sewer system both on and off the property. The sewer exits the Site at three locations (on the north near Building 104, on the south near Building 122, and on the east near Building 105). The combined sanitary/storm sewer system is operated by the Metropolitan Sewer District (MSD) of St. Louis.

The Site is located in MSD's Bissell Point service area (Reference 34). The Bissell Point plant is located at 10 East Grand Avenue, which is approximately 4 miles southeast of the Site (see Figure 22). The plant has been in operation since 1970 and treats an average of 139 million gallons per day. Treated wastewater is discharged into the Mississippi River; sludge is disposed by incineration (Reference 35).

Therefore, surface water exiting the Site would be subject to treatment prior to being released into surface water drainage (except during heavy precipitation events, when runoff would be highly diluted). The MSD adopted Ordnance 8472 on August 11, 1982, which defines acceptable concentrations of specific pollutants discharged into the combined sanitary/storm sewer systems (Reference 36).

During heavy rains, the Bissell Point treatment facility lacks the capacity to treat all of the water that is collected and transported through the combined sewer systems. During these events, combined waste and storm water are discharged untreated directly into surface waters. There are 208 combined sewer outfalls in MSD's service area. The combined sewer outfalls discharge to the Mississippi River, River Des Peres and their tributaries (Reference 37).

6.2.2 Surface Water Targets

Potential surface water targets include surface water bodies, watersheds, drinking water intakes, wetlands, and other sensitive environments. Potential targets are discussed below:

6.2.2.1 Surface Water Bodies

The Mississippi River is located three miles east of the Site and is the primary recipient of surface water leaving the Site either through the Bissell Point treatment plant or MSD's combined sewer outfalls. Much of the 35 mile length of the Mississippi River between the Meramec and the Missouri Rivers serves as a major commercial barge staging area and transportation corridor for the upper Midwest. The Mississippi River is classified as a Class P watercourse by the State of Missouri and its use designations are irrigation, wildlife water, human health protection (fish consumption and secondary contact recreation), aquatic life protection, industrial use, drinking water supply, boating and canoeing (Reference 38). The Mississippi River is on the 303(d) list for Chordane and PCBs in fish with the source of impairment being both point and nonpoint sources (Reference 39). The 15-mile target distance is provided on Figure 22.

The average annual Mississippi river flow rate past St. Louis is 199,000 cubic feet per second for the water years 1932 – 2006. The most recent value is 257,000 cubic feet per second on March 6, 2007 (Reference 40).

Recreational fishing is likely to occur on the Mississippi River within the first 13 miles downstream of the confluence where the surface water sourced from the Site enters the Mississippi River (total represents 15 miles downstream of the Site). Several public access sites can be found on the Mississippi river in the St. Louis Region; however, only one is located within the 15 mile target distance at North Riverfront Park. Aquatic species commonly caught include Blue, Channel, and Flathead catfish; Freshwater drum; and Sturgeon (Reference 41).

Four additional surface water bodies are located near the Site:

- Fairgrounds Park: This 131-acre park is located 2.7 miles southeast of the Site and contains a 9-acre lake that is stocked for fishing (Reference 42).

- O'Fallon Park: This 126-acre park is located 2.6 miles east southeast of the Site and contains a 5-acre lake that is stocked for fishing (Reference 42).

- Forest Park: This park is located 3.7 miles southwest of the Site and contains a river-like water system that runs from Jefferson Lake in the southeast corner of the park to the Cascades in the western end of the park. Boating and fishing are the primary activities on the lakes. The River des Peres runs underneath Forest Park. The river was encased in concrete pipes in the 1920's and is isolated from the park's water bodies (Reference 42).

- Engleholm Creek and the River des Peres: Engleholm Creek is a tributary of the River des Peres is located approximately 2 miles west of the Site. The creek joins the

River des Peres approximately 3 miles southwest of the Site. More information on the River des Peres is provided below.

6.2.2.2 Watersheds

There are nine major watersheds in the St. Louis region. Nested within these watersheds are smaller, sub-watersheds. All of these watersheds ultimately drain to the Mississippi River (Reference 43). The Site is located in the Cahokia Creek (Illinois) – Joachim Creek (Missouri) watershed (Hydrologic Unit Code – 07140101) and the River des Peres 2 sub-watershed (Hydrologic Unit Code – 07140101070003) (Reference 44).

The River des Peres watershed encompasses a 114 square-mile area. The river extends approximately 20 miles through St. Louis County and the City of St. Louis and generally flows south. For most of its length, the River des Peres is a cement, channelized stormwater ditch. Part of the river runs underground below Forest Park (see above), where it becomes part of the combined sanitary/storm sewer system. The river resurfaces before it reaches the Mississippi River, and dry weather flow is treated through the MSD's Lemay Wastewater Treatment Plant before being discharged to the Mississippi River on the south side of the City of St. Louis, approximately 11 miles south of the Site (Reference 45).

Much of the river is unclassified because it only flows during storm events and does not maintain pools that would support aquatic life. The river is on the 303(d) list for low dissolved oxygen with the source of impairment being urban nonpoint sources. The final 2.5 miles of the river (above its confluence with the Mississippi River) is classified as a Class C and P watercourse by the State of Missouri and its use designations are wildlife watering and aquatic life protection (Reference 38).

A St. Louis city park, Willmore Park, is located on the bank of the River des Peres near the confluence with the Mississippi. The park has two lakes stocked for fishing, but the lakes are not fed by the River des Peres (Reference 42).

6.2.2.3 Public Drinking Water Intakes

There is one public drinking water surface intake within 15 river miles downstream of the Site. The remaining public water supply intakes serving the St. Louis Metropolitan area are located upstream on the Missouri or Mississippi Rivers.

The City of St. Louis Water Division maintains two water treatment plants that draw water from the area's two main rivers. The Chain of Rocks Plant is located on the Mississippi River about eleven miles north of the center of the City and about five miles south of the confluence of the Missouri and Mississippi Rivers. The Howard Bend Treatment Facility is located on the Missouri River, 37 river miles above the confluence of the Missouri and Mississippi Rivers and 15 miles west of the City limits in Chesterfield. The intakes are located 6.5 miles northeast and 16 miles west of the Site, respectively (Reference 46).

Drinking water for the City of East St. Louis is supplied by the Illinois American Water Company (IAWC) East St. Louis Division community water supply. This facility draws water

from the Mississippi River through one surface water intake located at river mile 180.6, which is approximately 2.5 river miles downstream of the Bissell Point treatment facility or 5.5 river miles downstream of the Site (see Figure 22) (Reference 47). The supply provides an average of approximately 40.8 million gallons per day to 25,886 service connections with an estimated population of 239,683 persons in St. Clair and Monroe Counties. Illinois entities purchasing water from IAWC-East St. Louis include Cahokia, Caseyville, Columbia, Commonfields of Cahokia, O'Fallon, Millstadt, Waterloo, John Deshields Federal Housing Complex, Southwestern Illinois Correctional Center, and Scott Air Force Base (Reference 48).

There were no additional surface water intakes identified for irrigation of commercial food or forage crops, for watering of livestock, or for use in commercial food preparation.

6.2.3 Wetlands

The Site is not located within a flood plain and there are no wetlands at the Site. Wetlands downstream of the Site are located on the Illinois bank of the Mississippi River for 11 miles of the downstream target distance. As shown in Figure 23, wetlands consist of primarily:

- Inland forested wetland.
- Inland herbaceous wetland.
- Inland shrub swamp (Reference 49).

6.2.4 Sensitive Environments

There are no known threatened or endangered species habitats on Site (see Appendix E). The Missouri Department of Conservation (MDC) has no heritage records for the segment of the Mississippi River from the south tip of Mosenthein Island downstream to the Jefferson Barracks Bridge, but the Pallid Sturgeon and Bald Eagle are federal and state species of concern that are present throughout this part of the Mississippi River. Two additional species being tracked by the state, but not on the endangered species list, which occur in the Mississippi within the target region include the Ghost Shiner (Notropis buchanani) and Mooneye (Hiodon tergisus). Peregrine falcons (endangered state status) are present within a close enough range of the Site to potentially have occupied nest sites (Reference 50).

No recreational or commercial fisheries were identified along the 15-mile target distance.

6.3 SAMPLE LOCATIONS

Surface water and sediment samples were collected from storm sewer inlet boxes and from within the tunnel complex. Four sediment samples were collected from storm sewer inlet boxes that were identified in close proximity to former powder storage and handling areas and near Building 103F (previously designated Building 112). These sediment samples were analyzed for PCBs, metals, and explosives. Tunnel water was collected at two locations and tunnel sediment was collected at nine locations within the complex. Sump water samples were collected from three locations within Buildings 105, 105E, and 105F. Sample locations within the tunnels and Buildings 105, 105E, and 105F were selected near areas known to be utilized for powder storage and handling and from an

area downgradient of Building 103F. The water and sediment samples were analyzed for PCBs, explosives, metals, and SVOCs.

Numerous attempts were made to collect sediment from combined storm/sanitary sewer lines. However, in all cases there was not enough sediment at the sampling point to complete a sample. A total of fourteen sampling sites were accessed and inspected for possible sample collection. Recent precipitation and wastewater generated at the Site appeared to have removed all light sediments from the system. Moderate flow was noted in the system during the inspection. A representative with Bob Holtz Services, a subcontracted maintenance group at the Federal Center, stated that the combined storm/sanitary sewer lines were cleaned in October 2003 with a high pressure fire hose (Reference 51).

6.4 ANALYTICAL RESULTS

6.4.1 Metals

Laboratory analysis of sediments collected from storm sewer inlet boxes identified lead in excess of the MRBCA level for the non-residential with clayey soil scenario of 660 mg/Kg in one of the four sediment samples. Reported lead concentrations in the storm sewer sediment samples ranged from 14 mg/Kg to 1,900 mg/Kg.

Arsenic was detected above the MRBCA level for non-residential with clayey soil scenario of 15.9 mg/Kg in two sediment samples collected from within the utility tunnel system. The samples (TS-1, and TUNNEL SUMP 1) contained arsenic ranging from 16 mg/Kg to 34 mg/Kg.

Lead was detected above the MRBCA level for the non-residential with clayey soil scenario of 660 mg/Kg in seven sediment samples collected from the utility tunnel system. Detected concentrations of lead in excess of the MRBCA level for the non-residential with clayey soil scenario ranged from 1,800 mg/Kg to 8,300 mg/Kg.

Lead was detected above the MRBCA lowest default level of 0.015 mg/L in one tunnel water sample (TW-3). The reported lead concentration in TW-3 was 0.14 mg/L.

6.4.2 SVOCS

Two sump water samples contained bis(2-ethylhexyl)phthalate at concentrations in excess of the MRBCA lowest default level of 0.006 mg/L. The detected concentrations of bis(2-ethylhexyl)phthalate in samples 105SUMPH2O and 105ESUMP were 0.011 mg/L and 0.023 mg/L, respectively.

6.5 CONCLUSIONS

Arsenic, lead, and the SVOC bis(2-ethylhexyl)phthalate were identified above MRBCA screening levels in sediment and water samples colleted from storm sewer inlets, tunnel sediment samples, tunnel water samples, and sump water samples.

Lead and arsenic are hazardous materials and were identified in significant concentrations in sediment and water samples collected from the tunnel complex and the storm sewer system. In an effort to identify the source of the lead identified in tunnel sediments and water, paint samples were collected on water piping and electrical conduit within the utility tunnels and were submitted for laboratory analysis. Lead was identified within the paint samples at concentrations ranging from 4,500 mg/Kg to 15,000 mg/Kg. Based on the condition of the paint; concentration of lead within the paint; and location of the utility lines within the tunnels; it is suspected that the source of the lead detected in the tunnel sediments and water is the paint covering water lines and electrical conduit. However, it is also possible that migration of lead is occurring from impacted sediment and soil found in the basement and crawl space levels of the building, into the tunnels.

MSD Ordnance 8472 states that the maximum allowable concentration of lead within water discharged into the MSD system is 0.4 mg/l. As previously mentioned the lead concentration identified in tunnel water sample TW-3 was 0.14 mg/l, which is within the threshold limit defined in MSD Ordinance 8472.

The SVOC bis(2-ethylhexyl)phthalate, identified in excess of the MRBCA lowest default level in two sump water samples, could be a residual contaminant sourced from the production of munitions or it could be from building mechanical or electrical equipment. Bis(2-ethylhexyl)phthalate is used in many different processes and applications. These include hydraulic fluid and as a dielectric fluid utilized in electrical capacitors (Reference 52). Trace concentrations of bis(2-ethylhexyl)phthalate were also identified in two of fifteen shallow soil and sediment samples collected from the basement and crawl space level of Buildings 105 and 105F.

Surface water and any suspended sediment leaving the Site are collected and treated by the storm/sanitary sewer system of St. Louis MSD, except during heavy precipitation events that result in flows that exceed the capacity of the wastewater treatment plant. Although a portion of the untreated combined sewer flow is discharged directly to the Mississippi River during these events, the concentrations of contaminants discharged are also diluted. Potential targets within the 15-mile radius include one drinking water surface intake, recreational fishing, and potential habitat of the Pallid Sturgeon and Bald Eagle, however, potential impact on that area in the event of a release from the Site is relatively minimal due to treatment and/or dilution that would occur prior to release.

7.0 SOIL EXPOSURE PATHWAY

7.1 SITE CONDITIONS

The soil exposure pathway accounts for contact with in-place hazardous substances at the Site rather than migration of substances from the Site (air or groundwater pathway). The perimeter of the Site is fenced with a 7-foot tall chain-link fence. Access to the Site is controlled at a main gate (west side of the Site adjacent to Goodfellow Boulevard) and a secondary gate (east side of the Site adjacent to Mc Nair Street). Approximately 85 percent of the facility consists of paved parking and access roads or is occupied by buildings. The remaining area is landscaped with sod, small plants, shrubs, and trees.

As discussed in Section 5, the local geology consists of existing soils and backfill materials at varying depths. According to historical aerial photographs, the Site was subject to mass grading operations during development of the SLOP complex. In general, fill depth increases from west to east across the Site. Filling was completed to facilitate the construction of buildings at similar elevations and to provide rail access to the Site. Standing water or areas exhibiting wetland characteristics were not observed at the Site during the PA or during field activities for this SI.

7.2 TARGETS

Due to the presence of the security fence and gate system, targets have been separated into two distinct groups. These target groups are resident and non-resident populations. There are no environmental targets due to the fence and the fact that the Site is in an urban environment with no known threatened or endangered species habitats on Site. Resource targets are also excluded due to the fence and urban environment. There are no wetlands within two miles of the Site.

7.2.1 Resident Population

The resident population primarily consists of office workers, maintenance and security personnel, and children enrolled at the child care center. However, temporary personnel including delivery personnel, subcontracted construction personnel and/or other persons entering the Site are considered resident populations. As previously discussed, receptors evaluated included workers, construction workers, and children at the child care center.

7.2.2 Non-Resident Population

The non-resident population consists of people living and working in areas surrounding the Site. As previously mentioned, the Site is surrounded by commercial and light industrial facilities on all sides. The nearest residence is located approximately 500 feet west of the southwest corner of the Site. A review of a 1998 aerial photograph indicated approximately 200 houses are located within 1,000 feet of the Site. Population statistics for the area indicate that approximately 2,100 persons live within ¼ mile of the Site (Reference 15).

No schools are located within 200 feet of the Site (Reference 53). The closest facilities include the City of St. Louis Job Corps, run by the U.S. Department of Labor (DOL) and the Normandy

Technical School, run by the Normandy School District. Both schools share the same building, which is located approximately 900 feet west of the Site.

7.3 SOIL SAMPLING

Surface, subsurface and composite soil samples were collected at various depths from sampling points and direct-push borings across the Site. Soil sample locations were selected based on proximity to areas potentially impacted from a release of hazardous substances and to areas where potential on-Site receptor populations are located. Potential sources of concern are listed in Section 4.0.

Four background soil samples were collected from areas surrounding the Site. Background soil samples were collected at St. Vincent Park approximately two miles west of the Site; at the 89th Army Reserve Center located immediately west of Goodfellow Boulevard; at Schnucks Plaza located approximately one mile southeast of the Site; and form a vacant lot near the intersection of Clara Avenue and Hebert Street located approximately three-quarters of a mile south of the Site.

7.4 ANALYTICAL RESULTS

7.4.1 PCBs

One subsurface soil sample collected adjacent to Building 108A contained Aroclor 1260 in excess of the MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The concentration of Aroclor 1260 in sample SB1265-1 was 26,000 µg/Kg. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios for PCBs are 21,800 µg/Kg and 7,380 µg/Kg, respectively.

7.4.2 Metals

Antimony was detected in excess of the MRBCA level for the construction worker scenario in three sediment samples collected in the basement level of Building 103F. Additionally, two of these samples contained concentrations of antimony in excess of the MRBCA level for the non-residential with clayey soil scenario. Detected concentrations of antimony in these samples ranged from 960 mg/Kg to 21,000 mg/Kg.

Arsenic was detected in excess of the MRBCA level for the non-residential with clayey soil scenario in fifteen shallow soil and sediment samples collected from Buildings 102, 102D, 103F, 105, 105E, and the utility tunnel complex. Arsenic concentrations in these samples ranged from 16.0 mg/Kg to 570 mg/Kg. The MRBCA level for the non-residential with clayey soil scenario is 15.9 mg/Kg. None of the detected concentrations exceeded the MRBCA level for the construction worker scenario of 654 mg/Kg.

As previously discussed, analytes detected in the vicinity of the child care center were evaluated using the MRBCA residential with clayey soil scenarios. Arsenic and beryllium were detected above the MRBCA levels for the residential with clayey soil scenario (surface soil) in sample

104ECSSS1. Arsenic was detected at a concentration of 7.3 mg/Kg and beryllium was detected at a concentration of 1.5 mg/Kg. The MRBCA levels are 3.7 mg/Kg and 0.737 mg/Kg, respectively. This sample was collected in a crawl space beneath the building. The detected concentrations are below the MRBCA levels for non-residential with clayey soil and construction worker scenarios of 15.9 mg/Kg and 654 mg/Kg for arsenic and 3.19 mg/Kg and 215 mg/Kg for beryllium, respectively.

Copper was detected at reported concentrations above the MRBCA levels for the construction worker and non-residential with clayey soil scenarios in two sediment samples collected from Building 102. Sample 102D SS-13 and 102 SED-1 contained copper concentrations of 230,000 mg/Kg and 170,000 mg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios is 102,000 mg/Kg and 38,100 mg/Kg, respectively.

Lead was detected at concentrations above the MRBCA post-abatement clearance level for non-residential standard of 200 µg/ft^2 for floor surfaces in 73 of 84 wipe samples collected in Buildings 102, 102D, 102E, 103, 103D, 103E, 103F, 104, 104F, 105, 105E, 105F, 110, 115, and the utility tunnel complex. Lead was detected in excess of the HUD Interim Dust Lead Standard for floor surfaces of 40 µg/ft^2 in four wipe samples collected in Building 104E. Paint chip analysis has indicated the presence of lead-based paint at the Site, and it is unknown whether the nitric acid acted to soften lead-based paint which presented elevated concentrations in the wipe samples or if the surfaces sampled on and before July 24, 2003 simply contained particulate with higher concentrations of lead.

Lead was detected at concentrations above the MRBCA level for the non-residential with clayey soil scenario in thirty-two shallow soil and sediment samples collected from Buildings 102, 103F, 105, the utility tunnel complex, and a storm sewer inlet. Lead concentrations in these samples ranged from 760 mg/Kg to 240,000 mg/Kg. The MRBCA level for the non-residential with clayey soil scenario is 660 mg/Kg. MDNR has not established a MRBCA level for the construction worker scenario for this analyte.

Mercury was detected at a reported concentration above the MRBCA level for the construction worker scenario in one subsurface soil sample collected from the area where former Building 104L was located. Additionally, one sediment sample collected from Building 103F contained mercury in excess of the MRBCA level for the construction worker scenario. Mercury concentrations in these samples ranged from 22 mg/Kg in sediment sample SS-12 to 560 mg/Kg in subsurface soil sample SB22.

7.4.3 SVOCS

The PAH compound benzo(a)anthracene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one shallow soil sample (102CSSS104) and two sediment samples (102D SS-9 and 105 SS-1) collected from Buildings 102 and 105. The concentrations of benzo(a)anthracene in samples 102CSSS104, 102D SS-9, and 105 SS-1 were 48,000 µg/Kg, 180,000 µg/Kg, and 32,000 µg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 1,190,000 µg/Kg and 21,100 µg/Kg, respectively.

The PAH compound benzo(b)fluoranthene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one shallow soil sample (102CSSS104) and three sediment samples (102D SS-9, 102D SS-11, and 105 SS-1) collected from Buildings 102 and 105. The concentrations of benzo(b)fluoranthene in samples 102CSSS104, 102D SS-9, 102D SS-11, and 105 SS-1 were 50,000 µg/Kg, 190,000 µg/Kg, 33,000 µg/Kg, and 29,000 µg/Kg respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 1,160,000 µg/Kg and 21,100 µg/Kg, respectively.

The PAH compound benzo(a)pyrene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in four shallow soil samples (102CSSS104, 102CSSS105, 102CSSS108, and 112CSSS1), seven sediment samples (102D SS-8, 102D SS-9, 102D SS-10, 102D SS-11, 102D SS-13, 102D SS-14, and 105 SS-1), and one subsurface soil sample (105-3) collected from Buildings 102, 103F, and 105. Additionally, sediment sample 102D SS-9 contained benzo(a)pyrene in excess of the MRBCA level for the construction worker scenario. The concentrations of benzo(a)pyrene in samples 102CSSS104, 102CSSS105, 102CSSS108, 112CSSS1, 102D SS-8, 102D SS-9, 102D SS-10, 102D SS-11, 102D SS-13, 102D SS-14, and 105 SS-1, and 105-3 were 42,000 µg/Kg, 6,200 µg/Kg, 2,200 µg/Kg, 9,000 µg/Kg, 7,800 µg/Kg, 150,000 µg/Kg, 2,600 µg/Kg, 26,000 µg/Kg, 4,800 µg/Kg, 8,900 µg/Kg, 26,000 µg/Kg, and 3,700 µg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 119,000 µg/Kg and 2,110 µg/Kg, respectively.

The PAH compound indeno(1,2,3-cd)pyrene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one sediment sample (102D SS-9) collected from Building 102. The concentrations of indeno(1,2,3-cd)pyrene in samples 102D SS-9 was 76,000 µg/Kg. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 724,000 µg/Kg and 12,800 µg/Kg, respectively.

The PAH compound dibenzo(a,h)anthracene was detected at reported concentrations above the MRBCA level for the non-residential with clayey soil scenario in one shallow soil sample (102CSSS104) and five sediment samples (102D SS-8, 102D SS-9, 102D SS-11, and 102D SS-14, and 105 SS-1) collected from Buildings 102 and 105. The concentrations of dibenzo(a,h)anthracene in samples 102CSSS104, 102D SS-8, 102D SS-9, 102D SS-11, and 102D SS-14 were 4,000 µg/Kg, 3,500 µg/Kg, 24,000 µg/Kg, 5,100 µg/Kg, 2,200 µg/Kg, and 6,300 µg/Kg, respectively. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios are 119,000 µg/Kg and 2,110 µg/Kg, respectively.

7.5 CONCLUSIONS

Historical processes are not anticipated to have resulted in surface soil contamination either on or off site, and limited previous surface soil sampling for lead in the area of the child care center did not detect concentrations above MRBCA residential target levels. In addition, because most of the Site is currently paved or vegetated, no current surface soil exposure pathway exists for Site workers and construction workers. Possible maintenance/construction worker exposure pathways exist for contaminants detected in utility tunnels, crawl spaces, and sewers beneath the buildings.

It should be noted that in previous interim reports prepared to address specific portions of the Site, beryllium was frequently identified in excess of regulatory limits. Subsequent to preparation of the interim reports, MDNR adopted the current MRBCA guidance dated June 2006. The MRBCA maximum contaminant concentrations for beryllium are higher than the previous Cleanup Levels for Missouri (CALM) Soil Target Concentrations (STARC) Scenario A levels which were used for comparison in the previous reports.

8.0 AIR EXPOSURE PATHWAY

8.1 AIR EXPOSURE PATHWAY

Exposure to contaminants in air may result from direct inhalation of volatile contaminants or of particulates to which contaminants are adsorbed. In the absence of ongoing industrial processes, these may result from volatilization of contaminants from subsurface soil or groundwater, or from blowing dust from contaminated surface soil. Of particular concern with respect to volatilization is subsurface vapor intrusion into structures with occupied basements. Subsurface soil at the Site is clayey silt and limited groundwater has been observed to be present in the area, which reduce the opportunity for volatilization of contaminants, if present. In addition, none of the buildings have basements that are permanently occupied.

However, production buildings and support buildings have open crawl spaces and utility tunnels below the main floor where contaminants have been detected in surface soil and sediment samples. Crawl spaces vary in height from 4 to 10 feet and all have exposed subgrade soils at the surface. Crawl space soils below main floors have been found to contain concentrations of metals, PCBs, SVOCs, and explosives in excess of MRBCA screening levels. Utility tunnels extend between all former production buildings (102 Series, 103 Series, 104 Series and 105 Series Buildings); current and former administrative buildings (Buildings 101 and 107); the tool and gauge shop (Building 110); the former lead shop (current Building 103F, previously designated Building 112); and the former truck garage (Building 115) at the Site. Sediment within the tunnels has been found to contain metals lead and arsenic in excess of MRBCA screening levels. Paint chip samples collected from exterior surfaces of utility piping and conduits within the tunnel system have been found to contain concentrations of lead in excess of 5,000 mg/Kg.

As previously discussed, the majority of the surface area of the Site is currently paved or vegetated, which reduces the potential for blowing dust.

8.2 TARGETS

There are approximately 1,200 federal workers employed at the Federal Center. The majority of the federal workers occupy the facility on a flexible 8-hour shift from Monday through Friday. However, employees associated with the computer lab located within Building 103 operate 24-hours a day, 7 days a week. Although none of the buildings have permanently occupied basements, the crawl spaces and utility tunnels may be temporarily occupied by maintenance or construction workers doing inspections or repairs.

A child care facility is located on the main floor within Building 104E and an outdoor play area is located adjacent to the west side of Building 104E. Daycare services are only available during regular daily hours of operation from Monday through Friday. These populations make up the primary targets for an air release.

Secondary targets include approximately 400 students housed at the St. Louis Job Corps property (along with 200 students who commute daily) and the 300 students at the Normandy Technical School, which are adjacent to the Site (References 54 and 55). There are approximately 5,000

people that live within one half mile of the Site and approximately 250,000 people that live within four miles of the Site (Reference 15).

According to the MDC, there are no sensitive species or communities of federal concern within two miles of the Site (Reference 47). There are wetlands located within a 4-mile radius of the Site, as shown in Figure 24 (Reference 56).

8.3 AIR SAMPLING

Air monitoring was completed in Buildings 102, 102D, 103, 103D, 103F, and 104, because of lead and mercury concentrations identified in soil, wipe, and sediment samples found in excess of MRBCA screening levels in the crawl spaces and utility tunnels.

Eight passive ambient air samples for mercury vapor were collected at specific areas within Buildings 102, 102D, 103, 103D, and 104. Nine ambient air monitoring samples were collected at specific areas within Buildings 102, 102D, 103, 103D, 103F, and 104 for analysis for mercury and/or lead. On September 4, 2003, SCS Engineers utilized a HG253 portable mercury vapor analyzer to collect and analyze ambient air within Buildings 102, 102D, 102E, 103, 103D, 103E, 104, and 105. Twenty-eight ambient air samples were collected and analyzed within the buildings.

8.4 ANALYTICAL RESULTS

Laboratory analytical data indicated two samples analyzed for mercury vapor contained detectible concentrations. Sample 103D was collected from a second floor air handling room in Building 103D and contained 0.0050 mg/m^3 mercury. Sample 103T, collected from a utility tunnel under Building 103, contained 0.0045 mg/m^3 mercury. Both sample concentrations are below the OSHA Permissible Exposure Limit (PEL) of 0.05 mg/m^3 for an 8-hour time weighted average. None of the ambient air monitoring samples contained levels of particulate mercury or lead above laboratory detection limits. Mercury vapor concentrations measured using the HG253 analyzer ranged from below detectible levels to 0.0023 mg/m^3 within the areas sampled.

8.5 CONCLUSIONS

Potential air exposure pathways at the Site include inhalation of both particulates and vapors from contaminated media both outside and inside the buildings. Since the majority of the Site is paved or vegetated, and the surface soil is not known to be contaminated outside the buildings, the potential for exposure to contaminated particulates outside the buildings is low for both on-site workers and off-site targets. The potential for exposure to contaminated vapors from subsurface soil and groundwater is also considered to be low, because of clayey soil, few detected volatile contaminants in subsurface soil and groundwater, and limited availability of groundwater.

On the basis of air monitoring data there does not appear to be a significant risk to government workers from particulate lead, particulate mercury, or mercury vapor within the buildings surveyed. Maintenance crews working in tunnel and crawl space areas below the buildings may have a moderate risk of exposure to contaminants found in exposed crawl space soils and impacted sediments. Depending on the types of work being performed in these areas, the potential does exist for exposure to particulates contaminated with lead or possibly to mercury vapor.

9.0 SUMMARY AND CONCLUSIONS

On the basis of the sampling results and the pathway assessments, the primary contaminants and areas of concern are PCBs in subsurface soil and groundwater near Buildings 108A and 108B; PAHs and metals, particularly lead and arsenic, in abandoned process piping and nearby soil and sediment in Buildings 102, 103F, and 105; and the potential for high dust lead concentrations identified within Buildings 102, 102D, 102E, 103, 103D, 103E, 103F, 104, 104E, 104F, 105, 105E, 105F, 110, 115, and the utility tunnel complex.

9.1 PCBS IN SUBSURFACE SOIL AND GROUNDWATER

PCBs were detected at elevated concentrations (based on selected MRBCA screening levels) in subsurface soil and groundwater samples collected near Buildings 108A and 108B. All elevated concentrations of PCBs were in the form of Aroclor 1260. A subsurface soil sample collected adjacent to Building 108A contained Aroclor 1260 in excess of the above MRBCA levels for the construction worker and non-residential with clayey soil scenarios. The concentration of Aroclor 1260 in sample SB1265-1 was 26,000 µg/Kg. The MRBCA levels for the construction worker and non-residential with clayey soil scenarios for PCBs are 21,800 µg/Kg and 7,380 µg/Kg, respectively. A temporary monitoring point was installed in boring SB126 and a groundwater sample was collected for PCB analysis. Aroclor 1260 was detected in excess of the MRBCA lowest default and the residential scenario levels in the groundwater sample collected from SB126, at a concentration of 2.6 µg/L. The MRBCA lowest default target level and the MRBCA level for residential scenarios are 0.0335 µg/L and 0.0524 µg/L, respectively. Similarly, Aroclor 1260 was detected in excess of the MRBCA levels for residential scenarios in one groundwater sample collected adjacent to Building 108B. The detected concentrations of Aroclor 1260 in sample SB133 was 0.62 µg/L.

A limited assessment was completed in and around the north main transformer building (Building 108B) in January 1986. Laboratory analytical data indicates that soil and water samples collected in the area of the substation room contained PCBs at concentrations of 12 µg/gm and 210,000 µg/L, respectively. Historical documentation indicates that dielectric oil utilized in the transformers within the main transformer buildings (Buildings 108A and 108B) was found to contain PCBs at concentrations ranging from 95 mg/Kg to 228 mg/Kg. This oil was drained and properly disposed of at an off site location in late 1986. Original construction drawings indicate 4-inch oil drain lines terminated in the transformer room sumps (located beneath the main floor slabs) below each transformer, and that the sumps may not have contained concrete floors.

Based on the data, it appears that releases of PCB containing oil occurred sometime prior to 1986 from both transformer buildings. The releases have impacted soils surrounding the buildings, soils beneath the buildings, and groundwater with PCB Aroclor 1260 at concentrations in excess of MRBCA levels.

9.2 PAHS AND METALS IN SEDIMENTS AND SURFACE SOILS

Sediment samples were collected from the abandoned process piping and concrete basins related to the historical use of the facility. The analytical results of the sediment samples collected from Building 102 indicated that elevated concentrations of PAHs, arsenic, copper, and lead in excess of MRBCA levels for the construction worker and non-residential with clayey soil scenarios exist in material collected from the process piping. Similar contaminants and concentrations were identified in sediment samples collected from abandoned process piping in Buildings 103F (previously designated Building 112) and Building 105. Lead and PAHs have impacted areas of shallow soils adjacent to process piping within Buildings 102 and 103F (previously designated Building 112). However, it is not known if the contamination in the soils was sourced from sediments within the piping. Migration of sediments from within the piping is anticipated to be limited as long as the piping maintains its structural integrity. Migration of the sediments from the process piping is limited because upstream drains, sumps, and basins were sealed off during building renovation activities performed in the 1960s and 1970s. All process piping accessed and observed during sampling activities was constructed of cast iron and appeared to be in fair condition. However, some of the cast iron piping is located underground, and all of the piping contains joints at regular intervals, bends, and at fittings. If piping and surface soils need to be disturbed for maintenance issues, the work should be performed by workers who are trained and medically monitored in accordance with Occupational Health and Safety Act requirements (29 Code of Federal Regulations 1910 and 1926). If piping is to be removed during a building renovation or non-routine maintenance operation, proper characterization and disposal of piping and sediments will be necessary.

Concentrations of antimony, arsenic, lead, and mercury exceeded MRBCA screening levels in shallow soil and sediment samples collected within the basement level of Building 103F (previously designated Building 112). Additionally, the PAH compound benzo(a)pyrene was identified one shallow soil sample in the basement level of Building 103F. Based on field observations and analytical data results, several areas containing sediments and shallow soils contaminated with metals and PAHs have been defined. SCS recommended removal or encapsulation of impacted soils in order to eliminate or control exposure to contaminated areas. Proposals for removal and encapsulation of the in the crawl space level soils impacted with metals have been prepared and submitted to GSA. Additionally, if any routine or non-routine maintenance work involves accessing the space below the building for an extended period of time or excavating subsurface soils, the work should be performed by workers who are trained and medically monitored in accordance with Occupational Health and Safety Act requirements (29 Code of Federal Regulations 1910 and 1926).

As previously discussed, in previous interim reports prepared to address specific portions of the Site, beryllium was frequently identified in excess of regulatory limits. Subsequent to preparation of the interim reports, MDNR has adopted the current MRBCA guidance dated June 2006. The MRBCA maximum contaminant concentrations for beryllium are higher than the previous Cleanup Levels for Missouri (CALM) Soil Target Concentrations (STARC) Scenario A levels which were used for comparison in the previous reports.

9.3 DUST LEAD CONCENTRATIONS IN WIPE SAMPLES

Lead was detected at concentrations above the MRBCA post-abatement clearance level for non-residential standards of 200 µg/ft^2 for floor surfaces (or approximately 0.021 mg/Wipe) in 73 of 84 wipe samples collected in Buildings 102, 102D, 102E, 103, 103D, 103E, 103F, 104, 104F, 105, 105E, 105F, 110, 115, and the utility tunnel complex. Four wipe samples collected from Building 104E contained lead in excess of the HUD interim dust lead standard for floor surfaces of 40 µg/ft^2 (or approximately 0.004 mg/Wipe). Detected concentrations of lead in wipe samples collected from Building 104E ranged from 1,021 µg/ft^2 to 1,207,700 µg/ft^2.

The majority of the wipe samples collected within the buildings were from the crawl space level or were collected from surfaces located above suspended ceilings (non-occupied areas). Samples collected in occupied areas that contained lead in excess of 200 µg/ft^2 were collected near the center of the east wall of the cafeteria (112 WS-4); from the floor and wall in Building 105 (105WS4 and 105WS8); and from within the former fuel oil storage room and track room in Building 110 (110WS-1, 110WS-2, 110WS-3, and 110WS-4). The former fuel oil storage room and track room are considered accessible to workers and maintenance crews; however, the areas are primarily utilized for storage purposes and do not appear to be frequently accessed.

On the basis of the majority of wipe samples containing lead in excess of the MRBCA post-abatement clearance level for non-residential standard and the HUD interim dust lead standard, the potential exists for a dust lead hazard at the Site. However, as previously discussed, lead based paint has been identified at the Site and it is unknown if wipe samples collected utilizing dilute solutions of nitric acid acted to soften and remove upper portions of the paint strata. If paint was removed during collection of the wipe samples, this would skew the data indicating higher concentrations of particulate containing lead were present at the Site.

Based on the concentrations of lead identified in the wipe samples, it is recommended that interim controls or permanent abatement be performed to reduce the potential dust-lead hazard within the child occupied day care facility located within Building 104E. Additionally, if any routine or non-routine maintenance work involves accessing the space below the buildings or above the suspended ceilings for an extended period of time, the work should be performed by workers who are trained and medically monitored in accordance with Occupational Health and Safety Act requirements (29 Code of Federal Regulations 1910 and 1926).

10.0 REFERENCES

1. Preliminary Assessment/Site Inspection Work Plan prepared by SCS Engineers, dated March 19, 2003.

2. *Guidance for Performing Preliminary Assessments Under CERCLA*, EPA/540/G-91/013, dated September 1991.

3. *Guidance for performing Site Inspections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),* EPA/540-R-92-021, Interim Final, dated September 1992.

4. *Improving Site Assessments: Combined PA/SI Assessments,* Office of Solid Waste and Energy Response (OSWER) Directive 9375.2-10FS, dated October 1999.

5. *Missouri Risk-Based Corrective Action Technical Guidance* established by the Missouri Department of Natural Resources (MDNR) in June 2006.

6. Marc Enviro Services L.L.C., January 24, 2002. *Phase I Environmental Site Assessment, Federal Center, 4300 Goodfellow Boulevard, St. Louis, MO 63120.*

7. US Geological Survey, 1954. Clayton Quadrangle Missouri, 7.5-Minute Series [Topographic] Map, photo revised 1974.

8. Miller, D.E., et al., 1974. Missouri Geological Survey and Water Resources. *Water Resources of the St. Louis Area, Missouri*. WR 30.

9. Benham, K.E., 1979. *Soil Survey of St. Louis County and St. Louis, Missouri: United States Department of Agriculture, Soil Conservation Service.*

10. Historical Weather for Saint Louis, Missouri, United States of America obtained from http://www.weatherbase.com/weather.

11. Historical Weather for Saint Louis, Missouri, United States of America obtained from http://www.crh.noaa.gov/lsx.

12. US Department of Agriculture, 1979. *Soil Survey of St. Louis County and St. Louis City, Missouri, Soil Conservation Service.*

13. GSA Federal Center Tenant Listing and Location, prepared by Kim Unfried representing the GSA Federal Center Property Management Office, dated November 11, 2006.

14. St. Louis Ordnance Plant Small Arms Ammunition Plant I & II site map prepared by Mauran, Russell, Crowell & Mullgardt dated November 1942.

15. Rural Policy Research Institute (RUPRI), Community Information Resource Center (CIRC), Interactive Mapping Website, http://circ.rupri.org,accessed 2/22/07.

16. Benjamin H. Friedman, Assistant Inspector General for Auditing, Memorandum to John B. Platt, Regional Administrator, March 3, 1986 and Stewart Industrial Hygiene Analytical Data dated January 3, 1986.

17. GSA Routing Slip Form 14 dated 4/17/1989 with attached PCB transformer Status spreadsheet.

18. Industrial Testing Laboratories, Inc. analytical report dated April 9, 1990 addressed to GSA.

19. Letter and Analytical Data dated May 23, 1990 prepared by Allan M. Siegel, Director, representing Industrial Testing Laboratories, Inc. to GSA.

20. *Archives Search Report St. Louis Ordnance Plant and St. Louis Ordnance Core Plant* dated December, 1993 prepared by Defense Environmental Restoration Program for Formerly Used Defense Sites.

21. Letter and Analytical Report dated March 29, 1995 prepared by Westinghouse Electric Corporation.

22. *GSA Procurement Request and Contract Specification* dated September 18, 1995 prepared by Monte R. Findley, Field Office Manager.

23. *Metropolitan St. Louis Sewer District Industrial Facility Inspection Report* dated June 2, 1998 completed by Mike Crocker, Property Manager – Federal Center Director.

24. *St. Louis Ordnance Plant (SLOP) Property Owner Questionnaire* dated June 3, 1999 prepared by Michael P. Crocker, Director Federal Center PMC, prepared for the U.S. Army Corps of Engineers.

25. *Preliminary Assessment/Site Inspection Report Former St. Louis Ordnance Plant* dated June, 2001 prepared by TapanAm Associates, Inc.

26. GSA Routing Slip Form 14 dated July 30, 2001 with attached report review summary regarding contamination from munitions production at the SLOP.

27. *Project Information Retrieval System Findings Report* dated April 27, 2002, U.S. Army Corps of Engineers, Rock Island District and U.S. Army Engineering Support Center, Huntsville.

28. *Mold Contamination Inspection Report* dated July 16, 2002 prepared by Professional Abatement and Remediation Technologies.

29. *St. Louis Ordnance Plant Site Operational History Report* dated April 28, 2003 prepared by Dynamac Corporation.

30. *Small Arms Firing Range (SAFR) Remediation Report* dated March 18, 2003 prepared by SCS Engineers.

31. EPA REGISTER 40 CFR, Chapter 1, Part 216.24 *"Identification and Listing of Hazardous Waste"*.

32. Bedrock Map of the St. Louis Quadrangle, Missouri and Illinois: U.S. Geological Survey, dated 1997.

33. Missouri Department of Natural Resources, Well Information Reports, March 21, 2007.

34. Metropolitan St. Louis Sewer District, Phase II Stormwater Management Plan, Map Showing MSD's Five Service Areas, page 6-3, available at http://mkasmtp1.stlmsd.com/MSD/PgmsProjs/PhaseII

35. City of St. Louis, Five-Year Strategy, Chapter 10-Environment, Sewers/Flood Control, 2005, available at http://stlouis.missouri.org/5yearstrategy.

36. Metropolitan St. Louis Sewer District Website, Ordinances and Resolutions, available at http://www.msd.st-louis.mo.us/OrdsRes.

37. Metropolitan St. Louis Sewer District Website, Combined Sewer Overflow FAQ, available at http://mkasmtp1.stlmsd.com/MSD/PgmsProjs/SiteFAQ/CSOFAQ.

38. Missouri Code of State Regulations, Title 10 - Department of Natural Resources, Division 20 - Clean Water Commission, Chapter 7 – Water Quality, Water Quality Standards, Table H—Stream Classifications And Use Designations (10 CSR 20-7.031), available at http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-7c.pdf.

39. Missouri Department of Natural Resources, Total Maximum Daily Load Information Sheet, Mississippi River, available at http://www.dnr.mo.gov/env/wpp/tmdl/info/0001-1707-3152-miss-r-chlor-pcb-info.pdf

40. U.S. Geological Survey, National Water Information System: Web Interface, Real Time Data, USGS 07010000 Mississippi River at St. Louis, MO, http://waterdata.usgs.gov/nwis/uv?07010000, accessed March 6, 2007.

41. Missouri Department of Conservation, http://www.mdc.mo.gov/areas/stlouis/fish/, fishing publications, *Fish St. Louis,* available at: http://mdc4.mdc.mo.gov/Documents/2475.pdf

42. St. Louis Department of Parks, Recreation and Forestry, Listing of City Parks, http://stlouis.missouri.org/citygov/parks/parks_div.

43. East-West Gateway Council of Governments, *Everyone Lives in a Watershed*, available at http://www.ewgateway.org/pdffiles/library/wrc/watershed2004/watershedbrochure-122104.pdf.

44. U.S. Environmental Protection Agency, Surf Your Watershed, Cahokia-Joachim Watershed Profile, http://cfpub.epa.gov/surf/huc.cfm?huc_code=07140101

45. Missouri Department of Natural Resources, Total Maximum Daily Load Information Sheet, River des Peres, available at http://www.dnr.mo.gov/env/wpp/tmdl/info/9003-river-des-peres-info.pdf.

46. City of St. Louis Water Division Website, Your Water, http://www.stlwater.com.

47. Upper Mississippi Water Suppliers Coalition, Water Suppliers Contact List, available at http://www.umrwsc.com/contact_list.htm.

48. Illinois Environmental Protection Agency, Source Water Assessment and Protection Program, Source Water Assessment Summary, IL American-East St. Louis Fact Sheet available at http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl.

49. Center for Agricultural, Resource and Environmental System, Map Room, http://maproom.missouri.edu.

50. Missouri Department of Conservation letter prepared by Shannon Cave dated July 7, 2004, prepared for Jerrett Domling, SCS.

51. Personal communication with Bob Holtz Services representative.

52. Wikepedia website, search for Bis(2-ethylhexyl)_phthalate, http://en.wikipedia.org/wiki/Bis(2-ethylhexyl)_phthalate, accessed March 23, 2007.

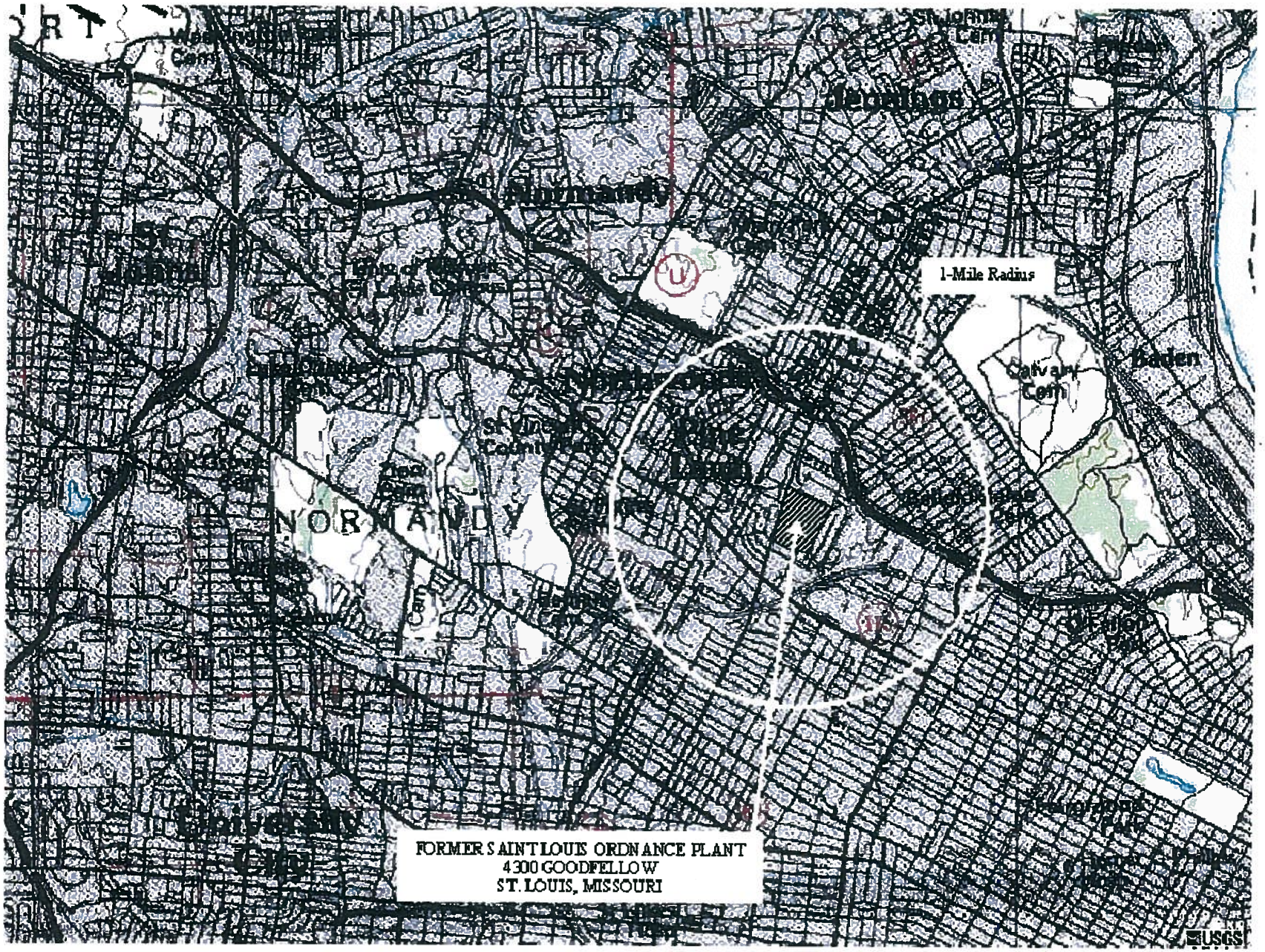
53. National Center for Education Statistics website, www.nces.ed.gov/globallocator/sch_info.

54. St. Louis Jobs Corps Center website, http://stlouis.jobcorps.gov.

55. GreatSchools.net, Normandy Tech School overview, available at http://www.greatschools.net/modperl/browse_school/mo/1351.

56. Center for Agricultural, Resource and Environmental System, Map Room, http://maproom.missouri.edu.

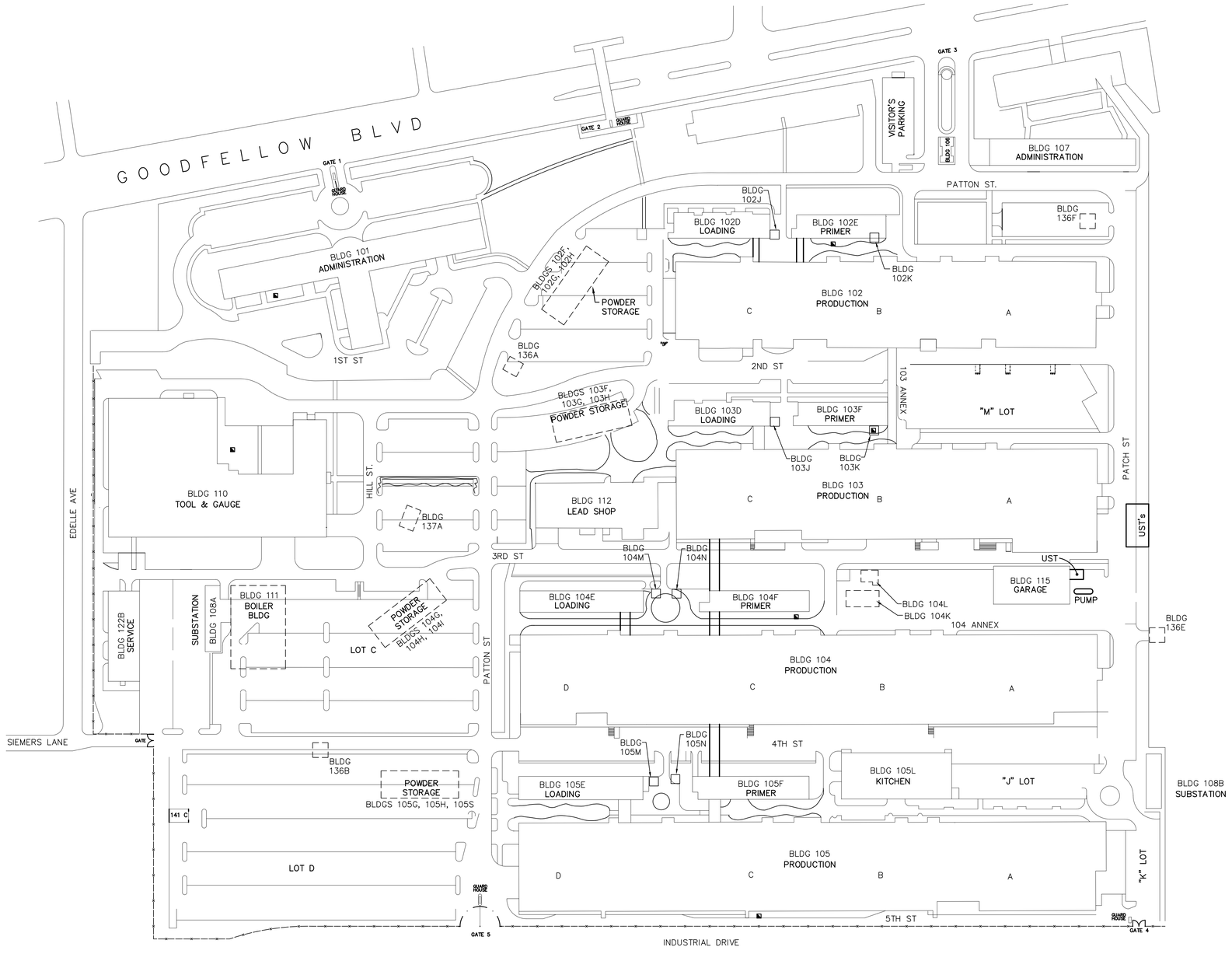
FIGURES



O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG 1

SCS ENGINEERS

FIGURE 1
SITE VICINITY MAP



LEGEND

- FENCE
- FIRE HYDRANT — FH
- NO PARKING
- SMOKING SHELTER
- FORMER BUILDING LOCATION

REV.	DATE	DESCRIPTION	CK. BY

SHEET TITLE: SITE PLAN

PROJECT TITLE: PA/SI REPORT
ST. LOUIS FEDERAL CENTER
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MISSOURI

CLIENT
U.S. GENERAL SERVICES ADMINISTRATION
PROPERTY MANAGEMENT DIVISION
GSA PUBLIC BUILDINGS SERVICE
HEARTLAND REGION
1500 E. BANNISTER ROAD, ROOM 201
KANSAS CITY, MO 64131

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
10875 ELMONTE, SUITE 100, OVERLAND PARK, KANSAS 66211
PH: (913) 681-0030 FAX: (913) 681-0012
WWW.SCSENGINEERS.COM

PROJ. NO.	DWN. BY:	O/A RVW BY:
02200070.56	REP	
DSN. BY:	CHK. BY:	APP. BY:
DAB		

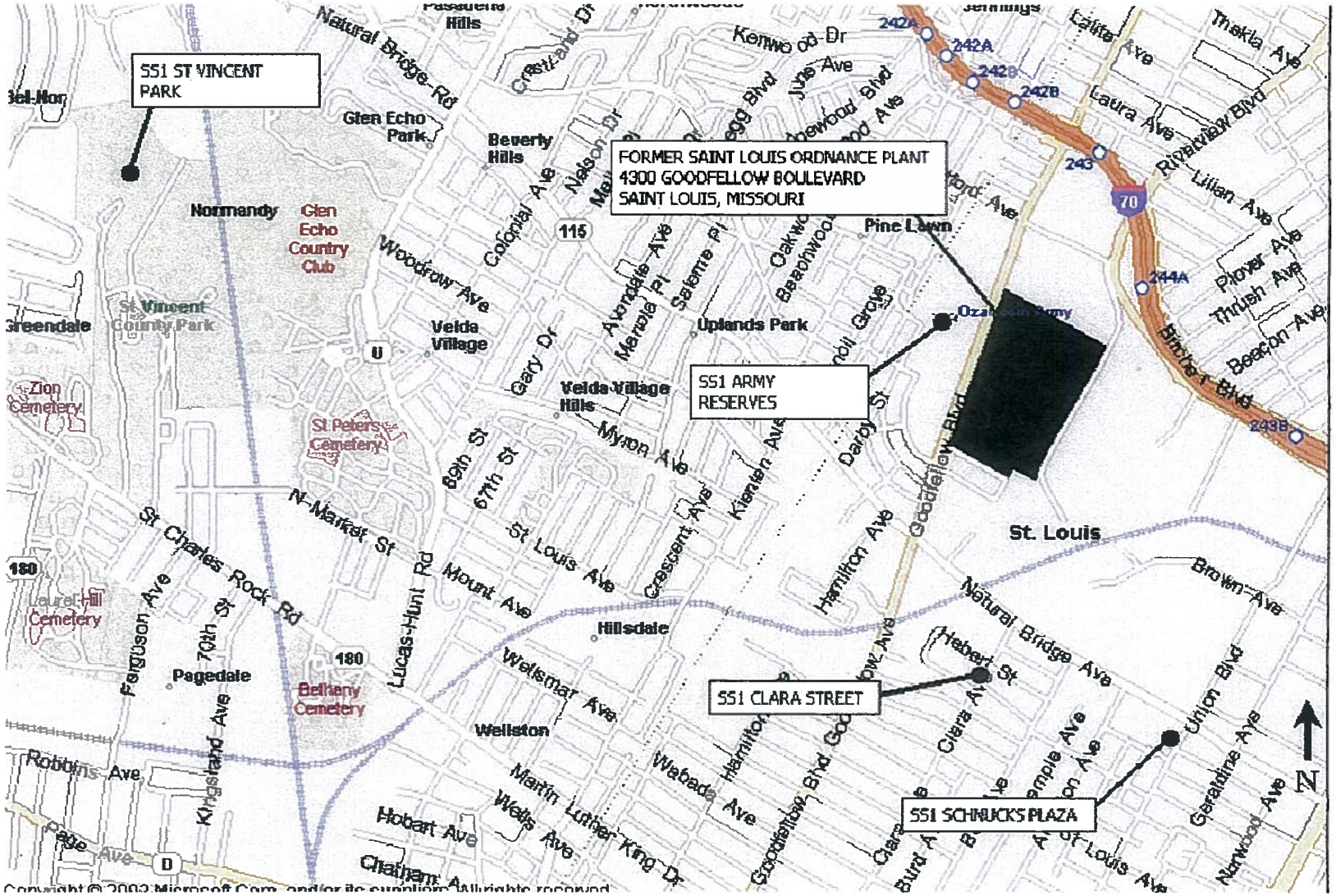
CADD FILE: 02200070.56-01

DATE: MARCH 2007

SCALE: 1"=100'

FIGURE 2

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG-2



SCS ENGINEERS

FIGURE 3

BACKGROUND SOIL SAMPLE LOCATIONS

C:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG 1

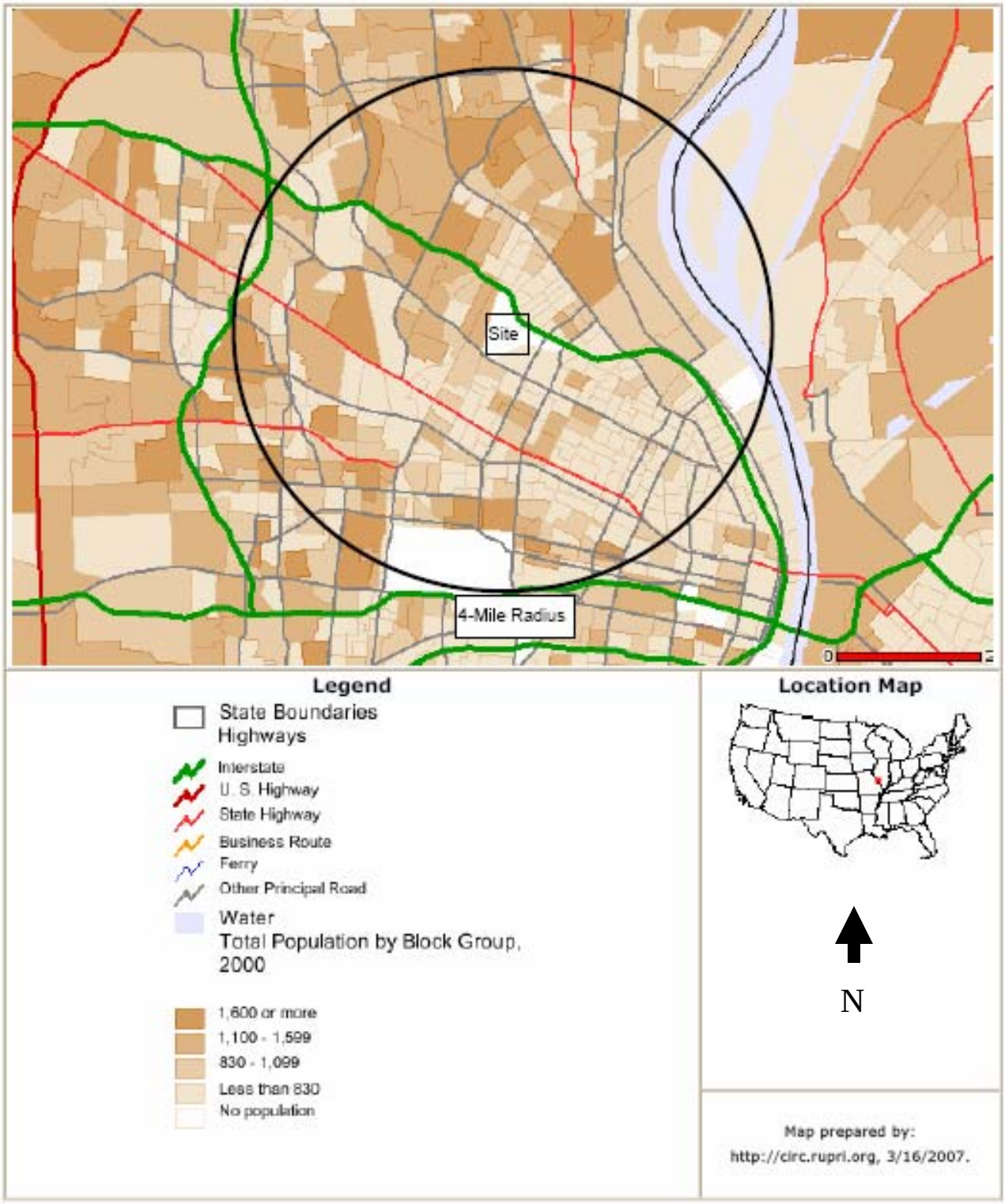
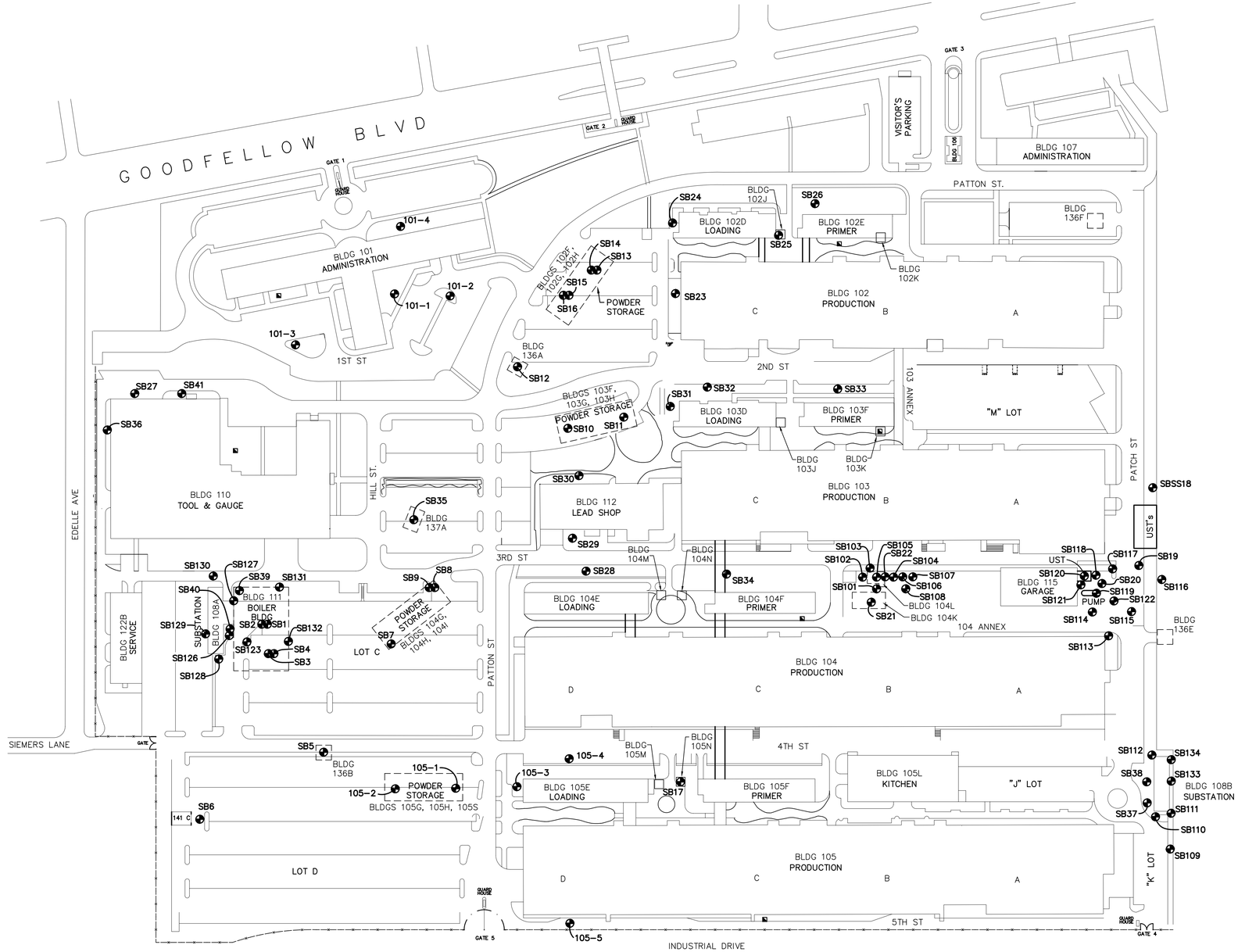


Figure 4
Area Population by Block Group



LEGEND

- FENCE
- FIRE HYDRANT — FH
- NO PARKING
- SMOKING SHELTER
- FORMER BUILDING LOCATION
- COMPLETED SOIL BORING LOCATION — SB38

REV.	DATE	DESCRIPTION	CK. BY

SHEET TITLE
SOIL BORING LOCATION PLAN

PROJECT TITLE
PA/SI REPORT
ST. LOUIS FEDERAL CENTER
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MISSOURI

CLIENT
U.S. GENERAL SERVICES ADMINISTRATION
PROPERTY MANAGEMENT DIVISION
GSA PUBLIC BUILDINGS SERVICE
HEARTLAND REGION
1500 E. BANNISTER ROAD, ROOM 201
KANSAS CITY, MO 64131

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
10975 ELMONTE, SUITE 900, OVERLAND PARK, KANSAS 66211
PH. (913) 451-7150 FAX NO. (913) 451-7153
WWW.SCSENGINEERS.COM

PROJ. NO.	DSN. BY:	DWN. BY:	CHK. BY:	Q/A R/W BY:	APP. BY:
02200070.56	DAB	REP			

CADD FILE:
02200070.56-01

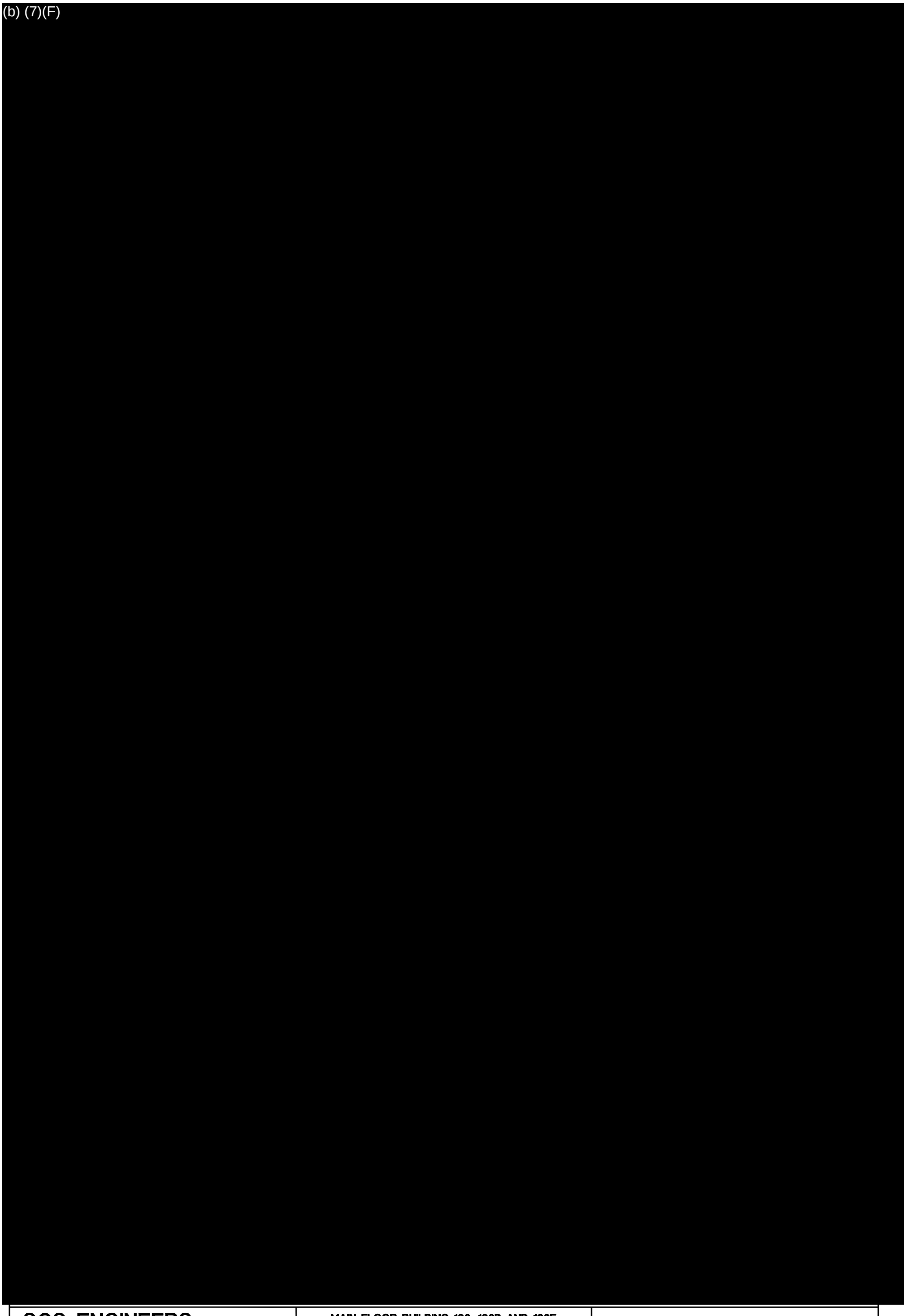
DATE:
MARCH 2007

SCALE:
1"=100'

FIGURE
5

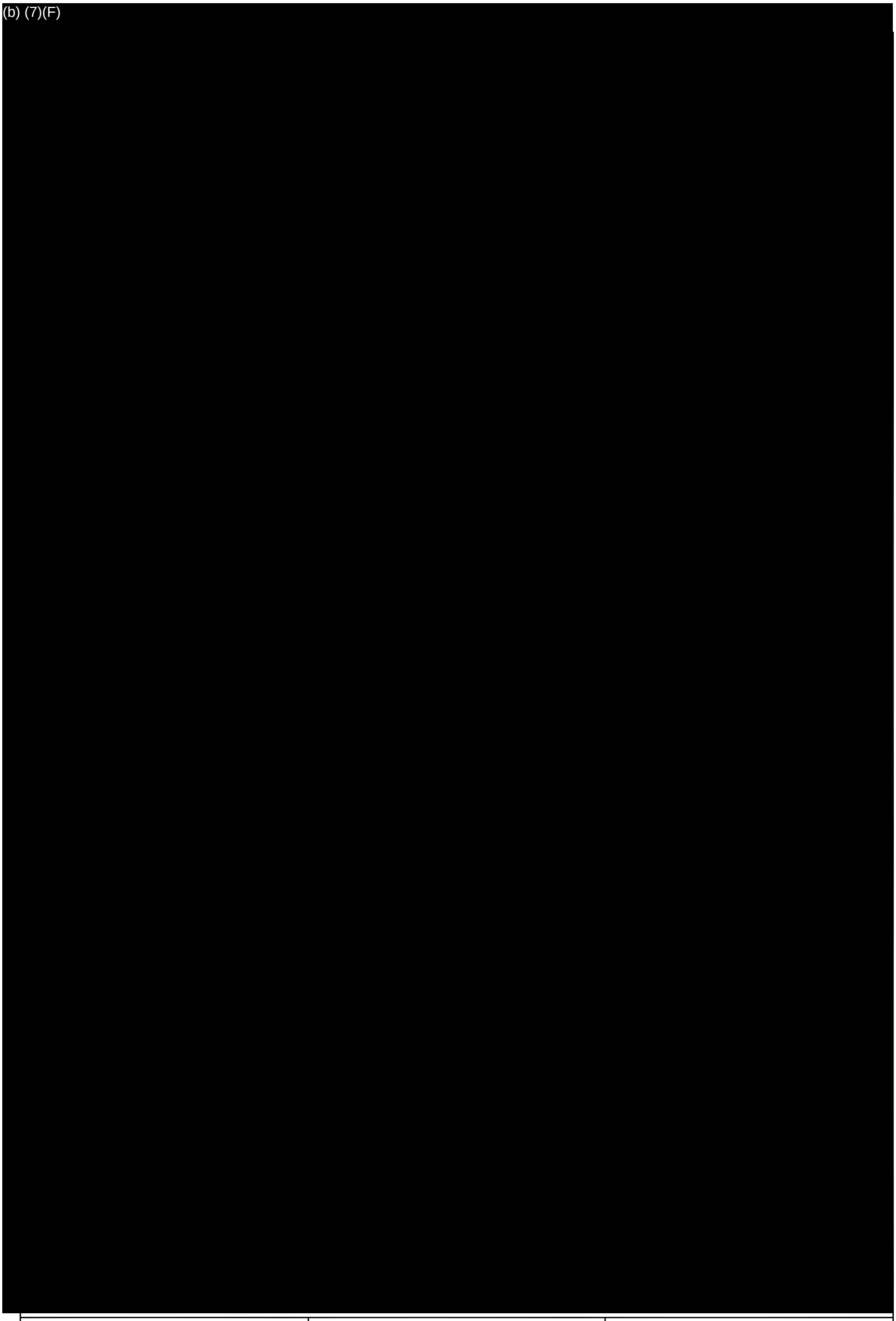
O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG-5

(b) (7)(F)



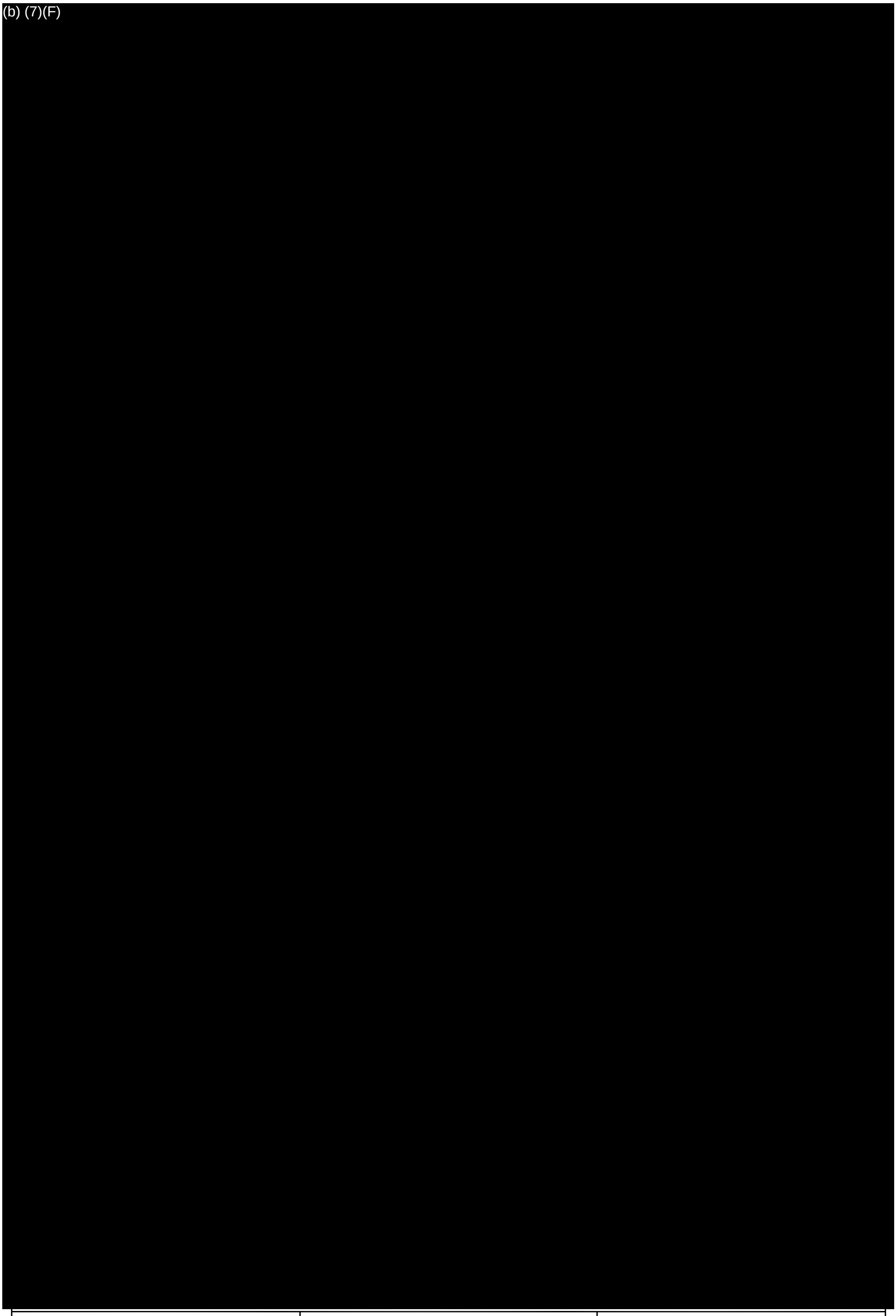
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	MAIN FLOOR BUILDING 102, 102D AND 102E ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 6 SAMPLE LOCATIONS

(b) (7)(F)



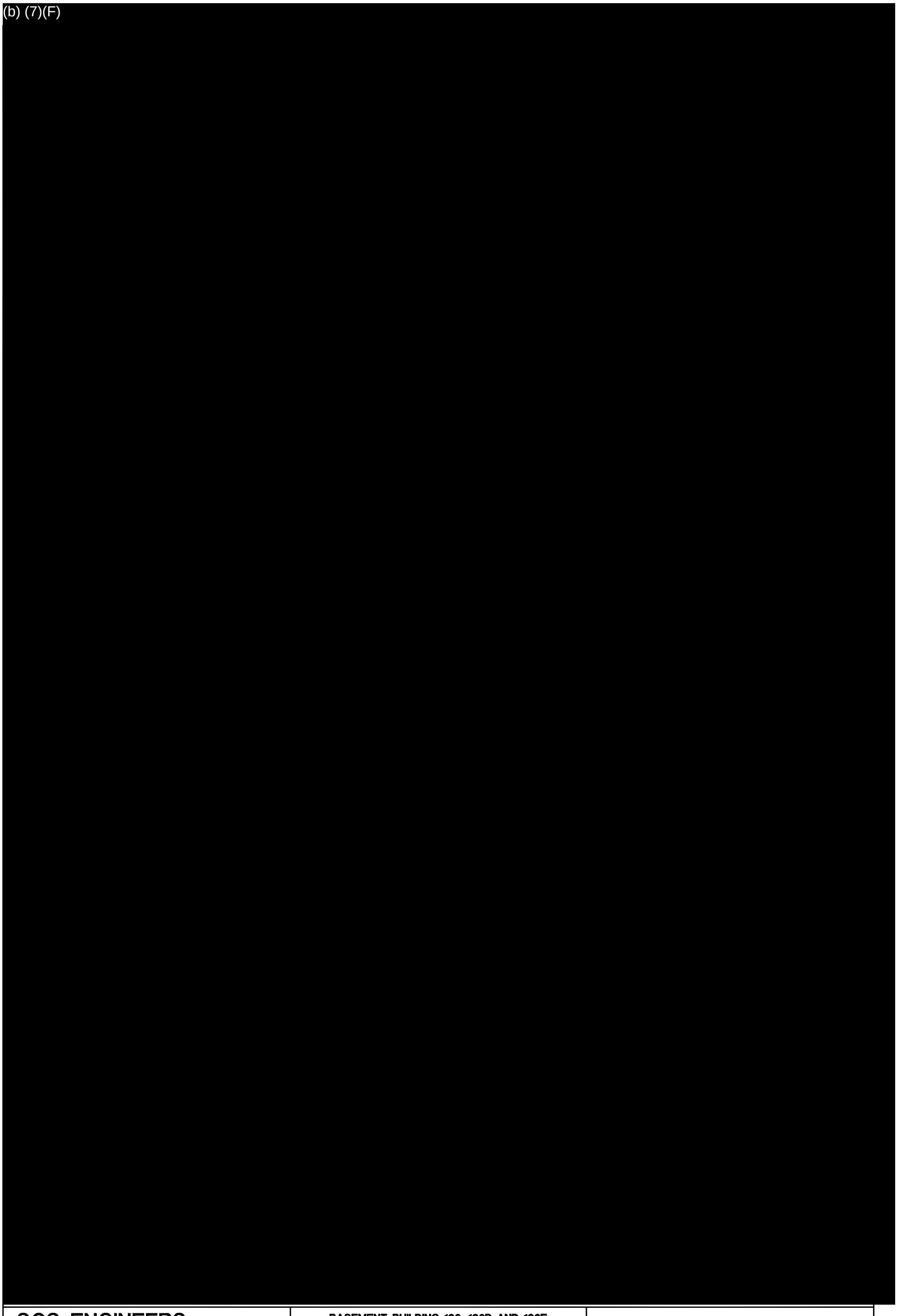
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	MAIN FLOOR BUILDING 102, 102D AND 102E ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 6A SAMPLE LOCATIONS

(b) (7)(F)



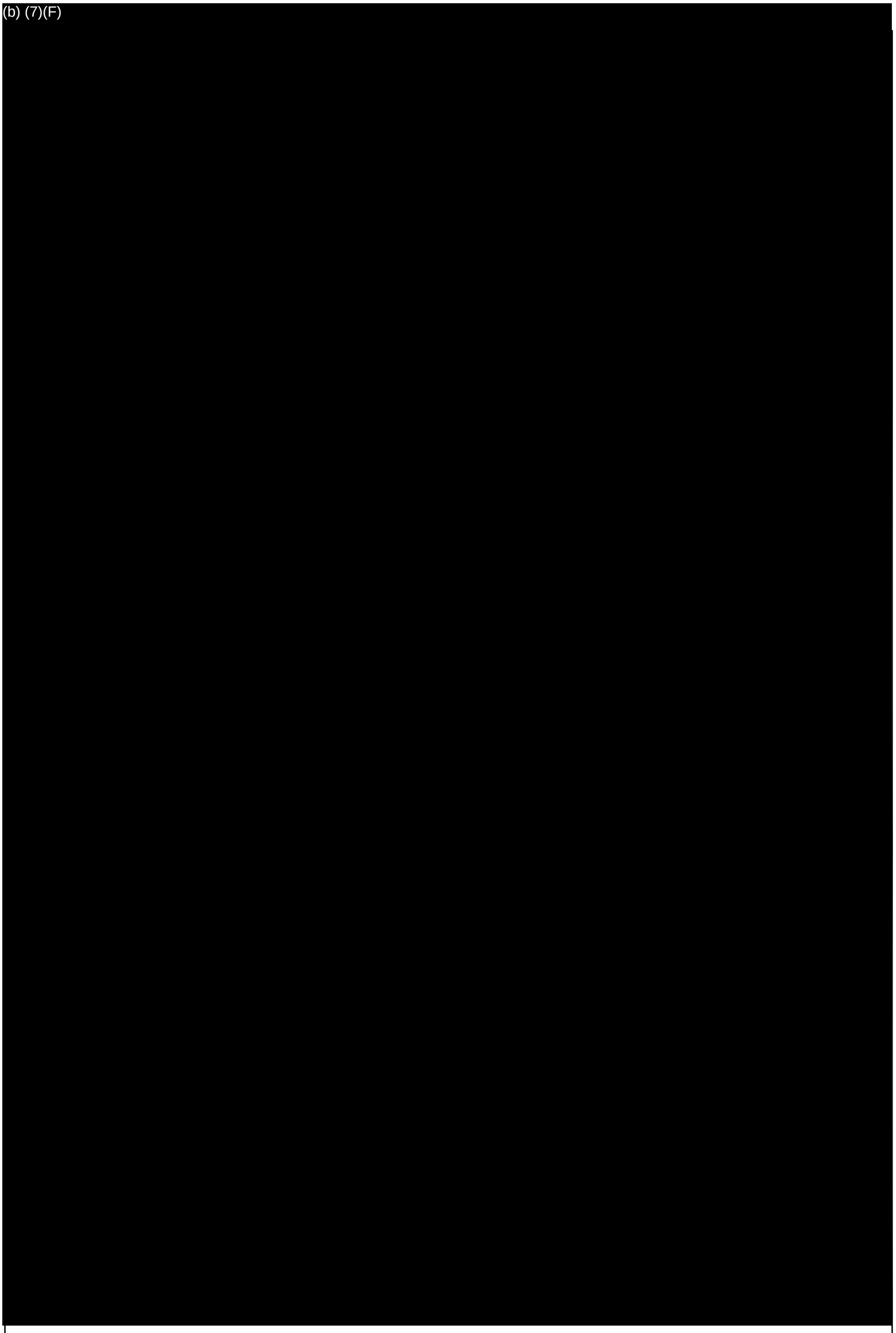
SCS ENGINEERS	BASEMENT BUILDING 102, 102D AND 102E ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 7 SAMPLE LOCATIONS
DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



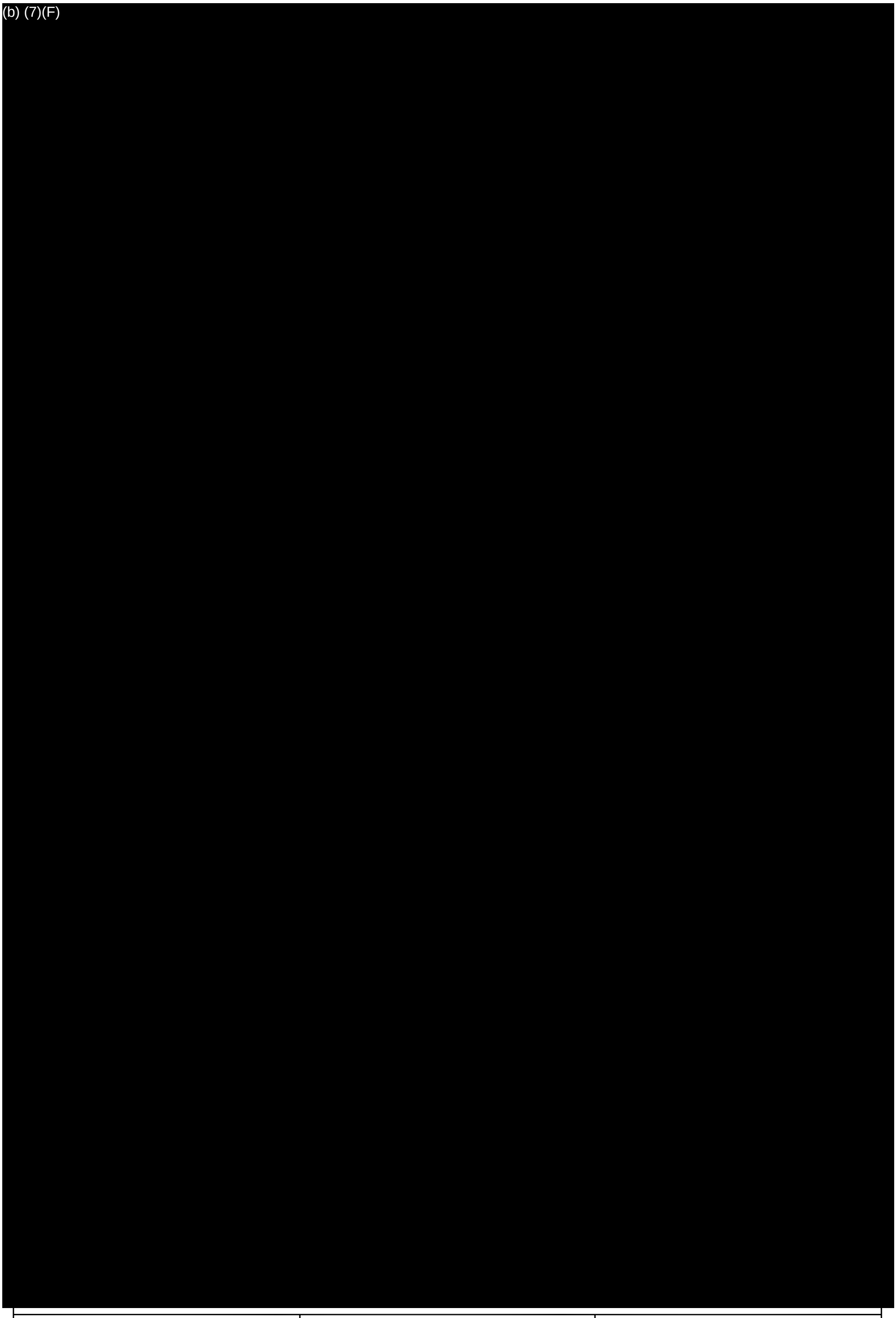
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	BASEMENT BUILDING 102, 102D AND 102E ST. LOUIS ORDANANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 7A SAMPLE LOCATIONS

(b) (7)(F)



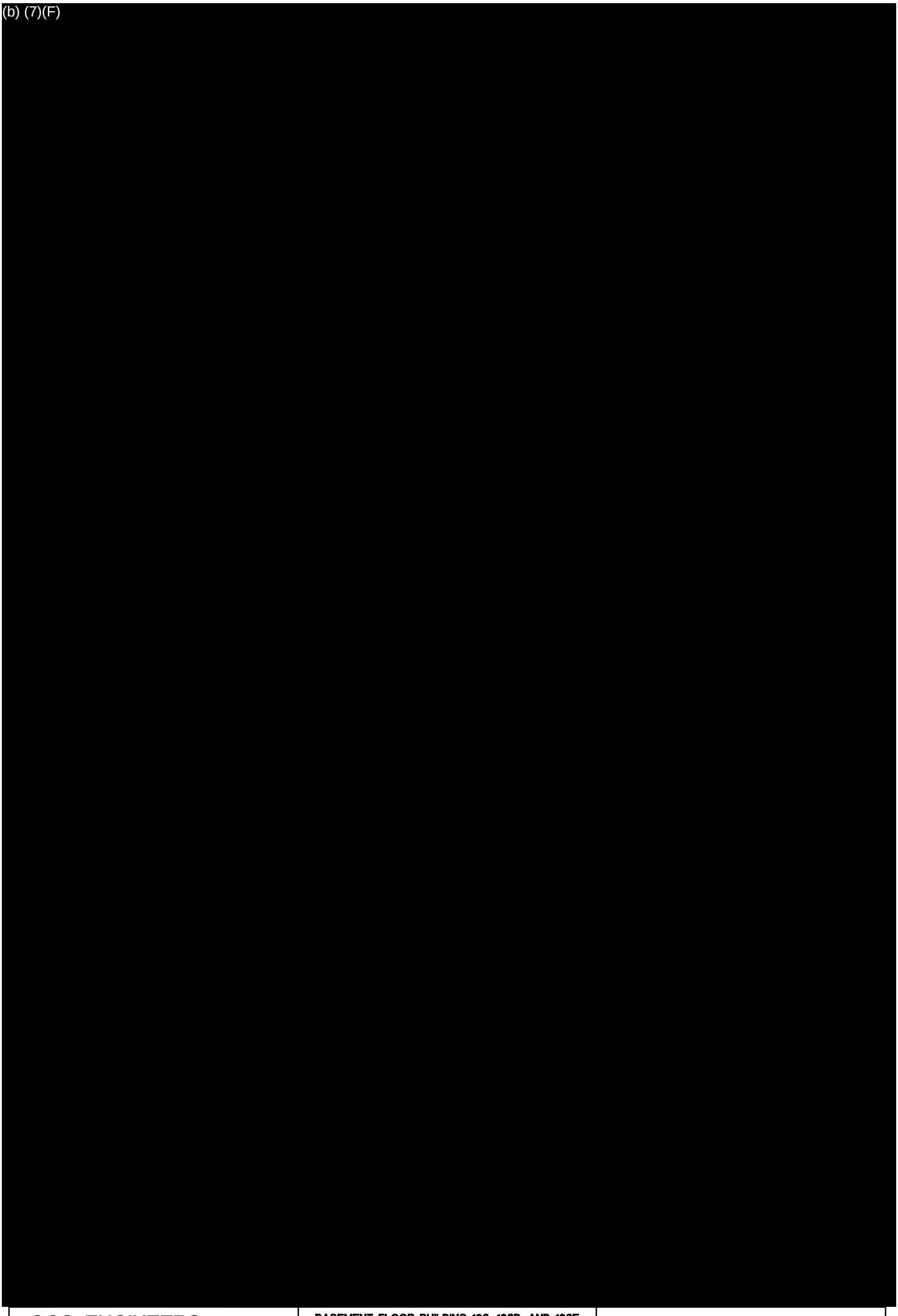
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	MAIN FLOOR BUILDING 103, 103D AND 103E ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 8 SAMPLE LOCATIONS

(b) (7)(F)



SCS ENGINEERS	MAIN FLOOR BUILDING 103, 103D AND 103E ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 8A SAMPLE LOCATIONS
DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



SCS ENGINEERS

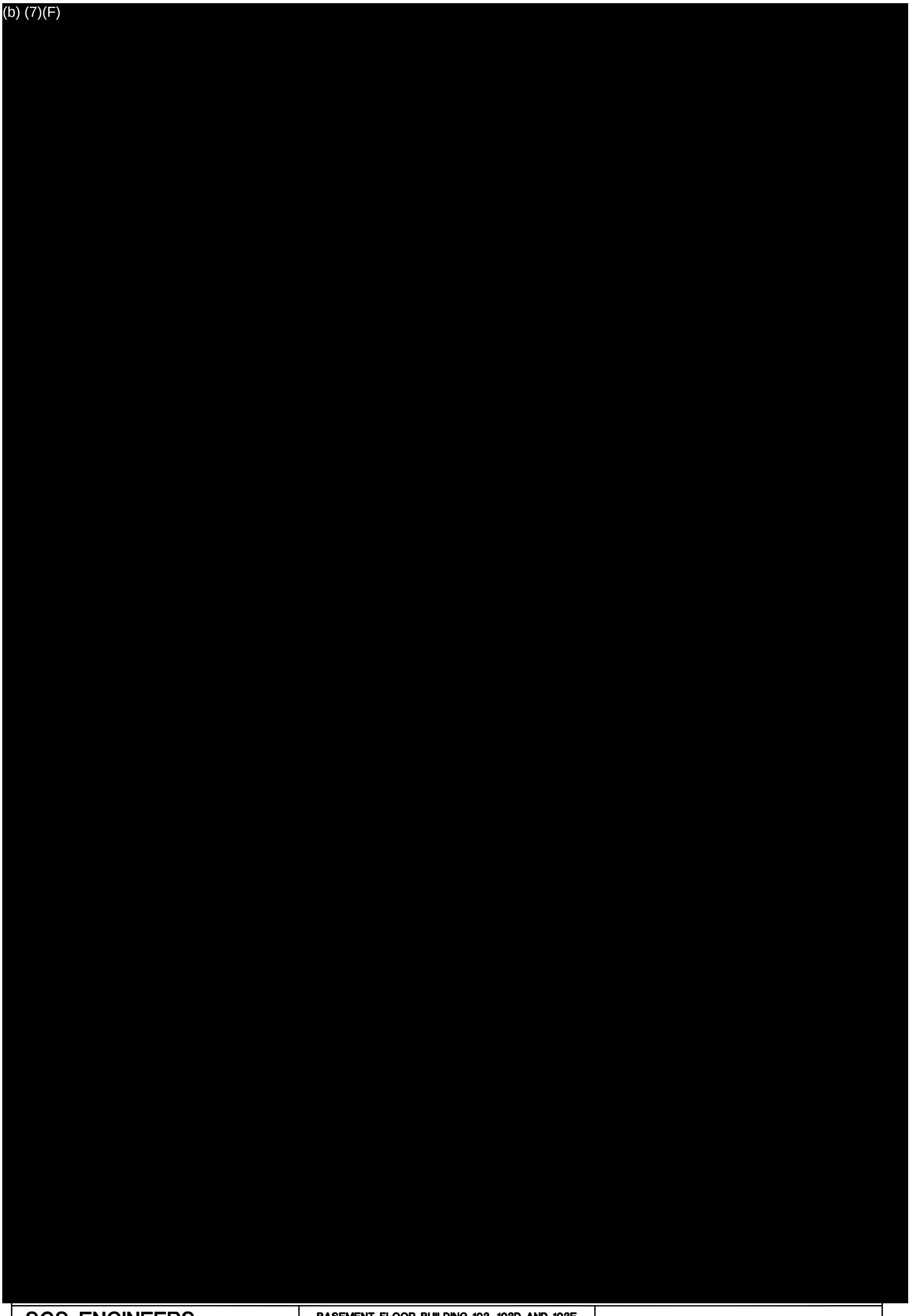
DSN. BY J. DOMLING CHK. BY D. BREWER

DWN. BY R.PHILLIPS REV:

BASEMENT FLOOR BUILDING 103, 103D, AND 103E
ST. LOUIS ORDNANCE PLANT
4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI
PROJECT NO. 02200070.56 MARCH 2007

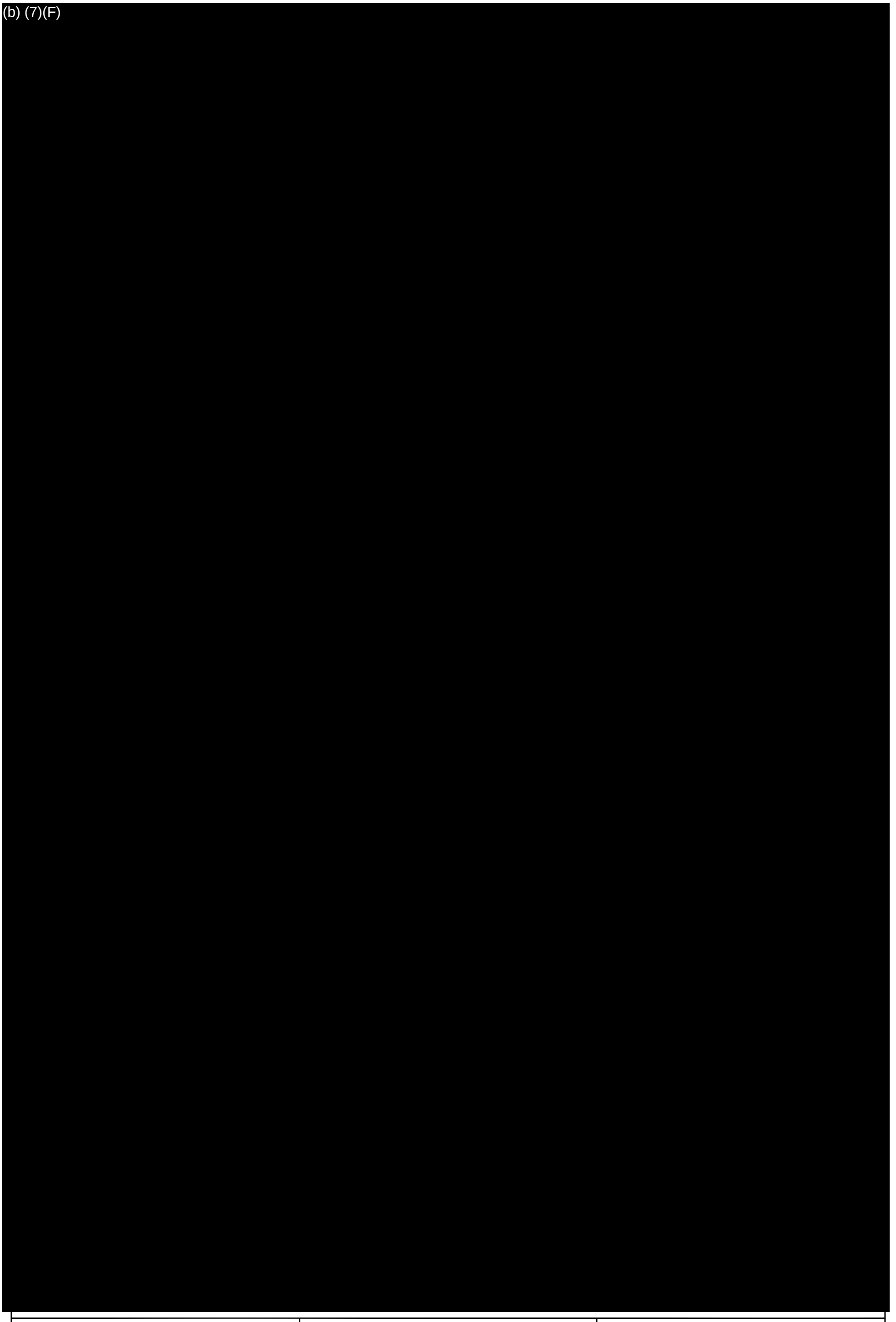
FIGURE 9
SAMPLE LOCATIONS

(b) (7)(F)



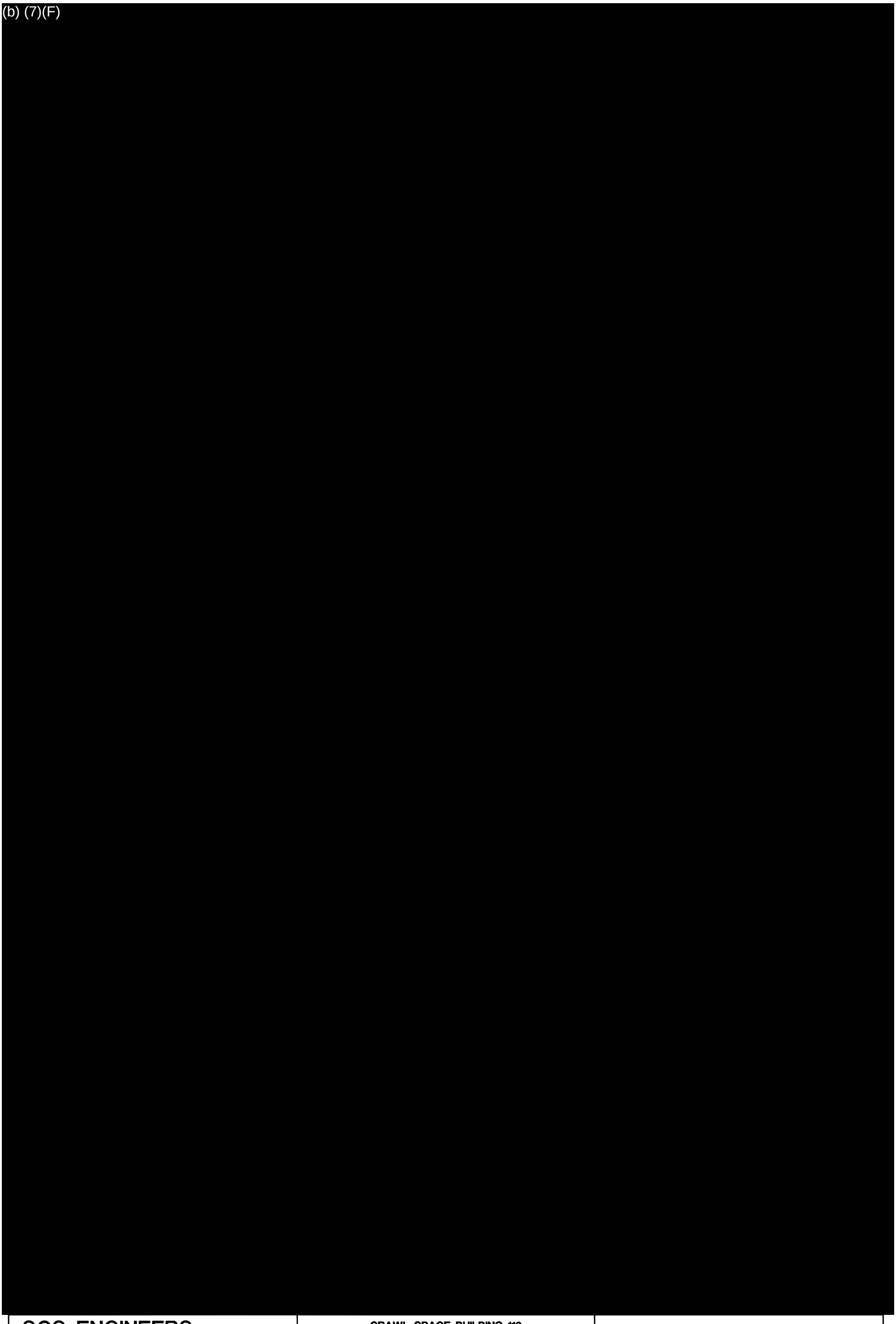
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	BASEMENT FLOOR BUILDING 103, 103D AND 103E ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 9A SAMPLE LOCATIONS

(b) (7)(F)



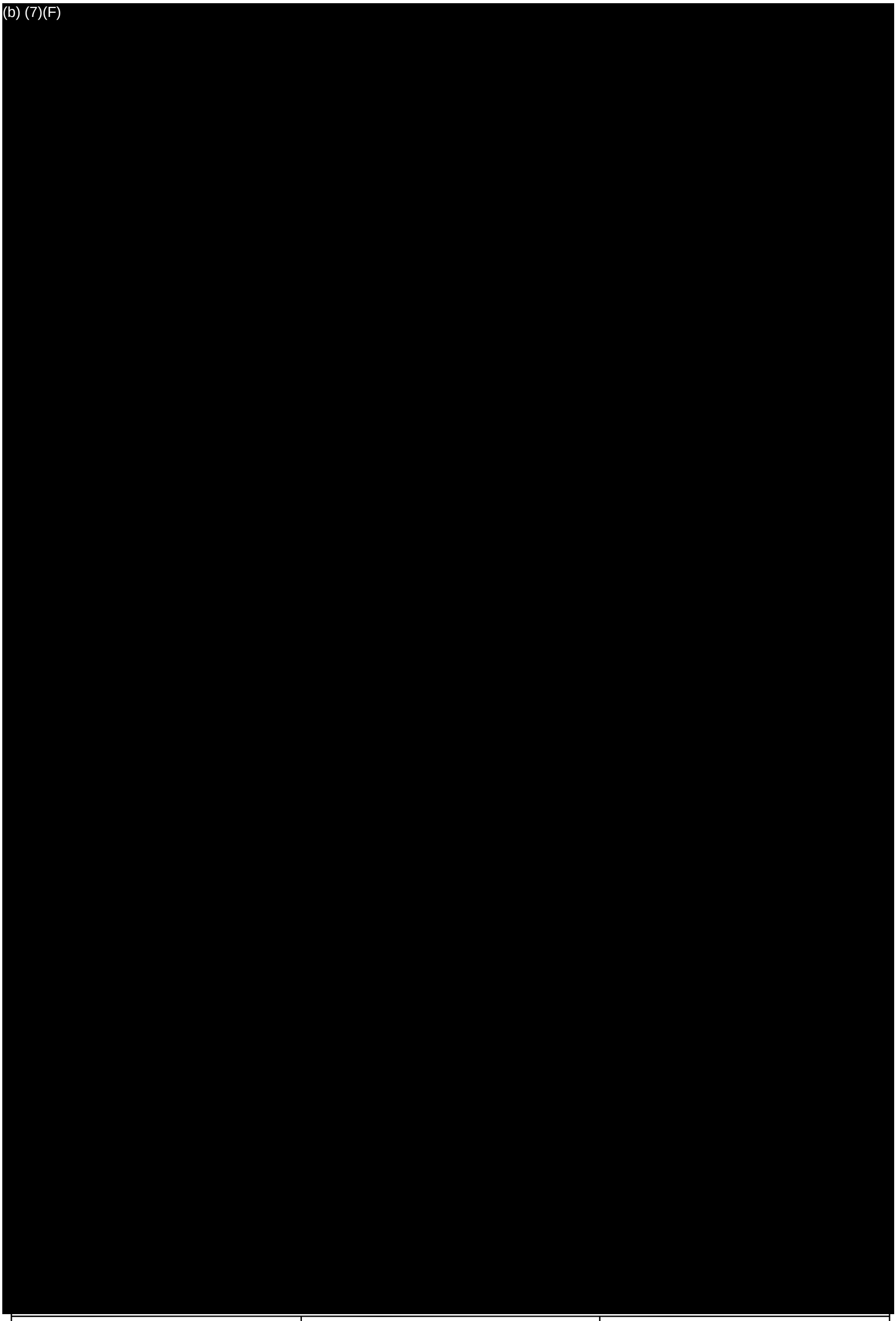
SCS ENGINEERS	BUILDING 112 FORMER ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 10 MAIN FLOOR WIPE SAMPLE LOCATIONS
DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



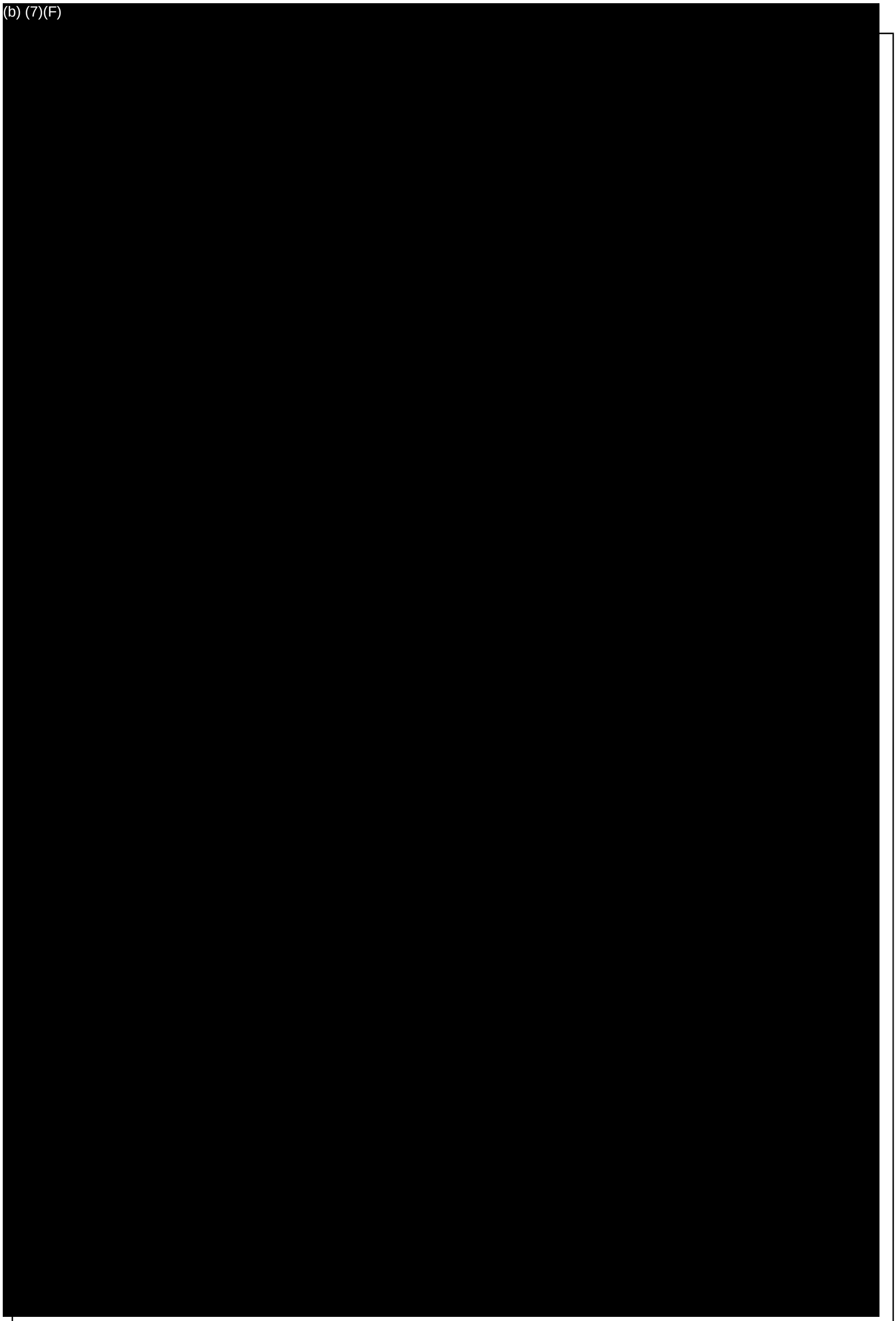
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	CRAWL SPACE BUILDING 112 ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 10A SAMPLE LOCATIONS

(b) (7)(F)



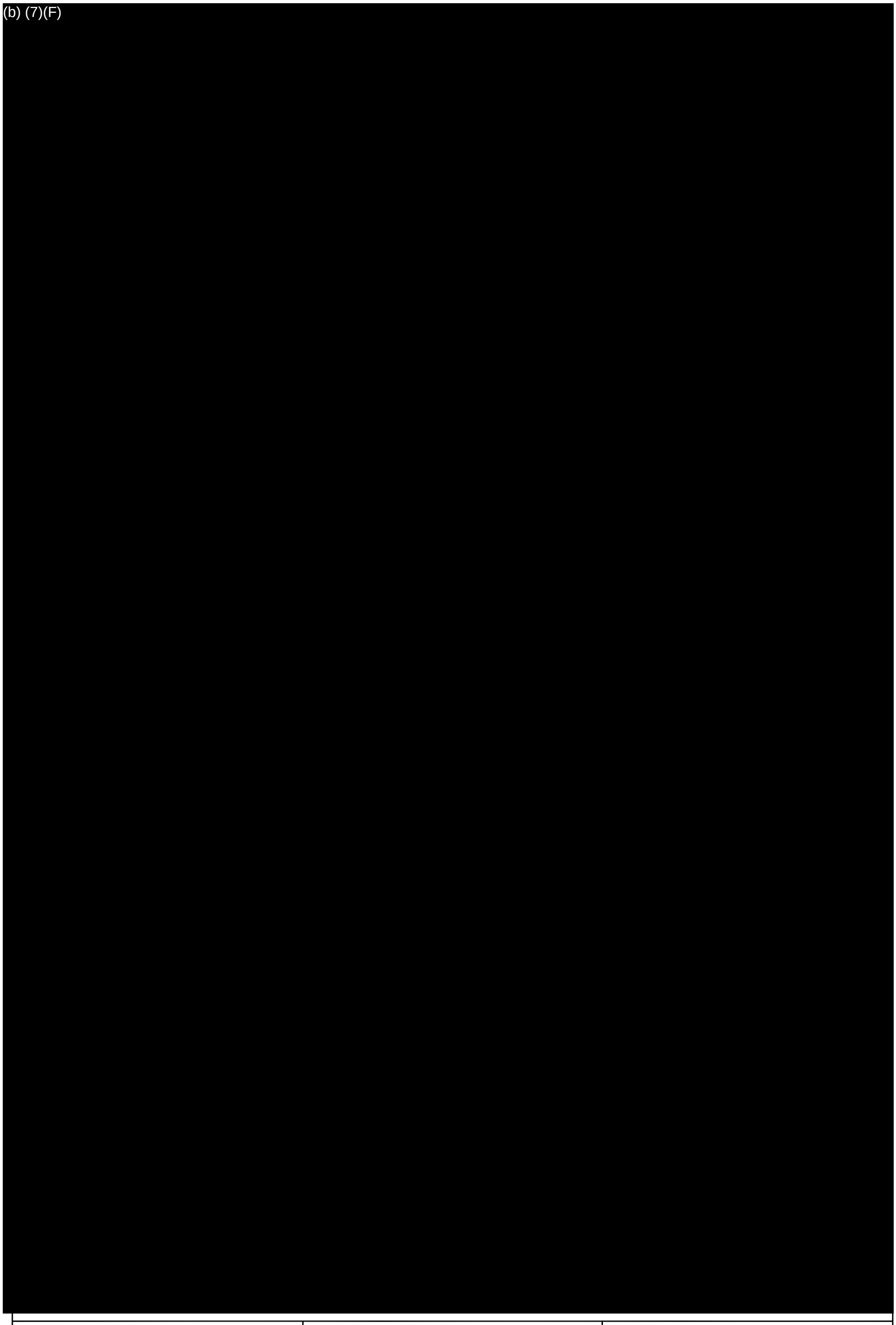
SCS ENGINEERS	MAIN FLOOR BUILDINGS 104, 104E, AND 104F ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 11 SAMPLE LOCATIONS
DSN. BY J.DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



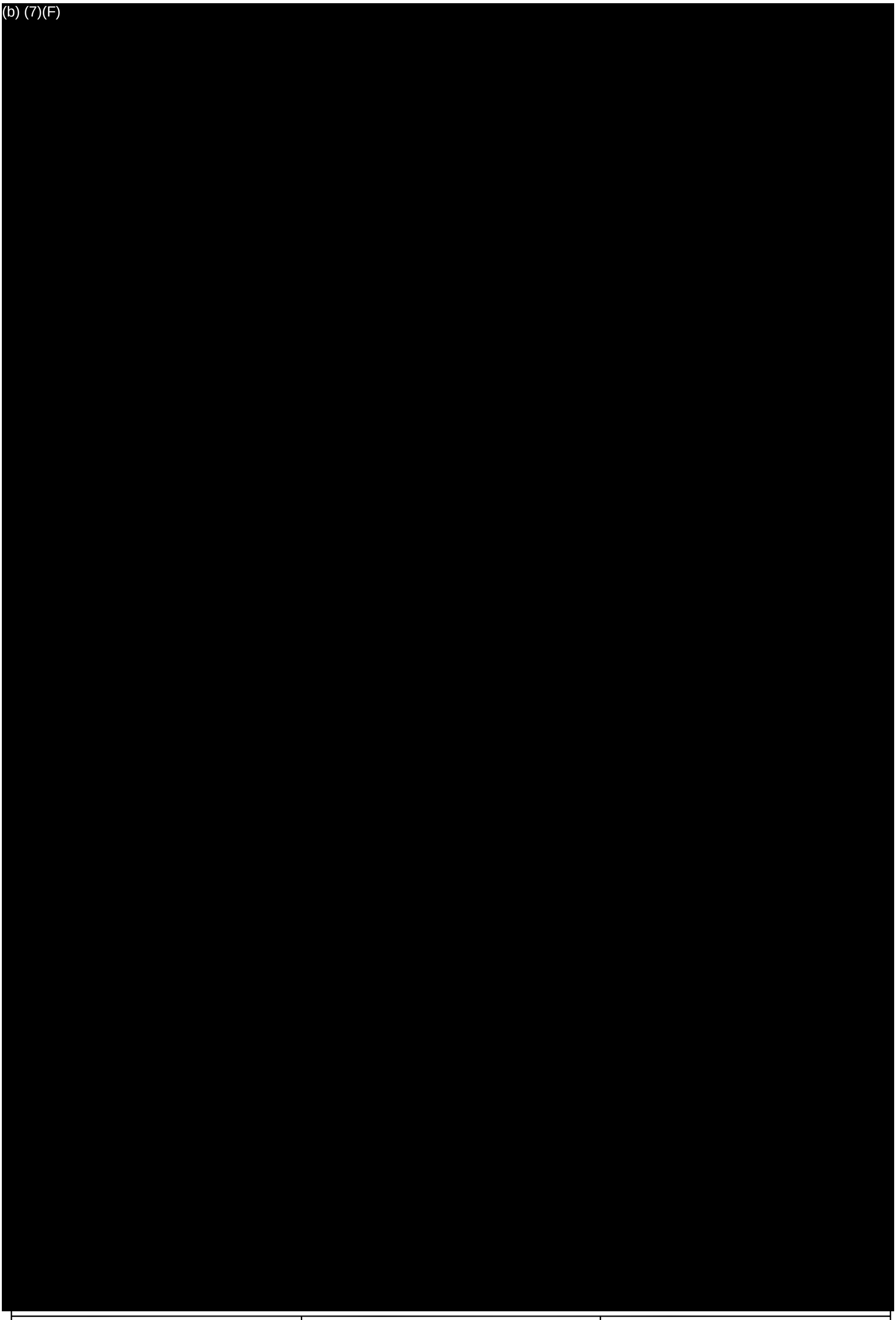
SCS ENGINEERS	MAIN FLOOR BUILDING 104 ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 11A SAMPLE LOCATIONS
DSN. BY J.DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



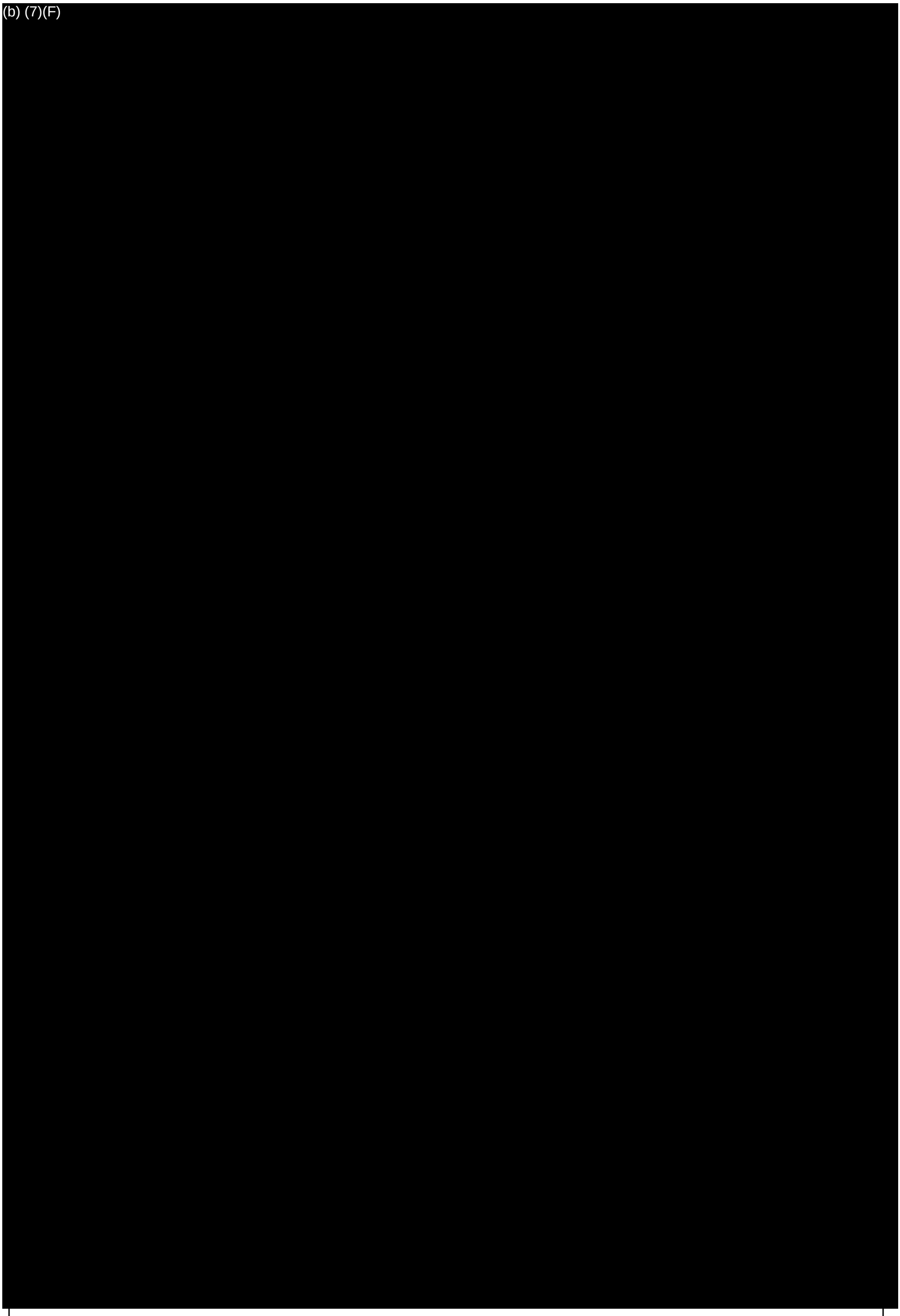
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	BASEMENT BUILDING 104 , 104E AND 104F ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 12 SAMPLE LOCATIONS

(b) (7)(F)



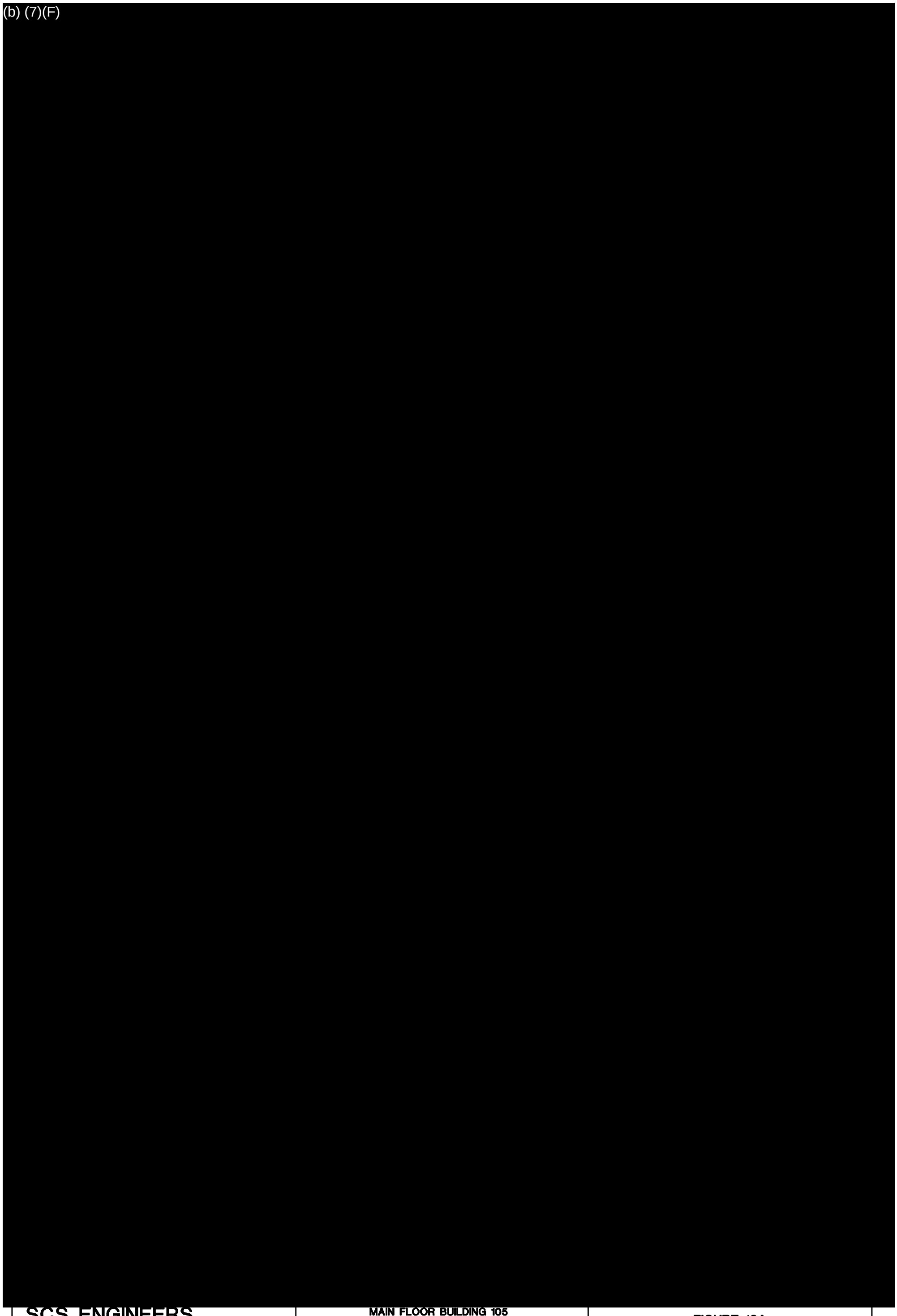
SCS ENGINEERS	BASEMENT BUILDING 104E AND 104F ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 12A SAMPLE LOCATIONS
DSN. BY J.DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



SCS ENGINEERS DSN. BY B. ENGARD CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	MAIN FLOOR BUILDINGS 105, 105E, AND 105F ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 13 SAMPLE LOCATIONS

(b) (7)(F)



SCS ENGINEERS

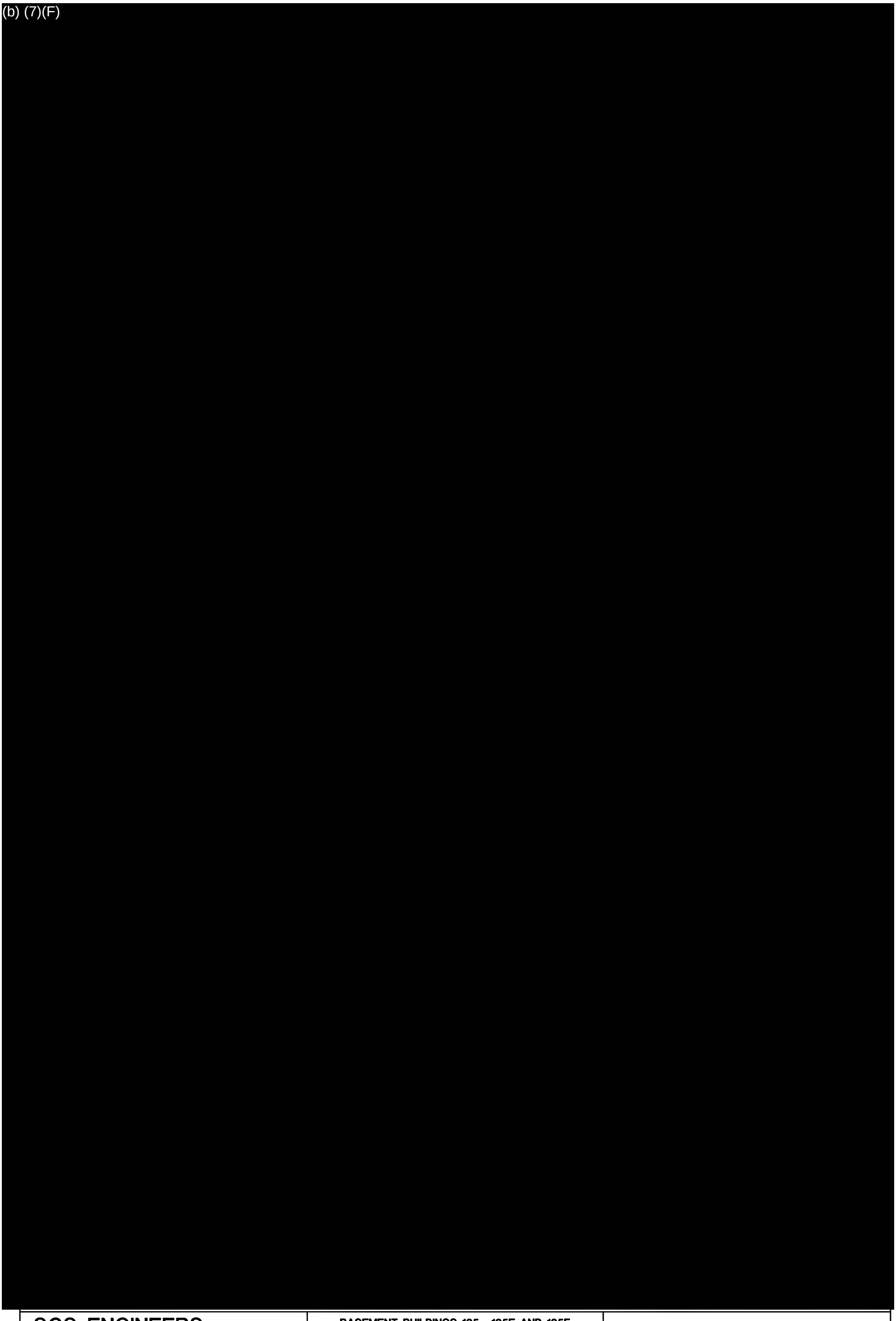
DSN. BY J.DOMLING CHK. BY D. BREWER

DWN. BY R.PHILLIPS REV:

MAIN FLOOR BUILDING 105
ST. LOUIS ORDNANCE PLANT
4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI
PROJECT NO. 02200070.56 MARCH 2007

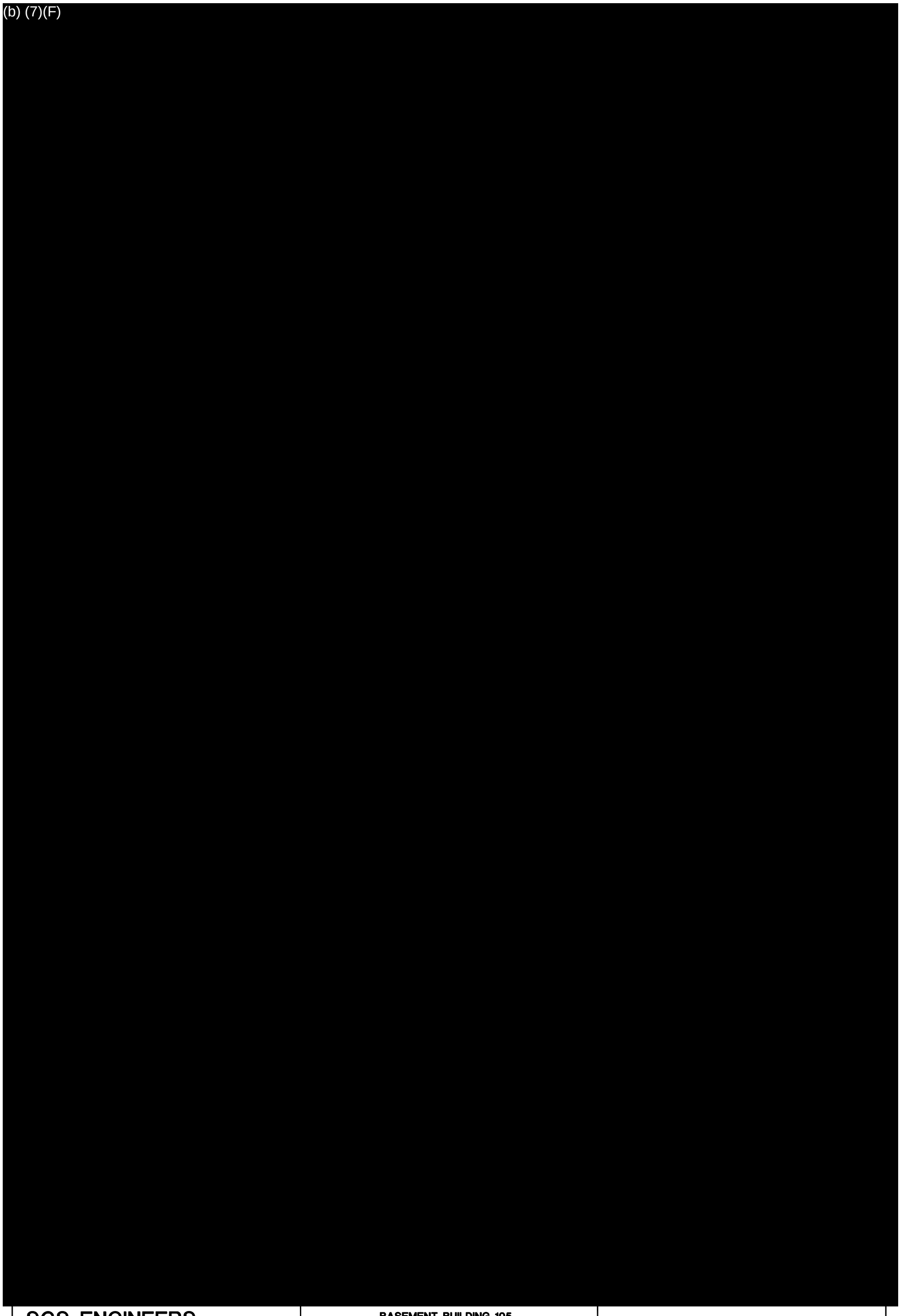
FIGURE 13A
SAMPLE LOCATIONS

(b) (7)(F)



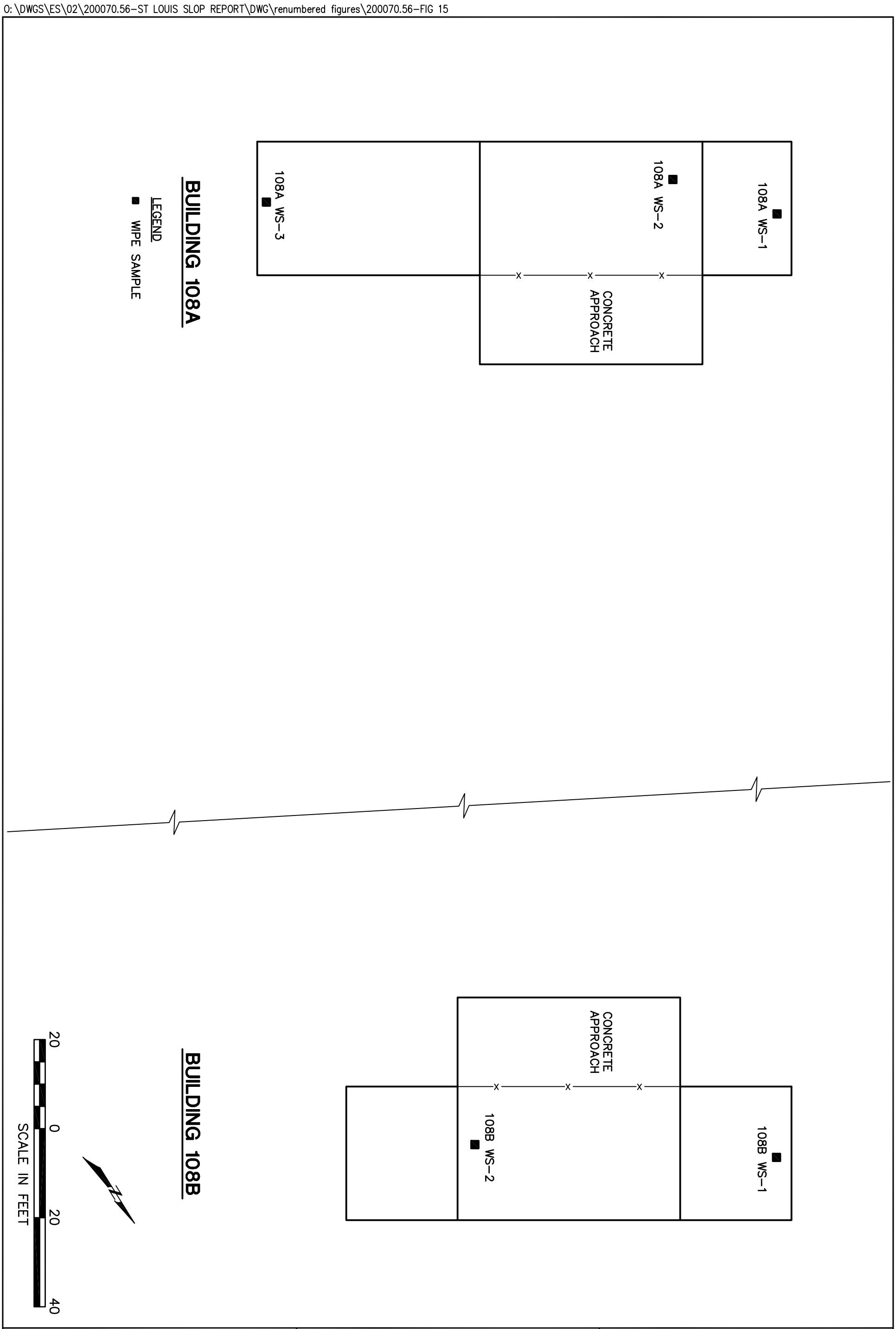
SCS ENGINEERS	BASEMENT BUILDINGS 105 , 105E AND 105F ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 14 SAMPLE LOCATIONS
DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:		

(b) (7)(F)



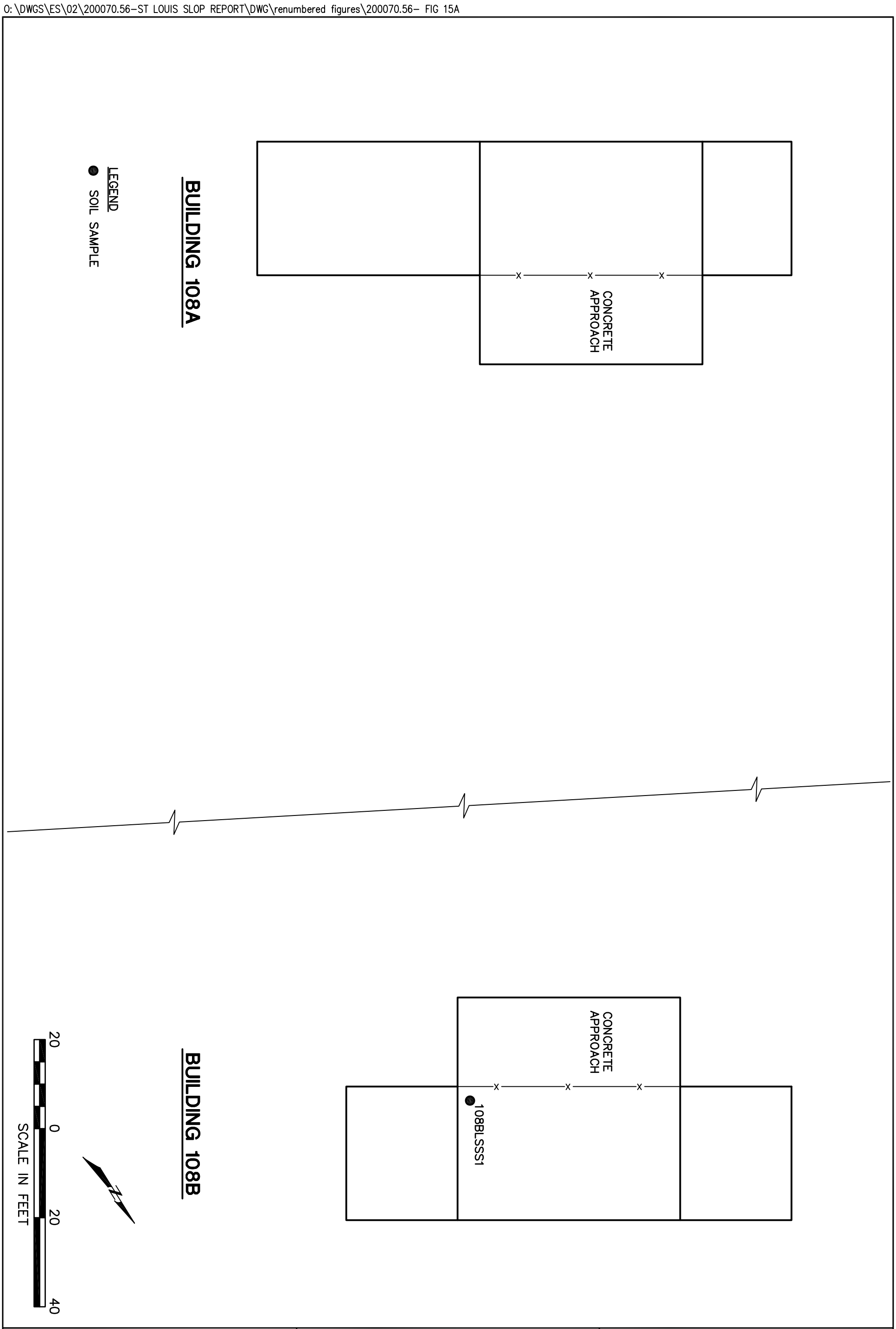
SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	BASEMENT BUILDING 105 FORMER ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 14A SAMPLE LOCATIONS

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\renumbered figures\200070.56-FIG 15



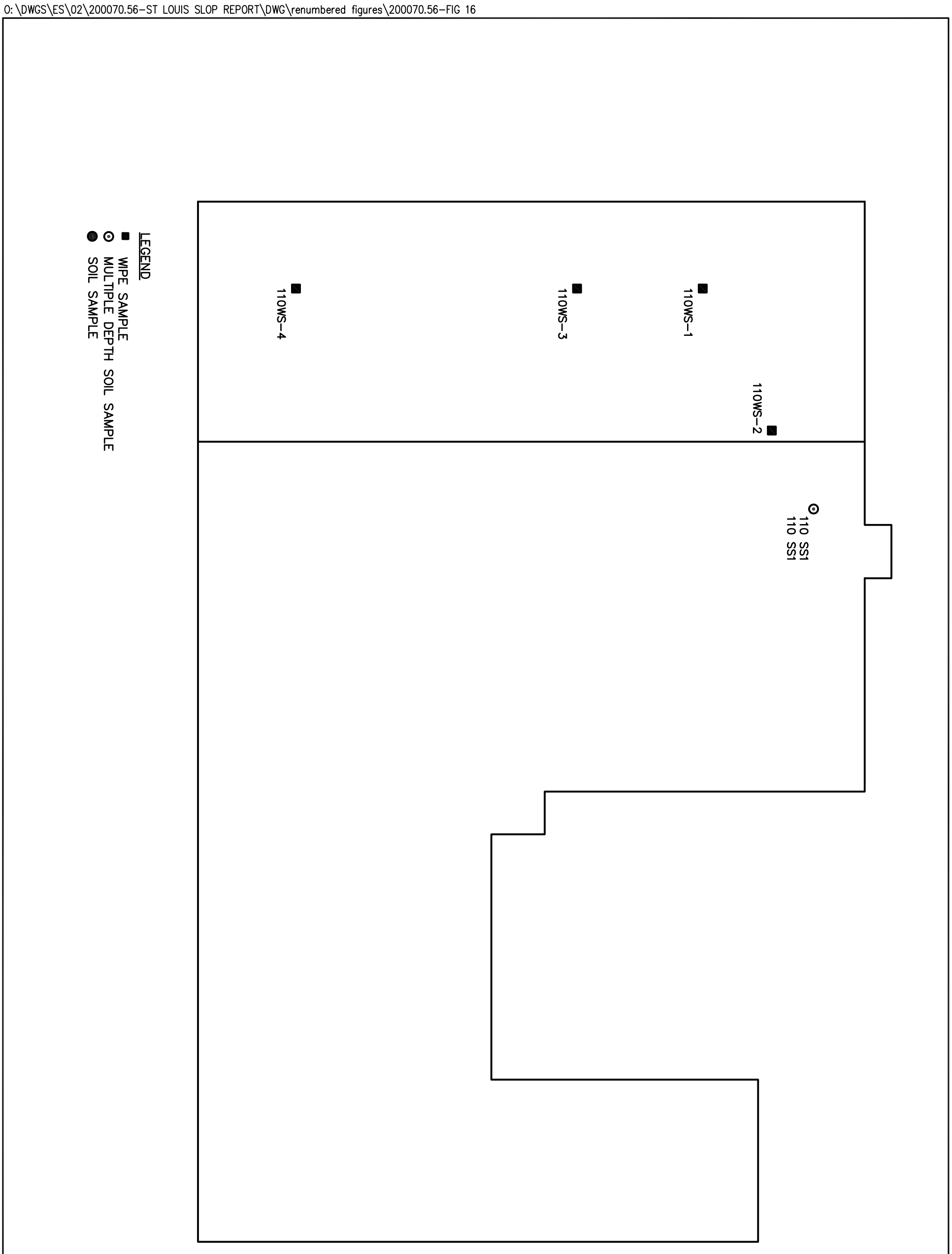
SCS ENGINEERS DSN. BY C. BAUDERS CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	**MAIN FLOOR BUILDINGS 108A AND 108B** **FORMER ST. LOUIS ORDNANCE PLANT** **4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI** **PROJECT NO. 02200070.56 MARCH 2007**	**FIGURE 15** **SAMPLE LOCATIONS**

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\renumbered figures\200070.56- FIG 15A



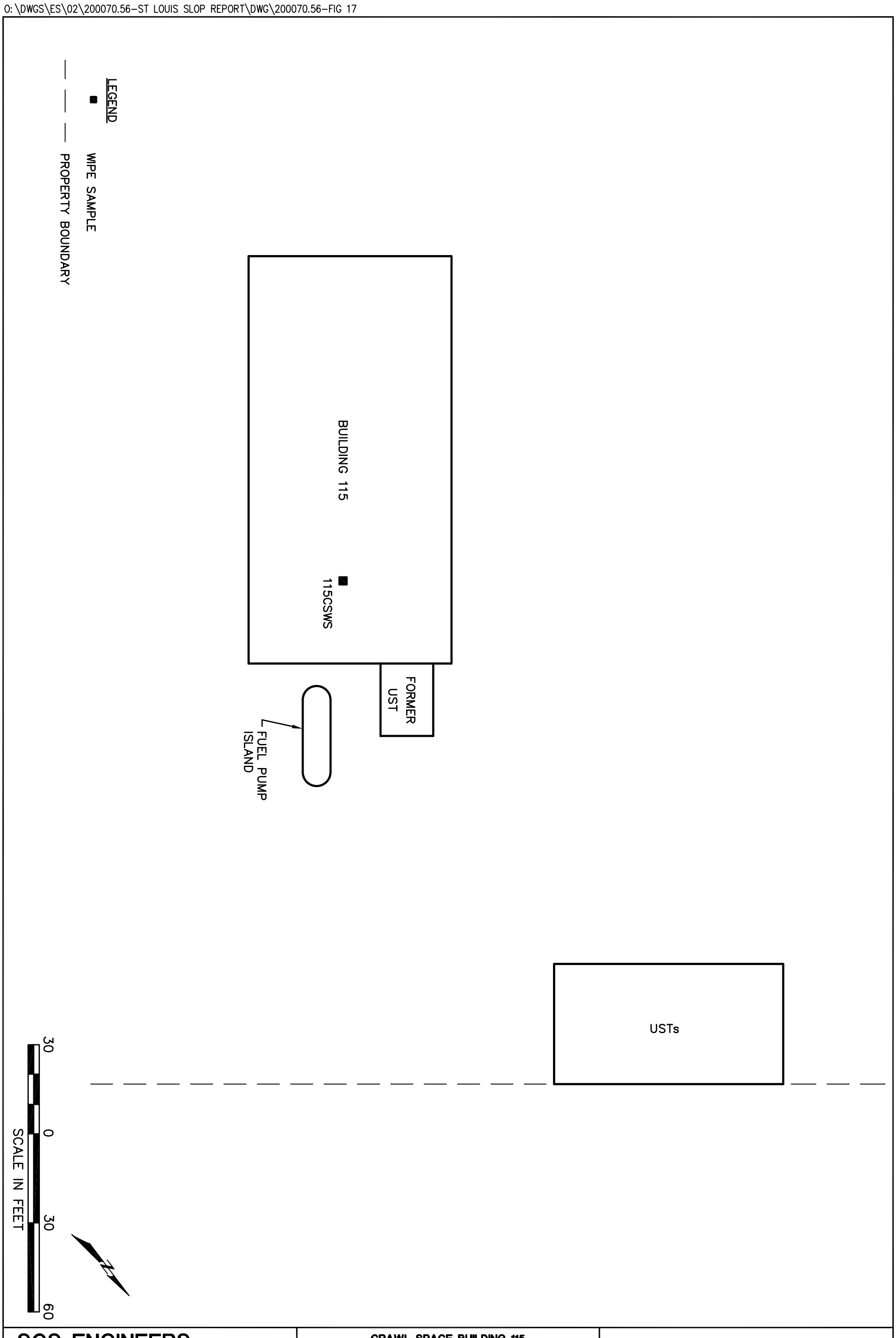
SCS ENGINEERS DSN. BY C. BAUDERS CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	**CRAWL SPACE BUILDINGS 108A AND 108B** **FORMER ST. LOUIS ORDNANCE PLANT** **4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI** **PROJECT NO. 02200070.56 MARCH 2007**	**FIGURE 15A** **SAMPLE LOCATIONS**

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\renumbered figures\200070.56-FIG 16



SCS ENGINEERS DSN. BY J. DOMLING CHK. BY D. BREWER DWN. BY R. PHILLIPS REV:	**BUILDING 110** **ST. LOUIS ORDNANCE PLANT** **4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI** **PROJECT NO. 02200070.56 MARCH 2007**	**FIGURE 16** **SAMPLE LOCATIONS**

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG 17



SCS ENGINEERS DSN. BY J.DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	**CRAWL SPACE BUILDING 115** **FORMER ST. LOUIS ORDNANCE PLANT** **4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI** **PROJECT 02200070.56 MARCH 2007**	**FIGURE 17** **SAMPLE LOCATIONS**

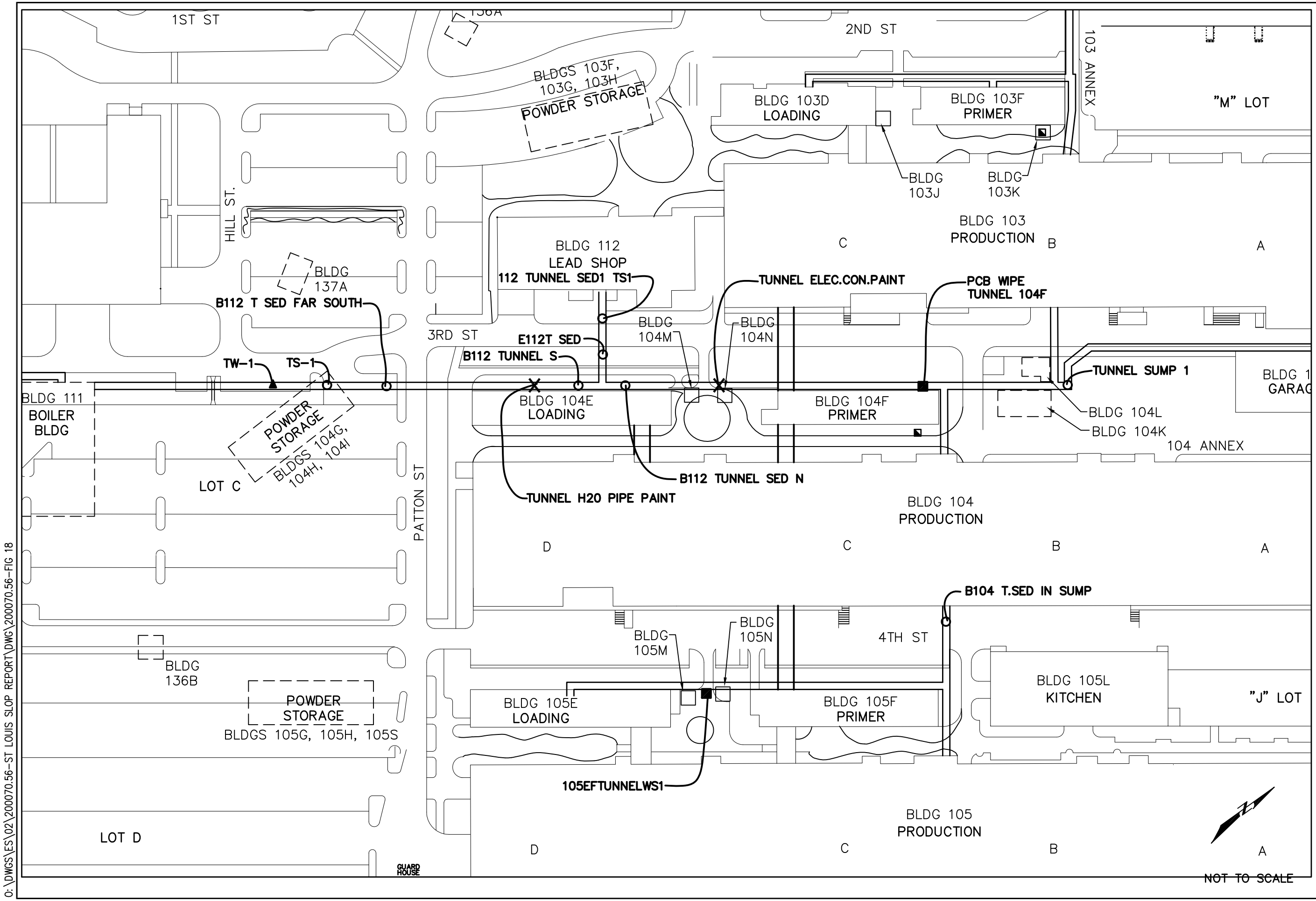
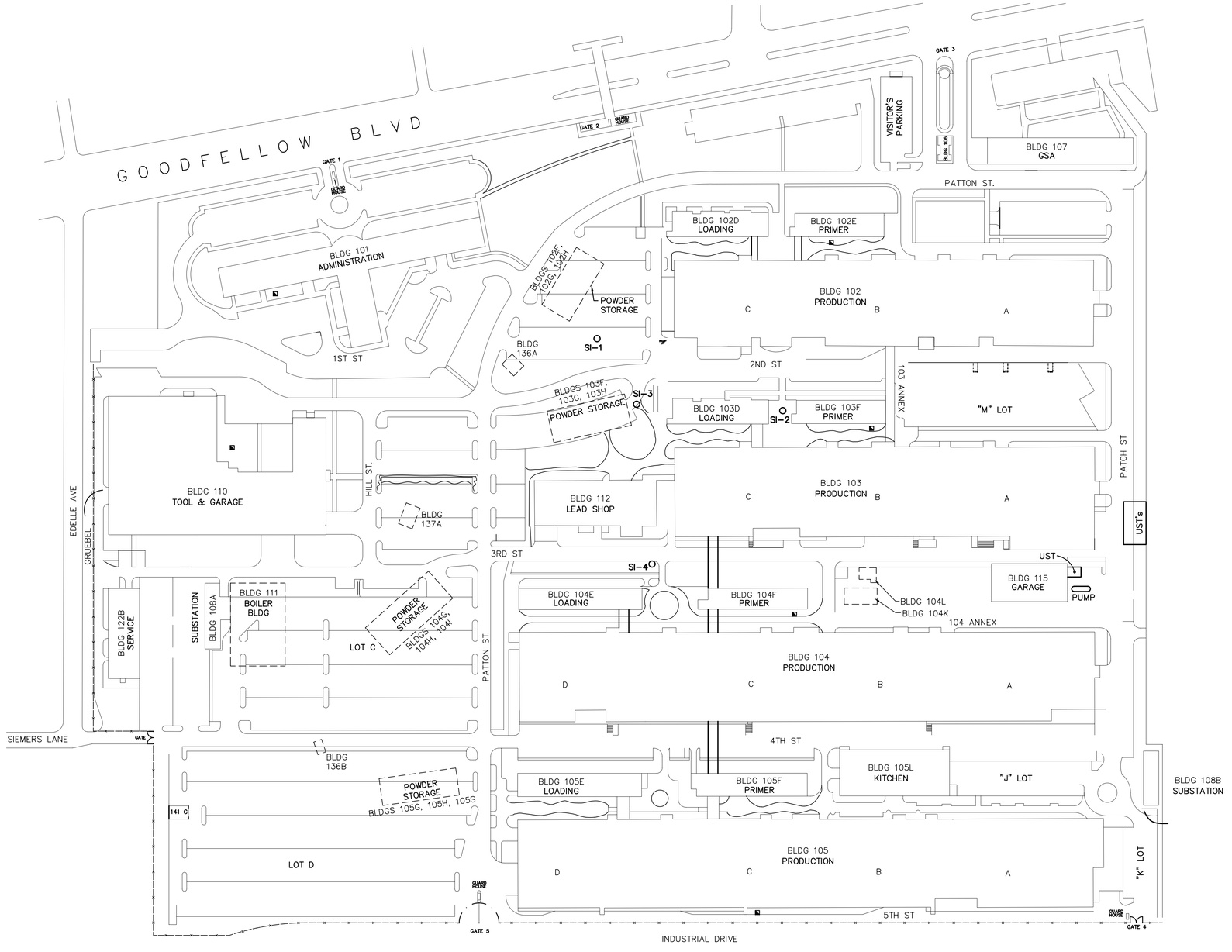


FIGURE 18
SAMPLE LOCATIONS

CRAWL SPACE BUILDING 112
ST. LOUIS ORDNANCE PLANT
4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI
PROJECT NO. 02200070.56 MARCH 2007

SCS ENGINEERS
DSN. BY J. DOMLING CHK. BY D. BREWER
DWN. BY R.PHILLIPS REV:

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG 18



LEGEND

- FENCE
- FIRE HYDRANT — FH
- NO PARKING
- SMOKING SHELTER
- FORMER BUILDING LOCATION
- STORM SEWER INLET SEDIMENT SAMPLE — SI-4

REV.	DATE	DESCRIPTION	CK. BY

SHEET TITLE: STORM SEWER INLET SEDIMENT LOCATION PLAN

PROJECT TITLE: PA/SI REPORT
ST. LOUIS FEDERAL CENTER
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MISSOURI

CLIENT
U.S. GENERAL SERVICES ADMINISTRATION
PROPERTY MANAGEMENT DIVISION
GSA PUBLIC BUILDINGS SERVICE
HEARTLAND REGION
1500 E. BANNISTER ROAD, ROOM 201
KANSAS CITY, MO 64131

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
10975 ELMONTE, SUITE 100, OVERLAND PARK, KANSAS 66211
PH. (913) 451-7550 FAX NO. (913) 451-7558
WWW.SCSENGINEERS.COM

Q/A RVW BY:	
APP. BY:	
DWN. BY:	REP
CHK. BY:	

PROJ. NO. 200070.56
DOC. NO. JDOWLING

CADD FILE: 200070.56-01

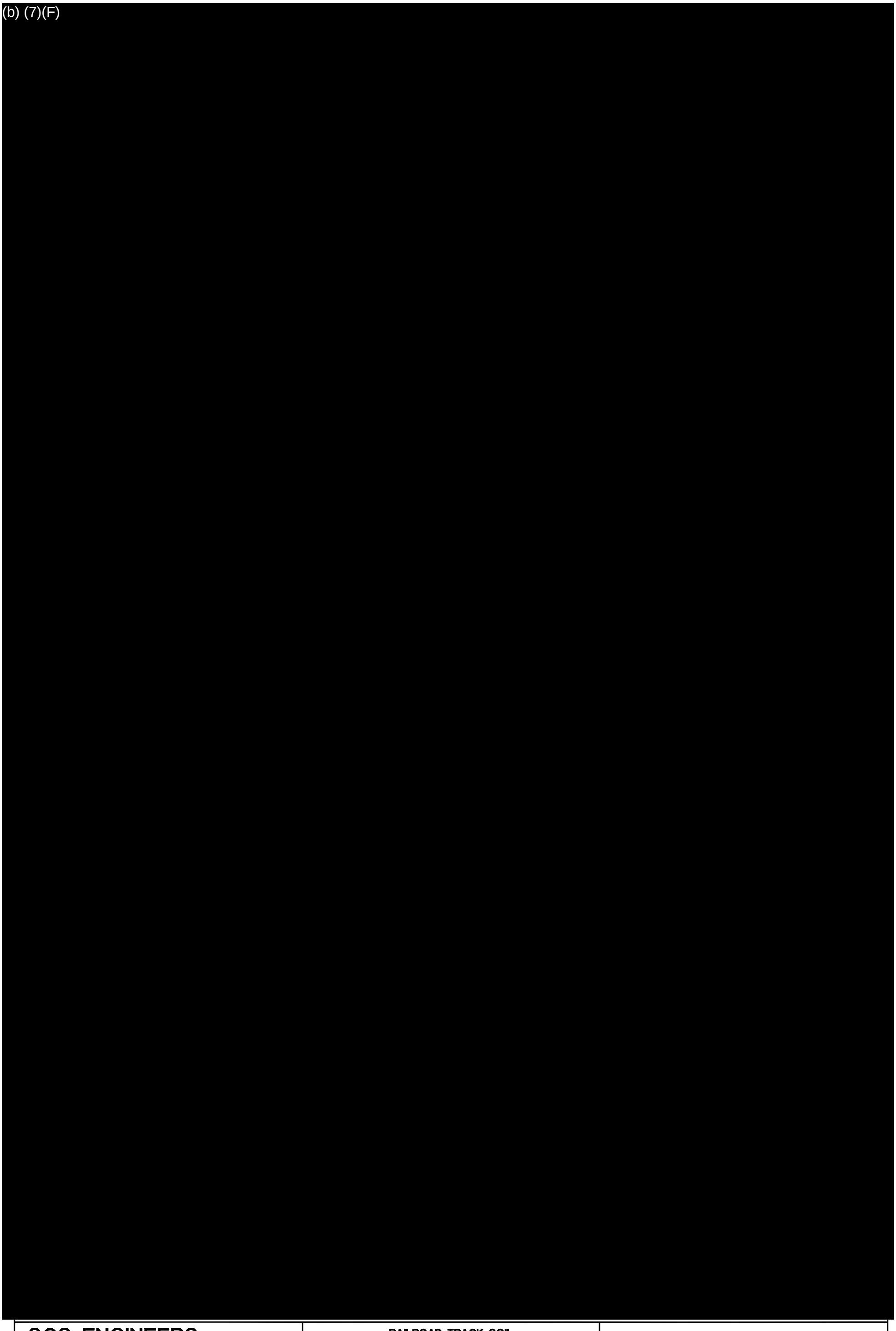
DATE: MARCH 2007

SCALE: 1"=100'

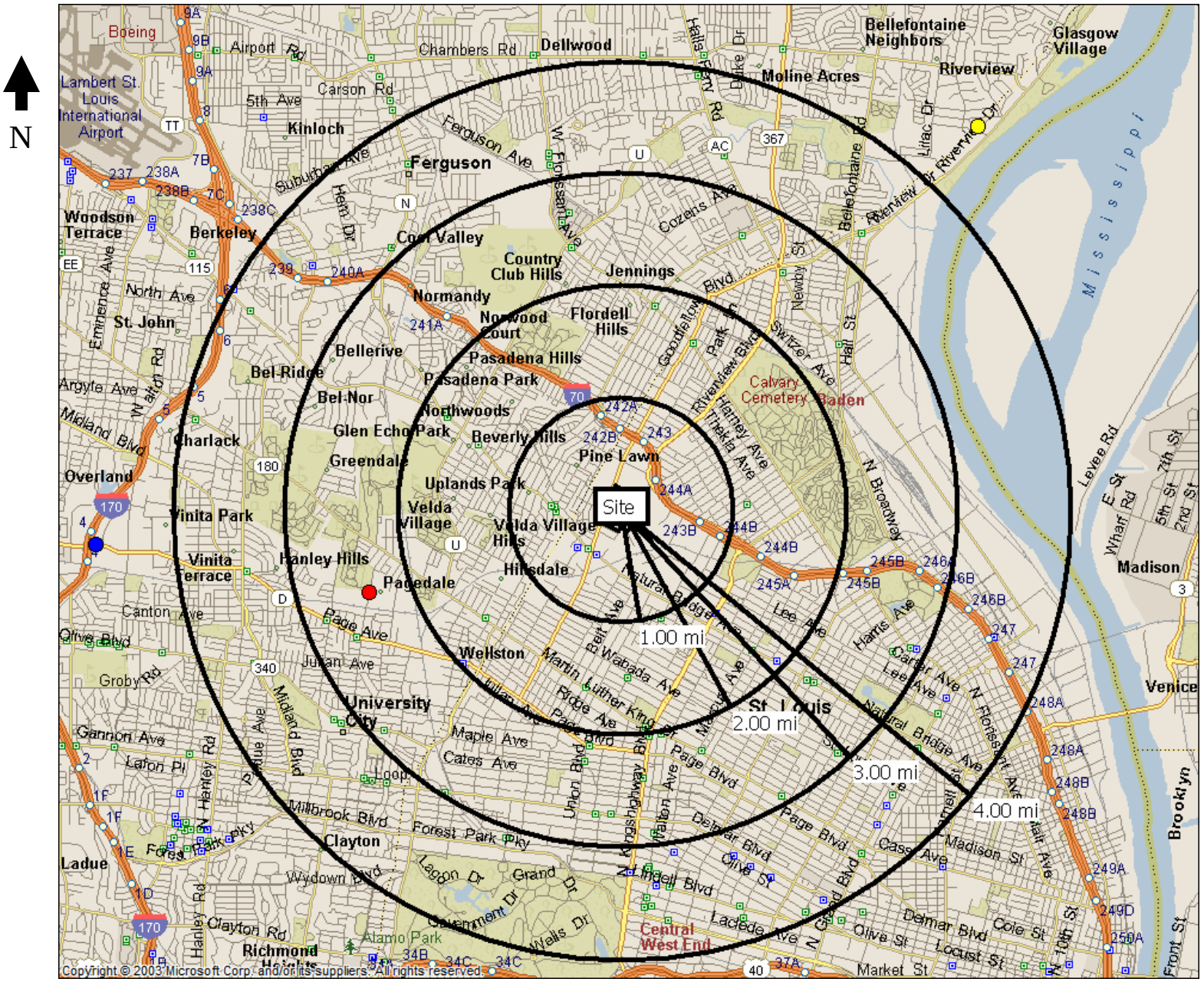
FIGURE 19

O:\DWGS\ES\02\200070.56-ST LOUIS SLOP REPORT\DWG\200070.56-FIG 19

(b) (7)(F)

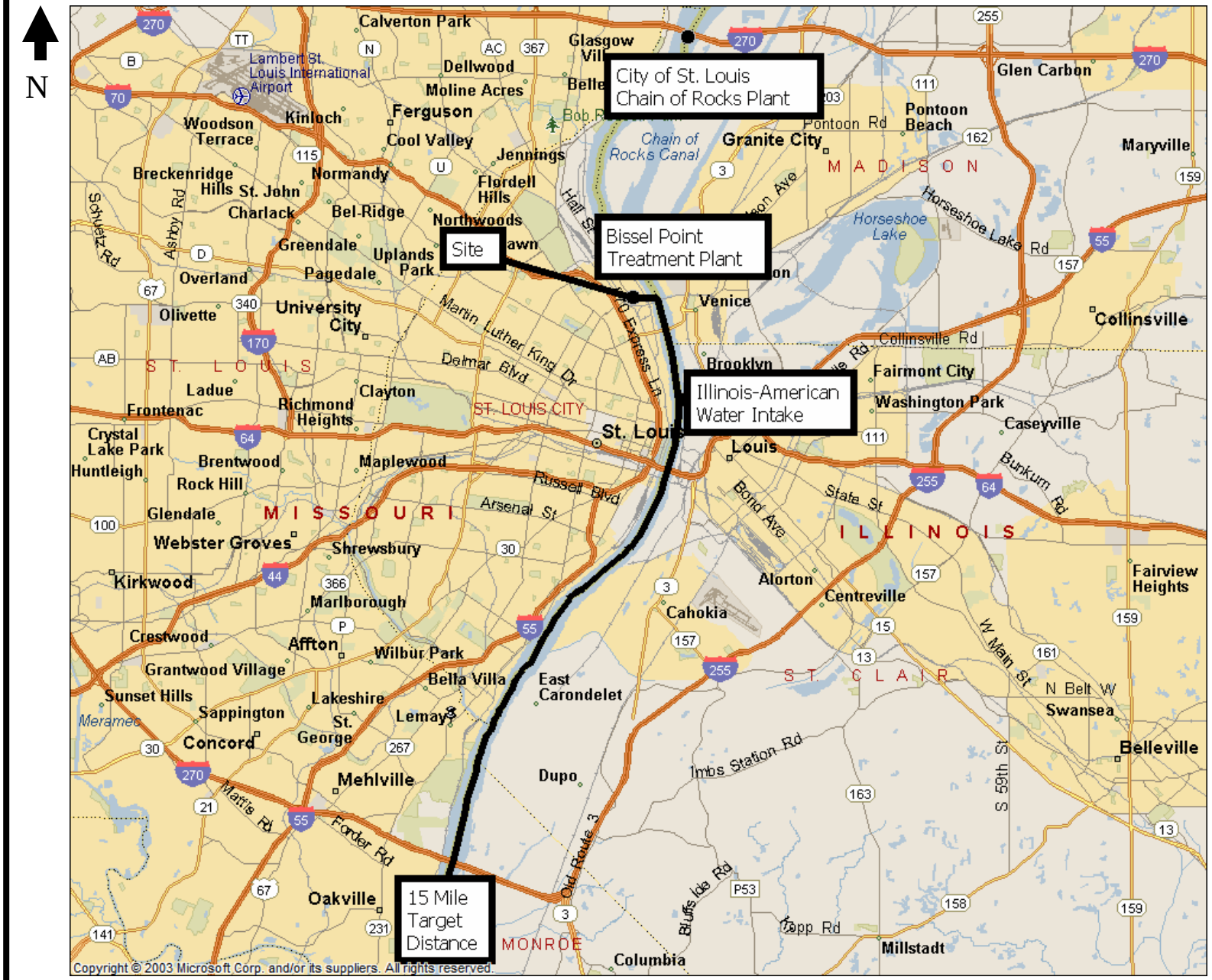


SCS ENGINEERS DSN. BY J.DOMLING CHK. BY D. BREWER DWN. BY R.PHILLIPS REV:	RAILROAD TRACK SOIL ST. LOUIS ORDNANCE PLANT 4300 GOODFELLOW BLVD. ST. LOUIS, MISSOURI PROJECT NO. 02200070.56 MARCH 2007	FIGURE 20 SAMPLE LOCATIONS



SCS ENGINEERS

Figure 21
Location of Wells



SCS ENGINEERS

Figure 22
Surface Water: 15-Mile Target Distance Limit

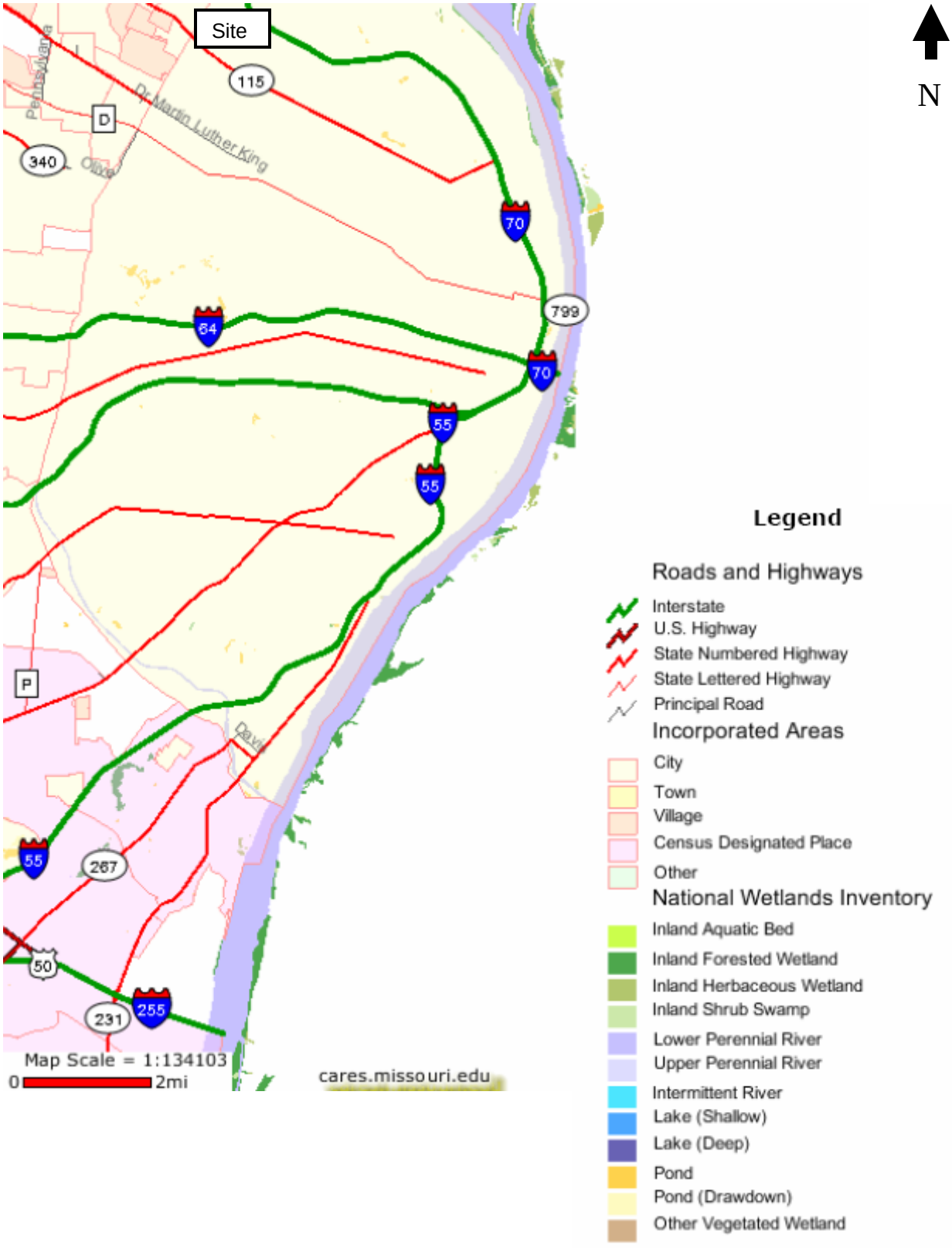
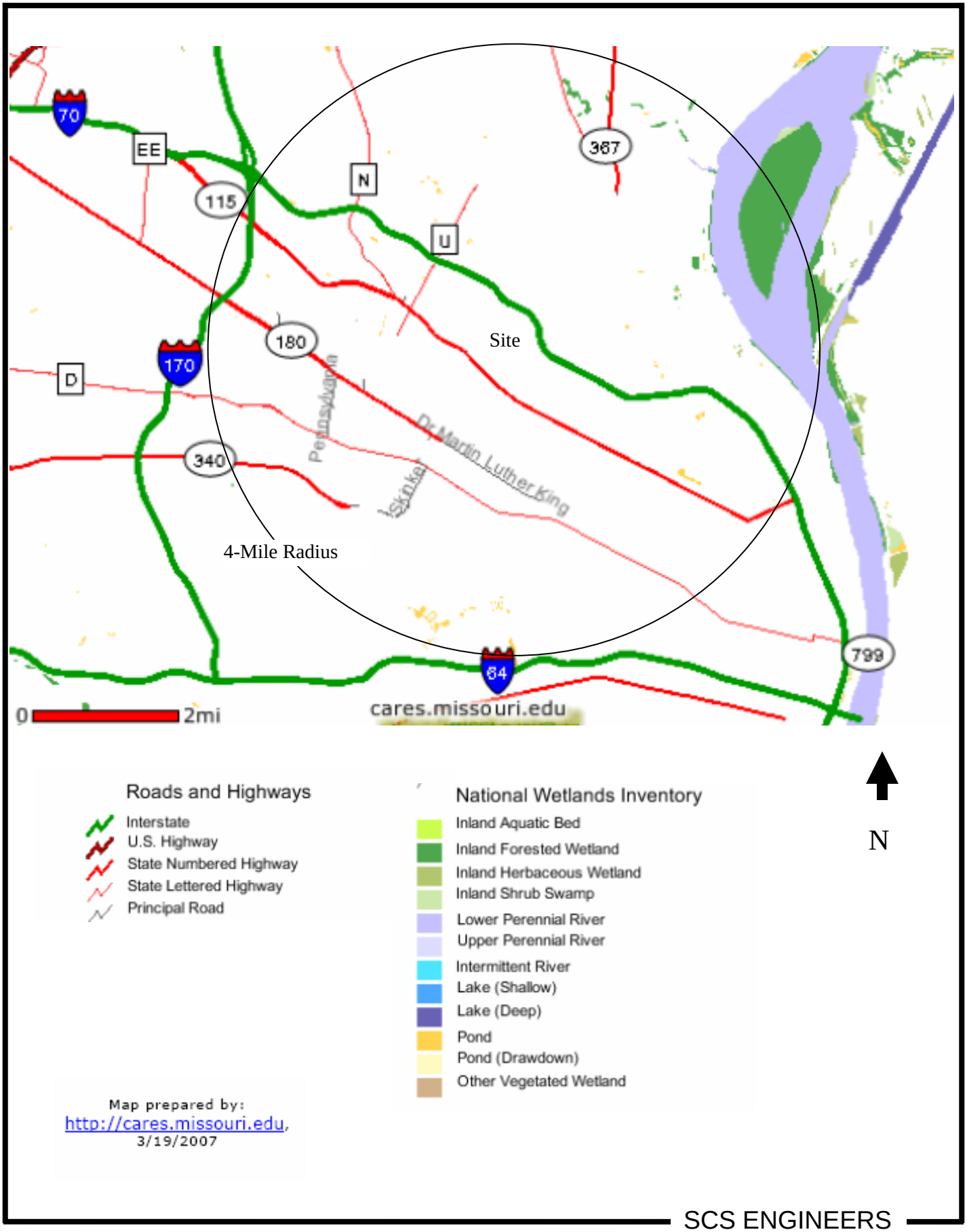


Figure 23
Wetlands Located Within 15-Mile Target Distance



SCS ENGINEERS

Figure 24
Wetlands Located Within 4-Mile Radius

APPENDICES

APPENDIX A

TABLE 1: ANALYTICAL RESULTS OF BACKGROUND SOIL SAMPLE ANALYSIS

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BACKGROUND SOIL SAMPLES
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 1 - RESULTS OF BACKGROUND SHALLOW SOIL SAMPLE ANALYSIS

SAMPLE NUMBER:		SS1 ST. VINCENT PARK		SS1 ARMY RESERVES		SS1 SCHNUCKS PLAZA		SS1 CLARA STREET		BACKGROUND RESULT STATISTICS			*BACKGROUND 3X RESULT STATISTICS*			NON-RESIDENTIAL RISK-BASED TARGET	CONSTRUCTION WORKER TARGET
SAMPLE DATE:		12/4/2004		12/4/2004		12/4/2004		12/4/2004									
LAB ID NUMBER:		222879-1		222879-2		222879-3		222879-4									
		RESULT	*3X RESULT*	RESULT	*3X RESULT*	RESULT	*3X RESULT*	RESULT	*3X RESULT*	MIN	MEAN	*MAX*	*MIN*	*MEAN*	*MAX*	LEVELS*	LEVELS**
PARAMETER	**UNITS**																
MERCURY (7471A)																	
Mercury	mg/Kg	0.031	*0.093*	0.047	*0.14*	0.042	*0.126*	0.084	*0.25*	0.031	0.051	0.084	*0.093*	*0.15*	*0.25*	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	5700	*17000*	10000	*30000*	11000	*33000*	9100	*27000*	5700	8900	11000	*17000*	*27000*	*33000*	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	5.3	***16***	7.2	***22***	9.2	***28***	7.3	***22***	5.3	7.2	9.2	***16***	***22***	***28***	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	130	*390*	130	*390*	130	*390*	230	*690*	130	150	230	*390*	*460*	*690*	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.12	*0.36*	0.27	*0.81*	0.26	*0.78*	0.26	*0.78*	0.12	0.23	0.27	*0.36*	*0.68*	*0.81*	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.32	*0.96*	0.47	*1.4*	0.17	*0.51*	0.62	*1.9*	0.17	0.39	0.62	*0.51*	*1.2*	*1.9*	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	1900	*5700*	4700	*14000*	20000	*60000*	4100	*12000*	1900	7700	20000	*5700*	*23000*	*60000*	NT	NT
Chromium	mg/Kg	9.8	*29*	17	*51*	16	*48*	14	*42*	9.8	14	17	*29*	*42*	*51*	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	6.5	*19*	8.1	*24*	5.0	*15*	11	*33*	5.0	7.6	11.0	*15*	*23*	*33*	NT	NT
Copper	mg/Kg	12	*36*	19	*57*	16	*48*	26	*78*	12	18	26	*36*	*55*	*78*	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	10000	*30000*	18000	*54000*	19000	*57000*	17000	*51000*	10000	16000	19000	*30000*	*48000*	*57000*	NT	NT
Lead	mg/Kg	30	*90*	64	*190*	18	*54*	88	*260*	18	50	88	*54*	*150*	*260*	660 mg/Kg	NT
Magnesium	mg/Kg	1200	*3600*	2700	*8100*	3600	*11000*	2000	*6000*	1200	2400	3600	*3600*	*7200*	*11000*	NT	NT
Manganese	mg/Kg	730	*2200*	600	*1800*	410	*1200*	1900	*5700*	410	910	1900	*1200*	*2700*	*5700*	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	10	*30*	18	*54*	17	*51*	19	*57*	10	16	19	*30*	*48*	*57*	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1200	*3600*	1500	*4500*	1500	*4500*	1500	*4500*	1200	1400	1500	*3600*	*4300*	*4500*	NT	NT
Seleniun	mg/Kg	0.64	*1.9*	0.89	*2.7*	0.74	*2.2*	0.92	*2.8*	0.64	0.80	0.92	*1.9*	*2.4*	*2.8*	4,780 mg/Kg	12,800 mg/Kg
Thallium	mg/Kg	1.3	*3.9*	1.0	*3.0*	0.96	*2.9*	3.0	*9.0*	0.96	1.6	3.0	*2.9*	*4.7*	*9.0*	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	18	*54*	28	*84*	28	*84*	25	*75*	18	25	28	*54*	*74*	*84*	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	53	*160*	80	*240*	48	*140*	140	*420*	48	80	140	*140*	*240*	*420*	288,000 mg/Kg	775,000 mg/Kg

mg/Kg = milligrams per kilogram
NT = No Target Concentration

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

APPENDIX B

TABLE 2: POPULATION WITHIN A 4-MILE RADIUS OF THE ST. LOUIS FEDERAL CENTER

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
400200	Block Group 5	Madison County	Illinois						55
400901	Block Group 1	Madison County	Illinois					1	17
210300	Block Group 4	St. Louis County	Missouri						320
210400	Block Group 1	St. Louis County	Missouri					170	1035
210400	Block Group 2	St. Louis County	Missouri					710	1
210400	Block Group 3	St. Louis County	Missouri					623	57
210400	Block Group 4	St. Louis County	Missouri					380	331
210400	Block Group 5	St. Louis County	Missouri						989
210500	Block Group 2	St. Louis County	Missouri						18
210500	Block Group 3	St. Louis County	Missouri						2
210500	Block Group 4	St. Louis County	Missouri						985
210500	Block Group 5	St. Louis County	Missouri						701
210500	Block Group 6	St. Louis County	Missouri						63
210600	Block Group 3	St. Louis County	Missouri						110
210600	Block Group 4	St. Louis County	Missouri						84
210600	Block Group 5	St. Louis County	Missouri						1067
211700	Block Group 2	St. Louis County	Missouri						29

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
211800	Block Group 2	St. Louis County	Missouri						550
211800	Block Group 3	St. Louis County	Missouri						358
211900	Block Group 1	St. Louis County	Missouri						757
211900	Block Group 2	St. Louis County	Missouri						1495
211900	Block Group 3	St. Louis County	Missouri						989
211900	Block Group 4	St. Louis County	Missouri						1477
211900	Block Group 5	St. Louis County	Missouri						1163
212000	Block Group 1	St. Louis County	Missouri					1081	855
212000	Block Group 2	St. Louis County	Missouri					1254	2
212000	Block Group 3	St. Louis County	Missouri					1357	
212000	Block Group 4	St. Louis County	Missouri				809	364	
212000	Block Group 5	St. Louis County	Missouri				327	630	
212000	Block Group 6	St. Louis County	Missouri				5	2027	
212000	Block Group 7	St. Louis County	Missouri				259	720	
212000	Block Group 8	St. Louis County	Missouri					1941	469
212100	Block Group 1	St. Louis County	Missouri			154	647		

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
212100	Block Group 2	St. Louis County	Missouri			749			
212100	Block Group 3	St. Louis County	Missouri			108	858		
212100	Block Group 4	St. Louis County	Missouri				858		
212100	Block Group 5	St. Louis County	Missouri			277	1242		
212100	Block Group 6	St. Louis County	Missouri			119	2233		
212100	Block Group 7	St. Louis County	Missouri				631		
212100	Block Group 8	St. Louis County	Missouri				457	368	
212200	Block Group 1	St. Louis County	Missouri				1366		
212200	Block Group 2	St. Louis County	Missouri			1231	61		
212200	Block Group 3	St. Louis County	Missouri			859	463		
212200	Block Group 4	St. Louis County	Missouri			935			
212200	Block Group 5	St. Louis County	Missouri		275	588			
212200	Block Group 6	St. Louis County	Missouri		385	301			
212200	Block Group 7	St. Louis County	Missouri	390	816	190			
212300	Block Group 1	St. Louis County	Missouri				1036	522	
212300	Block Group 2	St. Louis County	Missouri				1548	332	

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
212300	Block Group 3	St. Louis County	Missouri				1009	305	
212300	Block Group 4	St. Louis County	Missouri				155	676	
212400	Block Group 1	St. Louis County	Missouri					1455	
212400	Block Group 2	St. Louis County	Missouri				52	868	239
212500	Block Group 1	St. Louis County	Missouri						787
212500	Block Group 2	St. Louis County	Missouri						1105
212500	Block Group 3	St. Louis County	Missouri						1433
212500	Block Group 4	St. Louis County	Missouri					245	1103
212700	Block Group 1	St. Louis County	Missouri						392
212700	Block Group 2	St. Louis County	Missouri						669
212700	Block Group 3	St. Louis County	Missouri					736	1159
212700	Block Group 4	St. Louis County	Missouri					72	1283
212700	Block Group 5	St. Louis County	Missouri					4	533
212700	Block Group 6	St. Louis County	Missouri						298
213400	Block Group 7	St. Louis County	Missouri						14
213500	Block Group 3	St. Louis County	Missouri						11

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
213500	Block Group 4	St. Louis County	Missouri						200
213500	Block Group 5	St. Louis County	Missouri						642
213500	Block Group 6	St. Louis County	Missouri						17
213600	Block Group 1	St. Louis County	Missouri						1029
213600	Block Group 2	St. Louis County	Missouri					18	1023
213600	Block Group 3	St. Louis County	Missouri					18	905
213600	Block Group 4	St. Louis County	Missouri						917
213600	Block Group 5	St. Louis County	Missouri					7	707
213700	Block Group 1	St. Louis County	Missouri					674	
213700	Block Group 2	St. Louis County	Missouri					659	86
213700	Block Group 3	St. Louis County	Missouri					1087	150
213700	Block Group 4	St. Louis County	Missouri					690	
213700	Block Group 5	St. Louis County	Missouri				699	1368	
213700	Block Group 6	St. Louis County	Missouri				668	19	
213800	Block Group 1	St. Louis County	Missouri				846		
213800	Block Group 2	St. Louis County	Missouri			1192	247		

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
213800	Block Group 3	St. Louis County	Missouri		378	467			
213800	Block Group 4	St. Louis County	Missouri			220	426		
213800	Block Group 5	St. Louis County	Missouri			748	558		
213800	Block Group 6	St. Louis County	Missouri				1271		
213900	Block Group 1	St. Louis County	Missouri			185	357		
213900	Block Group 2	St. Louis County	Missouri				358		
213900	Block Group 3	St. Louis County	Missouri				720		
213900	Block Group 4	St. Louis County	Missouri				215	378	
214100	Block Group 1	St. Louis County	Missouri				459	368	
214100	Block Group 2	St. Louis County	Missouri					715	
214200	Block Group 1	St. Louis County	Missouri					234	462
214200	Block Group 2	St. Louis County	Missouri					1194	155
214200	Block Group 3	St. Louis County	Missouri				21	518	
214200	Block Group 4	St. Louis County	Missouri					789	40
214300	Block Group 1	St. Louis County	Missouri						562
214300	Block Group 2	St. Louis County	Missouri						1044

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
214300	Block Group 3	St. Louis County	Missouri						924
214300	Block Group 4	St. Louis County	Missouri						1058
214400	Block Group 4	St. Louis County	Missouri						372
215700	Block Group 2	St. Louis County	Missouri						717
215700	Block Group 3	St. Louis County	Missouri						789
215700	Block Group 6	St. Louis County	Missouri						292
215800	Block Group 4	St. Louis County	Missouri						15
215800	Block Group 5	St. Louis County	Missouri						739
215900	Block Group 1	St. Louis County	Missouri					11	544
215900	Block Group 2	St. Louis County	Missouri					52	768
215900	Block Group 3	St. Louis County	Missouri					1310	428
215900	Block Group 4	St. Louis County	Missouri					1164	
215900	Block Group 5	St. Louis County	Missouri					326	599
215900	Block Group 6	St. Louis County	Missouri						778
215900	Block Group 7	St. Louis County	Missouri						960
215900	Block Group 8	St. Louis County	Missouri						840

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
216000	Block Group 1	St. Louis County	Missouri					872	
216000	Block Group 2	St. Louis County	Missouri					984	
216100	Block Group 1	St. Louis County	Missouri					1	948
216100	Block Group 2	St. Louis County	Missouri					1607	982
216100	Block Group 3	St. Louis County	Missouri					1140	
216100	Block Group 4	St. Louis County	Missouri					427	1037
216200	Block Group 1	St. Louis County	Missouri						1476
216200	Block Group 2	St. Louis County	Missouri						762
216200	Block Group 3	St. Louis County	Missouri						778
216200	Block Group 4	St. Louis County	Missouri						345
216200	Block Group 5	St. Louis County	Missouri						893
216200	Block Group 6	St. Louis County	Missouri						918
216200	Block Group 7	St. Louis County	Missouri						1328
216200	Block Group 8	St. Louis County	Missouri						203
216300	Block Group 1	St. Louis County	Missouri						3545
216300	Block Group 2	St. Louis County	Missouri						702

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
216300	Block Group 3	St. Louis County	Missouri						142
216400	Block Group 3	St. Louis County	Missouri						42
221800	Block Group 3	St. Louis County	Missouri						17
105198	Block Group 1	St. Louis city	Missouri					656	3
105198	Block Group 2	St. Louis city	Missouri					184	510
105198	Block Group 3	St. Louis city	Missouri					407	546
105198	Block Group 4	St. Louis city	Missouri					9	786
105198	Block Group 5	St. Louis city	Missouri						6
105200	Block Group 1	St. Louis city	Missouri					1350	
105200	Block Group 2	St. Louis city	Missouri					583	485
105200	Block Group 3	St. Louis city	Missouri					422	
105300	Block Group 1	St. Louis city	Missouri					685	
105300	Block Group 2	St. Louis city	Missouri					847	
105300	Block Group 3	St. Louis city	Missouri					834	
105400	Block Group 1	St. Louis city	Missouri				1110	33	
105400	Block Group 2	St. Louis city	Missouri				314	243	
105400	Block Group 3	St. Louis city	Missouri				12	557	
105500	Block Group 1	St. Louis city	Missouri				422	378	
105500	Block Group 2	St. Louis city	Missouri				67	524	
105500	Block Group 3	St. Louis city	Missouri				75	384	
105500	Block Group 4	St. Louis city	Missouri				829	6	
105500	Block Group 5	St. Louis city	Missouri				389		
106100	Block Group 1	St. Louis city	Missouri				623		
106100	Block Group 2	St. Louis city	Missouri				747		
106100	Block Group 3	St. Louis city	Missouri				606		
106100	Block Group 4	St. Louis city	Missouri				921		
106200	Block Group 1	St. Louis city	Missouri	12	340	541			
106200	Block Group 2	St. Louis city	Missouri			526	179		
106200	Block Group 3	St. Louis city	Missouri				929		

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
106300	Block Group 1	St. Louis city	Missouri	21	802	160			
106300	Block Group 2	St. Louis city	Missouri			724			
106300	Block Group 3	St. Louis city	Missouri			584	49		
106300	Block Group 4	St. Louis city	Missouri			234	413		
106400	Block Group 1	St. Louis city	Missouri			568	48		
106400	Block Group 2	St. Louis city	Missouri			295	311		
106400	Block Group 3	St. Louis city	Missouri			579	553		
106400	Block Group 4	St. Louis city	Missouri		62	672			
106500	Block Group 1	St. Louis city	Missouri			46	1450		
106500	Block Group 2	St. Louis city	Missouri				899		
106500	Block Group 3	St. Louis city	Missouri				593		
106500	Block Group 4	St. Louis city	Missouri				489		
106600	Block Group 1	St. Louis city	Missouri				843	57	
106600	Block Group 2	St. Louis city	Missouri				730		
106600	Block Group 3	St. Louis city	Missouri				402		
106600	Block Group 4	St. Louis city	Missouri				534		
106700	Block Group 1	St. Louis city	Missouri				696		
106700	Block Group 2	St. Louis city	Missouri				1289		
106700	Block Group 3	St. Louis city	Missouri				1159		
106700	Block Group 4	St. Louis city	Missouri				577		
106700	Block Group 5	St. Louis city	Missouri				601		
107100	Block Group 1	St. Louis city	Missouri	1171	186				
107100	Block Group 2	St. Louis city	Missouri		2	2			
107100	Block Group 3	St. Louis city	Missouri						
107200	Block Group 1	St. Louis city	Missouri			376	257		
107200	Block Group 2	St. Louis city	Missouri		46	512			
107200	Block Group 3	St. Louis city	Missouri	115	414				
107300	Block Group 1	St. Louis city	Missouri				1235		
107300	Block Group 2	St. Louis city	Missouri				1049		
107300	Block Group 3	St. Louis city	Missouri			798	210		
107300	Block Group 4	St. Louis city	Missouri		294	380			
107300	Block Group 5	St. Louis city	Missouri		32	654			

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
107300	Block Group 6	St. Louis city	Missouri			442	288		
107300	Block Group 7	St. Louis city	Missouri				704		
107400	Block Group 1	St. Louis city	Missouri			456	110		
107400	Block Group 2	St. Louis city	Missouri			438	110		
107400	Block Group 3	St. Louis city	Missouri			420	160		
107400	Block Group 4	St. Louis city	Missouri	38	406	312			
107400	Block Group 5	St. Louis city	Missouri	149	277	172			
107400	Block Group 6	St. Louis city	Missouri	176	249	152			
107500	Block Group 1	St. Louis city	Missouri			17	825		
107500	Block Group 2	St. Louis city	Missouri			482	393		
107500	Block Group 3	St. Louis city	Missouri			1231	37		
107500	Block Group 4	St. Louis city	Missouri		112	527			
107600	Block Group 1	St. Louis city	Missouri				716		
107600	Block Group 2	St. Louis city	Missouri			124	537		
107600	Block Group 3	St. Louis city	Missouri			85	720		
107700	Block Group 1	St. Louis city	Missouri				733		
107700	Block Group 2	St. Louis city	Missouri				620		
107700	Block Group 3	St. Louis city	Missouri				771		
107700	Block Group 4	St. Louis city	Missouri				578		
107700	Block Group 5	St. Louis city	Missouri				1162		
107700	Block Group 6	St. Louis city	Missouri			147	354		
108100	Block Group 1	St. Louis city	Missouri				1338		
108100	Block Group 2	St. Louis city	Missouri				1691	50	
108100	Block Group 3	St. Louis city	Missouri				127	594	
108200	Block Group 1	St. Louis city	Missouri				21	1566	
108200	Block Group 2	St. Louis city	Missouri				214	670	
108200	Block Group 3	St. Louis city	Missouri				343	182	
108300	Block Group 1	St. Louis city	Missouri					602	
108300	Block Group 2	St. Louis city	Missouri					1234	
108300	Block Group 3	St. Louis city	Missouri					814	
108400	Block Group 1	St. Louis city	Missouri					86	235
108500	Block Group 1	St. Louis city	Missouri				100	543	

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
108500	Block Group 2	St. Louis city	Missouri				254	731	49
109600	Block Group 1	St. Louis city	Missouri				10	768	234
109600	Block Group 2	St. Louis city	Missouri					705	
109600	Block Group 3	St. Louis city	Missouri				34	929	
109600	Block Group 4	St. Louis city	Missouri				594	198	
109600	Block Group 5	St. Louis city	Missouri				659	8	
109700	Block Group 1	St. Louis city	Missouri					81	499
109700	Block Group 2	St. Louis city	Missouri						
109700	Block Group 3	St. Louis city	Missouri						563
109700	Block Group 4	St. Louis city	Missouri						340
109700	Block Group 5	St. Louis city	Missouri						596
109700	Block Group 6	St. Louis city	Missouri					173	397
109700	Block Group 7	St. Louis city	Missouri					478	50
109700	Block Group 8	St. Louis city	Missouri					839	
110100	Block Group 1	St. Louis city	Missouri				572		
110100	Block Group 2	St. Louis city	Missouri				616		
110100	Block Group 3	St. Louis city	Missouri				345		
110100	Block Group 4	St. Louis city	Missouri				1248		
110100	Block Group 5	St. Louis city	Missouri				945	11	
110200	Block Group 1	St. Louis city	Missouri					403	
110200	Block Group 2	St. Louis city	Missouri					735	
110200	Block Group 3	St. Louis city	Missouri					755	
110200	Block Group 4	St. Louis city	Missouri				519	96	
110200	Block Group 5	St. Louis city	Missouri				549	349	
110300	Block Group 1	St. Louis city	Missouri					506	
110300	Block Group 2	St. Louis city	Missouri					506	
110300	Block Group 3	St. Louis city	Missouri					657	
110300	Block Group 4	St. Louis city	Missouri					734	
110300	Block Group 5	St. Louis city	Missouri				32	269	
110300	Block Group 6	St. Louis city	Missouri				113	313	
110400	Block Group 1	St. Louis city	Missouri						942
110400	Block Group 2	St. Louis city	Missouri					211	301

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
110400	Block Group 3	St. Louis city	Missouri					971	
110400	Block Group 4	St. Louis city	Missouri					711	
110500	Block Group 1	St. Louis city	Missouri					15	422
110500	Block Group 2	St. Louis city	Missouri					489	204
110500	Block Group 3	St. Louis city	Missouri					556	
110500	Block Group 4	St. Louis city	Missouri					342	63
111100	Block Group 1	St. Louis city	Missouri						503
111100	Block Group 2	St. Louis city	Missouri					39	278
111100	Block Group 3	St. Louis city	Missouri					719	68
111100	Block Group 4	St. Louis city	Missouri					350	
111200	Block Group 1	St. Louis city	Missouri				331		
111200	Block Group 2	St. Louis city	Missouri				314	156	
111200	Block Group 3	St. Louis city	Missouri				151	484	
111200	Block Group 4	St. Louis city	Missouri					482	
111300	Block Group 1	St. Louis city	Missouri				67	490	
111300	Block Group 2	St. Louis city	Missouri					398	
111300	Block Group 3	St. Louis city	Missouri					703	
111300	Block Group 4	St. Louis city	Missouri				7	577	
111400	Block Group 1	St. Louis city	Missouri					435	16
111400	Block Group 2	St. Louis city	Missouri					142	92
111400	Block Group 3	St. Louis city	Missouri					397	124
111400	Block Group 4	St. Louis city	Missouri					815	
111500	Block Group 1	St. Louis city	Missouri					1	692
111500	Block Group 2	St. Louis city	Missouri						731
112100	Block Group 1	St. Louis city	Missouri					1602	7
112100	Block Group 2	St. Louis city	Missouri						
112100	Block Group 3	St. Louis city	Missouri					2636	115
112200	Block Group 1	St. Louis city	Missouri				233	448	
112200	Block Group 2	St. Louis city	Missouri					868	
112200	Block Group 3	St. Louis city	Missouri					654	
112300	Block Group 1	St. Louis city	Missouri					822	
112300	Block Group 2	St. Louis city	Missouri					511	

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons					
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile
112300	Block Group 3	St. Louis city	Missouri					688	
112300	Block Group 4	St. Louis city	Missouri				119	601	
112400	Block Group 1	St. Louis city	Missouri					1041	
112400	Block Group 2	St. Louis city	Missouri					856	310
112400	Block Group 3	St. Louis city	Missouri					158	1059
112400	Block Group 4	St. Louis city	Missouri						271
118600	Block Group 1	St. Louis city	Missouri						129
118600	Block Group 2	St. Louis city	Missouri						96
118600	Block Group 3	St. Louis city	Missouri						498
118600	Block Group 4	St. Louis city	Missouri						343
119100	Block Group 1	St. Louis city	Missouri						782
119100	Block Group 2	St. Louis city	Missouri						1099
119100	Block Group 3	St. Louis city	Missouri						1291
119100	Block Group 4	St. Louis city	Missouri						2247
119100	Block Group 5	St. Louis city	Missouri					207	853
119200	Block Group 1	St. Louis city	Missouri					181	808
119200	Block Group 2	St. Louis city	Missouri					627	5
119300	Block Group 1	St. Louis city	Missouri						828
119300	Block Group 2	St. Louis city	Missouri						1745
119300	Block Group 3	St. Louis city	Missouri						1047
120100	Block Group 1	St. Louis city	Missouri						372
120100	Block Group 2	St. Louis city	Missouri						493
120200	Block Group 1	St. Louis city	Missouri						473
120200	Block Group 2	St. Louis city	Missouri						515
120200	Block Group 3	St. Louis city	Missouri						431
120300	Block Group 1	St. Louis city	Missouri						280
120300	Block Group 2	St. Louis city	Missouri						175
120300	Block Group 3	St. Louis city	Missouri						264
120300	Block Group 4	St. Louis city	Missouri						515
121100	Block Group 1	St. Louis city	Missouri						141
121100	Block Group 3	St. Louis city	Missouri						80
121200	Block Group 1	St. Louis city	Missouri						393

Table 2
Population Within a 4-Mile Radius of the St. Louis Federal Center

Census Tract Identification				Total Persons						
Tract ID	Block Group Name	County Name	State Name	Facility Boundary to .25 Mile	.25 to .5 Mile	.5 to 1 Mile	1 to 2 Mile	2 to 3 Mile	3 to 4 Mile	
121200	Block Group 2	St. Louis city	Missouri						146	
121200	Block Group 3	St. Louis city	Missouri						1028	
121200	Block Group 4	St. Louis city	Missouri						543	
121300	Block Group 2	St. Louis city	Missouri						19	
126600	Block Group 4	St. Louis city	Missouri						139	
126700	Block Group 1	St. Louis city	Missouri						60	
126700	Block Group 2	St. Louis city	Missouri						460	
126700	Block Group 3	St. Louis city	Missouri						299	
126700	Block Group 4	St. Louis city	Missouri						539	
			Total Persons	2,072	5,076	20,979	62,835	79,598	85,518	256,078

Source: Rurual Policy Research Institute (RUPRI) Community Information Resource Center (CIRC). Interactive Mapping. (http://circ.rupri.org)

APPENDIX C

SUMARY OF LABORATORY ANALYTICAL RESULTS

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - SOIL BORINGS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-1 - RESULTS OF SUBSURFACE SOIL SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		101-1 9/10/2002 211927-6	101-2 9/10/2002 211927-7	101-3 9/10/2002 211927-8	101-4 9/10/2002 211927-9	105-1 9/10/2002 211927-5	105-2 9/10/2002 211927-2	105-3 9/10/2002 211927-3	105-4 9/10/2002 211927-4	105-5 9/10/2002 211927-5	SB1-SB4 12/15/2003 223146-1	SB5 12/15/2003 223146-2	SB6 12/16/2003 223146-3	SB7 12/16/2003 223146-4	SB8-SB9 12/16/2003 223146-5	SB10 12/16/2003 223146-6	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PARAMETER (METHOD)	**UNITS**																	
PCBs (8082)																		
Aroclor 1260	µg/Kg	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	7,360 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)																		
Diesel Range Organics	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	1,410,000 mg/Kg	3,010,000 mg/Kg
TPH (8015B MGRO)																		
Gasoline Range Organics	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,650,000 mg/Kg	1,290,000 mg/Kg
PHOSPHORUS (4500PE)																		
Total Phosphorus	mg/Kg	NA	NA	NA	NA	510	600	430	520	510	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																		
Mercury	mg/Kg	0.053	0.038	0.038	0.089	0.022	0.022	0.029	0.073	0.039	0.011	0.056	0.029	0.0089	0.019	0.024	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																		
Aluminum	mg/Kg	13000	13000	9900	12000	9900	9700	12000	11000	12000	770	9700	10000	12000	10000	11000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	9.1	8.5	10	8.5	5.7	3.9	5.8	4.3	5.2	0.81	3.6	5	3	5	3.8	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	150	140	130	160	140	93	110	120	210	20	78	72	78	93	44	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.43	0.44	0.51	0.44	0.28	0.33	0.38	0.36	0.4	0.047	0.72	0.78	1.2	0.76	0.67	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.19	0.2	0.33	0.47	0.16	ND	0.071	ND	ND	0.24	ND	ND	ND	0.1	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	3200	4800	11000	4000	27000	3800	24000	4100	6900	370000	2100	3400	3400	23000	2200	NT	NT
Chromium	mg/Kg	18	19	21	24	18	18	18	22	19	6.5	15	17	14	18	16	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	9.2	8.3	6.9	7.6	6.1	4.5	6.5	5.2	5.9	0.49	2.8	3.3	2.1	6.8	4.1	NT	NT
Copper	mg/Kg	18	17	16	22	13	11	13	13	16	6.7	8.3	13	9.2	12	9.5	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	18000	18000	17000	18000	14000	14000	15000	15000	20000	1200	11000	15000	12000	15000	12000	NT	NT
Lead	mg/Kg	31	25	25	68	19	15	14	13	22	ND	7.3	11	7	48	7	680 mg/Kg	NT
Magnesium	mg/Kg	2600	2900	4200	2400	3300	2700	2700	2700	2700	5100	1800	2000	2100	6300	1700	NT	NT
Manganese	mg/Kg	800	750	530	600	360	200	420	210	730	46	100	180	220	450	170	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	19	19	15	18	14	13	15	14	20	4.2	9.7	10	13	12	9.3	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1400	1300	1100	1600	1200	660	1100	1100	950	490	400	470	400	840	390	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1	ND	ND	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	230	840	630	200	760	380	760	360	320	310	ND	600	ND	1000	120	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	0.56	ND	0.93	ND	ND	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	32	31	35	31	30	28	31	30	26	2.9	17	34	20	26	26	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	64	56	54	87	56	38	42	43	47	9.1	22	34	17	35	24	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																		
Acenaphthene	µg/Kg	NA	NA	NA	NA	75	ND	870	ND	150	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	38,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	ND	ND	390	ND	79	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	ND	ND	1000	ND	200	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	1000	ND	11000	200	1700	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	160	ND	1800	ND	330	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	140	ND	990	ND	160	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	1400	ND	14000	370	1900	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	1300	ND	11000	270	1700	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	530	ND	4400	130	770	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	700	ND	5300	160	900	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	580	ND	4800	150	710	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	520	ND	3500	ND	640	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	520	ND	3700	130	670	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	350	ND	2400	ND	470	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	160	ND	1100	ND	ND	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	400	ND	2600	ND	530	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)																		
Acetone	µg/Kg	NA	NA	NA	NA	7.1	100	ND	6.9	13	NA	15	NA	NA	NA	NA	115,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	NA	ND	10	ND	ND	ND	NA	ND	NA	NA	NA	NA	NT	NT
Toluene	µg/Kg	NA	NA	NA	NA	ND	9.1	ND	ND	ND	NA	ND	NA	NA	NA	NA	13,800,000 µg/Kg	138,000,000 µg/Kg
1,1,2,2-Tetrachloroethane	µg/Kg	NA	NA	NA	NA	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	17,600 µg/Kg	799,000 µg/Kg
1,2,4-Trimethylbenzene	µg/Kg	NA	NA	NA	NA	ND	3.4	ND	ND	ND	NA	ND	NA	NA	NA	NA	373,000 µg/Kg	431,000 µg/Kg
p-Isopropyltoluene	µg/Kg	NA	NA	NA	NA	ND	46	ND	ND	ND	NA	ND	NA	NA	NA	NA	28,800,000 µg/Kg	69,400,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration

NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - SOIL BORINGS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-1 (continued) - RESULTS OF SUBSURFACE SOIL SAMPLE ANALYSIS

SAMPLE NUMBER:		SB11	SB12	SB13-SB14	SB15-SB16	SB17	SB18	SB19	SB20	SB21	SB22	SB23	SB24	SB25	SB26	SB27	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003		
LAB ID NUMBER:		223146-7	223146-8	223146-9	223146-10	223146-11	223218-1	223218-2	223218-3	223218-4	223218-5	223218-6	223218-7	223218-8	223218-9	223218-10		
PARAMETER (METHOD)	**UNITS**																	
PCBs (8082)																		
Aroclor 1260	µg/Kg	NA	ND	NA	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	7,380 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)																		
Diesel Range Organics	mg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	1,410,000 mg/Kg	3,010,000 mg/Kg
THP (8015B MGRO)																		
Gasoline Range Organics	mg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,650,000 mg/Kg	1,290,000 mg/Kg
PHOSPHORUS (4500PE)																		
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																		
Mercury	mg/Kg	0.0047	0.021	0.025	0.026	NA	0.032	0.035	0.035	ND	560	0.065	0.046	0.061	0.0082	0.038	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																		
Aluminum	mg/Kg	6400	11000	10000	7800	NA	14000	15000	14000	610	11000	14000	12000	16000	9100	13000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	3.7	5.4	5.5	5.4	NA	5.5	4.4	9.2	ND	7.8	4.7	7.1	5.2	3	3.2	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	59	100	87	84	NA	100	240	170	7.8	150	130	160	370	160	87	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.53	0.76	0.69	0.6	NA	0.86	0.71	0.97	0.051	0.69	0.98	0.99	2	1.7	0.59	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	ND	ND	ND	NA	ND	ND	ND	0.17	0.32	ND	ND	ND	ND	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	23000	45000	3800	12000	NA	1800	2600	7900	360000	45000	5000	15000	3400	3200	2400	NT	NT
Chromium	mg/Kg	18	16	16	12	NA	21	24	19	5.6	44	22	20	18	19	18	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	4	12	6	3.7	NA	5.1	7.4	8.5	0.48	5.5	7.9	9.2	44	5.5	5.1	NT	NT
Copper	mg/Kg	8.4	12	10	6.6	NA	12	15	18	ND	54	11	21	9.2	6.4	8.7	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	9100	14000	14000	13000	NA	17000	18000	21000	1400	21000	16000	21000	21000	20000	13000	NT	NT
Lead	mg/Kg	19	44	11	13	NA	7.3	8	13	ND	140	18	41	19	7.5	8.8	660 mg/Kg	NT
Magnesium	mg/Kg	1700	2700	2100	2100	NA	2500	3100	3200	9300	9300	2300	2300	2400	1800	1700	NT	NT
Manganese	mg/Kg	210	580	390	220	NA	260	1100	760	180	320	360	730	1700	260	140	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	9.1	14	12	9.9	NA	14	21	23	3.2	14	16	20	34	27	9.1	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	550	580	500	450	NA	800	1300	1200	380	1500	730	1400	720	460	460	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	NA	ND	ND	0.48	ND	0.48	ND	ND	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	390	110	540	370	NA	220	430	690	270	1300	160	160	140	ND	290	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	NA	ND	ND	ND	0.87	ND	ND	ND	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	17	26	26	25	NA	32	27	37	3.1	26	30	33	32	25	24	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	30	37	47	21	NA	34	52	54	5.8	110	40	46	28	18	20	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																		
Acenaphthene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	2.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	2.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)																		
Acetone	µg/Kg	NA	ND	NA	NA	9	NA	NA	130	NA	NA	NA	ND	NA	NA	NA	115,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	NT	NT
Toluene	µg/Kg	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	13,800,000 µg/Kg	138,000,000 µg/Kg
1,1,2,2-Tetrachloroethane	µg/Kg	NA	ND	NA	NA	ND	NA	NA	41	NA	NA	NA	ND	NA	NA	NA	17,600 µg/Kg	799,000 µg/Kg
1,2,4-Trimethylbenzene	µg/Kg	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	373,000 µg/Kg	431,000 µg/Kg
p-Isopropyltoluene	µg/Kg	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	28,800,000 µg/Kg	69,400,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration

NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - SOIL BORINGS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-1 (continued) - RESULTS OF SUBSURFACE SOIL SAMPLE ANALYSIS

SAMPLE NUMBER:		SB28	SB29	SB30	SB31	SB32	SB33	SB34	SB35	SB36	SB37	SB38	SB39	SB40	SB41	SB1015-3	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/19/2003	9/5/2006		
LAB ID NUMBER:		223218-11	223218-12	223218-13	223218-14	223218-15	223218-16	223218-17	223218-18	223218-19	223218-20	223218-21	223218-22	223218-23	223259-1	248531-1		
PARAMETER (METHOD)	**UNITS**																	
PCBs (8082)																		
Aroclor 1260	µg/Kg	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	3900	1000	ND	NA	7,380 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)																		
Diesel Range Organics	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	3.2	5.1	4.8	27	17	26	NA	1,410,000 mg/Kg	3,010,000 mg/Kg
THP (8015B MGRO)																		
Gasoline Range Organics	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	NA	4,650,000 mg/Kg	1,290,000 mg/Kg
PHOSPHORUS (4500PE)																		
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																		
Mercury	mg/Kg	0.025	0.038	0.029	0.033	0.0068	0.011	0.024	0.016	0.048	NA	NA	NA	NA	0.025	0.022	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																		
Aluminum	mg/Kg	4800	19000	15000	12000	17000	14000	11000	16000	12000	NA	NA	NA	NA	11000	NA	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	3.4	3.1	7.1	4.3	2.9	5.7	7.2	4.4	4.9	NA	NA	NA	NA	8.4	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	58	74	62	57	110	140	150	40	60	NA	NA	NA	NA	150	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.42	0.91	0.88	0.66	0.77	2	0.88	0.76	0.84	NA	NA	NA	NA	0.93	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	ND	ND	ND	ND	0.23	0.18	ND	ND	NA	NA	NA	NA	ND	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	17000	3300	2600	1600	2700	2400	8300	2400	1800	NA	NA	NA	NA	8000	NA	NT	NT
Chromium	mg/Kg	9.7	23	21	16	17	26	19	22	17	NA	NA	NA	NA	21	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	4.3	4	2.5	4.1	20	53	7.8	3.5	4.7	NA	NA	NA	NA	11	NA	NT	NT
Copper	mg/Kg	9.1	9.8	11	8.6	12	74	33	8.8	9.7	NA	NA	NA	NA	14	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	8700	15000	20000	15000	13000	65000	17000	17000	16000	NA	NA	NA	NA	20000	NA	NT	NT
Lead	mg/Kg	14	8.3	7.3	13	10	8.5	110	6.7	9.7	NA	NA	NA	NA	18	NA	660 mg/Kg	NT
Magnesium	mg/Kg	3800	2700	2200	1300	1900	4300	3400	1900	1600	NA	NA	NA	NA	2200	NA	NT	NT
Manganese	mg/Kg	240	61	57	100	650	330	900	86	170	NA	NA	NA	NA	610	NA	98,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	11	17	14	7.9	9.4	88	19	10	10	NA	NA	NA	NA	17	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	510	700	560	470	700	1300	1200	540	480	NA	NA	NA	NA	590	NA	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	260	150	180	150	230	ND	210	420	340	NA	NA	NA	NA	120	NA	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	ND	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	13	24	34	34	26	48	32	29	31	NA	NA	NA	NA	39	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	30	27	27	17	23	150	73	21	23	NA	NA	NA	NA	36	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																		
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	38,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)																		
Acetone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	9.8	10	NA	NA	NA	NA	NA	NA	115,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NT	NT
Toluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	13,800,000 µg/Kg	138,000,000 µg/Kg
1,1,2,2-Tetrachloroethane	µg/Kg	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	17,600 µg/Kg	799,000 µg/Kg
1,2,4-Trimethylbenzene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	373,000 µg/Kg	431,000 µg/Kg
p-Isopropyltoluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	28,800,000 µg/Kg	69,400,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration

NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - SOIL BORINGS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-1 (continued) - RESULTS OF SUBSURFACE SOIL SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:	UNITS	SB1025-5 9/5/2006 248531-2	SB1035-4 9/5/2006 248531-3	SB1045-2 9/5/2006 248531-4	SB1055-3 9/5/2006 248531-5	SB1085-5 9/5/2006 248531-6	SB1095-10 9/5/2006 248531-7	SB1105-1 9/5/2006 248531-8	SB1105-4 9/5/2006 248531-9	SB1115-1 9/5/2006 248531-10	SB1115-5 9/5/2006 248531-11	SB1125-1 9/5/2006 248531-12	SB1125-5 9/6/2006 248531-25	SB1135-5 9/5/2006 248531-26	SB1145-3 9/5/2006 248531-27	SB1155-2 9/6/2006 248531-13	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PCBs (8082)																		
Aroclor 1260	µg/Kg	NA	NA	NA	NA	ND	ND	22	ND	ND	ND	73	ND	NA	NA	NA	7,380 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)																		
Diesel Range Organics	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.7	8	35	1,410,000 mg/Kg	3,010,000 mg/Kg
THP (8015B MGRO)																		
Gasoline Range Organics	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	6.8	4,650,000 mg/Kg	1,290,000 mg/Kg
PHOSPHORUS (4500PE)																		
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																		
Mercury	mg/Kg	ND	0.22	3.9	0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																		
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																		
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,180,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)																		
Acetone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	115,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Toluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,800,000 µg/Kg	138,000,000 µg/Kg
1,1,2,2-Tetrachloroethane	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17,600 µg/Kg	799,000 µg/Kg
1,2,4-Trimethylbenzene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	373,000 µg/Kg	431,000 µg/Kg
p-Isopropyltoluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,800,000 µg/Kg	69,400,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration

NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - SOIL BORINGS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-1 (continued) - RESULTS OF SUBSURFACE SOIL SAMPLE ANALYSIS

SAMPLE NUMBER:		SB1155-3	SB1165-4	SB1175-4	SB1185-2	SB1185-5	SB1195-3	SB1195-4	SB1215-3	SB1225-2	SB1225-4	SB1255-3	SB1265-1	SB1265-4	SB1275-4	SB1285-1	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/7/2006	9/7/2006	9/7/2006	9/7/2006		
LAB ID NUMBER:		248531-14	248531-15	248531-16	248531-17	248531-18	248531-19	248531-20	248531-21	248531-22	248531-23	248531-24	248554-1	248554-2	248554-3	248554-4		
PARAMETER (METHOD)	UNITS																	
PCBs (8082)																		
Aroclor 1260	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	26000	180	ND	ND	7,380 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)																		
Diesel Range Organics	mg/Kg	35	21	8.8	110	22	9.3	12	9.9	18	11	NA	NA	4500	NA	NA	1,410,000 mg/Kg	3,010,000 mg/Kg
THP (8015B MGRO)																		
Gasoline Range Organics	ug/Kg	ND	ND	ND	39000	36000	310	82000	ND	3400	700	NA	NA	NA	NA	NA	4,650,000 mg/Kg	1,290,000 mg/Kg
PHOSPHORUS (4500PE)																		
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																		
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																		
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																		
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)																		
Acetone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	115,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Toluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,800,000 µg/Kg	138,000,000 µg/Kg
1,1,2,2-Tetrachloroethane	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17,600 µg/Kg	799,000 µg/Kg
1,2,4-Trimethylbenzene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	373,000 µg/Kg	431,000 µg/Kg
p-Isopropyltoluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,800,000 µg/Kg	89,400,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration

NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - SOIL BORINGS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-1 (continued) - RESULTS OF SUBSURFACE SOIL SAMPLE ANALYSIS

SAMPLE NUMBER:		SB1295-1	SB1305-1	SB1305-3	SB1315-1	SB1325-2	SB1335-1	SB1335-4	SB1345-1	SB1345-4	NON-RESIDENTIAL	CONSTRUCTION
SAMPLE DATE:		9/7/2006	9/7/2006	9/7/2006	9/7/2006	9/7/2006	9/7/2006	9/7/2006	9/7/2006	9/7/2006	RISK-BASED	WORKER
LAB ID NUMBER:		248554-5	248554-6	248554-7	248554-8	248554-9	248554-10	248554-11	248554-12	248554-13	TARGET	TARGET
											LEVELS*	LEVELS**
PARAMETER (METHOD)	UNITS											
PCBs (8082)												
Aroclor 1260	µg/Kg	50	ND	ND	18	ND	ND	160	ND	ND	7,380 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)												
Diesel Range Organics	mg/Kg	NA	NA	NA	NA	NA	NA	1000	NA	8.6	1,410,000 mg/Kg	3,010,000 mg/Kg
THP (8015B MGRO)												
Gasoline Range Organics	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,650,000 mg/Kg	1,290,000 mg/Kg
PHOSPHORUS (4500PE)												
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)												
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)												
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	680 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)												
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	61,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)												
Acetone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	115,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Toluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,800,000 µg/Kg	138,000,000 µg/Kg
1,1,2,2-Tetrachloroethane	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	17,600 µg/Kg	799,000 µg/Kg
1,2,4-Trimethylbenzene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	373,000 µg/Kg	431,000 µg/Kg
p-Isopropyltoluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,800,000 µg/Kg	69,400,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration

NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-2 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER:		102CS ANNEALING WIPE	102FLOOR1WS1	102FLOOR1WS2	102FLOOR2WS	102FLOOR2WS101	102FLOOR2WS102	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
SAMPLE DATE:		7/22/2003	7/23/2003	7/23/2003	7/23/2003	10/11/2006	10/11/2006		
LAB ID NUMBER:		219164-3	219204-1	219204-2	219204-3	249132-1	249132-2		
PARAMETER (METHOD)	UNITS								
PCBs (8082)									
Aroclor 1242	$\mu g/cm^2$	ND	ND	0.019	ND	ND	ND	10 ug/cm^2 ***	10 ug/cm^2 ***
Aroclor 1260	$\mu g/cm^2$	ND	ND	0.022	15	ND	ND	10 ug/cm^2 ***	10 ug/cm^2 ***
EXPLOSIVES (8330)									
1,3-Dinitrobenzene	µg/Wipe	ND	1.4	ND	ND	NA	NA	56,800 µg/Kg	52,400 µg/Kg
2,4,6-TNT	µg/Wipe	ND	1.4	ND	ND	NA	NA	308,000 µg/Kg	713,000 µg/Kg
MERCURY (7471A)						NA	NA		
Mercury	µg/Wipe	160	560	3900	1200	NA	NA	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)									
Aluminum	mg/Wipe	0.51	2.7	3.3	3.4	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	0.0037	0.0084	0.045	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.0028	0.014	0.0077	0.0094	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.037	0.59	2.5	0.45	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0008	0.019	0.082	0.031	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	4.4	40	91	41	NA	NA	NT	NT
Chromium	mg/Wipe	0.19	1.1	0.62	0.15	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.037	0.059	0.034	0.017	NA	NA	NT	NT
Copper	mg/Wipe	0.015	0.18	0.34	0.6	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	17	43	12	26	NA	NA	NT	NT
Lead	ug/ft^2	1114800	78965	42734	15793	NA	NA	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	0.5	2	4.6	4.7	NA	NA	NT	NT
Manganese	mg/Wipe	0.16	0.37	0.24	0.29	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.027	0.025	0.026	0.053	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.1	3.4	3.4	8.2	NA	NA	NT	NT
Selenium	mg/Wipe	ND	0.0018	0.0018	ND	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.0014	0.0015	0.003	0.0028	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	0.79	6.4	6.1	8.7	NA	NA	NT	NT
Vanadium	mg/Wipe	ND	0.015	0.015	0.0093	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.78	4.3	6.9	1.7	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-2 (continued) - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		102FLOOR2WS103 10/11/2006 249132-3	102FLOOR2WS104 10/11/2006 249132-4	102FLOOR2WS105 10/11/2006 249132-5	102FLOOR2WS106 10/11/2006 249132-6	102FLOOR2WS107 10/11/2006 249132-7	102FLOOR2WS108 10/11/2006 249132-8	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS								
PCBs (8082)									
Aroclor 1242	µg/Wipe	ND	ND	ND	ND	ND	ND	10 ug/cm^2 ***	10 ug/cm^2 ***
Aroclor 1260	µg/Wipe	ND	ND	6.0	ND	ND	ND	10 ug/cm^2 ***	10 ug/cm^2 ***
EXPLOSIVES (8330)									
1,3-Dinitrobenzene	µg/Wipe	NA	NA	NA	NA	NA	NA	56,800 µg/Kg	52,400 µg/Kg
2,4,6-TNT	µg/Wipe	NA	NA	NA	NA	NA	NA	308,000 µg/Kg	713,000 µg/Kg
MERCURY (7471A)		NA							
Mercury	µg/Wipe	NA	NA	NA	NA	NA	NA	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)									
Aluminum	mg/Wipe	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	NA	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Wipe	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Wipe	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Wipe	NA	NA	NA	NA	NA	NA	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Wipe	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Wipe	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-2 (continued) - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		102FLOOR2WS109 10/11/2006 249132-9	102FLOOR2WS110 10/11/2006 249132-10	102FLOOR2WS111 10/12/2006 249132-11	102FLOOR2WS112 10/12/2006 249132-13	102FLOOR1WS113 10/12/2006 249132-15	102FLOOR1WS114 10/12/2006 249132-17	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS								
PCBs (8082)									
Aroclor 1242	µg/Wipe	ND	ND	NA	NA	NA	NA	10 ug/cm^2 ***	10 ug/cm^2 ***
Aroclor 1260	µg/Wipe	ND	ND	NA	NA	NA	NA	10 ug/cm^2 ***	10 ug/cm^2 ***
EXPLOSIVES (8330)									
1,3-Dinitrobenzene	µg/Wipe	NA	NA	NA	NA	NA	NA	56,800 µg/Kg	52,400 µg/Kg
2,4,6-TNT	µg/Wipe	NA	NA	NA	NA	NA	NA	308,000 µg/Kg	713,000 µg/Kg
MERCURY (7471A)									
Mercury	µg/Wipe	NA	NA	0.17	0.13	0.072	2.6	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)									
Aluminum	mg/Wipe	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	NA	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Wipe	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Wipe	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Wipe	NA	NA	NA	NA	NA	NA	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Wipe	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Wipe	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	NA	NA	NA	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-3 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		102DCS CHEM FEED 7/22/2003 219164-10	102DCS WIPE 7/22/2003 219164-11	102D ELEVATOR SHAFT FLOOR 1 7/22/2003 219164-1	102D WIPE FLOOR 1 7/22/2003 219164-14	102DFLOOR2WS115 10/12/2006 249132-19	102DFLOOR2WS116 10/12/2006 249132-21	102DFLOOR1WS117 10/12/2006 249132-23	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**									
EXPLOSIVES (8330)										
1,3,5-Trinitrobenzene	µg/Wipe	40	ND	ND	ND	NA	NA	NA	18,500,000 µg/Kg	42,800,000 µg/Kg
MERCURY (7471A)										
Mercury	µg/Wipe	33000	600	470	840	0.047	0.14	0.08	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)										
Aluminum	mg/Wipe	13	6.1	0.92	8.9	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.0045	ND	0.0041	0.0044	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.006	0.0039	0.008	0.018	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.095	0.1	0.091	0.51	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Wipe	ND	ND	ND	0.0004	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Wipe	0.047	0.0009	0.0039	0.012	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	170	41	11	110	NA	NA	NA	NT	NT
Chromium	mg/Wipe	0.058	0.012	0.029	0.068	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0031	0.0032	0.044	0.022	NA	NA	NA	NT	NT
Copper	mg/Wipe	3.2	0.0092	0.081	1.2	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	13	11	31	36	NA	NA	NA	NT	NT
Lead	ug/ft^2	**1950**	**222**	**5759**	**29728**	NA	NA	NA	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	2.6	2.1	0.86	11	NA	NA	NA	NT	NT
Manganese	mg/Wipe	0.24	0.32	0.15	0.64	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.043	0.0093	0.04	0.034	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	16	3.9	0.4	1.7	NA	NA	NA	NT	NT
Selenium	mg/Wipe	ND	ND	0.001	0.0027	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.63	ND	0.0008	0.0022	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	14	1	1.6	1.5	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	0.013	0.019	0.0044	0.033	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	2.6	0.052	0.17	1.1	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-4 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		102ECSWS 7/23/2003 219204-5	102EFLOOR2WS118 10/12/2006 249132-25	102EFLOOR1WS119 10/12/2006 249132-27	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**					
MERCURY (7471A)						
Mercury	µg/Wipe	1400	0.06	0.21	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)						
Aluminum	mg/Wipe	4	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.0091	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.034	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	1.6	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0089	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	35	NA	NA	NT	NT
Chromium	mg/Wipe	0.57	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.039	NA	NA	NT	NT
Copper	mg/Wipe	0.19	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	250	NA	NA	NT	NT
Lead	ug/ft^2	761780	NA	NA	200 ug/ft^{2} ****	200 ug/ft^{2} ****
Magnesium	mg/Wipe	2.3	NA	NA	NT	NT
Manganese	mg/Wipe	1.3	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.061	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	1	NA	NA	NT	NT
Selenium	mg/Wipe	0.0018	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.0021	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	4.3	NA	NA	NT	NT
Thallium	mg/Wipe	0.0034	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	0.019	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	8.5	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Sta

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-5 - RESULTS OF PAINT SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		102FLOOR2PC111 10/12/2006 249132-12	102FLOOR2PC112 10/12/2006 249132-14	102FLOORPC113 10/12/2006 249132-16	102FLOOR1PC114 10/12/2006 249132-18	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PARAMETER (METHOD)	UNITS						
MERCURY (7471A) Mercury	mg/Kg	6.4	1.8	2.5	16	630 mg/Kg	21.6 mg/Kg

mg/Kg = milligrams per kilogram
NA = Not Analyzed

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-6 - RESULTS OF PAINT SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		102DFLOOR2PC115 10/12/2006 249132-20	102DFLOOR1PC116 10/12/2006 249132-22	102DFLOOR1PC117 10/12/2006 249132-24	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PARAMETER (METHOD)	**UNITS**					
MERCURY (7471A)						
Mercury	mg/Kg	1.2	6.1	21	630 mg/Kg	21.6 mg/Kg

mg/Kg = milligrams per kilogram
NA = Not Analyzed

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-7 - RESULTS OF PAINT SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		102EFLOOR2PC118 10/12/2006 249132-26	102EFLOOR1PC119 10/12/2006 249132-28	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PARAMETER (METHOD)	UNITS				
MERCURY (7471A)					
Mercury	mg/Kg	1.2	9.5	630 mg/Kg	21.6 mg/Kg

mg/Kg = milligrams per kilogram
NA = Not Analyzed

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-8 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		102CS ANNEALING SED	102CS CHEM FEED PUMP	102CS CHEM FEED PUMP DRAIN	102CSCONCRETE BASIN	102D SS-8	102D SS-9	102D SS-10	102D SS-11	102D SS-12	102D SS-13	102D SS-14	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/22/2003	7/22/2003	7/22/2003	7/23/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003		
LAB ID NUMBER:		219164-2	219164-4	219164-5	219204-14	223219-15	223219-16	223219-17	223219-18	223219-19	223219-20	223219-21		
SAMPLE DEPTH:		0" to 6"	0" to 6"	0" to 6"	0" to 6"	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)		
PARAMETER (METHOD)	UNITS													
PCBs (8082)	ug/Kg													
Aroclor 1242	ug/Kg	ND	ND	190	ND	ND	ND	ND	ND	NA	NA	NA	6,940 µg/Kg	10,400 µg/Kg
Aroclor 1260	ug/Kg	ND	1900	ND	ND	ND	ND	ND	400	NA	NA	NA	7,380 µg/Kg	21,800 µg/Kg
EXPLOSIVES (8330)														
1,3,5-Trinitrobenzene	ug/Kg	ND	ND	300	ND	ND	ND	ND	ND	NA	NA	NA	18,500,000 µg/Kg	42,800,000 µg/Kg
Nitrobenzene	ug/Kg	ND	ND	510	ND	ND	ND	ND	ND	NA	NA	NA	455,000 µg/Kg	130,000 µg/Kg
2,6-Dinitrotoluene	ug/Kg	ND	ND	6900	ND	ND	ND	ND	ND	NA	NA	NA	23,400 µg/Kg	542,000 µg/Kg
2-Amino-4,6-Dinitrotoluene	ug/Kg	ND	ND	ND	ND	260	ND	ND	ND	NA	NA	NA	82,900 µg/Kg	53,300 µg/Kg
4-Nitrotoluene	ug/Kg	ND	ND	6500	ND	ND	ND	ND	ND	NA	NA	NA	1,480,000 µg/Kg	2,310,000 µg/Kg
CYANIDE (9014/9010B)														
Total Cyanide	mg/Kg	ND	0.25	0.56	ND	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHOROUS (4500PE)														
Total Phosphorous	mg/Kg	71	36	520	510	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)														
Mercury	mg/Kg	0.075	2.2	0.54	0.037	1.5	0.18	0.7	0.26	ND	0.89	0.25	630 mg/Kg	21.6 mg/Kg
METALS (6010B)														
Aluminum	mg/Kg	6800	1000	4200	260	2300	510	810	1700	2.2	610	2200	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	ND	ND	ND	ND	5.6	3.2	ND	4.4	1	15	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	2.3	1.5	5.1	ND	17	570	7.3	200	ND	30	18	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	78	160	66	13	290	29	290	120	4.2	63	93	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.36	ND	0.057	ND	ND	ND	ND	ND	ND	0.18	0.42	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.7	2.4	1	0.56	3.9	5.4	4.6	4.8	0.11	ND	1.5	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	5600	27000	44000	140000	25000	500	250000	10000	1000	5000	80000	NT	NT
Chromium	mg/Kg	26	5.7	17	3.3	89	130	110	80	0.17	110	35	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	2.8	0.59	3.3	0.24	15	37	3.4	25	0.27	10	5.5	NT	NT
Copper	mg/Kg	42	28000	17000	920	740	3700	6500	3600	8.4	230000	280	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	28000	3400	31000	760	150000	450000	34000	360000	1500	240000	100000	NT	NT
Lead	mg/Kg	220	320	270	47	2100	28	1100	880	18	2500	390	660 mg/Kg	NT
Magnesium	mg/Kg	1300	6800	2500	910	2100	190	9900	5000	73	630	10000	NT	NT
Manganese	mg/Kg	140	34	210	25	970	1900	180	1300	22	620	520	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	7.8	5.1	11	1.3	52	93	28	46	0.47	99	19	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1400	890	470	8100	880	400	1100	440	53	180	2000	NT	NT
Selenium	mg/Kg	ND	0.74	ND	ND	ND	ND	1.2	ND	0.27	1.8	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	1.8	2	0.85	ND	50	410	9.9	530	ND	4.1	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	180	18000	1400	80000	880	830	1200	760	310	6200	1100	NT	NT
Thallium	mg/Kg	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	33	2	9.6	1.9	35	140	6	120	ND	7.9	6.9	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	71	2700	1400	84	1200	530	2900	1600	230	12000	1900	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)														
Napthalene	µg/Kg	NA	NA	NA	ND	ND	180	ND	130	ND	210	160	119,000 µg/Kg	256,000 µg/Kg
2-Methylnapthalene	µg/Kg	NA	NA	NA	1200	44	92	ND	100	ND	330	99	3,590,000 µg/Kg	1,530,000 µg/Kg
2,6-Dinitrotoluene	µg/Kg	NA	NA	NA	ND	ND	ND	ND	ND	ND	2000	ND	23,400 µg/Kg	542,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	ND	460	720	350	2600	ND	66	120	54,100,000 µg/Kg	53,700,000 µg/Kg
2,4-Dinitrotoluene	µg/Kg	NA	NA	NA	ND	ND	ND	ND	ND	ND	39000	ND	51,300 µg/Kg	1,190,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	ND	370	900	ND	190	ND	380	1200	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	ND	170	400	ND	110	99	480	520	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	1400	340	1400	ND	170	ND	300	820	21,300,000 µg/Kg	34,000,000 µg/Kg
Diethyl phthalate	µg/Kg	NA	NA	NA	ND	ND	ND	ND	ND	110	ND	ND	493,000,000 µg/Kg	1,140,000,000 µg/Kg
n-Nitrosodiphenylamine	µg/Kg	NA	NA	NA	ND	ND	ND	ND	ND	ND	1700	ND	3,260,000 µg/Kg	18,200,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	23000	6500	61000	780	3300	1300	23000	17000	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	ND	2300	16000	ND	1800	ND	3500	4500	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	ND	2200	9300	ND	1100	110	980	3100	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl-phthalate	µg/Kg	NA	NA	NA	ND	120	ND	ND	160	ND	330	ND	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	8400	12000	350000	4800	19000	480	41000	47000	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	30000	11000	310000	4900	9200	ND	21000	20000	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	ND	5200	180000	1800	14000	ND	8700	8200	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	15000	8000	290000	6200	24000	150	16000	10000	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	ND	480	ND	2600	ND	990	ND	2500	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	ND	5600	190000	5800	33000	ND	13000	10000	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	ND	5000	160000	4100	30000	ND	21000	8100	211,000 µg/Kg	11,900,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram

NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-8 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		102CS ANNEALING SED	102CS CHEM FEED PUMP	102CS CHEM FEED PUMP DRAIN	102CSCONCRETE BASIN	102D SS-8	102D SS-9	102D SS-10	102D SS-11	102D SS-12	102D SS-13	102D SS-14	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/22/2003	7/22/2003	7/22/2003	7/23/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003		
LAB ID NUMBER:		219164-2	219164-4	219164-5	219204-14	223219-15	223219-16	223219-17	223219-18	223219-19	223219-20	223219-21		
SAMPLE DEPTH:		0" to 6"	0" to 6"	0" to 6"	0" to 6"	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)	(Pipe Sediment)		
PARAMETER (METHOD)	UNITS													
SEMI-VOLATILE ORGANICS (8270C)														
Benzo(a)pyrene	µg/Kg	NA	NA	NA	ND	7800	150000	2600	26000	ND	4800	8900	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	ND	5800	76000	2900	12000	ND	2300	4000	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	ND	3500	24000	ND	5100	ND	1200	2200	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	ND	18000	78000	4300	12000	ND	2300	4400	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)														
Acetone	µg/Kg	NA	NA	NA	21	NA	NA	NA	NA	4600	NA	ND	807,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	ND	NA	NA	NA	NA	1400	NA	ND	NT	NT
2-Hexanone	µg/Kg	NA	NA	NA	ND	NA	NA	NA	NA	440	NA	ND	NT	NT

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram

NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-8 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		102 SED-1	B 102B SOIL SAMPLE 1	B102C SOIL FROM TANK	102CSSS101	102CSSS102	102CSSS103	102CSSS104	102CSSS105	102CSSS106	102CSSS107	102CSSS108	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/18/2003	4/6/2004	4/6/2004	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006		
LAB ID NUMBER:		223220-5	225741-2	225738-20	249132-29	249132-30	249132-31	249132-32	249132-33	249132-34	249132-35	249132-36		
SAMPLE DEPTH:		(Pipe Sediment)	4" to 8"	4" to 8"										
PARAMETER (METHOD)	UNITS													
PCBs (8082)	ug/Kg													
Aroclor 1242	ug/Kg	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,940 µg/Kg	10,400 µg/Kg
Aroclor 1260	ug/Kg	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7,380 µg/Kg	21,800 µg/Kg
EXPLOSIVES (8330)														
1,3,5-Trinitrobenzene	ug/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	18,500,000 µg/Kg	42,800,000 µg/Kg
Nitrobenzene	ug/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	455,000 µg/Kg	130,000 µg/Kg
2,6-Dinitrotoluene	ug/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	23,400 µg/Kg	542,000 µg/Kg
2-Amino-4,6-Dinitrotoluene	ug/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	82,900 µg/Kg	53,300 µg/Kg
4-Nitrotoluene	ug/Kg	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	1,480,000 µg/Kg	2,310,000 µg/Kg
CYANIDE (9014/9010B)														
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHOROUS (4500PE)														
Total Phosphorous	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)														
Mercury	mg/Kg	1.0	ND	0.14	0.017	0.1	0.15	0.12	NA	0.87	0.086	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)														
Aluminum	mg/Kg	780	6200	13000	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	5.1	2.5	1.9	NA	NA	NA	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	3.7	2.9	4.5	NA	NA	NA	NA	2.7	NA	NA	5.5	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	67	44	110	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.096	0.63	0.61	NA	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	5.1	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	85000	3800	7500	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	16	36	27	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	1.3	0.96	7.9	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	**170000**	20	510	4700	NA	NA	NA	27	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	6800	40000	21000	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	640	17	75	250	NA	**2900**	**2300**	NA	**1300**	NA	220	660 mg/Kg	NT
Magnesium	mg/Kg	1400	1000	2000	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	65	30	460	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	26	3	13	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	4200	920	900	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	5.3	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	6.3	ND	ND	NA	NA	NA	NA	0.97	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	31000	520	780	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	3.4	58	40	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	75000	5.6	83	1800	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)														
Napthalene	µg/Kg	NA	NA	NA	NA	NA	ND	3000	ND	42	NA	24	119,000 µg/Kg	256,000 µg/Kg
2-Methylnapthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
2,6-Dinitrotoluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23,400 µg/Kg	542,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	ND	960	31	61	NA	59	54,100,000 µg/Kg	53,700,000 µg/Kg
2,4-Dinitrotoluene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	51,300 µg/Kg	1,190,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	75	8200	24	870	NA	210	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	62	6300	25	660	NA	140	21,300,000 µg/Kg	34,000,000 µg/Kg
Diethyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	493,000,000 µg/Kg	1,140,000,000 µg/Kg
n-Nitrosodiphenylamine	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,260,000 µg/Kg	18,200,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	1500	110000	480	11000	NA	2800	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	310	16000	100	2100	NA	590	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl-phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	3800	120000	950	17000	NA	6500	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	2700	110000	790	13000	NA	5600	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	1900	**48000**	520	7300	NA	2700	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	1700	60000	510	6700	NA	2300	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	1600	**50000**	460	7300	NA	2600	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	2000	17000	510	4100	NA	1500	211,000 µg/Kg	11,900,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram

NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-8 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		102 SED-1	B 102B SOIL SAMPLE 1	B102C SOIL FROM TANK	102CSSS101	102CSSS102	102CSSS103	102CSSS104	102CSSS105	102CSSS106	102CSSS107	102CSSS108	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/18/2003	4/6/2004	4/6/2004	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006	10/12/2006		
LAB ID NUMBER:		223220-5	225741-2	225738-20	249132-29	249132-30	249132-31	249132-32	249132-33	249132-34	249132-35	249132-36		
SAMPLE DEPTH:		(Pipe Sediment)	4" to 8"	4" to 8"										
PARAMETER (METHOD)	UNITS													
SEMI-VOLATILE ORGANICS (8270C)														
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	1700	**42000**	510	**6200**	NA	**2200**	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	1100	**20000**	330	3800	NA	1400	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	460	**4000**	81	920	NA	620	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	1300	23000	420	4800	NA	1900	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)														
Acetone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	807,000,000 µg/Kg	208,000,000 µg/Kg
2-Butanone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
2-Hexanone	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-9 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		102D SS-1 SHALLOW	102D SS-1 DEEP	102D SS-2 SHALLOW	102D SS-2 DEEP	102D SS-3 SHALLOW	102D SS-3 DEEP	102D SS-4 SHALLOW	102D SS-4 DEEP	102D SS-5 SHALLOW	102D SS-5 DEEP	102D SS-6 SHALLOW	102D SS-6 DEEP	102D SS-7 SHALLOW	102D SS-7 DEEP	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003	12/17/2003		
LAB ID NUMBER:		223219-1	223219-2	223219-3	223219-4	223219-5	223219-6	223219-7	223219-8	223219-9	223219-10	223219-11	223119-12	223219-13	223219-14		
SAMPLE DEPTH:		0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"		
PARAMETER (METHOD)	UNITS																
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	0.37	0.028	0.055	0.7	0.034	0.28	0.054	0.044	0.053	0.047	0.093	0.023	0.0086	0.019	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	13000	14000	17000	14000	16000	21000	17000	17000	16000	18000	25000	24000	18000	18000	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	6.8	6.5	9.1	5.5	8	7	9.2	8.5	9.4	9.8	7.5	4.4	5.4	4.9	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	130	190	200	200	170	230	150	230	260	180	130	81	150	130	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	ND	ND	0.14	0.058	0.37	1.1	0.57	0.24	0.16	0.14	0.96	0.42	0.14	0.18	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.48	0.21	0.25	0.22	0.11	ND	0.17	0.2	0.22	0.1	0.16	ND	0.2	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	8000	3900	4000	2300	3000	3400	2700	5100	4200	2500	5000	3700	12000	3700	NT	NT
Chromium	mg/Kg	20	21	20	19	21	28	23	22	21	21	78	26	60	21	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	9.9	8.7	9.4	9	7.9	14	8.2	8.8	9.4	8.8	11	2.4	6.3	5.5	NT	NT
Copper	mg/Kg	17	14	19	18	17	16	16	19	19	19	22	15	23	12	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	19000	19000	22000	17000	21000	23000	22000	22000	22000	23000	27000	21000	20000	17000	NT	NT
Lead	mg/Kg	18	15	410	50	46	15	20	23	63	22	22	13	380	23	660 mg/Kg	NT
Magnesium	mg/Kg	4500	3400	3800	2900	3400	3200	2900	3500	3900	3300	3100	2400	4100	2700	NT	NT
Manganese	mg/Kg	930	680	860	150	590	840	780	630	930	500	280	59	410	370	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	23	20	23	21	22	32	22	22	22	22	26	12	14	12	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1300	1300	1700	1500	1300	1300	1500	1600	1900	1900	1200	1000	1400	1200	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	270	110	340	150	260	240	130	240	420	150	270	160	140	220	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	37	39	41	38	37	42	41	39	40	41	44	37	35	34	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	52	46	59	67	52	44	57	63	63	61	420	35	150	38	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Benzoic acid	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,270,000,000 µg/Kg	1,170,000,000 µg/Kg
Napthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Diethyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	493,000,000 µg/Kg	1,140,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Di-n-butyl-phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Butly benzyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	123,000,000 µg/Kg	285,000,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Di-n-octyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg
LEACHABLE METALS (SW-846)																	
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 mg/L***	5 mg/L***

ug/Kg = micrograms per kilogram NT = No Target Concentration
mg/Kg = milligrams per kilogram NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration Based on 40 CFR, Chapter 1, Part 216.24

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-9 (continued)- RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		102D DRAIN 1	102D DRAIN 2	102D DRAIN 3	102D DRAIN 1	102D DRAIN 2	102D DRAIN 3	102DCS CHEM FEED SED	102DSC SED	102D CORNER SPILL	102D SS-4 (DEEP)	102D SS-3 (DEEP)	102D SS-1(DEEP)	102D SS-2(DEEP)	102D SS-5 (DEEP)	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/22/2003	7/22/2003	7/22/2003	7/22/2003	7/22/2003	7/22/2003	7/22/2003	7/22/2003	7/22/2003	4/8/2004	4/8/2004	4/8/2004	4/8/2004	4/8/2004		
LAB ID NUMBER:		219164-6	219164-7	219164-8	219725-1	219725-2	219725-3	219164-9	219164-12	219164-13	225739-1	225739-2	225738-9	225738-11	225738-12		
SAMPLE DEPTH:		(Drain Sediment)	(Drain Sediment)	(Drain Sediment)	(Drain Sediment)	(Drain Sediment)	(Drain Sediment)	0" to 6"	0" to 6"	0" to 6"	24" to 30"	24" to 30"	24" to 30"	24" to 30"	24" to 30"		
PARAMETER (METHOD)	UNITS																
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	24	0.19	10	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/Kg	NA	NA	NA	NA	NA	NA	370	520	140	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	1.7	0.089	0.85	0.036	0.019	0.033	0.014	0.024	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	24000	16000	9900	14000	10000	16000	16000	16000	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	NA	NA	NA	NA	NA	NA	6	ND	ND	ND	ND	1.7	1.6	1.5	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	NA	NA	NA	NA	NA	NA	46	8.1	11	4.8	4.4	4.9	5.3	6.2	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	600	190	10	76	89	100	230	96	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	0.46	0.51	ND	0.49	1.1	0.56	2.2	1.7	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	20	0.82	2	ND	ND	ND	ND	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	13000	6800	5100	3800	2700	2800	4100	3000	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	410	22	87	18	20	20	21	29	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	11	8.9	8.8	3.7	15	10	21	8.9	NT	NT
Copper	mg/Kg	NA	NA	NA	NA	NA	NA	980	27	390	11	9.2	14	14	12	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	170000	21000	110000	17000	16000	22000	19000	22000	NT	NT
Lead	mg/Kg	NA	NA	NA	NA	NA	NA	580	120	54	12	8.8	18	25	10	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	4300	4000	36000	1500	1600	1800	2300	1900	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	770	620	400	160	270	290	1000	400	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	65	19	75	10	14	12	42	19	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	2900	1600	12000	660	450	790	780	660	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	ND	ND	0.78	ND	ND	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	600	640	630	NA	NA	NA	680	10	450	ND	ND	ND	ND	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	770	210	11000	ND	ND	180	250	120	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	2.7	1.5	2.6	ND	ND	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	56	36	2	29	26	40	36	45	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	770	84	440	37	20	41	27	23	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Benzoic acid	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	3500	ND	ND	ND	ND	ND	2,270,000,000 µg/Kg	1,170,000,000 µg/Kg
Napthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	62	ND	ND	ND	ND	ND	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	15	ND	ND	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	5.9	ND	ND	54,100,000 µg/Kg	53,700,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	8.3	ND	ND	21,300,000 µg/Kg	34,000,000 µg/Kg
Diethyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	14	ND	ND	ND	ND	ND	493,000,000 µg/Kg	1,140,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	140	15	ND	45	ND	ND	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	5.2	ND	ND	6.5	ND	ND	154,000,000 µg/Kg	188,000,000 µg/Kg
Di-n-butyl-phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	580	ND	ND	ND	ND	ND	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	130	18	ND	28	ND	ND	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	150	20	4.2	31	ND	ND	16,400,000 µg/Kg	34,800,000 µg/Kg
Butly benzyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	49000	ND	ND	ND	ND	ND	123,000,000 µg/Kg	285,000,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	75	9.5	ND	16	ND	ND	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	170	12	ND	17	ND	ND	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	2200	ND	ND	40	ND	ND	1,230,000 µg/Kg	28,500,000 µg/Kg
Di-n-octyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	190	ND	ND	ND	ND	ND	NT	NT
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	140	10	ND	16	ND	ND	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	72	ND	ND	ND	ND	ND	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	90	ND	ND	18	ND	ND	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	240	15	7.2	24	8.9	11	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	260	11	ND	21	10	14	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	190	18	13	27	9.6	13	16,500,000 µg/Kg	37,200,000 µg/Kg
LEACHABLE METALS (SW-846)																	
Silver	mg/L	NA	NA	NA	0.01	0.2	ND	NA	NA	NA	NA	NA	NA	NA	NA	5 mg/L***	5 mg/L ***

ug/Kg = micrograms per kilogram NT = No Target Concentration
mg/Kg = milligrams per kilogram NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration Based on 40 CFR, Chapter 1, Part 216.24

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 102E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-10 - RESULTS OF SHALLOW SOIL SAMPLE ANALYSIS

	SAMPLE NUMBER:	102ECSSOIL	NON-RESIDENTIAL	CONSTRUCTION
	SAMPLE DATE:	7/23/2003	RISK-BASED	WORKER
	LAB ID NUMBER:	219204-4	TARGET	TARGET
	SAMPLE DEPTH:	0" to 6"	LEVELS*	LEVELS**
PARAMETER (METHOD)	**UNITS**			
CYANIDE (9014/9010B)				
Total Cyanide	mg/Kg	0.22	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)				
Total Phosphorus	mg/Kg	160	NT	NT
MERCURY (7471A)				
Mercury	mg/Kg	0.028	630 mg/Kg	21.6 mg/Kg
METALS (6010B)				
Aluminum	mg/Kg	17000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	6.8	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	240	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.87	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.15	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	8500	NT	NT
Chromium	mg/Kg	23	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	12	NT	NT
Copper	mg/Kg	13	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	20000	NT	NT
Lead	mg/Kg	47	660 mg/Kg	NT
Magnesium	mg/Kg	2800	NT	NT
Manganese	mg/Kg	740	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	21	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	940	NT	NT
Sodium	mg/Kg	360	NT	NT
Thallium	mg/Kg	1.3	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	38	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	41	288,000 mg/Kg	775,000 mg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
Underlined Sample Numbers represent sediment samples.
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - AIR MONITORING
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-11 - RESULTS OF AIR MONITORING
MERCURY AND LEAD PARTICULATE

SAMPLE NUMBER	LAB ID NUMBER	SAMPLE DATE	SAMPLE DURATION (minutes)	SAMPLE VOLUME (liters)	QUANTITY DETECTED (µg)	EXPOSURE (mg/m^3)	OSHA PEL[1] (mg/m^3)
PARAMETER (METHOD)							
PARTICULATE MERCURY, ABIENT (OSHA METHOD 145)							
103C	2003028258	9/4/2003	304	608	ND	<0.00003	0.01
104D	2003028259	9/4/2003	400	800	ND	<0.00003	0.01
104C	2003028260	9/4/2003	394	788	ND	<0.00003	0.01
104T	2003028261	9/4/2003	130	234	ND	<0.00003	0.01
103D	2003028263	9/4/2003	370	740	ND	<0.00003	0.01
103T	2003028264	9/4/2003	378	756	ND	<0.00003	0.01
102A	2003028265	9/4/2003	371	742	ND	<0.00003	0.01
102D	2003028266	9/4/2003	364	728	ND	<0.00003	0.01
LEAD, AMBIENT (OSHA METHOD 125)							
112-3A	2004011025	4/7/2004	85	255	ND	<0.0002	0.05
112-4A	2004011029	4/7/2004	198	594	0.995	0.0017	0.05
112-5A	2004011030	4/7/2004	147	441	ND	<0.0001	0.05
112C	2003028262	9/4/2003	393	786	ND	<0.0006	0.05
LEAD, PERSONNEL (OSHA METHOD 125)							
112-1P	2004011023	4/7/2004	382	573	0.73	0.0013	0.05
112-2P	2004011024	4/7/2004	385	578	0.865	0.0015	0.05

[1]Occupational Safty and Health Administration (OSHA) Permissible Exposure Limits (PEL).
µg = micrograms
mg/m^3 = milligrams per cubic meter
ND = Not Detected above laboratory quantitative limits

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - AIR MONITORING
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-11 (continued) - RESULTS OF AIR MONITORING
MERCURY PASSIVE AIR MONITORING

SAMPLE NUMBER	LAB ID NUMBER	SAMPLE DATE	SAMPLE DURATION (minutes)	SAMPLE VOLUME (liters)	QUANTITY DETECTED (µg)	EXPOSURE (mg/m^3)	OSHA PEL[1] (mg/m^3)
PARAMETER (METHOD)							
MERCURY (OSHA METHOD 140)							
103C	2003028250	9/4/2003	421	6.27	ND	<0.0016	0.05
102D	2003028251	9/4/2003	363	5.41	ND	<0.0018	0.05
103D	2003028252	9/4/2003	369	5.50	0.0277	0.005	0.05
104C	2003028253	9/4/2003	395	5.89	ND	<0.0017	0.05
103T	2003028254	9/4/2003	377	5.62	0.0255	0.0045	0.05
104T	2003028255	9/4/2003	339	5.05	ND	<0.0020	0.05
104D	2003028256	9/4/2003	398	5.93	ND	<0.0017	0.05
102A	2003028257	9/4/2003	370	5.51	ND	<0.0018	0.05

[1]Occupational Safty and Health Administration (OSHA) permissible exposure limits (PEL).
µg = micrograms
mg/m^3 = milligrams per cubic meter
ND = Not Detected above laboratory quantitative limits

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-12 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		103CSWS1 7/23/2003 219204-8	103CSWS2 7/23/2003 219204-10	103CSWS3 7/23/2003 219204-11	103CSWS4 7/23/2003 219204-13	103CWS1 7/24/2003 219240-28	103CWS2 7/24/2003 219240-29	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**								
PCBs (8082)									
Aroclor 1260	µg/cm²	0.048	0.024	0.46	0.034	0.063	ND	10 ug/cm² ***	10 ug/cm² ***
EXPLOSIVES (8330)									
1,3,5-Trinitrobenzene	µg/Wipe	ND	240	ND	ND	ND	ND	18,500,000 µg/Kg	42,800,000 µg/Kg
MERCURY (7471A)									
Mercury	µg/Wipe	2700	400	150	1500	4900	9100	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)									
Aluminum	mg/Wipe	3	2.9	0.22	5.2	12	4	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.0045	ND	ND	0.0027	0.0068	0.01	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.0029	0.0027	0.0021	0.0049	0.021	0.0097	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	6.8	0.12	0.077	0.12	1.8	0.79	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.013	0.0009	0.0006	0.0019	0.016	0.071	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	34	42	3.8	43	180	80	NT	NT
Chromium	mg/Wipe	0.35	0.15	0.017	0.018	0.17	0.12	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.057	0.0011	0.017	0.0069	0.13	0.099	NT	NT
Copper	mg/Wipe	0.047	0.38	0.18	22	0.24	0.56	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	5.8	3.1	18	16	30	59	NT	NT
Lead	ug/ft²	**63172**	**8361**	**18580**	**1672**	**23225**	**13006**	200 ug/ft² ****	200 ug/ft² ****
Magnesium	mg/Wipe	2.2	1.2	0.28	2.6	12	4.5	NT	NT
Manganese	mg/Wipe	0.19	0.061	0.088	0.2	0.61	0.39	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0073	0.0031	0.0022	0.019	0.036	0.03	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	1	2.1	0.099	3.4	4.2	6.3	NT	NT
Selenium	mg/Wipe	ND	ND	ND	0.0024	0.0023	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.0008	ND	ND	0.0019	0.0025	0.0021	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	5.7	1.4	1.2	5.3	7.4	6.2	NT	NT
Vanadium	mg/Wipe	0.0075	0.0053	0.0009	0.016	0.035	0.015	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	10	0.28	0.77	9.1	5.3	3	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-13 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		103DCSWS1 7/24/2003 219240-13	103DCSWS2 7/24/2003 219240-15	103DWS1 7/24/2003 219240-30	103DWS2 7/24/2003 219240-31	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**						
EXPLOSIVES (8330)							
1,3,5-Trinitrobenzene	µg/Wipe	ND	ND	2.2	ND	18,500,000 µg/Kg	42,800,000 µg/Kg
2-Amino-4,6-Dinitrotoluene	µg/Wipe	ND	3.5	ND	ND	82,900 µg/Kg	53,300 µg/Kg
MERCURY (7471A)							
Mercury	µg/Wipe	96	41	3500	43	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)							
Aluminum	mg/Wipe	3	2.2	6.3	2.1	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	ND	0.0097	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.0018	0.0011	0.018	0.0047	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	2.3	0.23	0.7	0.057	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0006	0.0004	0.059	0.0004	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	63	16	90	53	NT	NT
Chromium	mg/Wipe	0.018	0.0071	0.19	0.011	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0028	0.0009	0.042	0.0015	NT	NT
Copper	mg/Wipe	0.0067	0.0053	1	0.0063	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	3.9	2.5	63	2.7	NT	NT
Lead	ug/ft^2	**120770**	**25083**	**24154**	**362**	200 ug/ft^{2} ****	200 ug/ft^{2} ****
Magnesium	mg/Wipe	1.7	0.82	11	1.5	NT	NT
Manganese	mg/Wipe	0.12	0.05	1.1	0.089	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0037	0.0022	0.11	0.0035	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	3	1.6	9.2	3.3	NT	NT
Selenium	mg/Wipe	ND	ND	0.0017	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	ND	ND	0.0044	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	1.7	1	12	18	NT	NT
Vanadium	mg/Wipe	0.018	0.0046	0.027	0.015	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.16	0.11	7.8	0.033	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-14 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		103ECSWS1 7/24/2003 219240-9	103ECSWS2 7/24/2003 219240-11	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS				
EXPLOSIVES (8330)					
2-Amino-4,6-Dinitrotoluene	µg/Wipe	4.4	8.6	82,900 µg/Kg	53,300 µg/Kg
4-Amino-2,6-Dinitrotoluene	µg/Wipe	2	ND	79,100 µg/Kg	45,100 µg/Kg
MERCURY (7471A)					
Mercury	µg/Wipe	14	94	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)					
Aluminum	mg/Wipe	1.4	2.5	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Wipe	0.0011	0.0011	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	7.5	0.78	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0015	0.0004	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	26	31	NT	NT
Chromium	mg/Wipe	0.015	0.12	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0077	0.0019	NT	NT
Copper	mg/Wipe	0.0066	0.0033	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	2	2.5	NT	NT
Lead	ug/ft^2	**306570**	**75249**	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	0.99	1.1	NT	NT
Manganese	mg/Wipe	0.072	0.081	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0029	0.0026	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.75	1.1	NT	NT
Sodium	mg/Wipe	0.53	0.65	NT	NT
Vanadium	mg/Wipe	0.0069	0.0047	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.29	0.19	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-15 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER:		112CSWS1	112CSWS2	112CSWS3	112CSWS4	112CSWS5	112CSWS6	112 WS-1	112 WS-2	112 WS-3	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
SAMPLE DATE:		7/24/2003	7/24/2003	7/24/2003	7/24/2003	7/24/2003	7/24/2003	12/18/2003	12/18/2003	12/18/2003		
LAB ID NUMBER:		219240-17	219240-19	219240-21	219240-22	219240-24	219240-26	223220-15	223220-16	223220-17		
PARAMETER (METHOD)	UNITS											
PCBs (8082)												
Aroclor 1260	ug/cm^2	0.039	0.061	0.046	0.21	0.2	0.012	ND	ND	NA	10 ug/cm^2 ***	10 ug/cm^2 ***
METALS (6010B)												
Aluminum	mg/Wipe	11	2.2	5.4	1.8	8.3	2.1	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	0.033	0.036	0.0027	0.026	ND	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.017	0.0028	0.0035	0.0015	0.0064	0.002	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.14	0.037	0.099	0.067	0.25	0.042	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.001	0.0007	0.0008	0.0004	0.0095	ND	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	57	45	60	65	59	51	NA	NA	NA	NT	NT
Chromium	mg/Wipe	0.026	0.014	0.024	0.0069	0.057	0.0062	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0068	0.0017	0.0025	0.0008	0.0038	0.0012	NA	NA	NA	NT	NT
Copper	mg/Wipe	0.025	0.019	0.02	0.014	1.9	0.0063	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	32	2.8	9.9	2.7	16	3.5	NA	NA	NA	NT	NT
Lead	ug/ft^2	**9011**	**7524**	**86397**	**2229**	**21367**	**343**	NA	NA	15	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	3.3	1.8	4.6	3.2	5.5	0.85	NA	NA	NA	NT	NT
Manganese	mg/Wipe	0.48	0.059	0.12	0.038	0.32	0.06	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.016	0.0086	0.0074	0.0049	0.015	0.0033	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	6.2	9.2	3.6	1.2	1.9	1.8	NA	NA	NA	NT	NT
Selenium	mg/Wipe	ND	0.001	ND	ND	ND	ND	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	ND	ND	ND	ND	0.0016	ND	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	7.5	11	2.1	0.9	1.8	1.1	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	0.031	0.0047	0.014	0.0032	0.032	0.0061	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.12	0.2	0.22	0.2	1.6	0.048	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-15 (continued) - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER:		112 WS-4	112 WS-5	112 WS-6	112 WIPE 1	112 WIPE 2 WOOD SHELF	112 WIPE 3 PIPE	112 WIPE 4 METAL	112 WIPE 5	112 WIPE 6	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
SAMPLE DATE:		12/18/2003	12/18/2003	12/18/2003	4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004		
LAB ID NUMBER:		223220-18	223220-19	223220-20	225741-14	225741-6	225741-8	225741-11	225741-19	225741-13		
PARAMETER (METHOD)	UNITS											
PCBs (8082)												
Aroclor 1260	ug/cm^2	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 ug/cm^2 ***	10 ug/cm^2 ***
METALS (6010B)												
Aluminum	mg/Wipe	NA	NA	NA	0.62	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	NA	NA	NA	0.005	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	NA	NA	NA	14	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Wipe	NA	NA	NA	0.0014	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	NA	NA	NA	0.48	NA	NA	NA	NA	NA	NT	NT
Lead	ug/ft^2	901	15	11	157	25083	5109	863	213	315	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	NA	NA	NA	0.42	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Wipe	NA	NA	NA	0.02	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	NA	NA	NA	0.29	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	NA	NA	NA	ND	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	NA	NA	NA	0.47	NA	NA	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	NA	NA	NA	0.001	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	NA	NA	NA	0.02	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-15 (continued) - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER:		112 WIPE 7	112 WIPE 8	112 WIPE 9 WRAPPED	B112 WIPE 10 (PILLAR)	112 WIPE 11 WRAPPED PIPE	112 WIPE 12	112 WIPE 13	112 WIPE 14	112 WIPE 15 REMELT	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
SAMPLE DATE:		4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004	4/6/2004		
LAB ID NUMBER:		225741-12	225741-17	225741-10	225741-20	225741-18	225741-5	225741-3	225741-4	225741-7		
PARAMETER (METHOD)	UNITS											
PCBs (8082)												
Aroclor 1260	ug/cm^2	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 ug/cm^2 ***	10 ug/cm^2 ***
METALS (6010B)												
Aluminum	mg/Wipe	0.98	0.4	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	ND	NA	NA	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	ND	ND	NA	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.076	0.076	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0002	0.0008	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	14	9	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Wipe	0.0027	0.012	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	ND	ND	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Wipe	0.0036	0.0011	NA	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	0.88	0.68	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	ug/ft^2	**241**	**743**	**1300**	**287**	**269**	**1579**	148	102	167	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	0.5	0.19	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Wipe	0.03	0.013	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.001	ND	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.34	0.29	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Wipe	ND	ND	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	ND	ND	NA	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	0.32	0.36	NA	NA	NA	NA	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	0.0017	0.001	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.11	0.049	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-15 (continued) - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER:		112 WIPE 16	112 WIPE 17	112 WIPE 18 VALTCASE PIPE	112 PCB WIPE 1	112 PCB WIPE 2	112 PCB WIPE 3	112 PCB WIPE 4	112 PCB WIPE 5	112 PCB WIPE 6	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
SAMPLE DATE:		4/6/2004	4/6/2004	4/6/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004		
LAB ID NUMBER:		225741-15	225741-9	225741-16	225739-10	225739-11	225739-12	225738-14	225739-15	225739-9		
PARAMETER (METHOD)	UNITS											
PCBs (8082)												
Aroclor 1260	ug/cm^2	NA	NA	NA	0.024	0.073	0.0042	0.015	0.046	0.035	10 ug/cm^2 ***	10 ug/cm^2 ***
METALS (6010B)												
Aluminum	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	ug/ft^2	167	73391	5852	NA	NA	NA	NA	NA	NA	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Seleniun	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Vanadium	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	NA	NA	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103 SECTIONS A, B, AND C
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-16 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		103CSSOIL1	103CSSOIL2	103CSSOIL3	103CSSOIL4	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/23/2003	7/23/2003	7/23/2003	7/23/2003		
LAB ID NUMBER:		219204-6	219204-7	219204-9	21904-12		
SAMPLE DEPTH:		0" to 6"	(Pipe Sediment)	(Pipe Sediment)	0" to 6"		
PARAMETER (METHOD)	**UNITS**						
CYANIDE (9014/9010B)							
Total Cyanide	mg/Kg	0.28	ND	ND	ND	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)							
Total Phosphorus	mg/Kg	25	130	32	250	NT	NT
MERCURY (7471A)							
Mercury	mg/Kg	0.12	0.37	0.067	0.071	630 mg/Kg	21.6 mg/Kg
METALS (6010B)							
Aluminum	mg/Kg	17000	18000	14000	15000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	5.8	5.7	5.9	4.6	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	160	160	160	170	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	1.2	1.3	0.47	1.1	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.43	0.43	0.25	0.47	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	5200	5000	3300	8000	NT	NT
Chromium	mg/Kg	27	31	20	29	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	10	9.9	7	18	NT	NT
Copper	mg/Kg	87	36	20	14	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	21000	21000	18000	37000	NT	NT
Lead	mg/Kg	21	34	31	32	660 mg/Kg	NT
Magnesium	mg/Kg	3100	2900	3100	3700	NT	NT
Manganese	mg/Kg	630	580	500	660	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	34	33	15	39	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1300	1700	1200	1400	NT	NT
Selenium	mg/Kg	0.48	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	180	500	210	690	NT	NT
Thallium	mg/Kg	1.2	0.82	1.4	1.3	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	35	35	33	38	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	120	57	50	68	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)							
Naphthalene	µg/Kg	24	ND	ND	ND	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	16	2.4	ND	ND	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	5.2	11	ND	ND	54,100,000 µg/Kg	53,700,000 µg/Kg
2,4-Dinitrotoluene	µg/Kg	ND	6.2	ND	ND	51,300 µg/Kg	1,190,000 µg/Kg
Acenaphthene	µg/Kg	11	ND	ND	ND	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	32	8.7	ND	5.2	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	8.7	ND	ND	ND	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	370	130	21	28	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	72	31	ND	6.5	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	66	ND	ND	ND	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	88	110	96	95	NT	NT
Fluoranthene	µg/Kg	1000	230	70	90	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	650	140	47	59	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	460	70	20	24	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	520	79	40	50	2,040,000 µg/Kg	81,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	460	83	61	63	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	500	38	10	13	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	380	61	ND	32	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	250	19	ND	ND	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	68	ND	ND	ND	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	250	6.4	ND	ND	16,500,000 µg/Kg	37,200,000 µg/Kg
VOLATILE ORGANICS (8260B)							
Trichlorofluoromethane	µg/Kg	4.5	41	ND	6.5	254,000,000 µg/Kg	47,600,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-17 - RESULTS OF SHALLOW SOIL SAMPLE ANALYSIS

	SAMPLE NUMBER:	103DCSSS1	103DCSSS2	NON-RESIDENTIAL	CONSTRUCTION
	SAMPLE DATE:	7/24/2003	7/24/2003	RISK-BASED	WORKER
	LAB ID NUMBER:	219240-12	219240-14	TARGET	TARGET
	SAMPLE DEPTH:	0" to 6"	0" to 6"	LEVELS*	LEVELS**
PARAMETER (METHOD)	UNITS				
PHOSPHORUS (4500PE)					
Total Phosphorus	mg/Kg	250	290	NT	NT
MERCURY (7471A)					
Mercury	mg/Kg	0.056	0.84	630 mg/Kg	21.6 mg/Kg
METALS (6010B)					
Aluminum	mg/Kg	9600	9900	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	5.9	4.6	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	67	88	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.59	0.57	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.26	0.22	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	3200	3400	NT	NT
Chromium	mg/Kg	17	16	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	7.7	4.7	NT	NT
Copper	mg/Kg	11	13	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	16000	14000	NT	NT
Lead	mg/Kg	14	35	660 mg/Kg	NT
Magnesium	mg/Kg	2600	2400	NT	NT
Manganese	mg/Kg	620	270	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	19	9.9	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	540	570	NT	NT
Sodium	mg/Kg	600	280	NT	NT
Vanadium	mg/Kg	33	27	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	36	50	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)					
Napthalene	µg/Kg	2.9	ND	119,000 µg/Kg	256,000 µg/Kg
2-Methylnapthalene	µg/Kg	2.6	ND	3,590,000 µg/Kg	1,530,000 µg/Kg
2,4-Dinitrotoluene	µg/Kg	95	ND	51,300 µg/Kg	1,190,000 µg/Kg
Dibenzofuran	µg/Kg	5.1	ND	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	ND	2.7	21,300,000 µg/Kg	34,000,000 µg/Kg
n-Nitrosodiphenylamine	µg/Kg	11	100	3,260,000 µg/Kg	18,200,000 µg/Kg
Phenanthrene	µg/Kg	15	59	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	3.7	12	154,000,000 µg/Kg	188,000,000 µg/Kg
Di-n-butyl-phthalate	µg/Kg	100	1300	NT	NT
Fluoranthene	µg/Kg	36	150	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	30	100	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	12	43	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	47	77	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	15	27	1230000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	66	81	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	ND	56	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	17	60	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	ND	19	12,800 µg/Kg	724,000 µg/Kg
VOLATILE ORGANICS (8260B)					
Acetone	µg/Kg	52	31	807,000,000 µg/Kg	208,000,000 µg/Kg

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standard

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-18 - RESULTS OF SHALLOW SOIL SAMPLE ANALYSIS

	SAMPLE NUMBER:	103ECSSS1	103ECSSS2	NON-RESIDENTIAL	CONSTRUCTION
	SAMPLE DATE:	7/24/2003	7/24/2003	RISK-BASED	WORKER
	LAB ID NUMBER:	219240-8	219240-10	TARGET	TARGET
	SAMPLE DEPTH:	0" to 6"	0" to 6"	LEVELS*	LEVELS**
PARAMETER (METHOD)	UNITS				
CYANIDE (9014/9010B)					
Total Cyanide	mg/Kg	0.23	0.18	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)					
Total Phosphorus	mg/Kg	1.5	1.3	NT	NT
MERCURY (7471A)					
Mercury	mg/Kg	0.07	0.044	630 mg/Kg	21.6 mg/Kg
METALS (6010B)					
Aluminum	mg/Kg	7700	10000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	7.2	3.3	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	150	160	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	1.0	0.88	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.43	0.12	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	5100	11000	NT	NT
Chromium	mg/Kg	28	21	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	6.3	22	NT	NT
Copper	mg/Kg	20	12	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	27000	25000	NT	NT
Lead	mg/Kg	59	110	660 mg/Kg	NT
Magnesium	mg/Kg	2600	4900	NT	NT
Manganese	mg/Kg	230	190	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	29	25	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	830	760	NT	NT
Sodium	mg/Kg	ND	750	NT	NT
Thallium	mg/Kg	0.83	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	36	30	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	55	52	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)					
Fluoranthene	µg/Kg	NA	36	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	23	16,400,000 µg/Kg	34,800,000 µg/Kg
Chrysene	µg/Kg	NA	45	2,040,000 µg/Kg	81,500,000 µg/Kg
VOLATILE ORGANICS (8260B)					
Trichlorofluoromethane	µg/Kg	7.6	ND	254,000,000 µg/Kg	47,600,000 µg/Kg

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112CSSS1	112CSSS2	112CSSS3	112CSSS4	112CSSS5	SS-1 SHALLOW	SS-1 DEEP	SS-2 SHALLOW	SS-2 DEEP	SS-3 SHALLOW	SS-3 DEEP	SS-4 SHALLOW	SS-4 DEEP	SS-5 SHALLOW	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/24/2003	7/24/2003	7/24/2003	7/24/2003	7/24/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003		
LAB ID NUMBER:		219240-16	219240-18	219240-20	219240-23	219240-25	223164-1	223164-2	223164-3	223164-4	223164-5	223164-6	223164-7	223164-8	223164-9		
SAMPLE DEPTH:		0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	0" to 6"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	ND	ND	3000	1500	2200	ND	22	100	ND	44	19	61	6.4	170	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	0.2	ND	ND	0.89	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	330	580	130	25	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	0.056	0.031	0.064	0.12	0.53	0.03	0.069	0.036	0.037	0.037	0.038	0.036	0.037	0.044	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	5900	10000	680	13000	8900	9700	9400	11000	12000	11000	12000	10000	10000	11000	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	0.99	8.8	ND	11	20	1.1	ND	1.6	ND	ND	ND	ND	1.2	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	5.6	3.2	1.5	7.2	11	4.7	7.1	2.8	3	3.5	4.3	4.1	6.2	2.6	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	99	180	15	72	370	95	130	230	120	93	130	84	110	98	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.18	0.37	ND	0.91	0.3	0.77	0.79	0.74	0.83	0.75	0.88	0.72	0.98	0.68	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.53	0.12	0.14	0.78	0.97	ND	ND	ND	ND	ND	ND	ND	ND	0.76	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	1500	4800	3700	3900	77000	3100	10000	8500	3400	4700	3400	4100	3200	4600	NT	NT
Chromium	mg/Kg	14	18	2.8	24	17	20	18	23	21	19	21	18	21	21	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	4.5	5.2	1.7	20	4.3	3.9	5	3.4	7.1	4.6	4.2	5.5	6.8	6.3	NT	NT
Copper	mg/Kg	39	13	5.7	1600	170	11	14	11	11	8.7	10	12	13	14	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	14000	13000	2900	22000	15000	12000	14000	12000	14000	15000	18000	15000	19000	14000	NT	NT
Lead	mg/Kg	320	630	120	760	3300	160	35	140	49	69	28	20	14	60	660 mg/Kg	NT
Magnesium	mg/Kg	11000	4500	920	2700	4900	2500	5600	3000	2800	3400	3000	3400	2700	3900	NT	NT
Manganese	mg/Kg	210	100	58	190	280	72	260	67	95	110	82	230	220	110	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	11	10	3.8	15	11	10	13	9.7	11	11	12	12	13	12	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1700	560	130	1100	1200	510	750	600	520	500	520	520	500	670	NT	NT
Selenium	mg/Kg	1	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	ND	ND	0.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	2500	670	91	540	1600	230	700	800	360	1500	970	2700	580	2300	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	18	24	2.8	37	23	25	27	22	29	26	33	26	36	25	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	38	41	75	100	98	71	44	40	40	80	51	38	35	45	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	2200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	650	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	9200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	9700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	7600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	ug/Kg	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	11000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	9900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	7800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	8300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		SS-5 DEEP	SS-6 SHALLOW	SS-6 DEEP	SS-7	SS-8	SS-9	SS-10 SHALLOW	SS-10 DEEP	SS-11 SHALLOW	SS-11 DEEP	SS-12	SS-13 SHALLOW	SS-13 DEEP	SS-14 SHALLOW	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/16/2003	12/16/2003	12/16/2003	12/17/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003		
LAB ID NUMBER:		223164-10	223164-11	223164-12	223164-13	223164-14	223164-15	223164-16	223164-17	223164-18	223164-19	223164-20	223164-21	223164-22	223164-23		
SAMPLE DEPTH:		12 to 18"	0" to 6"	12 to 18"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	(Pipe Sediment)	0" to 6"	12 to 18"	0" to 6"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	ND	9.7	8.4	34	230	34	170	ND	150	5.9	1600	ND	ND	34	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	0.023	0.046	0.033	ND	0.011	ND	0.04	0.022	0.029	0.033	22	0.029	0.023	0.044	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	11000	11000	11000	720	ND	720	12000	14000	1500	12000	4100	14000	15000	11000	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	ND	ND	ND	ND	21000	2.3	2.4	1.4	1.5	ND	960	ND	ND	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	2.7	7.6	8.8	1.4	560	0.98	3.6	5.2	1.7	3.9	31	5.1	6	5.5	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	100	120	130	12	5.4	11	88	78	36	63	1100	71	80	130	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.87	0.87	0.91	0.13	ND	0.13	0.69	0.71	0.19	0.91	0.17	0.7	0.7	0.86	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	5	ND	ND	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	2800	2800	2600	1500	750	1400	2500	2800	11000	3900	24000	2800	3800	3400	NT	NT
Chromium	mg/Kg	18	16	17	2.1	ND	2.1	19	19	6.4	17	39	20	19	18	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	5.7	7.8	6.7	2.1	ND	1.9	6.7	4.5	2.5	3.9	9.4	5.3	2.9	8.8	NT	NT
Copper	mg/Kg	11	14	17	0.88	450	ND	9.5	11	2.9	9.9	1100	24	15	34	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	16000	19000	19000	2800	150	2900	13000	17000	3900	16000	26000	17000	20000	16000	NT	NT
Lead	mg/Kg	8.6	12	15	11	160000	6.8	110	14	130	15	240000	19	50	21	660 mg/Kg	NT
Magnesium	mg/Kg	2600	2700	2700	820	140	820	2500	2200	2800	1900	17000	2300	2300	2400	NT	NT
Manganese	mg/Kg	79	620	510	68	0.99	57	230	110	100	46	850	220	80	390	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	11	17	17	4.5	3.4	4.1	10	11	5.9	11	19	12	11	13	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	460	960	1000	130	320	120	530	490	190	520	140	620	550	680	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	ND	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	ND	ND	ND	47	ND	ND	ND	ND	ND	7.8	ND	ND	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	470	330	160	ND	1700	ND	1200	630	220	460	630	310	310	310	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	4.9	ND	ND	ND	ND	ND	4.8	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	32	29	29	3.1	ND	3.4	23	28	4.6	23	9.5	31	33	31	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	32	46	61	11	42	11	24	24	40	18	1400	33	26	43	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		SS-14 DEEP	SS-15 SHALLOW	SS-15 DEEP	SS-16 SHALLOW	SS-16 DEEP	SS-17	SS-18	112 UTILITY TUNNEL	112 SS 1 (SHALLOW)	112 SS 2 (DEEP)	112 SS 3 (SHALLOW)	112 SS 4 (DEEP)	112 SS 5 (SHALLOW)	112 SS 6 (DEEP)	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	12/16/2003	4/5/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004		
LAB ID NUMBER:		223164-24	223164-25	223164-26	223164-27	223164-28	223164-29	223164-30	225738-17	225740-19	225740-18	225740-10	225740-11	255740-14	255740-15		
SAMPLE DEPTH:		12 to 18"	0" to 6"	12 to 18"	0" to 6"	12 to 18"	(Pipe Sediment)	0" to 6"	(Drain Sediment)	4" to 8"	12" to 24"	4" to 8"	12" to 24"	4" to 8"	12" to 24"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	22	ND	ND	30	ND	170	150	NA	NA	NA	NA	NA	NA	NA	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	0.033	0.031	0.027	0.036	0.034	0.16	0.32	NA	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	11000	11000	13000	12000	14000	450	120	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	ND	ND	ND	16	1.7	ND	10000	NA	5.8	ND	9.4	1.1	4.2	2.3	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	6.9	6.1	7	6.4	7.7	2.6	24	NA	3.0	2.1	2.4	3.9	7.3	5.5	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	96	87	83	66	72	60	6.2	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.88	0.81	0.79	0.82	1.2	ND	ND	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	ND	ND	ND	ND	ND	1.7	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	3500	2500	2900	7200	4000	5900	2400	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	18	20	19	19	22	77	0.61	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	7.9	8.2	5.2	6.3	6.7	2.3	ND	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	17	15	13	19	14	170	57	NA	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	16000	17000	18000	16000	20000	140000	690	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	25	18	12	1200	97	41	110000	470	470	9.6	1000	50	1200	110	660 mg/Kg	NT
Magnesium	mg/Kg	2200	2300	2200	2500	2000	580	700	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	390	520	300	150	250	290	4.9	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	13	13	13	12	15	86	5.4	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	640	570	770	710	720	78	33	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	0.57	ND	0.79	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	ND	ND	ND	ND	ND	9.8	NA	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	290	410	330	290	290	150	250	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	ND	ND	4.6	NA	NA	NA	NA	NA	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	33	34	33	30	38	2.4	0.79	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	34	29	31	37	26	110	25	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112 SS 7 (SHALLOW)	112 SS 8 (DEEP)	112 SS 9 (SHALLOW)	112 SS 10 (DEEP)	112 SS 11(SHALLOW	112 SS 12 (DEEP)	112 SS 13 (SHALLOW)	112 SS 14 (DEEP)	112 SS 15 (DEEP)	112 SS 16 (DEEP)	112 SS 17 (DEEP)	112 VALT 3 SED.SAMPLE	112 VALT 1 SED.SAMPLE	112 VALT S SED SAMPLE	NON-RESIDENTIAL RISK-BASED TARGET	CONSTRUCTION WORKER TARGET
SAMPLE DATE:		4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2005		
LAB ID NUMBER:		225740-12	225740-17	225740-9	225740-16	225740-13	225740-7	225740-8	225740-6	225740-3	225740-5	225740-4	225740-2	225740-1	225739-21		
SAMPLE DEPTH:		4" to 8"	12" to 24"	4" to 8"	12" to 24"	4" to 8"	12" to 24"	4" to 8"	12" to 24"	48"	48"	48"	(Vault Sediment)	(Vault Sediment)	(Vault Sediment)	LEVELS*	LEVELS**
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.0077	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	860	2100	1400	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	2.8	ND	9.9	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	6.7	2.9	7.5	2.7	NA	NA	NA	NA	NA	NA	NA	1.3	1.1	ND	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15	37	26	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.14	0.1	ND	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.49	0.55	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1100	330000	320000	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4	9.7	8.3	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2	1.4	2	NT	NT
Copper	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4	3.9	ND	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2700	2500	3000	NT	NT
Lead	mg/Kg	780	14	14000	35	190	8.9	1200	9.5	9.2	14	17	3.7	2.1	3.7	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	620	12000	15000	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	55	81	110	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.7	7.2	7.3	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	150	1400	710	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	1.2	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	230	ND	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.75	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.5	7.6	7	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	11	37	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112 PRESS VALT SS 21	112 PRESS VALT SS 22	112 PRESS VALT SS23	112 PRESS VALT SS24	112 SS 25 (DEEP)	112 SS 26 (DEEP)	112 SS 27 (SHALLOW)	112 SS 28 (SHALLOW)	112 SS 29 (SHALLOW)	112 SS 30 (SHALLOW)	112 SS 31 (DEEP)	112 SS 32 (SHALLOW)	112 SS 33 (SHALLOW)	112 SS 34 (SHALLOW)	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004		
LAB ID NUMBER:		225739-23	225739-22	225738-6	225738-7	225738-5	225738-3	225738-2	225738-4	225739-24	225738-1	225740-24	225739-16	225739-20	225739-19		
SAMPLE DEPTH:		(Vault Sediment)	(Vault Sediment)	(Vault Sediment)	(Vault Sediment)	48"	48"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	48"	4" to 8"	4" to 8"	4" to 8"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	ND	ND	ND	ND	ND	ND	43	160	ND	340	ND	NA	ND	ND	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	NA	NA	0.032	ND	0.02	0.031	0.051	0.13	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	10000	9900	11000	1500	16000	13000	10000	12000	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	ND	ND	1.1	ND	1.5	1.5	1.5	1.9	7.4	NA	NA	1.6	3.4	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	3.3	4.9	2.9	0.91	4.5	7.9	28	20	NA	13	2.4	1.7	6.7	5.1	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	75	68	75	10	99	110	110	160	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.48	0.49	0.43	ND	0.59	0.51	0.39	0.49	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	0.19	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	2300	2600	2300	1100	22000	3500	3500	6800	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	18	20	17	5.1	21	20	14	17	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	4	5.5	6.6	3.8	6.7	6.5	7	7.8	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	8.7	45	10	2.4	12	16	14	30	NA	NA	NA	3.4	20	12	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	13000	15000	14000	4500	16000	21000	15000	18000	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	7	11	17	2.2	14	19	37	44	65	60	14	120	190	17	660 mg/Kg	NT
Magnesium	mg/Kg	1700	1700	2100	970	5400	3100	2400	3200	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	140	370	250	77	280	410	500	510	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	9.4	11	11	9.5	13	20	15	17	NA	NA	NA	NA	NA	NA	18,500 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	390	400	520	140	1100	1400	940	1300	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	0.48	ND	ND	ND	ND	0.73	ND	ND	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	260	150	220	ND	590	340	430	1100	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	23	31	29	5.9	32	34	28	32	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	23	27	29	12	36	55	39	58	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112 SS 35 (SHALLOW)	112 SS 36 (SHALLOW)	112 SS 37 (SHALLOW)	112 SS 38 (SHALLOW)	112 SS 39 (SHALLOW)	112 SS 40 (SHALLOW)	112 SS 41 (SHALLOW)	112 SS 42 (SHALLOW)	112 SS 43 (SHALLOW)	112 SS 44 (DEEP)	112 SS 45 (SHALLOW)	112 SAMPLE 46 SHAVINGS	112 SAMPLE 47 REMELT ROOM	112 SS 48 (DEEP)	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004	4/7/2004		
LAB ID NUMBER:		225740-22	225739-18	225739-17	225739-14	225739-13	225740-23	225739-15	225740-21	225740-20	225739-5	225739-6	225738-10	225739-3	225739-4		
SAMPLE DEPTH:		4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	12" to 24"	4" to 8"	0"	(Vault Sediment)	12" to 24"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	160	ND	ND	NA	NA	NA	NA	NA	ND	ND	180	NA	NA	ND	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0091	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2700	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	1.6	ND	1.4	4.6	ND	13	74	9.2	ND	ND	2.2	NA	ND	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	4.5	5.8	6.2	2.3	1.3	7.5	5.4	6	4.3	3.6	6.6	NA	3.6	3.3	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	260000	NA	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.8	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	NT	NT
Copper	mg/Kg	12	12	19	NA	NA	NA	NA	NA	NA	10	NA	NA	7	11	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3200	NA	NT	NT
Lead	mg/Kg	280	38	87	730	23	1800	9500	1700	20	23	220	110	4.4	8.9	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28000	NA	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.1	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1200	NA	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.2	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	470	NA	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.4	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112SS101	112SS102	112SS103	112SS104	112SS105	112SS106	112SS107	112SS108	112SS109	112SS110	112SS111	112SS112	112SS113	112SS114	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/20/2004	7/20/2004	7/20/2004	7/20/2004	7/20/2004	7/20/2004	7/20/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004		
LAB ID NUMBER:		228707-1	228707-2	228707-3	228707-4	228707-5	228707-6	228707-7	228707-8	228707-9	228707-10	228707-11	228707-12	228707-13	228707-14		
SAMPLE DEPTH:		4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	ND	4.2	1.4	2.2	2.5	1.4	1.4	2.6	11	2.1	1.4	1.5	1.8	1.2	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	4.2	4.4	2.7	5.2	8.0	5.3	6.3	7.3	6.8	6.5	5.4	4.6	8.7	2.9	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	35	23	15	13	16	15	14	16	19	15	13	11	17	11	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	39	96	21	130	23	190	370	43	1100	100	16	26	16	8.4	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	ug/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112SS115	112SS116	112SS117	112SS118	112SS119	112SS120	112SS121	112SS122	112SS201	112SS202	112SS203	112SS204	112SS301	112SS302	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/21/2004	7/22/2004	9/8/2004	9/8/2004	9/8/2004	9/8/2004	12/28/2004	12/28/2004		
LAB ID NUMBER:		228707-15	228707-16	228707-17	228707-18	228707-19	228707-20	228707-21	228707-22	230049-1	230049-2	230049-3	230049-4	233070-1	233070-2		
SAMPLE DEPTH:		4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	4" to 8"	2" to 4"	2" to 4"		
PARAMETER (METHOD)	UNITS																
PCBs (8082)																	
Aroclor 1260	µg/Kg	ND	ND	ND	ND	ND	ND	ND	7.4	NA	NA	NA	NA	NA	NA	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)																	
Total Cyanide	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)																	
Total Phosphorus	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
MERCURY (7471A)																	
Mercury	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)																	
Aluminum	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	2.3	1.5	1.7	1.6	2.0	1.6	1.8	1.5	2.3	2.3	2.4	2.3	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	4.9	8.7	9.8	6.8	8.4	7.0	5.0	5.1	4.5	2.8	3.1	3.7	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	13	13	14	15	17	15	9.4	11	NA	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	13	34	11	25	20	19	9.0	8.6	11	150	27	62	NA	NA	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Selenium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)																	
Naphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	ND	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.7	ND	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	NT	NT
Fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	130	ND	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	ND	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	71	ND	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	86	ND	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	ND	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	ND	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46	ND	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	72	ND	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	55	ND	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	ND	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	54	ND	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 103F (PREVIOUSLY DESIGNATED BUILDING 112)
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-19 (continued) - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		112SS303	112SS304	NON-RESIDENTIAL	CONSTRUCTION
SAMPLE DATE:		12/28/2004	12/28/2004	RISK-BASED	WORKER
LAB ID NUMBER:		233070-3	233070-4	TARGET	TARGET
SAMPLE DEPTH:		2" to 4"	2" to 4"	LEVELS*	LEVELS**
PARAMETER (METHOD)	**UNITS**				
PCBs (8082)					
Aroclor 1260	µg/Kg	NA	NA	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)					
Total Cyanide	mg/Kg	NA	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)					
Total Phosphorus	mg/kg	NA	NA	NT	NT
MERCURY (7471A)					
Mercury	mg/Kg	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)					
Aluminum	mg/Kg	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	NA	NT	NT
Chromium	mg/Kg	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	NA	NT	NT
Copper	mg/Kg	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	NA	NT	NT
Lead	mg/Kg	NA	NA	660 mg/Kg	NT
Magnesium	mg/Kg	NA	NA	NT	NT
Manganese	mg/Kg	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	NA	NT	NT
Selenium	mg/Kg	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	NA	NT	NT
Thallium	mg/Kg	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	NA	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)					
Naphthalene	µg/Kg	ND	ND	119,000 µg/Kg	256,000 µg/Kg
2-Methylnaphthalene	µg/Kg	ND	ND	3,590,000 µg/Kg	1,530,000 µg/Kg
Acenaphthylene	µg/Kg	ND	5.4	54,100,000 µg/Kg	53,700,000 µg/Kg
Acenaphthene	µg/Kg	ND	17	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	ND	6.4	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	ND	13	21,300,000 µg/Kg	34,000,000 µg/Kg
Phenanthrene	µg/Kg	83	270	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	14	55	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	ND	48	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	ND	ND	NT	NT
Fluoranthene	µg/Kg	280	740	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	230	640	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	130	420	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	150	470	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl)phthalate	ug/Kg	ND	ND	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	210	670	21,100 µg/Kg	1,180,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	81	290	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	130	460	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	82	470	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	24	110	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	82	650	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104 SECTIONS A, B, C, AND D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-20 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		104CSWS1 7/23/2003 219204-15	104CSWS2 7/23/2003 219204-18	104CWS1 7/24/2003 219240-33	104DWS1 7/24/2003 219240-32	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**						
PCBs (8082)							
Aroclor 1260	µg/cm²	ND	0.27	ND	0.026	10 ug/cm² ***	10 ug/cm² ***
MERCURY (7471A)							
Mercury	µg/Wipe	7200	180	2000	1500	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)							
Aluminum	mg/Wipe	2.7	1.9	11	2.9	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.0035	ND	0.017	0.004	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.0073	0.0017	0.074	0.009	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.33	0.047	0.56	3.3	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Wipe	ND	ND	0.0004	ND	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Wipe	0.0031	0.042	0.44	0.036	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	140	53	160	60	NT	NT
Chromium	mg/Wipe	0.034	0.0061	0.57	0.062	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0039	0.0028	0.049	0.024	NT	NT
Copper	mg/Wipe	92	0.084	2.3	0.41	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	32	3	430	80	NT	NT
Lead	ug/ft²	**23225**	**650**	**929000**	**18580**	200 ug/ft² ****	200 ug/ft² ****
Magnesium	mg/Wipe	8.2	12	8.7	3	NT	NT
Manganese	mg/Wipe	0.27	0.43	2.9	0.5	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.026	0.26	0.39	0.049	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.88	1	22	1.3	NT	NT
Selenium	mg/Wipe	0.0029	ND	0.012	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.0043	ND	0.0044	0.0014	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	12	6.1	48	3.5	NT	NT
Thallium	mg/Wipe	ND	ND	0.0085	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	0.011	0.0051	0.067	0.013	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	39	11	6.8	3.8	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standard

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-21 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		104ECSWS1 7/24/2003 219240-5	104ECSWS2 7/24/2003 219240-7	104EWS1 7/24/2003 219240-34	104EWS2 7/24/2003 219240-35	WIPE TARGET CONCENTRATION*
PARAMETER (METHOD)	**UNITS**					
PCBs (8082)						
Aroclor 1260	µg/cm^2	0.0057	0.013	ND	ND	10 ug/cm^2 **
MERCURY (7471A)						
Mercury	µg/Wipe	14	410	280	2900	46,300 µg/Kg
METALS (6010B)						
Aluminum	mg/Wipe	3.7	1.9	4.5	10	75,500 mg/Kg
Antimony	mg/Wipe	ND	ND	0.0067	0.0047	30.4 mg/Kg
Arsenic	mg/Wipe	0.0024	ND	0.056	0.0092	3.89 mg/Kg
Barium	mg/Wipe	0.045	0.028	0.65	2.2	15,500 mg/Kg
Cadmium	mg/Wipe	0.0012	0.0003	0.33	0.028	16.8 mg/Kg
Calcium	mg/Wipe	61	44	46	140	NT
Chromium	mg/Wipe	0.008	0.004	0.074	0.081	47,600 mg/Kg
Cobalt	mg/Wipe	0.0015	0.0008	0.02	0.065	NT
Copper	mg/Wipe	0.011	0.0043	0.12	0.63	3,040 mg/Kg
Iron	mg/Wipe	4.3	2.3	190	25	NT
Lead	ug/ft^2	1393	1021	1207700	18580	40 & 250 ug/ft^2 ***
Magnesium	mg/Wipe	2.1	0.6	3.7	10	NT
Manganese	mg/Wipe	0.078	0.046	4.8	0.44	9,680 mg/Kg
Nickel	mg/Wipe	0.0066	0.0025	0.037	0.046	1,510 mg/Kg
Potassium	mg/Wipe	4.7	0.78	11	4.8	NT
Selenium	mg/Wipe	ND	ND	0.016	0.0027	380 mg/Kg
Silver	mg/Wipe	ND	ND	0.0021	0.016	374 mg/Kg
Sodium	mg/Wipe	2.2	0.65	12	6.9	NT
Thallium	mg/Wipe	ND	ND	0.0037	ND	6.09 mg/Kg
Vanadium	mg/Wipe	0.0058	0.0031	0.035	0.028	530 mg/Kg
Zinc	mg/Wipe	0.092	0.047	5.4	6.1	22,800 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Residential Standards
** = Target Concentration Based on Federal TSCA Regulations
**** = Target Concentration Based on Clearance Levels for Floors and Interior Window Sills, respectively

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104F
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-22 - RESULTS OF WIPE SAMPLE ANALYSIS

	SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:	104FCSWS 7/24/2003 219240-2	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**			
MERCURY (7471A)				
Mercury	µg/Wipe	97	630,000 µg/Kg	21,600 µg/Kg
METALS (6010B)				
Aluminum	mg/Wipe	8.5	933,000 mg/Kg	2,380,000 mg/Kg
Barium	mg/Wipe	0.087	181,000 mg/Kg	439,000 mg/Kg
Calcium	mg/Wipe	300	NT	NT
Chromium	mg/Wipe	0.02	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0035	NT	NT
Copper	mg/Wipe	0.021	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	12	NT	NT
Lead	ug/ft^2	1858	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	4.8	NT	NT
Manganese	mg/Wipe	0.22	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.011	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	11	NT	NT
Sodium	mg/Wipe	5.7	NT	NT
Vanadium	mg/Wipe	0.021	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.085	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-23 - RESULTS OF SOLID SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		104EPAINT 7/24/2003 219240-36	104EPAINT 7/24/200. 220008-1	RESIDENTIAL RISK-BASED TARGET LEVELS*
PARAMETER (METHOD)	UNITS			
MERCURY (7471A) Mercury	mg/Kg	NA	2.3	46.3 mg/Kg
METALS (6010B) Lead	mg/Kg	380	NA	5,000 mg/Kg **

mg/Kg = milligrams per kilogram
NA = Not Analyzed

* = Target Concentration Based on MDNR Risk Based Levels for Residential Standards
** = Target Concentration Based on HUD Regulations

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104 SECTIONS A, B, C, AND D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-24 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		104CSSS1	104CSSS2	104CSSS3	104CSPIPE	104RRTRACK SUBGRD	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/23/2003	7/23/2003	7/23/2003	7/23/2003	12/19/2003		
LAB ID NUMBER:		219204-16	219204-17	219204-20	219204-19	223259-2		
SAMPLE DEPTH:		0" to 6"	0" to 6"	0" to 6"	(Pipe Sediment)	18" to 24"		
PARAMETER (METHOD)	UNITS							
PCBs (8082)								
Aroclor 1260	µg/Kg	ND	ND	ND	ND	ND	7,380 µg/Kg	21,800 µg/Kg
PHOSPHORUS (4500PE)								
Total Phosphorus	mg/Kg	380	69	190	51	NA	NT	NT
MERCURY (7471A)								
Mercury	mg/Kg	0.53	0.68	0.28	0.023	0.029	630 mg/Kg	21.6 mg/Kg
METALS (6010B)								
Aluminum	mg/Kg	11000	13000	1600	63	15000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	6.3	7.2	1.4	2.5	8.3	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	130	160	30	18	140	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.36	0.61	ND	ND	0.21	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.59	2.6	1.5	0.8	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	30000	15000	220000	220000	2300	NT	NT
Chromium	mg/Kg	17	36	11	3	19	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	11	11	1.3	0.29	11	NT	NT
Copper	mg/Kg	1400	5300	14000	29000	15	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	17000	47000	4300	39000	20000	NT	NT
Lead	mg/Kg	44	320	570	17	16	660 mg/Kg	NT
Magnesium	mg/Kg	3100	5000	2500	1100	2900	NT	NT
Manganese	mg/Kg	500	470	77	53	730	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	16	37	8.8	4.8	17	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1100	800	1100	2500	1600	NT	NT
Selenium	mg/Kg	ND	1.4	0.42	0.77	0.87	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	1.5	0.53	0.86	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	660	1500	4000	7300	420	NT	NT
Thallium	mg/Kg	0.78	1.4	ND	ND	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	26	32	5.1	1.3	38	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	570	2500	5200	12000	48	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)								
Phenanthrene	µg/Kg	NA	NA	NA	NA	9	28,200,000 µg/Kg	35,200,000 µg/Kg
Fluoranthene	µg/Kg	NA	NA	NA	NA	15	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	NA	NA	NA	NA	15	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	NA	NA	NA	NA	9.1	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	NA	NA	NA	NA	12	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	NA	NA	NA	NA	17	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	NA	NA	NA	NA	13	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	NA	NA	NA	NA	6.9	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	NA	NA	NA	NA	10	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	NA	NA	NA	NA	26	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	NA	NA	NA	NA	33	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	NA	NA	NA	NA	11	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-25 - RESULTS OF SHALLOW SOIL SAMPLE ANALYSIS

	SAMPLE NUMBER:	104ECSSS1	104ECSSS2	RESIDENTIAL
	SAMPLE DATE:	7/24/2003	7/24/2003	RISK-BASED
	LAB ID NUMBER:	219240-4	219240-6	TARGET
	SAMPLE DEPTH:	0" to 6"	0" to 6"	LEVELS*
PARAMETER (METHOD)	UNITS			
PCBs (8082)				
Aroclor 1260	µg/Kg	ND	22	1,200 µg/Kg
PHOSPHORUS (4500PE)				
Total Phosphorus	mg/Kg	99	330	NT
MERCURY (7471A)				
Mercury	mg/Kg	0.011	0.044	46.3 mg/Kg
METALS (6010B)				
Aluminum	mg/Kg	9400	8800	75,500 mg/Kg
Arsenic	mg/Kg	7.3	3.7	3.89 mg/Kg
Barium	mg/Kg	89	91	15,500 mg/Kg
Beryllium	mg/Kg	1.5	0.45	0.737 mg/Kg
Calcium	mg/Kg	3800	2500	NT
Chromium	mg/Kg	13	16	74,600 mg/Kg
Cobalt	mg/Kg	11	6.9	NT
Copper	mg/Kg	11	11	3,040 mg/Kg
Iron	mg/Kg	18000	13000	NT
Lead	mg/Kg	13	12	260 mg/Kg
Magnesium	mg/Kg	2200	2500	NT
Manganese	mg/Kg	230	380	9,680 mg/Kg
Nickel	mg/Kg	21	11	15,100 mg/Kg
Potassium	mg/Kg	480	520	NT
Sodium	mg/Kg	690	1400	NT
Vanadium	mg/Kg	29	26	530 mg/Kg
Zinc	mg/Kg	23	31	22,800 mg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
* = Target Concentration Based on MDNR Risk Based Levels for Residential Standards

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 104F
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-26 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		104FCSSS1	104FCSSS2	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		7/24/2003	7/24/2003		
LAB ID NUMBER:		219240-1	219240-3		
SAMPLE DEPTH:		0" to 6"	0" to 6"		
PARAMETER (METHOD)	UNITS				
CYANIDE (9014/9010B)					
Total Cyanide	mg/Kg	0.43	0.28	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)					
Total Phosphorus	mg/Kg	180	40	NT	NT
MERCURY (7471A)					
Mercury	mg/Kg	0.046	0.027	630 mg/Kg	21.6 mg/Kg
METALS (6010B)					
Aluminum	mg/Kg	11000	12000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	5	5	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	120	91	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.64	0.98	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.37	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	9400	9100	NT	NT
Chromium	mg/Kg	18	17	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	8.5	7.8	NT	NT
Copper	mg/Kg	33	15	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	15000	14000	NT	NT
Lead	mg/Kg	35	60	660 mg/Kg	NT
Magnesium	mg/Kg	3300	3400	NT	NT
Manganese	mg/Kg	270	210	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	12	17	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	670	650	NT	NT
Sodium	mg/Kg	450	580	NT	NT
Vanadium	mg/Kg	33	25	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	50	29	288,000 mg/Kg	775,000 mg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDINGS 104F
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-27 - RESULTS OF SUMP WATER SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		TW-2 12/18/2003 223220-3	DEFAULT TARGET LEVELS*	RISK-BASED TARGET LEVELS**
PARAMETER (METHOD)	UNITS			
METALS (6010B)				
Aluminum	mg/L	0.044	15.6 mg/L	5,590 mg/L
Barium	mg/L	0.31	2.00 mg/L	1,120 mg/L
Cadmium	mg/L	0.00051	0.005 mg/L	0.625 mg/L
Calcium	mg/L	190	NT	NT
Copper	mg/L	0.0036	0.624 mg/L	223 mg/L
Iron	mg/L	0.048	NT	NT
Magnesium	mg/L	47	NT	NT
Manganese	mg/L	0.095	2.19 mg/L	782 mg/L
Nickel	mg/L	0.0022	0.313 mg/L	559 mg/L
Potassium	mg/L	7.7	NT	NT
Selenium	mg/L	0.0078	0.05 mg/L	27.9 mg/L
Sodium	mg/L	380	NT	NT
Zinc	mg/L	0.032	4.69 mg/L	2,790 mg/L

µg/L = micrograms per liter
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

ND = Not Detected
* = Target Concentration based on MDNR Risk Based Lowest Default Target Levels
** = Target Concentration based on MDNR Risk Based Levels for Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105 SECTIONS A, B, C, AND D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-28 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		105BCSWS1 9/11/2002 211976-8	105BCSWS2 9/11/2002 211976-9	105CCSWS1 9/11/2002 211976-6	105CCSWS2 9/11/2002 211976-7	105DCSWS1 9/11/2002 211976-10	105DCSWS2 9/11/2002 211976-11	105WS1 9/10/2002 211929-5	105WS2 9/10/2002 211929-6	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**										
PCBs (8082)											
Aroclor 1260	µg/cm²	ND	ND	0.18	ND	ND	ND	0.026	0.062	10 ug/cm² ***	10 ug/cm² ***
EXPLOSIVES (8330)											
Nitrobenzene	µg/Wipe	ND	ND	ND	ND	ND	ND	ND	3.1	455,000 µg/Kg	130,000 µg/Kg
4-Amino-2,6-Dinitrotoluene	µg/Wipe	ND	ND	ND	ND	ND	ND	ND	ND	79,100 µg/Kg	45,100 µg/Kg
METALS (6010B)											
Aluminum	mg/Wipe	0.31	0.21	2.6	0.26	0.63	0.99	6.1	11	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	ND	ND	ND	ND	ND	0.023	0.014	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	ND	ND	0.0023	ND	ND	0.001	0.089	0.03	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.0054	0.0049	0.047	0.0052	0.011	0.017	0.9	0.77	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Wipe	ND	ND	ND	ND	ND	ND	0.0005	ND	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Wipe	0.0045	0.0003	0.0007	ND	0.0008	0.0006	0.039	0.05	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	14	18	38	12	19	21	77	170	NT	NT
Chromium	mg/Wipe	0.0058	0.0011	0.0054	0.0015	0.0032	0.0072	0.35	0.21	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	ND	ND	0.0016	ND	ND	0.0006	0.19	0.23	NT	NT
Copper	mg/Wipe	0.0039	0.032	0.036	0.004	0.0068	0.01	3.4	18	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	0.36	0.24	4.3	0.48	0.99	4.4	780	120	NT	NT
Lead	ug/ft²	**287**	51	**529**	130	157	**353020**	**51095**	**67817**	200 ug/ft² ****	200 ug/ft² ****
Magnesium	mg/Wipe	0.32	0.31	1.4	0.22	0.41	0.99	5.6	9.7	NT	NT
Manganese	mg/Wipe	0.015	0.014	0.12	0.0093	0.017	0.052	3.4	0.8	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	ND	ND	0.0048	ND	0.0013	0.0028	0.19	0.075	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.38	0.52	5.4	0.36	0.99	1.9	4.2	4.4	NT	NT
Selenium	mg/Wipe	0.0008	0.0008	0.0008	0.0008	0.0008	0.0007	0.0096	0.007	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	ND	ND	ND	ND	ND	ND	0.0039	0.0053	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	1.3	1.4	4.3	1.4	1.6	2.2	9.3	4.6	NT	NT
Thallium	mg/Wipe	ND	ND	0.0012	ND	ND	ND	ND	0.0016	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	0.0007	ND	0.0064	0.0006	0.0012	0.0068	0.029	0.047	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.15	0.074	0.25	0.048	0.11	0.12	6.1	16	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105 SECTIONS A, B, C, AND D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-28 (continued) - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		105WS3 9/10/2002 211929-7	105WS4 9/10/2002 211929-8	105WS5 9/10/2002 211929-9	105WS6 9/10/2002 211929-10	105WS7 9/10/2002 211929-11	105WS8 9/10/2002 211929-12	105WS9 9/10/2002 211929-13	105WS10 9/10/2002 211929-14	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**										
PCBs (8082)											
Aroclor 1260	µg/cm²	0.18	0.025	0.075	0.074	0.032	ND	0.0079	0.11	10 ug/cm² ***	10 ug/cm² ***
EXPLOSIVES (8330)											
Nitrobenzene	µg/Wipe	ND	ND	ND	ND	ND	ND	ND	ND	455,000 µg/Kg	130,000 µg/Kg
4-Amino-2,6-Dinitrotoluene	µg/Wipe	ND	ND	ND	ND	ND	ND	ND	7.4	79,100 µg/Kg	45,100 µg/Kg
METALS (6010B)											
Aluminum	mg/Wipe	17	3	5.4	0.44	5.9	1.2	5.4	8.6	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.1	0.0071	0.015	0.0032	0.012	0.0027	0.0082	0.015	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.035	0.0037	0.018	0.0014	0.022	0.012	0.0099	0.0082	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.71	0.1	0.41	0.71	2.5	0.028	2	0.7	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Wipe	ND	ND	0.0004	ND	0.0005	ND	ND	ND	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Wipe	0.062	0.021	0.033	0.0013	0.04	0.0013	0.041	0.032	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	210	49	58	10	49	14	100	120	NT	NT
Chromium	mg/Wipe	0.52	0.042	0.14	0.0059	0.078	0.011	0.13	0.2	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.11	0.0059	0.036	0.016	0.044	0.001	0.11	0.16	NT	NT
Copper	mg/Wipe	11	0.25	2.4	0.027	0.56	0.018	0.96	1.2	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	240	13	32	1.2	24	2.5	72	16	NT	NT
Lead	ug/ft²	**92900**	**5852**	**45521**	**3623**	**102190**	**798**	**102190**	**47379**	200 ug/ft² ****	200 ug/ft² ****
Magnesium	mg/Wipe	10	2	2.1	0.45	2.7	1.4	4.6	8.3	NT	NT
Manganese	mg/Wipe	2.2	0.16	0.32	0.032	0.31	0.044	0.43	0.29	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.34	0.016	0.054	0.0037	0.032	0.0053	0.029	0.033	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	6.6	2.3	1.8	0.3	2.2	0.48	4.6	4.1	NT	NT
Selenium	mg/Wipe	ND	0.0014	0.0052	0.0012	0.0052	0.0011	0.002	0.0036	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.0048	0.0005	0.0043	ND	0.0029	ND	0.0024	0.0037	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	4.3	2.7	2.4	1.3	ND	1.6	4.8	3	NT	NT
Thallium	mg/Wipe	0.0021	ND	0.0015	ND	0.0019	ND	0.0021	0.001	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	0.067	0.0074	0.023	0.0014	0.024	0.064	0.014	0.021	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	8.7	2.9	2.8	2.6	12	0.11	5.8	6.6	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-29 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		105ECSWS1 9/11/2002 211976-1	105ECSWS2 9/11/2002 211976-2	Bldg105EWS1 9/10/2002 211929-1	105EWS2 9/10/2002 211929-2	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	**UNITS**						
PCBs (8082)							
Aroclor 1260	µg/cm^2	ND	ND	0.008	ND	10 ug/cm^2 ***	10 ug/cm^2 ***
EXPLOSIVES (8330)							
2,4-Dinitrotoluene	µg/Wipe	ND	ND	17	ND	51,300 µg/Kg	1,190,000 µg/Kg
METALS (6010B)							
Aluminum	mg/Wipe	1.2	0.68	6.8	4	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	ND	0.0098	0.0033	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.0017	ND	0.022	0.0084	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.035	0.0076	1.6	3.5	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0004	ND	0.023	0.013	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	27	17	96	61	NT	NT
Chromium	mg/Wipe	0.047	0.0031	0.13	0.054	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0007	ND	0.12	0.095	NT	NT
Copper	mg/Wipe	0.019	0.0054	0.96	0.13	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	5.1	0.98	150	29	NT	NT
Lead	ug/ft^2	**1950**	**232**	**78036**	**34373**	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	0.55	0.55	12	6.9	NT	NT
Manganese	mg/Wipe	0.072	0.031	1.2	0.38	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0031	0.0012	0.071	0.032	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	1.1	1.7	4	1.6	NT	NT
Selenium	mg/Wipe	0.0012	0.001	0.0032	0.0027	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	0.0018	ND	0.013	0.0023	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	1.5	1.9	2.6	ND	NT	NT
Thallium	mg/Wipe	ND	ND	0.0016	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	0.007	0.0019	0.023	0.014	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.069	0.057	21	17	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105F
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-30 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		105FCSWS1 9/11/2002 211976-3	105FCSWS2 9/11/2002 211976-4	105FWS1 9/10/2002 211929-3	105FWS2 9/10/2002 211929-4	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS						
PCBs (8082)							
Aroclor 1260	µg/cm²	ND	ND	0.016	0.0055	10 ug/cm² ***	10 ug/cm² ***
METALS (6010B)							
Aluminum	mg/Wipe	0.55	0.43	3.8	4.3	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	ND	ND	0.011	0.0084	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	ND	ND	0.031	0.0098	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.014	0.0079	2.1	1.4	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0002	ND	0.95	0.067	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	130	16	46	56	NT	NT
Chromium	mg/Wipe	0.0064	0.0022	0.11	0.046	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	ND	ND	0.041	0.061	NT	NT
Copper	mg/Wipe	0.0021	0.002	2.2	0.19	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	0.78	0.63	320	37	NT	NT
Lead	ug/ft²	102	49	**30657**	**52953**	200 ug/ft² ****	200 ug/ft² ****
Magnesium	mg/Wipe	0.88	0.41	4.8	8.5	NT	NT
Manganese	mg/Wipe	0.02	0.012	1.5	0.35	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0015	ND	0.06	0.032	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	1.7	1.4	2	1.9	NT	NT
Selenium	mg/Wipe	0.0012	0.0009	ND	0.0039	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Wipe	ND	ND	0.0017	0.0012	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Wipe	2.8	1.8	3.9	2.1	NT	NT
Thallium	mg/Wipe	ND	ND	0.0026	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	0.0014	0.0005	0.013	0.012	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.071	0.076	12	9.7	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105 SECTIONS A, B, C, AND D
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-31 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		105ASS1	105ASS2	105BSS1	105BSS2	105BTCSUMP	105CSS1	105CSS2	105DCSSS1	105DCSSS2	105 SS-1	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		9/11/2002	9/11/2002	9/11/2002	9/11/2002	9/11/2002	9/11/2002	9/11/2002	9/11/2002	9/11/2002	12/18/2003		
LAB ID NUMBER:		211977-13	211977-14	211977-11	211977-15	211977-12	211977-9	211977-10	211977-16	211977-17	223219-22		
SAMPLE DEPTH:		0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"	0" to 6"		
PARAMETER (METHOD)	UNITS												
PCBs (8082)													
Aroclor 1260	µg/Kg	ND	ND	21	9.7	100	ND	ND	29	ND	190	7,380 µg/Kg	21,800 µg/Kg
CYANIDE (9014/9010B)													
Total Cyanide	mg/Kg	ND	ND	0.41	ND	ND	ND	ND	ND	ND	NA	12,300 mg/Kg	28,500 mg/Kg
PHOSPHORUS (4500PE)													
Total Phosphorus	mg/Kg	420	700	120	440	280	310	450	230	210	NA	NT	NT
MERCURY (7471A)													
Mercury	mg/Kg	0.063	0.033	0.019	0.036	0.13	0.19	0.071	0.019	0.048	0.2	630 mg/Kg	21.6 mg/Kg
METALS (6010B)													
Aluminum	mg/Kg	11000	11000	18000	11000	16000	10000	9900	3600	11000	6700	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	4.9	7	6.3	4.7	5.9	6.4	5.3	3.6	4.1	**69**	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	130	140	110	110	140	110	100	91	100	150	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.33	0.36	0.65	0.37	0.53	0.39	0.33	ND	0.3	0.19	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.11	ND	ND	0.22	5.9	0.21	ND	ND	0.13	2.8	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	2900	2900	6300	2700	7200	9000	4000	310000	4500	85000	NT	NT
Chromium	mg/Kg	18	17	28	18	32	16	17	9.3	24	150	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	6	7.1	11	5.5	6.8	8.7	5.4	2.3	6.3	9.2	NT	NT
Copper	mg/Kg	14	16	92	12	430	82	34	4.4	57	16000	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	16000	17000	21000	15000	23000	15000	15000	5800	19000	220000	NT	NT
Lead	mg/Kg	13	10	90	8.1	160	19	15	9.3	58	**16000**	660 mg/Kg	NT
Magnesium	mg/Kg	2700	3200	2700	2800	3800	2400	2800	4400	2800	43000	NT	NT
Manganese	mg/Kg	450	560	580	400	500	620	340	420	220	860	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	14	17	17	13	18	15	13	8.9	15	69	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1200	1300	1100	890	1200	890	820	800	920	180	NT	NT
Selenium	mg/Kg	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	190	620	630	670	ND	650	1300	580	510	2500	NT	NT
Vanadium	mg/Kg	32	28	39	30	37	28	28	10	30	31	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	58	44	66	35	2700	82	69	23	140	6700	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)													
Fluorene	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	96	21,300,000 µg/Kg	34,000,000 µg/Kg
n-Nitrosodiphenylamine	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	240	3,260,000 µg/Kg	18,200,000 µg/Kg
Phenanthrene	µg/Kg	ND	ND	170	ND	510	ND	ND	ND	ND	9300	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	3300	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	490	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	690	NT	NT
Fluoranthene	µg/Kg	200	ND	300	ND	1200	ND	ND	ND	ND	55000	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	ND	ND	240	ND	980	ND	ND	ND	ND	47000	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	75	ND	140	ND	500	ND	ND	ND	ND	**32000**	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	98	ND	140	70	570	ND	ND	ND	ND	45000	2,040,000 µg/Kg	81,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	ND	ND	130	ND	570	ND	ND	ND	ND	**29000**	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	ND	ND	140	ND	480	ND	ND	ND	ND	27000	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	87	ND	130	ND	510	ND	ND	ND	ND	**26000**	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	ND	ND	ND	ND	450	ND	ND	ND	ND	9300	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6300**	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	ND	ND	ND	ND	520	ND	ND	ND	ND	9400	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105E
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-32 - RESULTS OF SHALLOW SOIL & SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		105ESS1	105ESS2	105E SS-1	NON-RESIDENTIAL	CONSTRUCTION
SAMPLE DATE:		9/11/2002	9/11/2002	12/18/2003	RISK-BASED	WORKER
LAB ID NUMBER:		211977-5	211977-6	223219-23	TARGET	TARGET
SAMPLE DEPTH:		0" to 6"	0" to 6"	0" to 6"	LEVELS*	LEVELS**
PARAMETER (METHOD)	UNITS					
PHOSPHORUS (4500PE)						
Total Phosphorus	mg/Kg	520	540	NA	NT	NT
MERCURY (7471A)						
Mercury	mg/Kg	0.041	0.13	1.1	630 mg/Kg	21.6 mg/Kg
METALS (6010B)						
Aluminum	mg/Kg	12000	9800	11000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	3.4	5.3	**27**	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	72	160	250	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.38	0.47	0.81	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.24	0.5	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	3100	3100	23000	NT	NT
Chromium	mg/Kg	20	24	20	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	6	28	9.1	NT	NT
Copper	mg/Kg	11	28	45	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	13000	14000	43000	NT	NT
Lead	mg/Kg	11	21	120	660 mg/Kg	NT
Magnesium	mg/Kg	3000	2400	5300	NT	NT
Manganese	mg/Kg	160	940	5500	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	13	22	20	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	760	800	990	NT	NT
Selenium	mg/Kg	ND	ND	1.2	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	9.6	460	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	490	400	190	NT	NT
Vanadium	mg/Kg	26	26	35	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	43	46	510	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)						
2,6-Dinitrotoluene	µg/Kg	ND	ND	45	23,400 µg/Kg	542,000 µg/Kg
2,4-Dinitrotoluene	µg/Kg	ND	ND	440	51,300 µg/Kg	1,190,000 µg/Kg
Acenaphthene	µg/Kg	ND	ND	46	30,700,000 µg/Kg	36,100,000 µg/Kg
Dibenzofuran	µg/Kg	ND	ND	16	1,790,000 µg/Kg	1,340,000 µg/Kg
Fluorene	µg/Kg	ND	ND	28	21,300,000 µg/Kg	34,000,000 µg/Kg
n-Nitrosodiphenylamine	µg/Kg	ND	ND	55	3,260,000 µg/Kg	18,200,000 µg/Kg
Phenanthrene	µg/Kg	ND	150	690	28,200,000 µg/Kg	35,200,000 µg/Kg
Anthracene	µg/Kg	ND	ND	110	154,000,000 µg/Kg	188,000,000 µg/Kg
Carbazole	µg/Kg	ND	ND	120	847,000 µg/Kg	40,200,000 µg/Kg
Di-n-butyl phthalate	µg/Kg	ND	760	380	NT	NT
Fluoranthene	µg/Kg	ND	480	1400	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	ND	350	1100	16,400,000 µg/Kg	34,800,000 µg/Kg
Butyl benzyl phthalate	µg/Kg	ND	ND	32	123,000,000 µg/Kg	285,000,000 µg/Kg
Benzo(a)anthracene	µg/Kg	ND	190	580	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	ND	290	800	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	ND	ND	370	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	ND	270	730	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	ND	210	670	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	ND	180	590	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	ND	160	390	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	ND	ND	200	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	ND	ND	470	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 105F
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-33 - RESULTS OF SHALLOW SOIL SAMPLE ANALYSIS

SAMPLE NUMBER:		105FSS1	105FSS2	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		9/11/2002	9/11/2002		
LAB ID NUMBER:		211977-7	211977-8		
SAMPLE DEPTH:		0" to 6"	0" to 6"		
PARAMETER (METHOD)	UNITS				
PHOSPHORUS (4500PE)					
Total Phosphorus	mg/Kg	220	320	NT	NT
MERCURY (7471A)					
Mercury	mg/Kg	0.023	0.07	630 mg/Kg	21.6 mg/Kg
METALS (6010B)					
Aluminum	mg/Kg	15000	12000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	4.7	5.2	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	70	84	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.6	0.51	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	0.39	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	3700	15000	NT	NT
Chromium	mg/Kg	20	22	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	4.9	14	NT	NT
Copper	mg/Kg	11	59	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	15000	21000	NT	NT
Lead	mg/Kg	15	100	660 mg/Kg	NT
Magnesium	mg/Kg	2400	2300	NT	NT
Manganese	mg/Kg	200	420	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	12	15	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	720	780	NT	NT
Sodium	mg/Kg	1000	760	NT	NT
Vanadium	mg/Kg	31	24	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	27	180	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)					
Phenanthrene	µg/Kg	ND	600	28,200,000 µg/Kg	35,200,000 µg/Kg
Carbazole	µg/Kg	ND	97	847,000 µg/Kg	40,200,000 µg/Kg
Flouranthene	µg/Kg	ND	1200	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	ND	1100	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	ND	460	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	ND	650	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	ND	190	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)flouranthene	µg/Kg	ND	630	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)flouranthene	µg/Kg	ND	510	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	ND	470	2,110 µg/Kg	119,000 µg/Kg
Indeno(1,2,3-cd)pyrene	µg/Kg	ND	390	12,800 µg/Kg	724,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	ND	430	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDINGS 105 SECTIONS A, B, C AND D; 105E; 105F
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-34 - RESULTS OF SUMP WATER SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		105SUMPH2O 9/11/2002 211977-1	105ESUMP 9/11/2002 211977-2	105FSUMP 9/11/2002 211977-3	DEFAULT TARGET LEVELS*	RISK-BASED TARGET LEVELS**
PARAMETER (METHOD)	**UNITS**					
PHOSPHOROUS (4500PE)						
Total Phosphorous	mg/L	0.099	0.17	0.34	NT	NT
MERCURY (7471A)						
Mercury	mg/L	0.00022	ND	ND	0.0507 mg/L	NT
METALS (6010B)						
Aluminum	mg/L	0.25	0.074	0.053	15.6 mg/L	5,590 mg/L
Barium	mg/L	0.094	0.082	0.11	2.00 mg/L	1,120 mg/L
Cadmium	mg/L	ND	0.00091	ND	0.005 mg/L	0.625 mg/L
Calcium	mg/L	59	80	130	NT	NT
Chromium	mg/L	0.004	0.0023	ND	0.1 mg/L	8380 mg/L
Copper	mg/L	0.022	0.02	0.0061	0.624 mg/L	223 mg/L
Iron	mg/L	0.53	0.29	0.46	NT	NT
Lead	mg/L	0.097	0.0051	0.004	0.015 mg/L	NT
Magnesium	mg/L	19	28	36	NT	NT
Manganese	mg/L	0.054	0.097	0.057	2.19 mg/L	782 mg/L
Potassium	mg/L	12	7.7	8.7	0.313 mg/L	559 mg/L
Silver	mg/L	ND	0.005	ND	0.0781 mg/L	NT
Sodium	mg/L	97	72	98	NT	NT
Vanadium	mg/L	0.0027	ND	ND	0.109 mg/L	39.1 mg/L
Zinc	mg/L	0.083	0.84	0.022	4.69 mg/L	2,790 mg/L
SEMI-VOLATILE ORGANICS (8270C)						
Bis(2-ethylhexyl) phthalate	µg/L	11	23	ND	0.006 mg/L	0.0752 mg/L

µg/L = micrograms per liter
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

ND = Not Detected
* = Target Concentration based on MDNR Risk Based Lowest Default Target Levels
** = Target Concentration based on MDNR Risk Based Levels for Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 108A
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-35 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		108A WS-1 12/18/2003 223220-10	108A WS-2 12/18/2003 223220-11	108A WS-3 12/18/2003 223220-12	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS					
PCBs (8082)						
Aroclor 1260	$\mu g/cm^2$	ND	ND	0.003	10 ug/cm^2 ***	10 ug/cm^2 ***

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 108B
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-36 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		108B WS-1 12/18/2003 223220-13	108B WS-2 12/18/2003 223220-14	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS				
PCBs (8082)					
Aroclor 1260	$\mu g/cm^2$	0.0033	ND	10 ug/cm^2 ***	10 ug/cm^2 ***

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 108B
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-37 - RESULTS OF SHALLOW SOIL AND SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		108BLSSS1 9/22/2006 248821-11	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PARAMETER (METHOD)	UNITS			
PCBs (8082)				
Aroclor 1260	µg/Kg	1500	7,380 µg/Kg	21,800 µg/Kg
TPH (8015B MDRO)				
Diesel Range Organics	mg/Kg	6400	1,410,000 mg/Kg	3,010,000 mg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - GROUNDWATER
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRATION

TABLE 3-38 - RESULTS OF GROUNDWATER SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		SB109 9/7/2006 248582-1	SB110 9/21/2006 248821-5	SB112 9/7/2006 248554-14	SB116 9/7/2006 258582-2	SB118 9/7/2006 248554-15	SB119 9/8/2006 248582-5	SB121 9/8/2006 248582-4	SB122 9/21/2006 248582-6	DEFAULT TARGET LEVELS*	RISK-BASED TARGET LEVELS**
PARAMETER (METHOD)	UNITS										
PCBs (8082) Aroclor 1260	µg/L	ND	ND	ND	NA	NA	NA	NA	NA	0.0335 µg/L	0.0524 µg/L
TPH (8015B MDRO) Diesel Range Organics	mg/L	NA	NA	NA	0.093	4.4	0.99	0.1	0.26	32.4mg/L	34.3 mg/L
THP (8015B MGRO) Gasoline Range Organics	µg/L	NA	NA	NA	ND	390	1900	390	20	10,500 µg/L	18,100 µg/L

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:		SB126 9/26/2006 248821-2	SB127 9/21/2006 248821-3	SB129 9/21/2006 248821-4	SB130 9/8/2006 248582-3	SB132 9/21/2006 248821-1	SB133 9/21/2006 248821-6	SB134 9/21/2006 248821-7	DEFAULT TARGET LEVELS*	RISK-BASED TARGET LEVELS**
PARAMETER (METHOD)	UNITS									
PCBs (8082) Aroclor 1260	µg/L	2.6	ND	ND	ND	ND	0.62	ND	0.0335 µg/L	0.0524 µg/L
TPH (8015B MDRO) Diesel Range Organics	mg/L	0.74	NA	NA	NA	NA	NA	NA	32.4 mg/L	34.3 mg/L
THP (8015B MGRO) Gasoline Range Organics	µg/L	NA	NA	NA	NA	NA	NA	NA	10,500 µg/L	18,100 µg/L

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
ND = Not Detected
* = Target Concentration based on MDNR Risk Based Lowest Default Target Levels
** = Target Concentration based on MDNR Risk Based Levels for Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 110
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-39 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER: SAMPLE DATE: LAB ID NUMBER:		110WS-1 12/18/2003 223220-6	110WS-2 12/18/2003 223220-7	110WS-3 12/18/2003 223220-8	110WS-4 12/18/2003 223220-9	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS						
METALS (6010B)							
Aluminum	mg/Wipe	0.59	5.6	0.33	0.23	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.0024	ND	0.003	ND	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Wipe	0.0012	0.0052	0.0031	ND	15.9 mg/Kg	654 mg/Kg
Barium	mg/Wipe	0.24	0.31	0.014	0.012	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Wipe	ND	0.0005	ND	ND	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Wipe	0.0002	0.0057	0.0006	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	9.3	29	5.4	2.7	NT	NT
Chromium	mg/Wipe	0.012	0.026	0.0043	0.002	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0009	0.0054	0.0028	0.0006	NT	NT
Copper	mg/Wipe	0.0026	0.053	0.012	0.0035	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	6.1	11	0.98	0.37	NT	NT
Lead	ug/ft^2	**1114**	**4180**	**1579**	**436**	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	0.4	2.5	0.33	0.19	NT	NT
Manganese	mg/Wipe	0.038	0.2	0.018	0.0074	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0037	0.013	0.0034	ND	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.19	2.1	0.47	0.12	NT	NT
Sodium	mg/Wipe	0.55	1.2	1.3	0.51	NT	NT
Vanadium	mg/Wipe	0.0018	0.018	0.0008	0.0006	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.11	0.88	0.14	0.028	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 110
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-40 - RESULTS OF WIPE SAMPLE ANALYSIS

SAMPLE NUMBER:		110 SS-1	110 SS-1	NON-RESIDENTIAL	CONSTRUCTION
SAMPLE DATE:		4/6/2004	4/6/2004	RISK-BASED	WORKER
LAB ID NUMBER:		225741-1	225738-18	TARGET	TARGET
SAMPLE DEPTH:		24" to 30"	36" to 42"	LEVELS*	LEVELS**
PARAMETER (METHOD)	UNITS				
TPH (8015B MDRO)					
Diesel Range Organics	mg/Kg	ND	ND	1,410,000 mg/Kg	3,010,000 mg/Kg
THP (8015B MGRO)					
Gasoline Range Organics	mg/Kg	ND	ND	4,650,000 mg/Kg	1,290,000 mg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - BUILDING 115
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-41 - RESULTS OF WIPE SAMPLE ANALYSIS

	SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER:	115CSWS / 7/24/2003 / 219240-27	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
PARAMETER (METHOD)	UNITS			
METALS (6010B)				
Aluminum	mg/Wipe	0.19	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Wipe	0.0024	383 mg/Kg	1,030 mg/Kg
Barium	mg/Wipe	0.011	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	0.0004	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	6.9	NT	NT
Chromium	mg/Wipe	0.017	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	0.0049	NT	NT
Copper	mg/Wipe	0.02	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	0.88	NT	NT
Lead	ug/ft^2	1300	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	0.22	NT	NT
Manganese	mg/Wipe	0.015	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	0.0027	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	0.15	NT	NT
Sodium	mg/Wipe	0.44	NT	NT
Vanadium	mg/Wipe	0.0008	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	0.11	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards

SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - UTILITY TUNNEL COMPLEX
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-42 - RESULTS OF WIPE SAMPLE ANALYSIS

NEAR BUILDING(S):		104F	105E & 105F		
SAMPLE NUMBER:		PCB WIPE TUNNEL 104F	105EFTUNNELWS1	WIPE TARGET CONCENTRATION*	WIPE TARGET CONCENTRATION**
SAMPLE DATE:		4/8/2004	9/11/2002		
LAB ID NUMBER:		225738-13	211976-5		
PARAMETER (METHO	UNITS				
METALS (6010B)					
Aluminum	mg/Wipe	NA	1.1	933,000 mg/Kg	2,380,000 mg/Kg
Barium	mg/Wipe	NA	0.01	181,000 mg/Kg	439,000 mg/Kg
Cadmium	mg/Wipe	NA	0.0007	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Wipe	NA	14	NT	NT
Chromium	mg/Wipe	NA	0.013	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Wipe	NA	0.0009	NT	NT
Copper	mg/Wipe	NA	0.014	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Wipe	NA	3.6	NT	NT
Lead	ug/ft^2	NA	**901**	200 ug/ft^2 ****	200 ug/ft^2 ****
Magnesium	mg/Wipe	NA	0.72	NT	NT
Manganese	mg/Wipe	NA	0.12	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Wipe	NA	0.0022	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Wipe	NA	0.35	NT	NT
Selenium	mg/Wipe	NA	0.0008	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Wipe	NA	1.2	NT	NT
Thallium	mg/Wipe	NA	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Wipe	NA	0.0029	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Wipe	NA	0.057	288,000 mg/Kg	775,000 mg/Kg

µg/Wipe = micrograms per wipe
mg/Wipe = milligrams per wipe
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
µg/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration based on Federal TSCA Regulations
**** = Target Concentration Based on MDNR Post-Abatement Clearance Levels for Non-Residential Standards

SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - UTILITY TUNNEL COMPLEX
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-43 - RESULTS OF PAINT SAMPLE ANALYSIS

NEAR BUILDING(S):		112	112		
SAMPLE NUMBER:		TUNNEL ELEC.CON.PAINT	TUNNEL H20 PIPE PAINT	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		4/8/2004	4/8/2004		
LAB ID NUMBER:		255739-7	225739-8		
PARAMETER	UNITS				
METALS (6010B)					
Lead	mg/Kg	4500	15000	5,000 mg/Kg ***	5,000 mg/Kg ***

mg/Kg = milligrams per kilogram
NA = Not Analyzed

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards
*** = Target Concentration Based on HUD Regulations

SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - UTILITY TUNNEL COMPLEX
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-44 - RESULTS OF SEDIMENT SAMPLE ANALYSIS

NEAR BUILDING(S):		102E	104	104F	104K & 104L	112	112	112	112	112		
SAMPLE NUMBER:		TS-2	B104 T.SED IN SUMP	TS-1	TUNNEL SUMP 1	E112T SED	112 TUNNEL SED1 TS1	B112 TUNNEL S	B112 TUNNEL SED N	B112 T SED FAR SOUTH	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/18/2003	4/5/2004	12/18/2003	4/8/2004	4/5/2004	4/5/2004	4/5/2004	4/5/2004	4/5/2004		
LAB ID NUMBER:		223220-4	225738-24	223220-2	225738-8	225738-16	225738-19	225738-21	225738-22	225738-23		
PARAMETER (METHOD)	UNITS											
MERCURY (7471A)												
Mercury	mg/Kg	NA	0.2	0.22	1.1	NA	NA	NA	NA	NA	630 mg/Kg	21.6 mg/Kg
METALS (6010B)												
Aluminum	mg/Kg	NA	11000	4000	6100	NA	NA	NA	NA	NA	933,000 mg/Kg	2,380,000 mg/Kg
Antimony	mg/Kg	NA	70	2.8	20	NA	NA	NA	NA	NA	383 mg/Kg	1,030 mg/Kg
Arsenic	mg/Kg	NA	5.4	16	34	NA	NA	NA	NA	NA	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	NA	360	410	2100	NA	NA	NA	NA	NA	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	NA	0.55	0.36	0.13	NA	NA	NA	NA	NA	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	NA	0.86	5.1	19	NA	NA	NA	NA	NA	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	NA	18000	210000	75000	NA	NA	NA	NA	NA	NT	NT
Chromium	mg/Kg	NA	28	75	170	NA	NA	NA	NA	NA	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	NA	11	7.9	18	NA	NA	NA	NA	NA	NT	NT
Copper	mg/Kg	NA	240	100	1200	NA	NA	NA	NA	NA	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	NA	25000	55000	200000	NA	NA	NA	NA	NA	NT	NT
Lead	mg/Kg	NA	230	8300	2600	5000	1800	5900	4500	2800	660 mg/Kg	NT
Magnesium	mg/Kg	NA	2500	8600	6800	NA	NA	NA	NA	NA	NT	NT
Manganese	mg/Kg	NA	4200	1900	1400	NA	NA	NA	NA	NA	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	NA	19	39	100	NA	NA	NA	NA	NA	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	NA	770	470	600	NA	NA	NA	NA	NA	NT	NT
Seleniun	mg/Kg	NA	ND	ND	1.9	NA	NA	NA	NA	NA	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	NA	ND	ND	0.41	NA	NA	NA	NA	NA	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	NA	290	930	ND	NA	NA	NA	NA	NA	NT	NT
Thallium	mg/Kg	NA	ND	ND	ND	NA	NA	NA	NA	NA	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	NA	25	17	16	NA	NA	NA	NA	NA	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	NA	260	750	6400	NA	NA	NA	NA	NA	288,000 mg/Kg	775,000 mg/Kg

ug/Kg = micrograms per kilogram NT = No Target Concentration
mg/Kg = milligrams per kilogram NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected

* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - UTILITY TUNNEL COMPLEX
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-45 - RESULTS OF TUNNEL WATER SAMPLE ANALYSIS

NEAR BUILDING(S):		104G & 104J	102D		
SAMPLE NUMBER:		TW-1	TW-3	DEFAULT TARGET LEVELS*	RISK-BASED TARGET LEVELS**
SAMPLE DATE:		12/18/2003	12/18/2003		
LAB ID NUMBER:		223220-1	223220-21		
PARAMETER (METHOD)	UNITS				
MERCURY (7471A)					
Mercury	mg/L	ND	0.00025	0.0507 mg/L	NT
METALS (6010B)					
Aluminum	mg/L	0.055	4.2	15.6 mg/L	5,590 mg/L
Barium	mg/L	0.24	0.21	2.00 mg/L	1,120 mg/L
Cadmium	mg/L	ND	0.0015	0.005 mg/L	0.625 mg/L
Calcium	mg/L	220	150	NT	NT
Chromium	mg/L	ND	0.012	0.1 mg/L	8,380 mg/L
Cobalt	mg/L	ND	0.0063	NT	NT
Copper	mg/L	0.0045	0.16	0.624 mg/L	223 mg/L
Iron	mg/L	0.28	12	NT	NT
Lead	mg/L	ND	0.14	0.015 mg/L	NT
Magnesium	mg/L	57	21	NT	NT
Manganese	mg/L	0.11	0.35	2.19 mg/L	782 mg/L
Nickel	mg/L	0.0029	0.0097	0.313 mg/L	559 mg/L
Potassium	mg/L	9.4	9.7	NT	NT
Selenium	mg/L	0.0068	0.019	0.05 mg/L	27.9 mg/L
Silver	mg/L	ND	0.017	0.0781 mg/L	46.6 mg/L
Sodium	mg/L	630	120	NT	NT
Vanadium	mg/L	ND	0.014	0.109 mg/L	39.1 mg/L
Zinc	mg/L	0.045	0.37	4.69 mg/L	2,790 mg/L

µg/L = micrograms per liter
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

ND = Not Detected
* = Target Concentration based on MDNR Risk Based Lowest Default Target Levels
** = Target Concentration based on MDNR Risk Based Levels for Residential Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - STORM SEWER INLETS
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-46 - RESULTS OF SEDIMENT SAMPLE ANALYSIS

SAMPLE NUMBER:		SI-1	SI-2	SI-3	SI-4	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
SAMPLE DATE:		12/19/2003	12/19/2003	12/19/2003	12/19/2003		
LAB ID NUMBER:		223259-3	223259-4	223259-5	223259-6		
PARAMETER (METHOD)	UNITS						
PCBs (8082)							
Aroclor 1260	µg/Kg	12	ND	ND	ND	6,940 µg/Kg	10,400 µg/Kg
MERCURY (7471A)							
Mercury	mg/Kg	ND	0.019	ND	0.013	630 mg/Kg	21.6 mg/Kg
METALS (6010B)							
Aluminum	mg/Kg	1100	3000	1500	1500	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	1.6	3.8	2.2	2.4	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	45	93	22	41	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.2	0.43	0.1	0.17	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	0.51	0.19	0.18	0.39	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	100000	79000	190000	170000	NT	NT
Chromium	mg/Kg	40	23	5.3	450	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	2.4	4.1	1.4	3.8	NT	NT
Copper	mg/Kg	4.5	23	5.8	75	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	5000	10000	2700	3200	NT	NT
Lead	mg/Kg	120	610	14	1900	660 mg/Kg	NT
Magnesium	mg/Kg	4500	5600	5700	4000	NT	NT
Manganese	mg/Kg	130	250	110	79	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	8.8	9.4	6	4.5	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	240	400	460	280	NT	NT
Seleniun	mg/Kg	ND	ND	0.5	ND	4,780 mg/Kg	12,800 mg/Kg
Sodium	mg/Kg	330	470	790	11000	NT	NT
Vanadium	mg/Kg	18	19	7.8	8.1	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	74	150	17	73	288,000 mg/Kg	775,000 mg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)
Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

FORMER SAINT LOUIS ORDNANCE PLANT
4300 GOODFELLOW - RAILROAD TRACK SUBGRADE
ST. LOUIS, MISSOURI
U.S. GENERAL SERVICES ADMINISTRAITON

TABLE 3-47 - RESULTS OF SHALLOW SOIL SAMPLE ANALYSIS

SAMPLE NUMBER: / SAMPLE DATE: / LAB ID NUMBER: / SAMPLE DEPTH:		104RRTRACK SUBGRD 12/19/2003 223259-2 18" to 24"	NON-RESIDENTIAL RISK-BASED TARGET LEVELS*	CONSTRUCTION WORKER TARGET LEVELS**
PARAMETER (METHOD)	UNITS			
PCBs (8082)				
Aroclor 1260	µg/Kg	ND	7,380 µg/Kg	21,800 µg/Kg
MERCURY (7471A)				
Mercury	mg/Kg	0.029	630 mg/Kg	21.6 mg/Kg
METALS (6010B)				
Aluminum	mg/Kg	15000	933,000 mg/Kg	2,380,000 mg/Kg
Arsenic	mg/Kg	8.3	15.9 mg/Kg	654 mg/Kg
Barium	mg/Kg	140	181,000 mg/Kg	439,000 mg/Kg
Beryllium	mg/Kg	0.21	3.19 mg/Kg	215 mg/Kg
Cadmium	mg/Kg	ND	74.8 mg/Kg	2,810 mg/Kg
Calcium	mg/Kg	2300	NT	NT
Chromium	mg/Kg	19	472,000 mg/Kg	521,000 mg/Kg
Cobalt	mg/Kg	11	NT	NT
Copper	mg/Kg	15	38,100 mg/Kg	102,000 mg/Kg
Iron	mg/Kg	20000	NT	NT
Lead	mg/Kg	16	660 mg/Kg	NT
Magnesium	mg/Kg	2900	NT	NT
Manganese	mg/Kg	730	96,700 mg/Kg	163,000 mg/Kg
Nickel	mg/Kg	17	18,600 mg/Kg	47,100 mg/Kg
Potassium	mg/Kg	1600	NT	NT
Selenium	mg/Kg	0.87	4,780 mg/Kg	12,800 mg/Kg
Silver	mg/Kg	ND	4,480 mg/Kg	10,600 mg/Kg
Sodium	mg/Kg	420	NT	NT
Thallium	mg/Kg	ND	76.7 mg/Kg	207 mg/Kg
Vanadium	mg/Kg	38	6,580 mg/Kg	17,000 mg/Kg
Zinc	mg/Kg	48	288,000 mg/Kg	775,000 mg/Kg
SEMI-VOLATILE ORGANICS (8270C)				
Phenanthrene	µg/Kg	9	28,200,000 µg/Kg	35,200,000 µg/Kg
Fluoranthene	µg/Kg	15	21,900,000 µg/Kg	45,900,000 µg/Kg
Pyrene	µg/Kg	15	16,400,000 µg/Kg	34,800,000 µg/Kg
Benzo(a)anthracene	µg/Kg	9.1	21,100 µg/Kg	1,190,000 µg/Kg
Chrysene	µg/Kg	12	2,040,000 µg/Kg	81,500,000 µg/Kg
Bis(2-ethylhexyl) phthalate	µg/Kg	17	1,230,000 µg/Kg	28,500,000 µg/Kg
Benzo(b)fluoranthene	µg/Kg	13	21,100 µg/Kg	1,160,000 µg/Kg
Benzo(k)fluoranthene	µg/Kg	6.9	211,000 µg/Kg	11,900,000 µg/Kg
Benzo(a)pyrene	µg/Kg	10	2,110 µg/Kg	119,000 µg/Kg
Ideno(1,2,3-cd)pyrene	µg/Kg	26	12,800 µg/Kg	724,000 µg/Kg
Dibenzo(a,h)anthracene	µg/Kg	33	2,110 µg/Kg	119,000 µg/Kg
Benzo(ghi)perylene	µg/Kg	11	16,500,000 µg/Kg	37,200,000 µg/Kg

ug/Kg = micrograms per kilogram
mg/Kg = milligrams per kilogram
NT = No Target Concentration
NA = Not Applicable (Not Sampled)

Underlined Sample Numbers represent sediment samples.
ND = Not Detected
* = Target Concentration Based on MDNR Risk Based Levels for Non-Residential Standards
** = Target Concentration Based on MDNR Risk Based Levels for Construction Worker Standards

APPENDIX D

MISSOURI DEPARTMENT OF NATURAL RESOURCES WELL INFORMATION REPORT

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	Case	Yield	SWL
00004853	WELL		SOUTHWEST PARTS SUPPLY		6346 PLYMOUTH	WELLSTON	MO	MULTFAMILY	405.0		NW	SW	1	45	6	E		85	3.0	
00129392	ABANDONED	6166 BARTMER		MUELLER	13022 FERN CREST CT	CREVE COEUR	MO	UNKNOWN	16.0				1	45	6	E				
00133697	ABANDONED		MACKEY MITCHELL ASSOC		800 ST LOUIS UNION STN	ST. LOUIS	MO	UNKNOWN	15.0	NE	NW	SW	1	45	6	E	710			
00161627	MONITORING	6400 BLOCKS OGDEN AVE STL	ST LOUIS CO ECONOMIC COUNCIL		121 S MERAMEC STE 900	ST LOUIS	MO	MONITORING	18.0	SE	NE	NW	1	45	6	E		60.0		
00161628	MONITORING	6400 BLOCKS OGDEN AVE STL	ST LOUIS CO ECONOMIC COUNCIL		121 S MERAMEC STE 900	ST LOUIS	MO	MONITORING	20.0	SE	NE	NW	1	45	6	E				
00164398	ABANDONED	WELLSTON	C.C. DILLON COMPANY		1342 LONEDELL RD	ARNOLD	MO	UNKNOWN	20.0	NE	NE	NE	1	45	6	E		12.0		
00230446	ABANDONED	STEPHEN JONES AVE	ST LOUIS CO ECONOMIC COUNCIL		121 SOUTH MERAMEC STE 900	ST LOUIS	MO	SOILBORING	15.0	SW	NE	SW	1	45	6	E				
00245085	ABANDONED	6400 BLOCKS OGDEN AVE STL	STL COUNTY ECONOMIC COUNCIL		121 S MERAMEC STE 900	ST LOUIS	MO	SOILBORING		SE	NE	NW	1	45	6	E				
00314981	MONITORING	6258 ETZEL AVE WELLSTON	NORFOLK SOUTHERN RR CO		C/O FOREST STEVENSON	ROANOKE	VA	MONITORING	8.0				1	45	6	E		1.0		
00323878	ABANDONED	NE PLYMOUTH/METROLINK WELLSTON	LCRA OF THE CO OF STL		121 S MERAMEC	ST LOUIS	MO	MONITORING	17.0				1	45	6	E		7.0		
00323879	ABANDONED	NE PLYMOUTH/METROLINK WELLSTON	LCRA OF THE CO OF STL		121 S MERAMEC	ST LOUIS	MO	MONITORING	17.0				1	45	6	E		7.0		
00323880	ABANDONED	NE PLYMOUTH/METROLINK WELLSTON	LCRA OF THE CO OF STL		121 S MERAMEC	ST LOUIS	MO	MONITORING	17.0				1	45	6	E		7.0		
00325387	ABANDONED	5386 PERSHING AVE STL	MILLS GROUP		15480 ELK RIDGE LN	CHESTERFIELD	MO	SOILBORING	20.0				1	45	6	E				
00325424	ABANDONED	5578 PERSHING AVE	MILLS GROUP		15480 ELK RIDGE LANE	CHESTERFIELD	MO	SOILBORING					1	45	6	E				
00354259	ABANDONED	6515 PAGE AVE	CLARK PROPERTIES		ATTN: TOM BARNEWOLT	ST LOUIS	MO	SOILBORING					1	45	6	E				
00187662	ABANDONED		PRECISION TOOL CO		875 KINGSLAND AVENUE	UNIVERSITY CITY	MO	UNKNOWN	19.0				2	45	6	E	498			
00195378	ABANDONED		PRECISION TOOL COMPANY		875 KINGSLAND AVENUE	UNIVERSITY CITY	MO	SOILBORING	20.0				2	45	6	E	498	20.0		
00195386	ABANDONED	F5,G5,6,H5,6,7,I5,6,J5,6	PRECISION TOOL CO		875 KINGSLAND AVENUE	UNIVERSITY CITY	MO	UNKNOWN					2	45	6	E	498	20.0		
00195390	ABANDONED		PRECISION TOOL COMPANY		875 KINGSLAND AVE	UNIVERSITY CITY	MO	SOILBORING					2	45	6	E		20.0		
00259268	ABANDONED	PLYMOUTH AVE & METROLINK TRACK	LCRA OF THE COUNTY OF ST LOUIS		121 SOUTH MEREMEC STE 900	ST LOUIS	MO	MONITORING	15.0				2	45	6	E		15.0		
00259269	ABANDONED	PLYMOUTH AVE & METROLINK TRACK	LCRA OF THE COUNTY OF ST LOUIS		121 SOUTH MEREMEC STE 900	ST LOUIS	MO	MONITORING	15.0				2	45	6	E		15.0		
00259270	ABANDONED	PLYMOUTH AVE & METROLINK TRACK	LCRA OF THE COUNTY OF ST LOUIS		121 SOUTH MEREMEC STE 900	ST LOUIS	MO	MONITORING	15.0				2	45	6	E		15.0		
00266323	ABANDONED	6668 VERNON AVE	WESTGATE PROPERTIES		705 OLIVE ST	ST LOUIS	MO	SOILBORING	12.0				2	45	6	E	502			
00276851	ABANDONED	6779 OLIVE BLVD ST LOUIS	HANDEX ENVIRONMENTAL INC		16940 W VICTOR RD	NEW BERLIN	WI	SOILBORING			SE	SW	2	45	6	E		20.0		
00353528	ABANDONED	1094 SUTTER AVE WELLSTON	MO DNR		PO BOX 250	ROLLA	MO	SOILBORING	32.0				2	45	6	E	525			
00018385	ABANDONED		KPG CORPORATION		8011 CLAYTON RD. SUITE 102	CLAYTON	MO	MONITORING	19.0	SW	NE	NW	3	45	6	E				
00207379	MONITORING		CITY OF UNIVERSITY CITY		2258 GRISSOM DRIVE	ST LOUIS	MO	WATERLEVEL	77.0	NW	NW	SE	3	45	6	E		12.0		
00207380	MONITORING	SE CRNR KINGSLAND&VERNON U CIT	CITY OF UNIVERSITY CITY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	105.0	NW	NW	SE	3	45	6	E		12.0		
00207388	MONITORING	6646 VERNON AVE UNIVERSITY CIT	ASSOCIATED INDUSTRIES		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	75.0	NW	NW	SE	3	45	6	E		12.0		
00324059	ABANDONED	7531 OLIVE BLVD/ ST LOUIS	SINCLAIR OIL CORPORATION		3401 FARBANKS AVENUE	KANSAS CITY	KS	SOILBORING	16.0				3	45	6	E				
00339733	ABANDONED	13339-13399 OLIVE BLVD	WOODCHASE PLAZA ASSC MOZT VENTE		BEMISTEN AVE	ST LOUIS	MO	SOILBORING	19.0				3	45	6	E	521			
00353787	ABANDONED	7579 - 7585 OLIVE BLVD UNIVERS		LAMPSON	2424 BRISTOW AVENUE	ST LOUIS	MO	SOILBORING	20.0	SE	NW	NW	3	45	6	E				
00021931	MONITORING	B-8 82ND ST & OLIVE ST	AFFHADER INC		2258 GRISSOM DR	ST LOUIS	MO	WATERLEVEL	100.0	NE	NE	NW	4	45	6	E		12.0		
00115400	MONITORING	8560 OLIVE, UNIVERSITY CITY	SHELL OIL CO.		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	20.0	SW	NW	NW	4	45	6	E	567			
00115401	MONITORING	8560 OLIVE RD,UNIVERSITY CITY	SHELL OIL CO.		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	20.0	SW	NW	NW	4	45	6	E	567			
00115402	MONITORING	8560 OLIVE BLVD,UNIVERSITY CIT	SHELL OIL CO.		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	20.0	SW	NW	NW	4	45	6	E	567			
00115403	MONITORING	8560 OLIVE,UNIVERSITY CITY	SHELL OIL CO.		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	20.0	SW	NW	NW	4	45	6	E	567			
00115404	MONITORING	8560 OLIVE, UNIVERSITY CITY	SHELL OIL CO.		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	20.0	SW	NW	NW	4	45	6	E	567			
00153820	ABANDONED	ST LOUIS	STEAK N SHAKE, INC		8132 OLIVE BLVD	ST LOUIS	MO	UNKNOWN	16.0				4	45	6	E	550			
00163678	MONITORING	8213 DELMAR & BONHOMME	THE PASTA HOUSE CO		1143 MACKLIND	ST LOUIS	MO	MONITORING	24.0	NE	NE	NE	4	45	6	E		0.7		
00163679	MONITORING	8213 DELMAR & BONHOMME ST LOUI	THE PASTA HOUSE CO		1143 MACKLIND	ST LOUIS	MO	MONITORING	16.0	NE	NE	NE	4	45	6	E		8.0		
00277048	ABANDONED		MATT'S SERVICE		7901 OLIVE	UNIVERSITY CITY	MO	SOILBORING					4	45	6	E				
00311261	ABANDONED	8560 OLIVE UNIVERSITY CITY	SHELL OIL PRODUCTS U S		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING					4	45	6	E				
00312465	ABANDONED	8502 OLD BONHOMME RD U CITY	BONHOMME INVESTMENT GROUP		820 WHEATON WAY	ST LOUIS	MO	SOILBORING					4	45	6	E		10.0		
00323598	ABANDONED	7345 FORSYTH BLVD	WASHINGTON UNIVERSITY		7425 FORSYTHE	ST LOUIS	MO	MONITORING	14.2				4	45	6	E		4.0		
00323599	ABANDONED	7393 FORSYTH BLVD	WASHINGTON UNIVERSITY		7425 FORSYTHE	ST LOUIS	MO	MONITORING	30.3				4	45	6	E		20.0		
00323658	ABANDONED	7900 OLIVE BLVD UNIVERSITY CIT	ALDI INC AN ILLINOIS CORPORATI		PO BOX 8800	OFALLON	MO	SOILBORING	16.0				4	45	6	E				
00323881	ABANDONED	NE PLYMOUTH/METROLINK WELLSTON	LCRA OF THE CO OF STL		121 S MERAMEC	ST LOUIS	MO	MONITORING	17.0				4	45	6	E		7.0		
00325306	ABANDONED			GAST	930 MCKNIGHT RD	UNIVERSITY CITY	MO	SOILBORING	20.0				4	45	6	E				
00354975	ABANDONED	930 MCKNIGHT RD UNIVERSITY CIT		GAST	11 BURNAWOODS LN	UNIVERSITY CITY	MO	MONITORING					4	45	6	E				
00129395	ABANDONED		TARTEL DEVELOPMENT CORP		5500 WEST PARK AVE	ST LOUIS	MO	UNKNOWN	15.0				5	45	6	E	590			
00129402	ABANDONED		TARLTEL DEVELOPMENT CORP		5500 WEST PARK AVE	ST LOUIS	MO	UNKNOWN	15.0				5	45	6	E	590			
00145059	MONITORING	8689 OLIVE BLVD,UNIV CTY	SHURGARD STORAGE CENTERS		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	17.0			NE	5	45	6	E				
00145060	MONITORING	8689 OLIVE BLVD,UNIV CITY	SHURGARD STORAGE CENTERS		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	20.0			NE	5	45	6	E	575			
00145061	MONITORING	8689 OLIVE BLVD,UNIV CITY	SHURGARD STORAGE CENTERS		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	24.0			NE	5	45	6	E	580			
00145062	MONITORING	8689 OLIVE BLVD,UNIV CITY	SHURGARD STORAGE CENTERS		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	20.0			NE	5	45	6	E				
00145063	MONITORING	8689 OLIVE BLVD,UNIV CTY	SHURGARD STORAGE		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	20.0			NE	5	45	6	E				
00145064	MONITORING	8689 OLIVE BLVD,UNIV CTY	SHURGARD STORAGE CENTERS		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	20.0			NE	5	45	6	E				
00145065	MONITORING	8689 OLIVE BLVD,UNIV CITY	SHURGARD STORAGE CENTERS		1201 THIRD AVE #2200	SEATTLE	WA	MONITORING	20.0			NE	5	45	6	E	565			
00145066	MONITORING	8689 OLIVE BLVD,UNIV CITY	SHURGARD STORAGE CENTERS		1901 THIRD AVE #2200	SEATTLE	WA	MONITORING	20.0			NE	5	45	6	E	570			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00266182	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SW	10	45	6	E	20.0		
00266183	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SW	10	45	6	E	25.0		
00267093	MONITORING	7393 FORSYTH BLVD UNIVERSITYCI	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	30.0			SW	10	45	6	E	12.0		
00267094	MONITORING	7393 FORSYTH BLVD UNIVERSITYCI	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	30.0			SW	10	45	6	E	12.0		
00267095	MONITORING	7393 FORSYTH BLVD UNIVERSITYCI	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	30.0			SW	10	45	6	E	12.0		
00267140	MONITORING	FOREST PARK STL	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	30.0				10	45	6	E	12.0		
00267141	MONITORING	FOREST PARK STL	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	35.0			SE	10	45	6	E	12.0		
00268209	MONITORING	FOREST PARK PKWY/PERSHING	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	20.0			SE	10	45	6	E	12.0		
00268210	MONITORING	FOREST PARK PKWY/PERSHING	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	30.0			SE	10	45	6	E	12.0		
00268211	MONITORING	FOREST PARK PKWY/PERSHING	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	30.0			SE	10	45	6	E	12.0		
00268212	MONITORING	FOREST PARK PKWY/PERSHING	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	20.0			SW	10	45	6	E	12.0		
00268213	MONITORING	FOREST PARK PKWY/PERSHING	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	12.0		
00268214	MONITORING	MARYLAND AVE UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	12.0		
00268215	MONITORING	7393 FORSYTH UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	20.0			SW	10	45	6	E	12.0		
00268216	MONITORING	7393 FORSYTH UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	12.0		
00268217	MONITORING	7393 FORSYTH UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	15.0			SW	10	45	6	E	12.0		
00268218	MONITORING	7393 FORSYTH UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	12.0		
00268219	MONITORING	7393 FORSYTH UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	20.0			SW	10	45	6	E	12.0		
00268220	MONITORING	7393 FORSYTH UNIVERSITY CITY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	12.0		
00276201	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SW	10	45	6	E	15.0		
00276202	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SW	10	45	6	E	25.0		
00276217	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SE	10	45	6	E	30.0		
00276297	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SW	10	45	6	E	20.0		
00276298	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SW	10	45	6	E	25.0		
00276329	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SE	10	45	6	E	20.0		
00284461	MONITORING	8879 N BROADWAY STL	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	14.1	SW	SW	NW	10	45	6	E	12.0		
00284463	MONITORING	8879 N BROADWAY STL	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	16.6	SW	SW	NW	10	45	6	E	12.0		
00299115	ABANDONED	7345 FORSYTH BLVD/ UNIVERSITY	CHEVRON CORP C/O GEOTECHNO		2258 GRISSOM DRIVE	ST LOUIS	MO	UNKNOWN	15.0			SE	10	45	6	E	15.0		
00299116	ABANDONED	7345 FORSYTH BLVD/ UNIVERSITY	CHEVRON CORP C/O GEOTECHNO		2258 GRISSOM DRIVE	ST LOUIS	MO	UNKNOWN	11.0			SE	10	45	6	E	11.0		
00299117	ABANDONED	7345 FORSYTH BLVD/ UNIVERSITY	CHEVRON CORP C/O GEOTECHNO		2258 GRISSOM DRIVE	ST LOUIS	MO	UNKNOWN	14.0			SE	10	45	6	E	14.0		
00299128	ABANDONED	MARYLAND AVE/ UNIVERSITY CITY	BISTATE DEV AGENCY C/O GEOTE		2258 GRISSOM DRIVE	ST LOUIS	MO	WATERLEVEL	51.5			SW	10	45	6	E	49.0		
00299129	ABANDONED	MARYLAND AVE/ UNIVERSITY CITY	BISTATE DEV AGENCY C/O GEOTE		2258 GRISSOM DRIVE	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	25.0		
00299140	ABANDONED	7345 FORSYTH BLVD/ UNIVERSITY	CHEVRON CORP C/O GEOTECHNO		2258 GRISSOM DRIVE	ST LOUIS	MO	UNKNOWN	15.0			SE	10	45	6	E	15.0		
00299981	ABANDONED	7393 FORSYTH CLAYTON	BISTATE DEVE AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	25.0			SW	10	45	6	E	25.0		
00300073	ABANDONED	7345 FORSYTH BLVD/ UNIVERSITY	CHEVRON CORP C/O GEOTECHNO		2258 GRISSOM DRIVE	ST LOUIS	MO	UNKNOWN	19.0			SE	10	45	6	E	19.0		
00311551	ABANDONED	7701 DELMAR,UNIVERSITY CITY	BP PRODUCTS NA-AMOCO#9749		2240 BLUESTONE DR	ST CHARLES	MO	SOILBORING	20.0				10	45	6	E			
00312483	ABANDONED	550 N & S RD ST LOUIS	MARBO INVESTMENT CO		1137 JO CARR DR	CHESTERFIELD	MO	DOMESTIC					10	45	6	E	16.0		
00339210	ABANDONED	550 N & S RD UNIVERSITY CITY	550 NORTH & SOUTH LLC		C/O BRET RICH	ST LOUIS	MO	SOILBORING					10	45	6	E	16.0		
00024483	ABANDONED	6211 DELMAR, ST LOUIS	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			NE	11	45	6	E	20.0		
00258192	ABANDONED	DEBARIVIERE/MILLBROOK ST LOUIS	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SE	11	45	6	E			
00258193	ABANDONED	SKINKER/FOREST PRKWY UNIVERSIT	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SE	11	45	6	E			
00258194	ABANDONED	6500 BLK MILLBROOK AVE UNIVERS	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SE	11	45	6	E			
00258195	ABANDONED	BIG BEND BLVD/FOREST PRK UNIVE	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	18.0			SW	11	45	6	E			
00258196	ABANDONED	FORSYTH & FOREST PRK CLAYTON	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	19.0			SW	11	45	6	E			
00258197	ABANDONED	HANLEY RD/FOREST PRKWY CLAYTON	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	15.0			SW	11	45	6	E			
00258198	ABANDONED	400 MERAMEC AVE CLAYTON	BI-STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SW	11	45	6	E			
00258199	ABANDONED	BRENTWOOD/I70/FOREST PRK CLAYT	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SW	11	45	6	E			
00258202	ABANDONED	INTERSECTION OF FORSYTH RD	BI-STATE DEVELOPMENT		C/O GEOTECHOLOGY INC	ST LOUIS	MO	SOILBORING	23.5			SW	11	45	6	E			
00258203	ABANDONED	INTERSECTION OF MILLBROOK	BI-STATE DEVELOPMENT		C/O GEOTECHOLOGY INC	ST LOUIS	MO	SOILBORING	23.0			SE	11	45	6	E			
00267142	MONITORING	FOREST PARK STL	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	35.0			SW	11	45	6	E	12.0		
00268207	MONITORING	FOREST PARK PKWY/SKINKER	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	29.0			SE	11	45	6	E	12.0		
00276328	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				SE	11	45	6	E	29.0		
00277391	ABANDONED	6211 DELMAR, ST LOUIS	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0			NE	11	45	6	E	20.0		
00277691	ABANDONED	6211 DELMAR, ST LOUIS	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	15.0			NE	11	45	6	E	15.0		
00277748	ABANDONED	6211 DELMAR UNIVERSITY CITY	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	20.0			NE	11	45	6	E			
00284471	MONITORING	FORREST PARK PARKWAY CLAYTON M	BISTATE DEVELOPMENT AGENCY		2258 GRISSOM DRIVE	ST LOUIS	MO	WATERLEVEL	44.0			SW	11	45	6	E	12.0		
00299127	ABANDONED	FOREST PARK PARKWAY	BISTATE DEVELOPMENT AGENCY		2258 GRISSOM DRIVE	ST LOUIS	MO	WATERLEVEL	29.0			SE	11	45	6	E	29.0		
00300072	ABANDONED	6211 DELMAR BLVD	SHELL OIL PRODUCTS		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	12.0			NE	11	45	6	E			
00323199	ABANDONED	6211 DELMAR, ST LOUIS	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	18.7			NE	11	45	6	E	18.0		
00323200	ABANDONED	6211 DELMAR, ST LOUIS	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	19.0			NE	11	45	6	E	19.0		

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00315927	MONITORING	OLIVE AND SKINKER	CITY OF ST LOUIS		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	25.0			NW	12	45	6	E		1.0	
00323541	ABANDONED	5920 DELMAR BLVD, ST LOUIS	UNIQUE BUILDING LLC		6504 DELMAR BLVD	ST LOUIS	MO	SOILBORING	20.0				12	45	6	E	525		
00323551	ABANDONED	5883 DELMAR	DELMAR SCHOOL LLC		6504 DELMAR BLVD	ST LOUIS	MO	SOILBORING					12	45	6	E	561	322.0	
00325057	ABANDONED		VERNON J SANTENS PROP INC		6191 MAPLE AVENUE	ST LOUIS	MO	SOILBORING					12	45	6	E		24.0	
00354212	ABANDONED	5595 PERSHING AVE		MILLS	120 S CENTRAL	ST LOUIS	MO	SOILBORING		SE	NW	SE	12	45	6	E			
00203470	ABANDONED	1051 HAMPTON, STL	MOBIL OIL COPRORATION		PO BOX 874	JOLIET	IL	SOILBORING	17.0				13	45	6	E	550		
00269473	MONITORING	814 S LINDBERGH BLVD ST LOUIS	B P AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	16.0				13	45	6	E		12.0	
00132852	ABANDONED		ST MARY'S CHILD CARE CNTR		7110 OAKLAND AVE	ST LOUIS	MO	UNKNOWN					14	45	6	E			
00132860	ABANDONED	7110 OAKLAND AVE	ST MARY'S HEALTH CENTER		6420 CLAYTON RD	ST LOUIS	MO	UNKNOWN	20.0				14	45	6	E			
00204341	ABANDONED			DANFORTH	#2 BRENTMOOR PARK	ST LOUIS	MO	SOILBORING					14	45	6	E			
00276293	ABANDONED	6447 CLAYTON RD	WALLMAN MANAGEMENT CO		PO BOX 11263	CLAYTON	MO	SOILBORING	14.5				14	45	6	E			
00299904	ABANDONED	6737 CLAYTON RD/ CLAYTON	MCGINLEY FAMILY LIMITED PARTNE		2751 CARONDELET	ST LOUIS	MO	SOILBORING	18.0				14	45	6	E			
00300337	ABANDONED	700 DEMUN AVE CLAYTON		HAMILTON	C/O STEVE SALLER	ST LOUIS	MO	SOILBORING	19.0				14	45	6	E			
00311363	ABANDONED	6737 CLAYTON RD CLAYTON MO	MCGINLEY FAMILY LIMITED PARTNE		2751 CARONDELET	ST LOUIS	MO	MONITORING	20.0				14	45	6	E		5.0	
00311365	ABANDONED	6737 CLAYTON RD CLAYTON MO	MCGINLEY FAMILY LIMITED PARTNE		2751 CARONDELET	ST LOUIS	MO	MONITORING	20.0				14	45	6	E		5.0	
00311366	ABANDONED	6737 CLAYTON RD CLAYTON MO	MCGINLEY FAMILY LIMITED PARTNE		2751 CARONDELET	ST LOUIS	MO	MONITORING	20.0				14	45	6	E		5.0	
00311670	ABANDONED	7001 CLAYTON RD RICHMOND HEIGH	WALLIS OIL COMPANIES		106 E WASHINGTON	CUBA	MO	SOILBORING					14	45	6	E			
00339443	ABANDONED	6400 CLAYTON RD, ST LOUIS	LILLIBRIDGE HEALTHCARE		C/O ATC ASSOICATES INC	ST LOUIS	MO	SUPPLY					14	45	6	E			
00362501	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	21.0				14	45	6	E		21.0	
00362502	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	20.4				14	45	6	E		20.0	
00362503	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	19.8				14	45	6	E		19.0	
00362504	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	20.0				14	45	6	E		20.0	
00362505	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	19.0				14	45	6	E		19.0	
00362506	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	14.8				14	45	6	E		14.0	
00362507	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	14.7				14	45	6	E		14.0	
00362508	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	15.1				14	45	6	E		15.0	
00362509	ABANDONED	1201 BELLEVUE AVE ST LOUIS	SUNOCO, INC		350 EAGLEVIEW BLVD	EXTON	PA	MONITORING	14.0				14	45	6	E		14.0	
00187605	ABANDONED	CLAYTON	CLARK REFINING & MARKETIN		800 ROOSEVELT RD	GLEN ELLYN	IL	UNKNOWN	22.0	NW	NW		15	45	6	E			
00202418	ABANDONED	7810 CLAYTON RD	FOLLMAN PROPERTIES		165 N MERAMEC AVE	ST LOUIS	MO	SOILBORING	16.0				15	45	6	E			
00204180	ABANDONED	7810 CLAYTON RD	FOLLMAN PROPERTIES ONCOR INTER		165 N MERAMEC AVE	ST LOUIS	MO	SOILBORING					15	45	6	E			
00204297	ABANDONED	NE CORNER OF FORSTHY & LINDELL	EQUILON ENTERPRISES LLC		2258 GRISSOM DR	ST LOUIS	MO	SOILBORING					15	45	6	E			
00229378	MONITORING	7345 FORSYTH AVE CLAYTON	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	14.0	SE	SW	NW	15	45	6	E		12.0	
00229379	MONITORING	7345 FORSYTH AVE CLAYTON	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	16.0	SE	SW	NW	15	45	6	E		12.0	
00229380	MONITORING	7345 FORSYTH AVE CLAYTON	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	16.0	SE	SW	NW	15	45	6	E		12.0	
00229381	MONITORING	7345 FORSYTH AVE CLAYTON	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	19.0	SE	SW	NW	15	45	6	E		12.0	
00229397	MONITORING	7345 FORSYTH AVE CLAYTON	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	19.0	SE	SW	NW	15	45	6	E		12.0	
00258156	ABANDONED	7345 FORSYTH CLAYTON	EQUILON ENTERPRIES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SW	NW	15	45	6	E		13.0	
00258157	ABANDONED	7345 FORSYTH CLAYTON	EQUILON ENTERPRIES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SW	NW	15	45	6	E		14.0	
00266145	ABANDONED	7345 FORSYTH AVE CLAYTON	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	14.0	SE	SW	NW	15	45	6	E		13.0	
00266146	ABANDONED	7345 FORSYTH AVE CLAYTON	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	19.0	SE	SW	NW	15	45	6	E		18.0	
00266156	ABANDONED	7345 FORSYTH CLAYTON	EQUILON ENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	14.3	SE	SW	NW	15	45	6	E		14.0	
00266157	ABANDONED	7345 FORSYTH CLAYTON	EQUILON ENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	14.1	SE	SW	SW	15	45	6	E		13.0	
00300063	ABANDONED		FIRST AMERICAN TITLE INSURANC		7600 FORSYTH BLVD	ST LOUIS	MO	SOILBORING	16.0				15	45	6	E	590		
00312277	ABANDONED	7920 CLAYTON AVE RICHMOND HEIG	CNL RETIREMENT SUN 2		C/O LOWNDES	ORLANDO	FL	SOILBORING					15	45	6	E		10.0	
00314982	MONITORING	6258 ETZEL AVE WELLSTON	NORFOLK SOUTHERN RR CO		C/O FOREST STEVENSON	ROANOKE	VA	MONITORING	8.0				15	45	6	E		1.0	
00323163	ABANDONED	WEST MORELAND AVE	BISTATE DEV AGENCY C/O GEOTE		2258 GRISSOM DRIVE	ST LOUIS	MO	DOMESTIC	35.0				15	45	6	E			
00339334	ABANDONED	7920 CLAYTON AVE	CNL RETIREMENT SUN		C/O LOWNDES DROSDICK DOSTER	RICHMOND HEIGHTS	MO	SOILBORING					15	45	6	E		5.0	
00194488	ABANDONED	NETWORK AUTO SOLUTIONS		ORSER	7016 GRAYMOOR	LOUISVILLE	MO	UNKNOWN	16.0				16	45	6	E			
00222847	ABANDONED	8086 CLAYTON RD RICHMOND HTS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		NW	NW	SE	16	45	6	E			
00258171	ABANDONED	8086 CLAYTON DR RICHMOND HEIGH	EQUILON ENTERPRISES LLC		C/O GOETECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SE	16	45	6	E			
00258191	ABANDONED	800 CLAYTON RD RICHMOND HTS	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SE	16	45	6	E			
00267111	MONITORING	8086 CLAYTON RD RICHMOND HTS	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	16.0			SE	16	45	6	E		12.0	
00267112	MONITORING	8086 CLAYTON RD RICHMOND HTS	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	9.0			SE	16	45	6	E		12.0	
00267113	MONITORING	8086 CLAYTON RD RICHMOND HTS	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	9.5			SE	16	45	6	E		12.0	
00267114	MONITORING	8086 CLAYTON RD RICHMOND HTS	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	15.0			SE	16	45	6	E		12.0	
00276364	ABANDONED	1240 BRENTWOOD BLVD	EQUILON ENT. LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SE	16	45	6	E			
00302317	MONITORING	1240 BRENTWOOD BLVD	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	17.0			SE	16	45	6	E		1.0	
00302318	MONITORING	1240 BRENTWOOD BLVD	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	16.0			SE	16	45	6	E		1.0	
00315931	MONITORING	1240 S BRENTWOOD RICHMAN HEIGH	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	15.0			SE	16	45	6	E		1.0	
00324054	ABANDONED		CLAYTON AUTO		500 S HANLEY ROAD	CLAYTON	MO	SOILBORING	20.0				16	45	6	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00188585	RECNSTRUCT		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E			
00188586	RECNSTRUCT		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E			
00188587	RECNSTRUCT		BAKER PETROLITE		369 MARSHALL	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E			
00188588	RECNSTRUCT		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E			
00188589	RECNSTRUCT		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E			
00195866	ABANDONED	1436 S BIG BEND		HARRIS(POWER/AT	980 COMPTON HILL	ST LOUIS	MO	SOILBORING	17.0				21	45	6	E			
00203626	ABANDONED		BKAER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	UNKNOWN	13.5	SE	NE	SW	21	45	6	E	451		
00204866	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	SOILBORING	10.0	SW	NE	SE	21	45	6	E			
00207226	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	45.0	SW	NE	SE	21	45	6	E	452	60.0	
00207229	MONITORING		BAKER PETROLIE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	91.0	SW	NE	SE	21	45	6	E	462	60.0	
00207230	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	160.0	SW	NE	SE	21	45	6	E	462	60.0	
00222503	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E	462	21.0	
00222504	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E	462	20.0	
00223981	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E			
00230176	ABANDONED		BARKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	SOILBORING		SW	NE	SE	21	45	6	E			
00234553	MONITORING	369 MARSHALL RD	BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	38.0	SW	SW	NE	21	45	6	E	478	60.0	
00234554	MONITORING	369 MARSHALL RD	BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	40.0	SW	SW	NE	21	45	6	E	476	60.0	
00234555	MONITORING	369 MARSHALL RD	BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	22.0	SW	SW	NE	21	45	6	E	461	60.0	
00234556	MONITORING	369 MARSHALL RD	BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	48.0	SW	SW	NE	21	45	6	E	477	60.0	
00244302	ABANDONED	8851-8855 ST CHARLES RK RD ST	BLACKSTONE GROUP - ILLINOIS LL		1830 CRAGI PARK CT	ST LOUIS	MO	MONITORING	20.0				21	45	6	E		20.0	
00244303	ABANDONED	8851-8855 ST CHARLES RK RD ST	BLACKSTONE GROUP - ILLINOIS LL		1830 CRAGI PARK CT	ST LOUIS	MO	MONITORING	20.0				21	45	6	E		20.0	
00259108	ABANDONED		BAKER PETROLITE		369 MARSHALL ROAD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E	448	21.0	
00259368	ABANDONED		BAKER PETROLITE		369 MARSHALL ROAD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E	448	8.0	
00259406	ABANDONED			PETROLITE	369 MARSHALL RD	WEBSTER GROVES	MO	DOMESTIC					21	45	6	E	470	8.0	
00260317	MONITORING		BAKER PETROLITE		C/O DEBBIE ROMANOWSKI	WEBSTER GROVES	MO	MONITORING	41.0	SW	SW	NE	21	45	6	E	477	60.0	
00260318	MONITORING		BAKER PETROLITE		C/O DEBBIE ROMANOWSKI	WEBSTER GROVES	MO	MONITORING	161.0	SW	SW	NE	21	45	6	E	477	60.0	
00260319	MONITORING		BAKER PETROLITE		C/O DEBBIE ROMANOWSKI	WEBSTER GROVES	MO	MONITORING	41.0	SW	SW	NE	21	45	6	E	477	60.0	
00260320	MONITORING		BAKER PETROLITE		C/O DEBBIE ROMANOWSKI	WEBSTER GROVES	MO	MONITORING	66.0	SW	SW	NE	21	45	6	E	477	60.0	
00260654	MONITORING		BAKER PETROLITE		ATTEN: DEBBIE ROMANOWSKI	WEBSTER GROVES	MO	MONITORING	51.0	SW	NE	NE	21	45	6	E	487	60.0	
00260655	MONITORING		BAKER PETROLITE		ATTEN: DEBBIE ROMANOWSKI	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	NE	21	45	6	E	489	60.0	
00260662	MONITORING		BAKER PETROLITE		369 MARSHALL ROAD	WEBSTER GROVES	MO	MONITORING	41.0	SW	NE	NE	21	45	6	E		60.0	
00266822	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	SE	21	45	6	E		10.0	
00267198	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	81.0	SW	NE	SE	21	45	6	E	478	60.0	
00267199	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E	475	60.0	
00268464	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	41.0	SW	NE	SE	21	45	6	E	454	60.0	
00268465	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E		60.0	
00268466	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E	470	60.0	
00268467	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E	476	60.0	
00268475	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E		60.0	
00268476	MONITORING		BAKER PETROLITE		369 MARSHALL	WEBSTER GROVES	MO	MONITORING	47.0	SW	NE	SE	21	45	6	E		60.0	
00269865	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	50.0	SW	SW	NE	21	45	6	E	477	60.0	
00269866	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	40.0				21	45	6	E	452	60.0	
00269867	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	50.0				21	45	6	E	462	60.0	
00269868	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	50.0				21	45	6	E	484	60.0	
00269869	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	39.0				21	45	6	E	455	60.0	
00275747	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	SOILBORING		SW	NE	SE	21	45	6	E			
00275768	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	SOILBORING	19.0	SW	SW	NE	21	45	6	E			
00275851	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	SW	NE	21	45	6	E		12.0	
00275852	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	SW	NE	21	45	6	E	448	9.0	
00275853	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	SW	NE	21	45	6	E	456	15.0	
00275854	ABANDONED		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING		SW	NE	NE	21	45	6	E	449	24.0	
00283381	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	SW	NE	21	45	6	E	489	60.0	
00283382	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E	481	60.0	
00283383	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	31.0	SW	NE	SE	21	45	6	E	490	12.0	
00283401	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	61.0	SW	NE	SE	21	45	6	E	479	60.0	
00283402	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	47.0	SW	NE	SE	21	45	6	E	487	60.0	
00283403	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	125.0	SW	NE	SE	21	45	6	E	477	12.0	
00283404	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	75.0	SW	NE	SE	21	45	6	E	489	60.0	
00284769	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	20.5	SW	SW	NE	21	45	6	E	448	60.0	
00284770	MONITORING		BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVES	MO	MONITORING	50.0	SW	SW	NE	21	45	6	E		12.0	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00111484	ABANDONED		TEXACO REFINING&MARKETING		PO BOX 1650	TULSA	OK	MONITORING	15.0	SE	NE	SE	22	45	6	E	500		
00115956	MONITORING	2200 BIG BEND,RICHMOND HTS	TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	19.0	SE	NE	SE	22	45	6	E	500		
00115957	MONITORING	2200 BIG BEND,RICHMOND HTS	TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	19.0	SE	NE	SE	22	45	6	E	500		
00122666	MONITORING	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0			NW	22	45	6	E			
00122667	MONITORING	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	25.0			NW	22	45	6	E			
00122668	MONITORING	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0			NW	22	45	6	E			
00122669	MONITORING	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	25.0			NW	22	45	6	E			
00122670	MONITORING	8514 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	20.0			NW	22	45	6	E			
00122671	MONITORING	8514 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD		MO	MONITORING	20.0			NW	22	45	6	E			
00122672	MONITORING	8514 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	20.0			NW	22	45	6	E			
00122673	MONITORING	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0			NW	22	45	6	E			
00122952	MONITORING	1601 S HANLEY, BRENTWOOD	CLAIRE MANUFACTURING		ALTMAN, KRITZER AND LEVICK, P	BRENTWOOD	MO	MONITORING	34.0	SW	SE	NE	22	45	6	E	550		
00122953	MONITORING	1601 S HANLEY, BRENTWOOD	CLAIRE MANUFACTURING		ALTMAN, KRITZER, AND LEVICK, P	BRENTWOOD	MO	MONITORING	27.0	SW	SE	NE	22	45	6	E	550		
00122994	MONITORING	1601 S. HANLEY, BRENTWOOD	CLAIRE MANUFACTURING		ALTMAN, KRITZER AND LEVICK PC	BRENTWOOD	MO	MONITORING	31.0	SW	SE	NE	22	45	6	E	550		
00122995	MONITORING	1601 S HANLEY, BRENTWOOD	CLAIRE MANUFACTURING		ALTMAN, KRITZER, AND LEVICK, P	BRENTWOOD	MO	MONITORING	29.0	SW	SE	NE	22	45	6	E	550		
00122999	MONITORING	1601 S. HANLEY, BRENTWOOD	CLAIRE MANUFACTURING		ALTMAN, KRITER, AND LEVICK PC	BRENTWOOD	MO	MONITORING	24.0	SW	SE	NE	22	45	6	E	550	60.0	
00163120	MONITORING		TEXACO REFINING AND MARKE		PO BOX 1650	TULSA	OK	MONITORING	20.0	SE	NE	NE	22	45	6	E		1.0	
00194930	ABANDONED	100 S GARRISON, STL	MO DEPT OF ELEM		PO BOX 480	JEFFERSON CITY	MO	SOILBORING	21.0		NE	NE	22	45	6	E			
00204340	ABANDONED	8300 EAGER ROAD, BRENTWOOD	SOUTHWESTERN BELL TELEPHON		IN NORMA'S PF	DRAWER	MO	SOILBORING	18.0				22	45	6	E			
00204353	ABANDONED	8300 EAGER ROAD, BRENTWOOD	SOUTHWESTERN BELL TELEPHON		IN NORMA'S PF	DRAWER	MO	SOILBORING	17.0				22	45	6	E			
00230918	ABANDONED	254 HANLEY INDUSTRIAL CT BRENT		KELLY JR	1230 TOPPING ROAD	ST LOUIS	MO	SOILBORING					22	45	6	E			
00258188	ABANDONED	E OF 2300 S HANLEY BRENTWOOD	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SW	22	45	6	E			
00258190	ABANDONED	200 HANLEY IND CT BRENTWOOD	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				NW	22	45	6	E			
00259392	ABANDONED	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0				22	45	6	E		24.0	
00259393	ABANDONED	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0			NW	22	45	6	E		24.0	
00259394	ABANDONED	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0			NW	22	45	6	E		24.0	
00259395	ABANDONED	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	25.0				22	45	6	E		25.0	
00259396	ABANDONED	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	24.0			NW	22	45	6	E		24.0	
00259397	ABANDONED	8400 EAGER RD ST LOUIS	DIERBERGS MARKETS		1422 ELBRIDGE PAYNE RD	CHESTERFIELD	MO	MONITORING	9.0			NW	22	45	6	E		9.0	
00260109	MONITORING	2200 BIG BEND BLV/RICHMONDHIGH	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	13.5				22	45	6	E		12.0	
00260556	MONITORING	8400 EAGLE RD	MATERIAL SERVICE CO		ATTEN: JERRY EBEST	ST LOUIS	MO	MONITORING	23.0				22	45	6	E		12.0	
00266147	ABANDONED	2200 BIG BEND BLV/RICHMONDHIGH	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	13.0			SE	22	45	6	E			
00266153	ABANDONED	175 HANLEY IND CT	BRENTWOOD POLICE DEPT		GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	10.0			SW	22	45	6	E			
00267105	MONITORING	2200 BIG BEND BLV/RICHMONDHIGH	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	13.5			SE	22	45	6	E		12.0	
00268739	MONITORING	7965 MANCHESTER	MAPLEWOOD-HILLTOP LLC		7910 MANCHESTER RD	MAPLEWOOD	MO	MONITORING	24.0			SW	22	45	6	E	440	48.0	
00268740	MONITORING	7965 MANCHESTER	MAPLEWOOD-HILLTOP LLC		7910 MANCHESTER RD	MAPLEWOOD	MO	MONITORING	24.0			SW	22	45	6	E	440	48.0	
00268741	MONITORING	7965 MANCHESTER	MAPLEWOOD- HILLTOP LLC		7910 MANCHESTER RD	MAPLEWOOD	MO	MONITORING	25.0			SW	22	45	6	E	440	48.0	
00269007	MONITORING	8400 EAGER RD BRENTWOOD	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	15.0				22	45	6	E		12.0	
00276299	ABANDONED	FOREST PARK PKWY	BISTATE DEV AGENCY		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL				NW	22	45	6	E		15.0	
00276375	ABANDONED	2301 S BIG BEND BLVD, ST LOUIS		KNEZNEKOFF	2305 S BIG BEND BLVD	ST LOUIS	MO	SOILBORING					22	45	6	E			
00277972	ABANDONED	7965 MANCHESTER RD	MAPLEWOOD HILLTOP LLC		7910 MANCHESTER RD	MAPLEWOOD	MO	SOILBORING				SW	22	45	6	E		23.0	
00299130	ABANDONED	S OF EAGER RD & I-64/40	BISTATE DEV AGENCY C/O GEOTE		2858 GRISSOM DRIVE	ST LOUIS	MO	WATERLEVEL	20.0			NW	22	45	6	E		20.0	
00300062	ABANDONED	251 HANLEY INDUSTRIAL COURT	INDEECO		425 HANLEY INDUSTRIAL CT	ST LOUIS	MO	SOILBORING	14.0				22	45	6	E	470		
00300156	ABANDONED	241 HANLEY INDUSTRIAL CT	INDEECO		425 HANLEY INDUSTRIAL CT	ST LOUIS	MO	SOILBORING	16.0				22	45	6	E			
00311367	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311368	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311369	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311370	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311371	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311372	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311373	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		NW	NE	SW	22	45	6	E			
00311374	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311375	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311376	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311377	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311378	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311379	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311380	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311381	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			
00311382	ABANDONED	2300 S HANLEY, MAPLEWOOD	MAPLEWOOD SOUTH DEV & MAPL		BALDONNERBELT BUSS CENTER DE	ST LOUIS	MO	MONITORING		SW	NE	SW	22	45	6	E			

Legal Description Report

Ref Num	Well Type	Site Address		Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00385880	ABANDONED	7965 MANCHESTER RD	MAPLEWOOD	MAPLEWOOD HILLTOP LLC % COZAD		[illegible]	ST LOUIS	MO	MONITORING	18.8			SW	22	45	6	E		18.2	10.17
00385881	ABANDONED	7965 MANCHESTER RD	MAPLEWOOD	MAPLEWOOD HILLTOP LLC % COZAD		[illegible]	ST LOUIS	MO	MONITORING	23.6			SW	22	45	6	E		23.6	9.5
00183805	ABANDONED	2400 BIG BEND		CITY OF MAPLEWOOD		7601 MANCHESTER	MAPLEWOOD	MO	UNKNOWN	15.0	NW	SW	SW	23	45	6	E			
00300655	ABANDONED	7003 MANCHESTER RD		BP AMOCO CORP		2240 BLUESTONE DRIVE	ST CHARLES	MO	SOILBORING	20.0				23	45	6	E			
00323542	ABANDONED	1503 S BIG BEND BLVD ST LOUIS			FREIN	8996 WEMBLEY CT	SARASOTA	FL	SOILBORING					23	45	6	E			
00323568	ABANDONED	7321 WISE AVE		LAND GROUP LLC		11015 RAMBLING OAKS	ST LOUIS	MO	SOILBORING					23	45	6	E	580		
00323637	ABANDONED	6350 KNOX INDUSTRIAL DR ST LOU		KOCH MATGERIALS REISS REMEDIAT		411 E 37TH ST N	WICHITA	KS	SOILBORING					23	45	6	E			
00339532	ABANDONED	1201 BELLEVILE RICHMOND HTS		SUNOCO INC		9436 MATHY RD	BRIGHTON	MO	MONITORING	20.5				23	45	6	E		6.0	
00339533	ABANDONED	1201 BELLEVILE RICHMOND HTS		SUNOCO INC		9436 MATHY RD	BRIGHTON	MO	MONITORING					23	45	6	E		4.0	
00018360	ABANDONED			MOBIL OIL CORP.		2000 SOUTH 20TH ST.	SAUGET	IL	MONITORING	19.0				24	45	6	E	550		
00124979	ABANDONED	ST LOUIS		DEACONESS HOSPITAL		6150 OAKLAND AVE	ST LOUIS	MO	UNKNOWN				NE	24	45	6	E			
00203469	ABANDONED	1514 HAMPTON AVE		SITE OIL CO		50 S BEMISTON	CLAYTON	MO	SOILBORING	17.0			SE	24	45	6	E			
00207227	MONITORING			BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVE	MO	MONITORING	99.0	SW	NE	SE	24	45	6	E	481	60.0	
00207392	MONITORING	1514 HAMPTON AVE		SITE OIL CO		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	NW	NE	SE	24	45	6	E		12.0	
00207393	MONITORING	1514 HAMPTON AVE		SITE OIL CO		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	NW	NE	SE	24	45	6	E		12.0	
00207394	MONITORING	1514 HAMPTON AVE		SITE OIL		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	25.0	NW	NE	SE	24	45	6	E		12.0	
00207395	MONITORING	1514 HAMPTON AVE		SITE OIL CO		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	NW	NE	SE	24	45	6	E		12.0	
00258176	ABANDONED	1514 HAMPTON AVE		SITE OIL CO C/O GEOTECHNOLOGY		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING		NW	NE	NE	24	45	6	E		25.0	
00258177	ABANDONED	1514 HAMPTON AVE		SITE OIL CO C/O GEOTECHNOLOGY		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING		NW	NE	NE	24	45	6	E		20.0	
00258178	ABANDONED	1514 HAMPTON AVE		SITE OIL CO C/O GEOTECHNOLOGY		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING		NW	NE	NE	24	45	6	E		20.0	
00258179	ABANDONED	1514 HAMPTON AVE		SITE OIL CO C/O GEOTECHNOLOGY		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING		NW	NE	NE	24	45	6	E		20.0	
00267981	MONITORING	1201 BELLEVUE RICHMOND HTS MO		SUNOCO INC (R & M)		1801 MARKET ST	PHILADELPHIA	PA	MONITORING	20.5	NE	NE	NW	24	45	6	E		10.0	
00267982	MONITORING	1201 BELLEVUE RICHMOND HTS MO		SUNOCO INC (R & M)		1801 MARKET ST	PHILADELPHIA	PA	MONITORING	20.5	NE	NE	NW	24	45	6	E		10.0	
00267983	MONITORING	1201 BELLEVUE RICHMOND HTS MO		SUNOCO INC (R & M)		1801 MARKET ST	PHILADELPHIA	PA	MONITORING	20.5	NE	NE	NW	24	45	6	E		10.0	
00267985	MONITORING	1201 BELLEVUE RICHMOND HTS MO		SUNOCO INC (R & M)		1801 MARKET ST	PHILADELPHIA	PA	MONITORING	20.5	NE	NE	NW	24	45	6	E		10.0	
00302657	MONITORING			BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVE	MO	MONITORING	52.0	SW	SW	NE	24	45	6	E	470	60.0	
00303402	MONITORING			BAKER PETROLITE		369 MARSHALL RD	WEBSTER GROVE	MO	MONITORING	41.0	SW	SW	NE	24	45	6	E	488	12.0	
00311263	ABANDONED	1104 HAMPTON AVE ST LOUIS		B P AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	SOILBORING				NW	24	45	6	E			
00339766	ABANDONED			MIDWEST RECOVERY LTD		5710 WISE AVE	ST LOUIS	MO	SOILBORING					24	45	6	E	462		
00122986	MONITORING	5707 WILSON,ST. LOUIS		STATE OF MO.-DIV. OF DES.		PO BOX 809	JEFFERSON CITY	MO	MONITORING	30.0			NE	25	45	6	E	490		
00122987	MONITORING	5707 WILSON,ST. LOUIS		STATE OF MO.-DIV. OF DES.		PO BOX 809	JEFFERSON CITY	MO	MONITORING	50.0			NE	25	45	6	E	490		
00122989	MONITORING	5707 WILSON,ST. LOUIS		STATE OF MO.-DIV. OF DES.		PO BOX 809	JEFFERSON CITY	MO	MONITORING	40.0				25	45	6	E	490		
00131687	ABANDONED			STATE OF MO DIV OF DESIGN		PO BOX 809	JEFFERSON CITY	MO	UNKNOWN	20.0			NE	25	45	6	E	490		
00245084	ABANDONED				HAGEN	3280 HAMPTON AVE	ST LOUIS	MO	SOILBORING		NE	NW	SE	25	45	6	E			
00266321	ABANDONED	6088 ARSENAL ST ST LOUIS			FREIN	8996 WEMBLEY CT	SARASOTA	FL	SOILBORING					25	45	6	E	524		
00311661	ABANDONED				RAPISARDO	3401 WATSON ROAD	ST LOUIS	MO	SOILBORING					25	45	6	E			
00323204	ABANDONED	5700 ARSENAL		CITY OF ST LOUIS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING					25	45	6	E		30.0	
00324075	ABANDONED	2724 WATSON RD/ ST LOUIS		SINCLAIR OIL CORPORATION		3401 FARBANTES AVENUE	KANSAS CITY	KS	SOILBORING	16.0				25	45	6	E			
00324091	ABANDONED	2724 WATSON RD ST LOUIS		SINCLAIR OIL CORPORATION		3401 FAIRBANKES AVENUE	KANSAS CITY	KS	SOILBORING	14.0				25	45	6	E			
00324819	ABANDONED	3301 HAMPTON AVE STL		SUNOCO INC		9436 MALTBY RD	BRIGHTON	MI	SOILBORING	16.0				25	45	6	E			
00010694	HEAT PUMP			ST LOUIS HEARING CENTER		9526 MANCHESTER RD.	ST LOUIS	MO	HORZ CLOOP	375.0		NE	SW	26	45	6	E			
00132012	ABANDONED	MAPLEWOOD		KOMAN PROPERTIES		ONE CITY PLACE DR	ST LOUIS	MO	UNKNOWN	15.0	NW	NW	SW	26	45	6	E	520	6.0	
00299096	ABANDONED	2321 MCCAUSLAND AVE		CITIZENS NATIONAL BANK/RHODAS		7305 MANCHESTER AVE	ST LOUIS	MO	SOILBORING	15.0				26	45	6	E	560		
00299155	ABANDONED	1900 SULPHUR AVE ST L		MSD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SW	26	45	6	E		20.0	
00299156	ABANDONED	1824 KNOX AVE ST L		MSD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0				26	45	6	E		20.0	
00299157	ABANDONED	2000 HAMPTON AVE ST L		MSD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0				26	45	6	E		20.0	
00300077	ABANDONED	1824 KNOX AVE		MSD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	23.0			SW	26	45	6	E		23.0	
00313271	MONITORING	DEER CREEK MAPLEWOOD		MSD		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	18.0			SW	26	45	6	E		12.0	
00323603	ABANDONED	3118 WATSON ROAD/ ST LOUIS		FIRST BANK		135 N MERAMEC	CLAYTON	MO	SOILBORING	13.0				26	45	6	E			
00325469	ABANDONED			MISSOURI STATE BANK		3280 S HAMPTON	ST LOUIS	MO	MONITORING					26	45	6	E		9.0	
00325470	ABANDONED			MISSOURI STATE BANK		C/O MARK SAUERWEIN	ST LOUIS	MO	MONITORING					26	45	6	E		5.0	
00325471	ABANDONED			MISSOURI STATE BANK		C/O MARK SAUERWEIN	ST LOUIS	MO	MONITORING					26	45	6	E		15.0	
00325472	ABANDONED			MISSOURI STATE BANK		C/O MARK SAUERWEIN	ST LOUIS	MO	MONITORING					26	45	6	E		15.0	
00163699	MONITORING	8401 ST CHARLES ROCK RD		SONOCO PRODUCTS CO		N SECOND STREET	HARTSVILLE	SC	MONITORING	25.0	SE	NW	NW	27	45	6	E			
00201971	ABANDONED	8401 ST CHARLES ROCK RD ST JOH		SONOCO PRODUCTS CO		N SECOND ST	HARTSVILLE	SC	SOILBORING	38.0	SW	NW	NW	27	45	6	E			
00201972	ABANDONED	8401 ST CHARLES ROCK RD		SONOCO PRODUCTS CO		NORTH SECOND ST	HARTSVILLE	SC	SOILBORING		SE	NW	NW	27	45	6	E			
00222843	ABANDONED	2707 BIG BEND MAPLEWOOD		EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		SW	SE	NE	27	45	6	E			
00258180	ABANDONED	BIG BEND IND CT MAPLEWOOD		BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SE	27	45	6	E			
00258182	ABANDONED	WEST OF 3417 & 3423 BIG BEND M		BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING					27	45	6	E			
00258184	ABANDONED	W OF 3030 LACLEDE ST RD MAPLEW		BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SW	27	45	6	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00314134	MONITORING	9866 MANCHESTER RD ROCK HILL	7-ELEVEN INC		814 BAKER RD	VIRGINIA BEACH	VA	MONITORING	15.0			SW	30	45	6	E		12.0	
00314135	MONITORING	9866 MANCHESTER RD ROCK HILL	7-ELEVEN INC		814 BAKER RD	VIRGINIA BEACH	VA	MONITORING	15.0			SW	30	45	6	E		12.0	
00314136	MONITORING	9866 MANCHESTER RD ROCK HILL	7-ELEVEN INC		814 BAKER RD	VIRGINIA BEACH	VA	MONITORING	18.0				30	45	6	E		12.0	
00103287	MONITORING	10024 MANCHESTER RD,GLENDALE	TEXACO REFINING&MARKETING		PO BOX 1650	TULSA	OK	MONITORING	18.0	NW	NW	NE	31	45	6	E	580		
00105785	ABANDONED		GEOTECHNOLOGY, INC.		2258 GRISSOM DR.	ST. LOUIS	MO	MONITORING	20.0	NW	NW	NE	31	45	6	E			
00123437	ABANDONED		TEXACO REFINING&MARKETING		PO BOX 1650	TULSA	OK	MONITORING	24.0	NW	NW	NE	31	45	6	E	580		
00123480	ABANDONED		TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	18.0	NW	NW	NE	31	45	6	E	580		
00131698	ABANDONED		TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	18.0	NW	NW	NE	31	45	6	E		18.0	
00131699	ABANDONED		TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	18.0	NW	NW	NE	31	45	6	E	580	18.0	
00323669	ABANDONED		ST LOUIS AUTO DEALERS ASSN		10712 MANCHESTER RD	ST LOUIS	MO	SOILBORING					31	45	6	E			
00324880	ABANDONED	424 N SAPPINGTON RD KIRKWOOD M	CINGULAR WIRELESS		13075 MANCHESTER STE 100	ST LOUIS	MO	SOILBORING					31	45	6	E			
00354749	ABANDONED	1044 CHELSEA AVE GLENDALE	METRO ST LOUIS SEWER DIST		2350 MARKET ST	ST LOUIS	MO	SOILBORING					31	45	6	E			
00145029	MONITORING	OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	15.0			NE	32	45	6	E	571		
00114513	ABANDONED		SHELL OIL CO.		400 CHESTERFIELD CENTER	CHESTERFIELD	MO	MONITORING	19.0		NE	SE	33	45	6	E	540		
00311226	ABANDONED	112 E LOCKWOOD WEBSTER GROVES	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING				SW	33	45	6	E		13.0	
00311227	ABANDONED	112 E LOCKWOOD WEBSTER GROVES	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING				SW	33	45	6	E		14.0	
00311228	ABANDONED	112 E LOCKWOOD WEBSTER GROVES	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING				SW	33	45	6	E		13.0	
00311229	ABANDONED	112 E LOCKWOOD WEBSTER GROVES	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING				SW	33	45	6	E		12.0	
00311230	ABANDONED	112 E LOCKWOOD WEBSTER GROVES	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING				SW	33	45	6	E		3.0	
00311231	ABANDONED	112 E LOCKWOOD WEBSTER GROVES	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING				SW	33	45	6	E		14.0	
00258183	ABANDONED	E OF 3514 BIG BEND BLVD SHREWS	BI STATE DEVELOPMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				NE	34	45	6	E			
00300000	ABANDONED	7816 BIG BEND BLVD	WEBSTER GROVES SUBARU-ISUZU		8822 BIG BEND BLVD	ST LOUIS	MO	SOILBORING	16.0				34	45	6	E	516		
00353048	ABANDONED	7250 LANSDOWNE		DIEKMANN	4330 OPAL CT	ST LOUIS	MO	SOILBORING					34	45	6	E			
00353438	ABANDONED	7996 BIG BEND BLVD ST LOUIS	BP AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	MONITORING					34	45	6	E			
00130009	ABANDONED	SHREWSBURY		AVEY JR	535 ALAMEDA COURT	MARCO ISLAND	FL	UNKNOWN	16.0	NE	SW	SW	35	45	6	E	470		
00130011	ABANDONED	SHREWSBURY		AVEY	535 ALAMEDA COURT	MACRO ISLAND	FL	UNKNOWN	16.0	NE	SW	SW	35	45	6	E	470	7.0	
00245243	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	25.0				35	45	6	E	575	15.0	
00245244	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	20.0				35	45	6	E	575	20.0	
00245245	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	18.0				35	45	6	E	575	18.0	
00245246	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	18.0				35	45	6	E	575	18.0	
00245248	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	25.0				35	45	6	E	575		
00245249	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	25.0				35	45	6	E	575	25.0	
00245250	ABANDONED	1390 FERGUSON AVE PAGEDALE	SOUTHWESTERN BELL TELEPHONE		THREE BELL PLAZA	DALLAS	TX	MONITORING	25.0				35	45	6	E	575	25.0	
00311679	ABANDONED			RUPISARDO	3401 WATSON ROAD	SAINT LOUIS	MO	SOILBORING					35	45	6	E			
00313272	MONITORING	RIVER DES PERES SHREWSBURY	MSD		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	28.0			NW	35	45	6	E		12.0	
00325757	ABANDONED			RAPISARDO	3401 WATSON ROAD	ST LOUIS	MO	SOILBORING	13.9				35	45	6	E			
00339686	ABANDONED	6630 CHIPPEWA	KLARFELD REAL ESTATE CO INC		107 S MERAMEC AVE	ST LOUIS	MO	SOILBORING					35	45	6	E	423		
00129935	ABANDONED		BOOT PIERCE/MDNR		PO BOX 250	ROLLA	MO	UNKNOWN	20.0			SW	36	45	6	E	580	20.0	
00131346	ABANDONED		FLOPPIN & FRYIN		3634 LONG DR	ST ANN	MO	UNKNOWN	24.0	SE	NE	NW	36	45	6	E			
00144202	MONITORING		FORMER FINA SERVICE		3301 HAMPTON AVENUE	ST LOUIS	MO	MONITORING	25.0				36	45	6	E			
00144203	MONITORING		FORMER FINA SERVICE STAT		3301 HAMPTON AVENUE	ST LOUIS	MO	MONITORING	18.0				36	45	6	E			
00144204	MONITORING		FORMER FINA SERVICE STATI		3301 HAMPTON AVENUE	ST LOUIS	MO	MONITORING	15.0				36	45	6	E			
00144205	MONITORING		FORMER FINA SERVICE STA		3301 HAMPTON AVE	ST LOUIS	MO	MONITORING	20.0				36	45	6	E			
00144207	MONITORING	3301 HAMPTON ST LOUIS	SUN COMPANY		500 S DIX	DETROIT	MI	MONITORING	18.0				36	45	6	E	507		
00144208	MONITORING	3301 HAMPTON AVE ST LOUIS	SUN COMPANY		500 S DIX	DETROIT	MI	MONITORING	18.0				36	45	6	E	507		
00144209	MONITORING	3301 HAMPTON AVE ST LOUIS	SUN COMPANY		500 S DIX	DETROIT	MI	MONITORING	18.0				36	45	6	E	507		
00311632	ABANDONED	6313 DMLK JR DRIVE WELLSTON	SIXTY THREE THIRTEEN EASTON G		POST OFFICE BOX 3115	CORDOVA	TN	SOILBORING	16.0				36	45	6	E			
00325054	ABANDONED	6630 CHIPPEWA STL	YUM! BRANDS		17901 VONKARMAN	IRVINE	CA	SOILBORING	14.5				36	45	6	E		15.0	
00103210	MONITORING	5736 PAGE BLVD,ST. LOUIS	AMOCO STATION #15912		5736 PAGE BLVD.	ST. LOUIS	MO	MONITORING	12.0					45	6	E			
00103229	MONITORING	5736 PAGE BLVD.,ST. LOUIS	AMOCO STATION # 15912		5736 PAGE BLVD.	ST. LOUIS	MO	MONITORING	12.0					45	6	E			
00106843	MONITORING	3600 BIG BEND,MAPLEWOOD	TOTAL PETROLEUM		999 18TH ST., STE. 2201	DENVER	CO	MONITORING	15.0					45	6	E	450		
00106844	MONITORING	3600 BIG BEND, MAPLEWOOD	TOTAL PETROLEUM		999 18TH ST.,STE. 2201	DENVER	CO	MONITORING	30.0					45	6	E			
00106845	MONITORING	3600 BIG BEND, MAPLEWOOD	TOTAL PETROLEUM		999 18TH ST. STE.2201	DENVER	CO	MONITORING	30.0					45	6	E	450		
00111021	ABANDONED		AMOCO REMED. SERVICES DIV		400 S. WOODS MILL RD., SUITE 2	CHESTERFIELD	MO	UNKNOWN	15.0					45	6	E			
00111022	ABANDONED	ST LOUIS/MW-5	AMOCO OIL CO.		400 S WOODS MILL RD	CHESTERFIELD	MO	MONITORING						45	6	E			
00111024	ABANDONED	ST LOUIS	AMOCO OIL CO.		400 S WOODS MILL RD	CHESTERFIELD	MO	MONITORING	20.0					45	6	E			
00111025	ABANDONED	ST LOUIS	AMOCO OIL CO.		400 S WOODS MILL RD	CHESTERFIELD	MO	MONITORING	20.0					45	6	E			
00114508	ABANDONED	ST LOUIS	BIG BEND ASSOCIATES		1240 DIELMAN IND. CT.	ST. LOUIS	MO	MONITORING						45	6	E	509		
00115421	MONITORING	6211 DELMAR,ST. LOUIS	SHELL OIL PRODUCTS		1415 W, 22ND ST.	OAK BROOK	IL	MONITORING	20.0					45	6	E	500		
00115436	MONITORING	4200 S KINGSHIGHWAY,ST LOUIS	WATERWAY GAS & WASH		115 VALLEY CENTER DR	CHESTERFIELD	MO	MONITORING	20.0					45	6	E			

Report Date: 03/12/2007
Selected By: Township Range Direction
Selection: E

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00123439	ABANDONED		MALLINCKRODT CHEMICAL,INC		ATTN: VANNESSA GRAHAM	ST. LOUIS	MO	MONITORING	50.0		SW	SW	1	45	7	E	410		
00123443	ABANDONED		MALLINCKRODT CHEMICAL,INC		ATTN: SOL GUBER, P.E.	ST. LOUIS	MO	MONITORING	35.0		SW	SW	1	45	7	E	410		
00131709	ABANDONED	ST LOUIS, MO	DEPT OF ENERGY		C/O BECHTEL NATIONAL	BERKELEY	MO	UNKNOWN	25.0	SW	NE	SW	1	45	7	E			
00207250	MONITORING		MIDLAND RESOURCES		10 BREMAN	ST LOUIS	MO	MONITORING	20.0				1	45	7	E		12.0	
00207251	MONITORING		MIDLAND RESOURCES		10 BREMAN	ST LOUIS	MO	MONITORING	35.0				1	45	7	E		12.0	
00207252	MONITORING		MIDLAND RESOURCES		10 BREMAN	ST LOUIS	MO	MONITORING	40.0				1	45	7	E		12.0	
00207253	MONITORING		MIDLAND RESOURCES		10 BREMAN	ST LOUIS	MO	MONITORING	35.0				1	45	7	E		12.0	
00207254	MONITORING		MIDLAND RESOURCES		10 BREMAN	ST LOUIS	MO	MONITORING	40.0				1	45	7	E		12.0	
00222727	ABANDONED	1600 N 2ND ST	MALLINCKRODT CHEMICAL		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		NE	SW	SW	1	45	7	E			
00222728	ABANDONED	1600 N 2ND ST B-9TOB-37	MALLINCKRODT CHEMICAL		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		NE	SW	SW	1	45	7	E			
00222762	ABANDONED	1600 N 2ND Z-1 TO Z-26	MALLINCKRODT CHEMICAL		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		NE	SW	SW	1	45	7	E			
00230205	ABANDONED	N BROADWAY & MALLINCKRDDT	MALLINCKRDDT INC		PO BOX 5439	ST LOUIS	MO	MONITORING	10.0	SW	SW	SW	1	45	7	E		12.0	
00230206	ABANDONED	N BROADWAY & MALLINCKRDDT	MALLINCKRDDT INC		PO BOX 5439	ST LOUIS	MO	MONITORING	20.0	SW	SW	SW	1	45	7	E		22.0	
00230207	ABANDONED	N BROADWAY & MALLINCKRDDT	MALLINCKRDDT INC		PO BOX 5439	ST LOUIS	MO	MONITORING	15.0	SW	SW	SW	1	45	7	E		17.0	
00299226	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	20.5				1	45	7	E			
00323645	ABANDONED	1939 N BROADWAY ST LOUIS	THE STOLOR PARTNERSHIP		911 WASHINGTON AVENUE	ST LOUIS	MO	SOILBORING	16.0				1	45	7	E			
00024428	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	DOMESTIC	24.0				2	45	7	E			
00024451	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	12.0				2	45	7	E			
00024452	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	13.5				2	45	7	E			
00103460	MONITORING	1600 N 2ND	MALLINCHRODT INC		P O BOX 5439	ST LOUIS	MO	MONITORING	21.0				2	45	7	E			
00103461	MONITORING	1600 N 2ND ST LOUIS	SCIENCE APPLICATIONS INTL		500 NW PLAZA STE 1250	ST ANN	MO	MONITORING	23.0				2	45	7	E			
00106867	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	48.0				2	45	7	E			
00106868	MONITORING		US CORPS OF ENGINEERS		1222 SPRUC ST	ST LOUIS	MO	MONITORING	47.0				2	45	7	E			
00106870	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	56.0				2	45	7	E			
00106871	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	38.0				2	45	7	E			
00106873	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	44.0				2	45	7	E			
00106875	MONITORING		US CORPS OF ENGINEERS		122 SPRUCE ST	ST LOUIS	MO	MONITORING	38.0				2	45	7	E			
00106876	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	40.0				2	45	7	E			
00106903	MONITORING	1600 N 2ND ST LOUIS	SCIENCE APPLICATIONS INTL		500 NW PLAZA STE 1250	ST ANN	MO	MONITORING	40.0				2	45	7	E			
00106904	MONITORING	1600 N 2ND	SCIENCE APPLICATIONS INTL		500 NW PLAZA STE 1250	ST ANN	MO	MONITORING	65.0				2	45	7	E			
00106905	MONITORING	1600 N 2ND	SCIENCE APPLICATIONS INTL		500 NW PLAZA STE 1250	ST ANN	MO	MONITORING	50.0				2	45	7	E			
00106906	MONITORING	1600 N 2ND	SCIENCE APPLICATIONS INTL		500 NW PLAZA STE 1250	ST ANN	MO	MONITORING	45.0				2	45	7	E			
00106909	MONITORING	1600 N SECOND ST LOUIS	SCIENCE APPLICATIONS INTN		500 NW PLAZA STE 1250	ST ANN	MO	MONITORING	54.0				2	45	7	E			
00133180	ABANDONED		TERMINAL RAILROAD ASSOC		1201 MCKINLEY	VENICE	IL	MONITORING	41.0				2	45	7	E		10.0	
00133181	ABANDONED		TERMINAL RAILROAD ASSOC		1201 MCKINLEY	VENICE	IL	MONITORING	40.0				2	45	7	E		10.0	
00133183	ABANDONED		TERMNAL RAILROAD ASSOC		1201 MCKINLEY	VENICE	IL	MONITORING	40.0				2	45	7	E		10.0	
00133184	ABANDONED		TERMINAL RAILROAD ASSOC		1201 MCKINLEY	VENICE	IL	MONITORING	40.0				2	45	7	E		10.0	
00133185	ABANDONED		TERMINAL RAILROAD ASSOC		1201 MCKINLEY	VENICE	IL	MONITORING	40.0				2	45	7	E		10.0	
00133186	ABANDONED		TERMINAL RAILROAD ASSOC		1201 MCKINLEY	VENICE	IL	MONITORING	42.0				2	45	7	E		10.0	
00133736	ABANDONED	MALLINCKRODT & 2ND,ST LOUIS	MALLINCKRODT CHEMICAL		PO BOX 5439	ST LOUIS	MO	UNKNOWN	20.0		SW	SW	2	45	7	E	410		
00163300	MONITORING	2100 MALLINCKRODT, ST LOUIS		SCHMIDT	2526 BALDWIN ST	ST LOUIS	MO	MONITORING	17.0			SE	2	45	7	E			
00183831	ABANDONED	WARNER JINKISON CO		SCHMIDT	2526 BALDWIN ST	ST LOUIS	MO	UNKNOWN	17.0	SW	SE	SE	2	45	7	E		17.0	
00204299	ABANDONED	N BROADWAY & MALLINCKRODT ST	MALLINCKRODT INC		2318 MILLPARK DRIVE	MARYLAND HEIGHTS	MO	SOILBORING	20.0	SE	SE	SE	2	45	7	E			
00205040	ABANDONED	N BROADWAY & MALLIOCRODT	USACDE		C\O IT CORP	ST LOUIS	MO	SOILBORING	25.0	SE	SE	SE	2	45	7	E			
00205043	ABANDONED	N BROADWAY & MULLINERODT ST LO	USACDE C/O IT CORP		FOOT OF ANGLERODT ST	ST LOUIS	MO	SOILBORING		SE	SE	SE	2	45	7	E			
00230236	ABANDONED	N BROADWAY & MALLINCKRODT ST	MALLINCKRODT INC		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	16.0	SE	SE	SE	2	45	7	E			
00230244	ABANDONED	1600 N 2ND ST ST LOUIS	MALLINCKRODT		GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	16.0	SE	SE	SE	2	45	7	E			
00276317	ABANDONED	10 BREMEN DR ST LOUIS	GEOTECHNOLOGY INC		2258 GRISSOM DR	ST LOUIS	MO	SOILBORING				NW	2	45	7	E			
00276363	ABANDONED	110 ANGELICA ST ST LOUIS	SUBSURFACE CONSTRUCTORS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	12.0	NW	NW	NE	2	45	7	E		12.0	
00298468	ABANDONED	42 FERRY ST	ST LOUIS DEVELOPMENT CORP		1015 LOCUST ST	ST LOUIS	MO	SOILBORING	49.0				2	45	7	E			
00300166	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	14.0				2	45	7	E			
00300167	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	14.0				2	45	7	E			
00300168	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	14.0				2	45	7	E			
00300169	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	12.0				2	45	7	E			
00300170	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	13.5				2	45	7	E			
00300171	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	13.8				2	45	7	E			
00300172	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	13.0				2	45	7	E			
00300176	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	DOMESTIC	16.0				2	45	7	E			
00300177	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	DOMESTIC	16.0				2	45	7	E			
00300183	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	DOMESTIC	16.0				2	45	7	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00276315	ABANDONED	620 N UNION ST LOUIS	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	7	45	7	E		13.0	
00276316	ABANDONED	620 N UNION ST LOUIS	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	7	45	7	E		12.0	
00145293	MONITORING	1310 N KINGSHWY	SHELL OIL PRODUCTS CO.		1415 WEST 22ND ST.	OAK BROOK	IL	MONITORING	18.0			NW	8	45	7	E			
00145294	MONITORING		SHELL OIL PRODUCTS CO.		1415 WEST 22ND ST.	OAK BROOK	IL	MONITORING	15.0			NW	8	45	7	E			
00145295	MONITORING	1310 N KINGSHWY	SHELL OIL PRODUCTS CO.		1415 WEST 22ND ST.	OAK BROOK	IL	MONITORING	15.0			NW	8	45	7	E			
00163128	MONITORING	1310 N. KINGSHIGHWAY	EQUILON		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	18.0	NE	NW	NW	8	45	7	E	525		
00163129	MONITORING	1310 N. KINGSHIGHWAY	EQUILON		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0	NE	NW	NW	8	45	7	E			
00163130	MONITORING	1310 N. KINGSHIGHWAY	EQUILON		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0	NE	NW	NW	8	45	7	E			
00203020	ABANDONED	1310 N KINGSHIGHWAY, STL	EQUILON ENTERPRISES		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	20.0	NE	NW	NW	8	45	7	E	525		
00285825	MONITORING		NATIONAL CHURCH RESIDENCES		2335 N BANK DRIVE	COLUMBUS	OH	MONITORING	19.0		NW	SW	8	45	7	E		12.0	
00312489	ABANDONED	4374 OLIVE ST	KIDDIE KOLLEGE INC		4370 OLIVE ST	ST LOUIS	MO	SOILBORING					8	45	7	E			
00314994	MONITORING	1313 NEW STEAD AVE	RANKEN TECHNICAL COLLEGE		C/O JAMES FAUGHN	ST LOUIS	MO	WATERLEVEL	28.0				8	45	7	E		10.0	
00323558	ABANDONED			PIEL SR	4300 FINNEY AVE	ST LOUIS	MO	SOILBORING					8	45	7	E			
00324176	ABANDONED		ROOSEVELT TOWNE APARTMENTS		711 EUCLID AVENUE	ST LOUIS	MO	SOILBORING	20.0				8	45	7	E			
00339176	ABANDONED	909 N KINGSHIGHWAY ST LOUIS	GE FRANCHISE FINANCE		17807 N PERIMETER DR	SCOTTSDALE	AZ	SOILBORING					8	45	7	E		14.0	
00354194	ABANDONED	4701 MCPHERSON AVE	LANDMARK REAL ESTATE		9909 CLAYTON ROAD	ST LOUIS	MO	SOILBORING					8	45	7	E			
00354210	ABANDONED	429 N EUCLID		SODIPO	429 N EUCLID	ST LOUIS	MO	SOILBORING		SW	NE	SW	8	45	7	E			
00354239	ABANDONED	4014-4020 OLIVE ST	MCPHERSON LAND LP		C/O RJK INC	ST LOUIS	MO	SOILBORING					8	45	7	E			
00354247	ABANDONED	1313 N NEWSTEAD AVE	RANKEN TECH COLLEGE		ATTN:JAMES FAUGHN	ST LOUIS	MO	SOILBORING					8	45	7	E			
00359018	ABANDONED	4631-4665 DELMAR ST LOUIS MO	180 BLACK MEN OF METROPOLITAN		4411 N NEWSTEAD AVE	ST LOUIS	MO	SOILBORING	15.0				8	45	7	E			
00205396	ABANDONED	1310 N GRAND AVE	EQUILON ENETERPRISES		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING		NW	NW	SE	9	45	7	E			
00024464	ABANDONED	2801 CASS AVE	MAGDALA FOUNDATION		4158 LINDELL	ST LOUIS	MO	SOILBORING	24.0				10	45	7	E		10.0	
00269042	MONITORING	1310 N GRAND ST LOUIS	EQUILON ENT LLC		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	20.0			SW	10	45	7	E		12.0	
00277345	ABANDONED	3600 MARTIN LUTHER KING DRIVE	KOMAN PROPERTIES		8027 FORSYTH BLVD SUITE 100	CLAYTON	MO	MONITORING	19.0				10	45	7	E		6.0	
00277346	ABANDONED	3600 MARTIN LUTHER KING DRIVE	KOMAN PROPERTIES		8027 FORSYTH BLVD SUITE 100	CLAYTON	MO	MONITORING	17.0				10	45	7	E		5.0	
00277764	ABANDONED	2901 N GRAND	HERBERT HOOVER B/G CLUB		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			NW	10	45	7	E		20.0	
00277870	ABANDONED	3600 MARTIN LUTHER KING DRIVE	KOMAN PROPERTIES		8027 FORSYTH BLVD SUITE 100	CLAYTON	MO	MONITORING	18.0				10	45	7	E		5.0	
00277873	ABANDONED	1500NORTH GRAND ST LOUIS MO	DIRAN INC		416 ARGUS MANOR COURT	CHESTERFIELD	MO	SOILBORING					10	45	7	E			
00323629	ABANDONED	22 & COLE	ST LOUIS DEVELOPMENT CORP		1015 LOCUST ST	ST LOUIS	MO	SOILBORING	13.0				10	45	7	E			
00339355	ABANDONED	2851 N GRAND ST LOUIS	ACF / CITY OF ST LOUIS		100 CLARK ST	ST CHARLES	MO	SOILBORING					10	45	7	E			
00339364	ABANDONED	2800 N SPRING AVE	LAND REUTILIZATION AUTHORITY		1015 LOCUST ST	ST LOUIS	MO	SOILBORING					10	45	7	E			
00291172	RECNSTRUCT		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	MONITORING					11	45	7	E			
00291173	RECNSTRUCT		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	MONITORING					11	45	7	E			
00291174	RECNSTRUCT		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	MONITORING					11	45	7	E			
00299203	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	19.0				11	45	7	E			
00299204	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	19.0				11	45	7	E			
00299205	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299206	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299207	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299208	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299209	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299210	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299211	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E		5.0	
00299212	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299213	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299214	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299215	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299216	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00299223	ABANDONED		US ARMY CORP OF ENGINEERS		110 MCDONNELL BLVD	HAZELWOOD	MO	SOILBORING	18.0				11	45	7	E			
00299224	ABANDONED		US ARMY CORP OF ENGINEERS		110 MCDONNELL BLVD	HAZELWOOD	MO	SOILBORING	26.0				11	45	7	E			
00299225	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	19.0				11	45	7	E			
00299227	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00300191	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312304	ABANDONED		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312305	ABANDONED	FUSRAP/SLDS	U S ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312306	ABANDONED		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312307	ABANDONED		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312308	ABANDONED		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312309	ABANDONED		U S ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			
00312313	ABANDONED		US ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING					11	45	7	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00106503	MONITORING	MLK BUSINESS/CITY BLK 957	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	16.0			NW	14	45	7	E			
00106862	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	40.0				14	45	7	E			
00106863	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	43.0				14	45	7	E			
00106872	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	39.0				14	45	7	E			
00132873	ABANDONED	2001 WASHINGTON AVE, STL	TOTAL REALTY		#30 CRESTWOOD EXEC	ST LOUIS	MO	SOILBORING	20.0				14	45	7	E			
00145307	MONITORING	721 N 12TH ST,ST LOUIS	SHELL OIL CO		1415 W 22ND ST	OAK BROOK	IL	MONITORING	21.0			SE	14	45	7	E			
00160002	MONITORING	MLK BUSINESS PARK,CITY BLK 959	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	15.0	NE		NW	14	45	7	E	60.0		
00160003	MONITORING	MLK BUSINESS PK/CITY BLK 959	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	16.0			NW	14	45	7	E	60.0		
00160004	MONITORING	MLK BUSINESS PARK/CITY BLK 952	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	15.0			NW	14	45	7	E	60.0		
00160005	MONITORING	MLK BUSINESS PARK/CITY BLK 952	ST LOUIS DEVELOPMENT CORP		3000 N 15T ST	ST LOUIS	MO	MONITORING	20.0			NW	14	45	7	E	60.0		
00160008	MONITORING	945 MARTIN LUTHER,19 ST	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	20.0			NE	14	45	7	E	60.0		
00160009	MONITORING	MARTIN LUTHER,19TH ST	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	15.0			NE	14	45	7	E	60.0		
00160019	MONITORING	946 COLE & N 19TH,ST LOUIS	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	18.0			NE	14	45	7	E	60.0		
00162240	MONITORING	721 N 12TH ST	SHELL OIL COMPANY		1415 W 22ND ST	OAK BROOK	IL	MONITORING	21.0			SE	14	45	7	E			
00162241	MONITORING	721 N 12TH ST	SHELL OIL COMPANY		1415 W 22ND ST	OAK BROOK	IL	MONITORING	21.0			SE	14	45	7	E			
00163181	MONITORING		GEOTECHNOLOGY C/O EQUILON		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	25.0	NW	NW	SE	14	45	7	E			
00163279	MONITORING	901 N. 10TH ST. STL	MOSERS		906 LESLIE BOULEVARD	JEFFERSON CITY	MO	MONITORING	24.0				14	45	7	E			
00163280	MONITORING	901 N. 10TH ST. STL	MOSERS		906 LESLIE BOULEVARD	JEFFERSON CITY	MO	MONITORING	25.0				14	45	7	E			
00163281	MONITORING	901 N. 10TH ST.	MOSERS		906 LESLIE BLVD	JEFFERSON CITY	MO	MONITORING	25.0				14	45	7	E			
00163282	MONITORING	901 N. 10TH ST STL	MOSERS		906 LESLIE BLVD	JEFFERSON CITY	MO	MONITORING	21.0				14	45	7	E			
00163283	MONITORING	CITY BLK 960-COLE & 23RD ST ST	ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	19.0			NW	14	45	7	E	60.0		
00163676	MONITORING		ST LOUIS DEVELOPMENT CORP		3000 N 15TH ST	ST LOUIS	MO	MONITORING	15.0	SE	SE	SE	14	45	7	E	5.0		10.26
00163686	MONITORING	2020 DELMAR ST LOUIS	KIRBY		7342 MANCHESTER RD	ST LOUIS	MO	MONITORING	19.0	SE	SE	SE	14	45	7	E			
00164340	ABANDONED		MO STATE EMPLOYEES RETIRE		906 LESLIE BOULEVARD	JEFFERSON CITY	MO	UNKNOWN	16.0				14	45	7	E	460		
00174381	ABANDONED		PLANNED INDUSTRIAL EXPANS		1015 LOCUST SUITE 1200	ST LOUIS	MO	UNKNOWN	15.0	NE	NW	NW	14	45	7	E			
00183824	ABANDONED	2020 DELMAR	KIRBY		7342 MANCHESTER RD	ST LOUIS	MO	SOILBORING	15.0	SE	SE	NW	14	45	7	E			
00183825	ABANDONED	BH1-7, COLE & 22ND ST	PLANNED IND EXPANSION AUTH		1015 LOCUST STE 1200	ST LOUIS	MO	SOILBORING	15.0	NE	NW	NW	14	45	7	E			
00183827	ABANDONED		KLIPSCH		1015 LOCUST SATREET	ST LOUIS	MO	MONITORING					14	45	7	E			
00194398	ABANDONED	COLE & 21ST ST (CB-953)	BALKE PROPERTIES		800 ST LOUIS UNION STATION	ST LOUIS	MO	MONITORING		NW	SE	NW	14	45	7	E			
00194400	ABANDONED	COLE & 21ST ST (CB-953)	BALKE PROPERTIES		800 ST LOUIS UNION STATION	ST LOUIS	MO	MONITORING		NW	SE	NW	14	45	7	E	5.0		
00194401	ABANDONED	COLE & 21ST ST (CB-953)	BALKE PROPERTIES		800 ST LOUIS UNION STATION	ST LOUIS	MO	MONITORING		NW	SE	NW	14	45	7	E	10.0		
00194402	ABANDONED	COLE & 21ST ST (CB-953)	BALKE PROPERTIES		800 ST LOUIS UNION STATION	ST LOUIS	MO	MONITORING		NW	SE	NW	14	45	7	E	10.0		
00194403	ABANDONED	CITY BLOCK 958	PLANNED INDUSTRIAL EXPANSION		1015 LOCUST STREET	ST LOUIS	MO	MONITORING			SE	SE	14	45	7	E	7.0		
00194404	ABANDONED	CITY BLOCK 958	PLANNED INDUSTRIAL EXPANSION		1015 LOCUST STREET	ST LOUIS	MO	MONITORING			SE	SE	14	45	7	E	7.0		
00201969	ABANDONED	CB-954 COLE & 21 ST	LAND		800 ST LOUIS UNION STATION	ST LOUIS	MO	SOILBORING		NW	SE	NW	14	45	7	E			
00201973	ABANDONED	COLE & 21ST ST CB-953	BALKE PROPERTIES		800 ST LOUIS UNION STA	ST LOUIS	MO	SOILBORING		NW	SE	NW	14	45	7	E			
00229764	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	32.0	SE	NW	SW	14	45	7	E	12.0		
00229765	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	32.0	SE	NW	SW	14	45	7	E	12.0		
00229766	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	32.0	SE	NW	SW	14	45	7	E	12.0		
00229791	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	32.0	SE	NW	SW	14	45	7	E	12.0		
00229795	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	32.0	SE	NW	SW	14	45	7	E	12.0		
00229799	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	32.0	SE	NW	SW	14	45	7	E	12.0		
00229803	MONITORING	400 N TUCKER	HERTZ CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	35.0	SE	NW	SW	14	45	7	E	12.0		
00230449	ABANDONED	1709 WASHINGTON, STL, MO	GLASSER		710 NORTH SECOND STREET	ST. LOUIS	MO	SOILBORING	25.0	SW	NE	SE	14	45	7	E			
00230450	ABANDONED		STERLING PROPERTIES		720 OLIVE STE 220	ST LOUIS	MO	MONITORING	30.0	SW	SE	NW	14	45	7	E			
00230926	ABANDONED	2035 DELMAR ST LOUIS	BRADLEY		1907 WASHINGTON	ST LOUIS	MO	SOILBORING	20.0				14	45	7	E			
00266589	ABANDONED	22ND & COLE STREETS	PLANNED INDUSTRIAL EXPANSION		1015 LOCUST ST	ST LOUIS	MO	MONITORING	17.0			SE	14	45	7	E	7.0		
00266590	ABANDONED	22ND & COLE STREETS	PLANNED INDUSTRIAL EXPANSION		1015 LOCUST ST	ST LOUIS	MO	MONITORING	20.0			SE	14	45	7	E			
00269000	MONITORING	721 N 12TH ST	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	25.0			SE	14	45	7	E	12.0		
00269056	MONITORING	721 N 12TH ST	EQUILON ENT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	25.0			SE	14	45	7	E	12.0		
00277683	ABANDONED	721 N 12TH ST ST LOUIS	SHELL OIL PRODUCTS US		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING					14	45	7	E			
00277760	ABANDONED		CITY OF ST LOUIS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	24.0			SW	14	45	7	E	24.0		
00277881	ABANDONED	1881 PINE ST ST LOUIS	BREOF INVESTORS LLC		3 FINANCIAL CENTER	NEW YORK	NY	SOILBORING					14	45	7	E	13.0		
00299054	ABANDONED		CITY OF ST LOUIS		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	24.0			SW	14	45	7	E	8.0		
00299086	ABANDONED	1107 MULLANPHNY ST	INLAND REALTY ENTERPRISES		C/O HILLIKER CORPORATION	ST LOUIS	MO	SOILBORING	20.0				14	45	7	E	463		
00299907	ABANDONED	1421 DR MARTIN LUTHER KING DR	COLLIER TURLEY MARTIN TUCKER		7701 FORSYTH STE 500	ST LOUIS	MO	SOILBORING	20.0				14	45	7	E	10.0		
00315216	MONITORING	721 N 12 ST ST LOUIS	SHELL OL PRODUCTS US		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	25.0			SW	14	45	7	E	1.0		
00315217	MONITORING	721 N 12 ST ST LOUIS	SHELL OL PRODUCTS US		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	25.0			SW	14	45	7	E	1.0		
00315218	MONITORING	721 N 12 ST ST LOUIS	SHELL OL PRODUCTS US		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	25.0			SW	14	45	7	E	1.0		
00315219	MONITORING	721 N 12 ST ST LOUIS	SHELL OL PRODUCTS US		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	25.0			SW	14	45	7	E	1.0		

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00277878	ABANDONED	406 SARAH @ MCPHERSON ST LOUIS	R J K INC BY BRUCKER ENG		7547 RAVENSRIDGE DR	SHREWSBURY	MO	SOILBORING					16	45	7	E	476		
00277883	ABANDONED	3608 OLIVE & VENDEVENTER ST LO	R J K INC BY BRUCKER ENG		7547 RAVENSRIDGE DR	SHREWSBURY	MO	SOILBORING					16	45	7	E	476		
00300002	ABANDONED	700 S SPRING AVE	MIDCO INDUSTRIES INC		2684 MISSOURI AVE	GRANITE CITY	IL	SOILBORING	20.0				16	45	7	E	572		
00312486	ABANDONED	1126 PINE ST ST LOUIS	SBC SERVICES INC		308 S AKARD	DALLAS	TX	SOILBORING					16	45	7	E			
00312551	ABANDONED	4100 BLOCK OF OLIVE ST LOUIS M	SAAMAN CORP		7925 FORSYTH	CLAYTON	MO	SOILBORING					16	45	7	E			
00323601	ABANDONED	DELMAR & THERESON	ST LOUIS HOUSING AUTHORITY		4100 LINDELL BLVD	ST LOUIS	MO	SOILBORING	22.0				16	45	7	E			
00323610	ABANDONED	3227 LOCUST BLVD	SAINT LOUIS UNIVERSITY		3500 LINDELL BLVD	ST LOUIS	MO	SOILBORING	25.0				16	45	7	E			
00324019	ABANDONED	NW CNR OF 10TH&SPRUCE STL	BANK OF AMERICA		400 N ASHLEY DR	TAMPA	FL	SOILBORING	19.0				16	45	7	E			
00325383	ABANDONED		ST LOUIS HOUSING AUTHORITY		4100 LINDELL BLVD	ST LOUIS	MO	SOILBORING	22.0				16	45	7	E			
00353775	ABANDONED	3229 WASHINGTON BLVD ST LOUIS	BELLEVUE PROPERTIES INC		3207 WASHINGTON AVE	ST LOUIS	MO	SOILBORING	20.0				16	45	7	E			
00354244	ABANDONED	3401 OLIVE ST		APPLEBAUM	4 BIRNAWOODS	ST LOUIS	MO	SOILBORING					16	45	7	E			
00385862	ABANDONED	1133 N COMPTON AVE ST LOUIS	ST LOUIS HOUSING AUTHORITY		4100 LINDELL BLVD	ST LOUIS	MO	SOILBORING	21.0				16	45	7	E			
00024678	ABANDONED	SW CORNER OF BUCKINGHAM CT ST LOUIS	OPUS NORTHWEST		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	18.0			NW	17	45	7	E		18.0	
00105787	ABANDONED		SHANNON & WILSON		11500 OLIVE BLVD SUITE 276	ST LOUIS	MO	MONITORING	38.0				17	45	7	E			
00105788	ABANDONED		SHANNON & WILSON		11500 OLIVE BLVD SUITE 276	ST LOUIS	MO	MONITORING	24.0				17	45	7	E			
00111286	ABANDONED		HARTOG OIL COMPANY		6746 ROMISS CT	ST LOUIS	MO	UNKNOWN	18.0	SW	NE	SE	17	45	7	E	500		
00132859	ABANDONED	4949 WEST PINE	PINE KING REDEVELOPMENT		C/O NORTHLAND FINANCIAL	ST LOUIS	MO	UNKNOWN	15.0				17	45	7	E			
00153101	ABANDONED		HARTOG OIL COMPANY		6746 ROMISS CT	ST LOUIS	MO	UNKNOWN	14.0				17	45	7	E			
00153819	ABANDONED		ST LOUIS UNIVERSITY		3500 LINDELL BOULEVARD	ST LOUIS	MO	UNKNOWN	15.0				17	45	7	E			
00163716	MONITORING	MW 1 7401 ALABAMA ST	UNICO INC		7401 ALABAMA AVE	ST LOUIS	MO	MONITORING	23.6	NE	SE	NW	17	45	7	E		8.0	
00183830	ABANDONED	645 S NEWSTEAD STL	MONSANTO		645 S NEWSTEAD AVENUE	ST LOUIS	MO	SOILBORING	12.0	SW	NE	SW	17	45	7	E			
00195391	ABANDONED	3 17 SOUTH ENCLID AVE		IOYASHOV	9495 OLIVE BOULEVARD	ST LOUIS	MO	DOMESTIC				NW	17	45	7	E		19.0	
00195392	ABANDONED	3 17 S EUCLID AVE		IOYASHOV	9495 OLIVE BLVD	ST LOUIS	MO	SOILBORING	20.0			NW	17	45	7	E		19.0	
00203009	ABANDONED		SITE OIL COMPANY		50 S BEMISTON	ST LOUIS	MO	SOILBORING	24.0	NE	SW	SW	17	45	7	E			
00230443	ABANDONED	7401 ALABAMA ST	UNICO INC		4160 MERAMAC ST	ST LOUIS	MO	SOILBORING		NE	SE	NW	17	45	7	E			
00230932	ABANDONED			BOYDUN	4316 DUNCAN AVE	ST LOUIS	MO	SOILBORING	20.0				17	45	7	E			
00258173	ABANDONED	4018 DUNCAN AVE	THE DESCO GROUP		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	30.0			SW	17	45	7	E			
00258174	ABANDONED	4100 FOREST PARK BLVD	THE DESCO GROUP		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	30.0			SW	17	45	7	E			
00268876	MONITORING	4500 CHILDRENS PLACE STL	HARTOG OIL CO		GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	23.0			SW	17	45	7	E		12.0	
00268882	MONITORING	4500 CHILDRENS PLACE STL	HARTOG OIL CO		GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	24.0			SW	17	45	7	E		12.0	
00268883	MONITORING	4500 CHILDRENS PLACE STL	HARTOG OIL CO		GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	22.4			SW	17	45	7	E		12.0	
00268884	MONITORING	4500 CHILDRENS PLACE STL	HARTOG OIL CO		GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	29.0			SW	17	45	7	E		12.0	
00268910	MONITORING	4140 LINDELL BLVD ST LOUIS	EXXON/MOBIL		C/O HANDEX ENVIRONMENTAL	NEW BERLIN	WI	MONITORING	21.0			NE	17	45	7	E		12.0	
00268911	MONITORING	4140 LINDELL BLVD ST LOUIS	EXXON/MOBIL		C/O HANDEX ENVIRONMENTAL	NEW BERLIN	WI	MONITORING	24.0			NE	17	45	7	E		12.0	
00277880	ABANDONED	4200 WASHINGTON AVE ST LOUIS	RJK INC		357 MARSHALL AVE	ST LOUIS	MO	SOILBORING					17	45	7	E			
00299899	ABANDONED	2-22 N SARAH	LANCELOT INVESTMENT CO		4064 LACLEDE AVE	ST LOUIS	MO	SOILBORING	34.0				17	45	7	E			
00311240	ABANDONED	311 S SARAH ST	US METALS		GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SW	17	45	7	E		14.0	
00311359	ABANDONED	4107-4177 LINDELL BLVD ST LOUI	THF REALTY		2127 INNERBELT BUS CTR DR	ST LOUIS	MO	SOILBORING	20.0				17	45	7	E			
00323646	ABANDONED	4300 FOREST PARK PARKWAY ST LO	BJC HEALTH SYSTEM		600 SOUTH TAYLOR AVE	ST LOUIS	MO	SOILBORING	16.0				17	45	7	E			
00323678	ABANDONED	4001-4021 FOREST PARK AVE ST L		ODELL	4001-4021 FOREST PARK AVE	ST LOUIS	MO	SOILBORING					17	45	7	E			
00324017	ABANDONED	4316 DUNCAN AVE	SITEX ENVIRONMENTAL INC		716 GEYER AVE	ST LOUIS	MO	SOILBORING	20.0				17	45	7	E		20.0	
00324060	ABANDONED	4301 FOREST PARK BLVD		GARNETT	9907 BAPTIST CHURCH RD	ST LOUIS	MO	SOILBORING	20.0				17	45	7	E			
00325396	ABANDONED	214 S VANDEVENTER AVE	KIRBERG ROOFING INC		3951 DUNCAN AVE	ST LOUIS	MO	SOILBORING	20.0				17	45	7	E			
00325398	ABANDONED	4000 LACLADE AVE	BSC HEALTHCARE		600 SOUTH TAYLOR AVE	ST LOUIS	MO	SOILBORING	12.0				17	45	7	E			
00325413	ABANDONED	3860 DUNCAN AVE	KIRBERG ROOFING INC		3951 DUNCAN AVE	ST LOUIS	MO	SOILBORING					17	45	7	E			
00340094	ABANDONED	4526 CHILDRENS PLACE ST LOUIS	WASHINGTON UNIVERSITY ST LOU		660 SOUTH EUCLID AVE	ST LOUIS	MO	SOILBORING					17	45	7	E			
00340097	ABANDONED	4526 CHILDRENS PLACE ST LOUIS	WASHINGTON UNIVERSITY ST LOU		660 SOUTH EUCLID AVE	ST LOUIS	MO	SOILBORING					17	45	7	E			
00354957	ABANDONED			KOCH	660 S EUCLID AVE	ST LOUIS	MO	SOILBORING					17	45	7	E			
00106021	MONITORING	5600 CLAYTON RD STL	CITY OF ST LOUIS PUB SER		CITY HALL ROOM 305	ST LOUIS	MO	MONITORING	14.0	SW	SW	NE	18	45	7	E			
00106022	MONITORING	5600 CLAYTON RD STL	CITY OF ST LOUIS PUB SER		CITY HALL ROOM 305	ST LOUIS	MO	MONITORING	14.0	SW	SW	NE	18	45	7	E			
00106023	MONITORING	5600 CLAYTON RD STL	CITY OF ST. LOUIS		1200 MARTKET ST.S	ST LOUIS	MO	MONITORING	14.0	SW	SW	NE	18	45	7	E			
00106024	MONITORING	5600 CLAYTON RD,ST. LOUIS	CITY OF ST. LOUIS PUB.SER		CITY HALL ROOM 305	ST. LOUIS	MO	MONITORING	14.0	SW	SW	NE	18	45	7	E			
00145284	MONITORING		CITY OF ST LOUIS		C/O O'BRIEN & GERE ENG, INC.	ST LOUIS	MO	MONITORING	25.0			SW	18	45	7	E		1.0	5.08
00145285	MONITORING		CITY OF ST LOUIS		C/O O'BRIEN & GERE ENG, INC.	ST LOUIS	MO	MONITORING	21.0			SW	18	45	7	E		1.0	5.56
00145286	MONITORING		CITY OF ST LOUIS		C/O O'BRIEN & GERE ENG, INC.	ST LOUIS	MO	MONITORING	20.0			SW	18	45	7	E		1.0	6.9
00145287	MONITORING		CITY OF ST LOUIS		C/O O'BRIEN & GERE ENG, INC.	ST LOUIS	MO	MONITORING	16.0			SW	18	45	7	E		1.0	5.95
00162248	MONITORING		CITY OF ST LOUIS		5000 CEDAR PLAZA PARKWAY	ST LOUIS	MO	MONITORING	17.0				18	45	7	E			
00162249	MONITORING		CITY OF ST LOUIS		5000 CEDAR PLAZA	ST LOUIS	MO	MONITORING	16.0				18	45	7	E			
00162250	MONITORING		CITY OF ST LOUIS		5000 CEDAR PLAZA PARKWAY	ST LOUIS	MO	MONITORING	16.0	SW	SE	SW	18	45	7	E			
00323605	ABANDONED	4018 DUNCAN AVE/ ST LOUIS	PRAXAIR INC		435 DONNER AVE SUITE 430	MONESSEN	PA	MONITORING	20.0				18	45	7	E		10.0	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00353251	ABANDONED	4105 CHOUTEAU ST LOUIS		STREUBER	429 GATEFORD	BALLWIN	MO	MONITORING					20	45	7	E		18.0	
00353252	ABANDONED	4105 CHOUTEAU ST LOUIS		STREUBER	429 GATEFORD	BALLWIN	MO	MONITORING					20	45	7	E		18.0	
00353253	ABANDONED	4105 CHOUTEAU ST LOUIS		STREUBER	429 GATEFORD	BALLWIN	MO	MONITORING					20	45	7	E		18.0	
00353254	ABANDONED	4105 CHOUTEAU ST LOUIS		STREUBER	429 GATEFORD	BALLWIN	MO	MONITORING					20	45	7	E		18.0	
00354242	ABANDONED	1058 S VANDEVENTER ST LOUIS MO	VANDEVENTER AVENUE LLC		1202 SOUTH VANDEVENTER	ST LOUIS	MO	SOILBORING					20	45	7	E			
00354246	ABANDONED	2610 CHOUTEAU AVE	BEKEZ INC		38 COUNTRY CLUB ACRES	BELLEVILLE	IL	SOILBORING					20	45	7	E			
00354249	ABANDONED	4436 HUNT AVE	ST LOUIS DEVELOPMENT CORP		1015 LOCUST STREET	ST LOUIS	MO	SOILBORING					20	45	7	E			
00358960	ABANDONED	1525 S VANDEVENTER ST LOUIS	VIACOM INC		11 STANWIX ST	PITTSBURGH	PA	SOILBORING					20	45	7	E			
00024421	ABANDONED	3311 CHOUTEAU AV ST LOUIS	SUPREME EQUIPMENT COMPANY		817 STONEBLUFF COURT	CHESTERFIELD	MO	SOILBORING	20.0				21	45	7	E	460		
00107909	MONITORING	CHOUTEAY & VANDEVENTER,ST LOUI	CITY OF ST. LOUIS PUB.SER		ATTN: ARTHUR KRUGER	ST. LOUIS	MO	MONITORING	41.0			NW	21	45	7	E	469		
00107910	MONITORING	CHOUTEAU & VANDEVENTER,ST.LOUI	CITY OF ST. LOUIS PUB.SER		ATTN: ARTHUR KRUGER	ST. LOUIS	MO	MONITORING	26.0			NW	21	45	7	E	468		
00107911	MONITORING	CHOUTEAU & VANDEVENTER,ST.LOUI	CITY OF ST. LOUIS PUB.SER		ATTN: ARTHUR KRUGER	ST. LOUIS	MO	MONITORING	30.0			NW	21	45	7	E	490		
00107912	MONITORING	CHOUTEAU & VANDEVENTER,ST.LOUI	CITY OF ST. LOUIS PUB.SER		ATTN: ARTHUR KRUGER	ST. LOUIS	MO	MONITORING	36.0			NW	21	45	7	E	477		
00114165	ABANDONED	ST. LOUIS	GROSSMAN IRON & STEEL CO.		5 N. MARKET ST.	ST. LOUIS	MO	MONITORING					21	45	7	E			
00114166	ABANDONED	ST. LOUIS	GROSSMAN IRON & STEEL CO.		5 NORTH MARKET ST.	ST. LOUIS	MO	MONITORING					21	45	7	E			
00114167	ABANDONED	ST. LOUIS	GROSSMAN IRON & STEEL CO.		5 N. MARKET ST.	ST. LOUIS	MO	MONITORING					21	45	7	E			
00114168	ABANDONED		GROSSMAN IRON & STEEL CO.		5 N. MARKET ST.	ST. LOUIS	MO	MONITORING	30.0				21	45	7	E			
00124822	ABANDONED		STEELCOTE FACILITY		1 STEELCOTE SQUARE	ST LOUIS	MO	MONITORING	50.0	NE	SE	NW	21	45	7	E			
00124824	ABANDONED		STEELCOTE FACILITY		1 STEELCOTE SQUARE	ST LOUIS	MO	MONITORING	50.0	NE	SE	NW	21	45	7	E			
00124825	ABANDONED		STEELCOTE FACILITY		1 STEELCOTE SQUARE	ST LOUIS	MO	MONITORING	45.0	NE	SE	NW	21	45	7	E			
00124826	ABANDONED		STEELCOTE FACILITY		1 STEELCOTE SQUARE	ST LOUIS	MO	MONITORING	45.0	NE	SE	NW	21	45	7	E			
00132862	ABANDONED	ST LOUIS	CONTAINER SERVICE INC		7000 CHIPPEWA SUITE 103	ST LOUIS	MO	UNKNOWN	16.0				21	45	7	E			
00132863	ABANDONED		CONTAINER SERVICE INC		7000 CHIPPEWA	ST LOUIS	MO	UNKNOWN	11.0				21	45	7	E			
00132864	ABANDONED		US PAINTS CORPORATION		831 SOUTH 21ST STREET	ST LOUIS	MO	UNKNOWN	20.0				21	45	7	E			
00132870	ABANDONED			MCGRUTHER	831 S 21ST ST	ST LOUIS	MO	UNKNOWN	20.0				21	45	7	E			
00161619	MONITORING	1218 CENTRAL IND AVE ST LOUIS	BRYAN CAVE LLP		300 ONE KANSAS CITY PLACE	KANSAS CITY	MO	MONITORING	17.2	NE	NW	SW	21	45	7	E		8.0	
00161620	MONITORING	MW5 1218 CENTRAL IND AVE ST LO	BRYAN CAVE LLP		300 ONE KANSAS CITY PL	KANSAS CITY	MO	MONITORING	26.2	NE	NW	SW	21	45	7	E		8.0	
00161621	MONITORING	1218 CENTRAL IND AVE ST LOUIS	BRYAN CAVE LLP		300 ONE KANSAS CITY PL	KANSAS CITY	MO	MONITORING	13.2	NE	NW	SW	21	45	7	E		8.0	
00163285	MONITORING	39TH AND PARK STL		HERRIES	707 NORTH 1ST STREET	ST LOUIS	MO	MONITORING	16.0			SW	21	45	7	E			
00163286	MONITORING	39TH AND PARK STL		HERRIES	707 N 1ST STREET	ST LOUIS	MO	MONITORING	23.0			SW	21	45	7	E			
00163289	MONITORING			HERRIES	707 N 1ST ST	ST LOUIS	MO	MONITORING	17.0			NW	21	45	7	E			
00163707	MONITORING	3843 PARK MW10	WILLERT HOME PROD		4044 PARK AVE	ST LOUIS	MO	MONITORING	17.0	SW	NW	SW	21	45	7	E		8.0	
00174380	ABANDONED	10-11	BI STATE DEVELOPMENT		707 N 1ST	ST LOUIS	MO	UNKNOWN	15.0	SW	NW	SW	21	45	7	E			
00183800	ABANDONED	13&14	BI-STATE DEVELOPMENT AGEN		707 N 1ST ST	ST LOUIS	MO	UNKNOWN	15.0	SW	NW	SW	21	45	7	E			
00183802	ABANDONED	18 & 19	BISTATE DEVELOPMENT		707 N 1ST ST	ST LOUIS	MO	UNKNOWN	15.0	SW	NW	SW	21	45	7	E			
00183803	ABANDONED	16	BI STATE DEVELOPMENT		707 N 1ST ST	ST LOUIS	MO	UNKNOWN	15.0	SW	NW	SW	21	45	7	E			
00205046	ABANDONED	CHOTEAU AVE EASMENT	AMEREN NE GEOTECHNOLOGY		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING		SW	SE	NW	21	45	7	E			
00230444	ABANDONED	1218 CENTRAL IND AVE ST LOUIS	BRYAN CAVE LLP		300 ONE KANSAS CITY PL	KANSAS CITY	MO	SOILBORING		NE	NE	SW	21	45	7	E			
00230445	ABANDONED	39TH & PARK	WILLERT HOME PRODUCTS		4044 PARK AVE	ST LOUIS	MO	MONITORING		NW	SW	SW	21	45	7	E			
00230460	ABANDONED	39TH & PARK	WILLERT HOME PRODUCTS		4044 PARK AVE	ST LOUIS	MO	SOILBORING		NW	SW	SW	21	45	7	E			
00245082	ABANDONED	39TH & PARK	WILLERT HOME PRODUCTS		4044 PARK AVE	ST LOUIS	MO	MONITORING	23.25	NW	SW	SW	21	45	7	E			
00276292	ABANDONED	711 & 812 S THERESA		STANIFORTH	7701 FORSYTH BLVD STE 700	ST LOUIS	MO	SOILBORING	16.0				21	45	7	E			
00300163	ABANDONED		MIDCO INC		2684 MISSOURI AVE	GRANITE CITY	IL	SOILBORING	20.0				21	45	7	E	508		
00311214	ABANDONED		MODOT		GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				NW	21	45	7	E			
00323563	ABANDONED		PALLET LOGISTICS MANGT		3311 CHOUTEAU AVE	ST LOUIS	MO	SOILBORING					21	45	7	E			
00323567	ABANDONED	3701 CHOUTEAU ST LOUIS	INT TRUCK & ENGINE CORP		4201 WINFIELD RD	WARRENVILL	IL	SOILBORING					21	45	7	E	476	12.0	
00323600	ABANDONED	CLARK & 10TH STREET	CUPPLES RESIDENTIAL I LLC		911 WASHINGTON AVE SUITE 400	ST LOUIS	MO	SOILBORING	17.0				21	45	7	E			
00325442	ABANDONED	2201 S GRAND	ND CONSULTING GROUP		1425 S 18TH ST	ST LOUIS	MO	SOILBORING					21	45	7	E			
00339212	ABANDONED		SUPREME EXPRESS & TRANSFER CO		3311 CHOUTEAU AVE	ST LOUIS	MO	MONITORING					21	45	7	E		2.0	
00339213	ABANDONED		SUPREME EXPRESS & TRANSFER CO		3311 CHOUTEAU AVE	ST LOUIS	MO	MONITORING					21	45	7	E		24.0	
00339214	ABANDONED		SUPREME EXPRESS & TRANSFER CO		3311 CHOUTEAU AVE	ST LOUIS	MO	MONITORING					21	45	7	E		24.0	
00339215	ABANDONED		SUPREME EXPRESS & TRANSFER CO		3311 CHOUTEAU AVE	ST LOUIS	MO	MONITORING					21	45	7	E		24.0	
00339678	ABANDONED		SUPREME EXPRESS TRANSFER CO		3311 CHOUTEAU AVE	ST LOUIS	MO	SOILBORING					21	45	7	E	526		
00339683	ABANDONED	1321 CHOUTEAU AVE ST LOUIS 631	AALCO WRECKING		1700 N LINDBERG BLVD	ST LOUIS	MO	MONITORING					21	45	7	E	482		
00354240	ABANDONED	2110 CHOUTEAU AVE ST LOUIS	COASTAL MART INC 7310		1001 LOUISIANA STREET	HOUSTON	TX	SOILBORING					21	45	7	E			
00133841	ABANDONED	1600 CARROLL ST	PSI		1512 W ANTHONY DR	CHAMPAIGN	IL	UNKNOWN	18.0				22	45	7	E			
00144553	MONITORING	2300 PAPIN, ST. LOUIS	BFI		11500 BOWLING GREEN	ST. LOUIS	MO	MONITORING	30.0				22	45	7	E		22.9	7.92
00145289	MONITORING	2300 PAPIN,ST. LOUIS	BFI		11500 BOWLING GREEN	ST. LOUIS	MO	MONITORING	23.0				22	45	7	E		22.9	9.2
00145290	MONITORING	2300 PAPIN ST, ST. LOUIS	BFI		11500 BOWLING GREEN	ST. LOUIS	MO	MONITORING	29.0				22	45	7	E		28.5	16.05
00145291	MONITORING	2300 PAPIN ST,ST. LOUIS	BFI		11500 BOWLING GREEN	ST. LOUIS	MO	MONITORING	28.0				22	45	7	E		22.9	7.4

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	Case	Yield	SWL
00229782	MONITORING	NE CORNER SPRUCE & 12TH ST	CITY OF ST LOUIS		C/O OBRIEN & GERE	ST LOUIS	MO	MONITORING	26.0	SW	SW	NE	23	45	7	E			12.0	
00229783	MONITORING	NE CORNER SPRUCE & 12TH ST	CITY OF ST LOUIS		C/O OBRIEN & GERE	ST LOUIS	MO	MONITORING	20.0	SW	SW	NE	23	45	7	E			12.0	
00230217	ABANDONED	NE CORNER SPRICE & 12TH ST.	CITY OF ST. LOUIS		5000 CEDAR PLAZA PARKWAY	ST. LOUIS	MO	SOILBORING	36.0	NE	SW	SW	23	45	7	E				
00230923	ABANDONED	11TH & CLARK	TREASURER CITY OF ST LOUIS		ROOM 220 CITY HALL	ST LOUIS	MO	SOILBORING					23	45	7	E				
00275979	ABANDONED	900 WALNUT ST	BANDWITH EXCHANGE BLDG LLC		210 N TUCKER BLVD	ST LOUIS	MO	MONITORING	30.0				23	45	7	E			10.0	
00315928	MONITORING	18TH & SINGLETON	CITY OF ST LOUIS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	22.0				23	45	7	E			1.0	
00315929	MONITORING	18TH & SINGLETON	CITY OF ST LOUIS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	17.5			SW	23	45	7	E			1.0	
00315930	MONITORING	18TH & SINGLETON	CITY OF ST LOUIS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	21.0			SW	23	45	7	E			1.0	
00324083	ABANDONED	810 S 7TH STREET	WARMANN OIL		11360 LARIMORE	ST LOUIS	MO	SOILBORING	15.0				23	45	7	E				
00325431	ABANDONED	400 S 4TH ST	BALKE BROWN ASSOCIATES INC		1001 HIGHLANDS PLAZA DRIVE W	ST LOUIS	MO	SOILBORING					23	45	7	E				
00325432	ABANDONED	400 S 4TH ST	BALKE BROWN ASSOCIATES INC		1001 HIGHLANDS PLAZA DRIVE W	ST LOUIS	MO	SOILBORING					23	45	7	E				
00339489	ABANDONED	620 S 7TH ST	BP AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	SOILBORING					23	45	7	E				
00353773	ABANDONED	SPRUCE ST	GATEWAY PARKING LLC		327 SOUTH 8TH STREET	ST LOUIS	MO	SOILBORING	16.0				23	45	7	E				
00105743	ABANDONED	1012 CLARK	C&S PROPERTIES, INC		1831 CHESTNUT	ST LOUIS	MO	UNKNOWN	20.0	SW	SW	NW	24	45	7	E				
00106874	MONITORING		US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	29.0				24	45	7	E				
00163312	MONITORING	CLARK & 11TH ST,ST LOUIS		COUGHLIN	1831 CHESTNUT STREET	ST LOUIS	MO	MONITORING	25.0			NW	24	45	7	E				
00163313	MONITORING	CLARK & 11TH ST,ST LOUIS		COUGHLIN	1831 CHESTNUT ST	ST LOUIS	MO	MONITORING	21.0			NW	24	45	7	E				
00163314	MONITORING	CLARK & 11TH ST,ST LOUIS		COUGHLIN	1831 CHESTNUT ST	ST LOUIS	MO	MONITORING	25.0			NW	24	45	7	E				
00230457	ABANDONED	900 SOUTH SECOND STREET	DEVEREUX MURPHY LLC		10 SOUTH BRENTWOOD BLVD	ST LOUIS	MO	UNKNOWN	15.0	SW	NE	SE	24	45	7	E			8.0	
00187684	ABANDONED		FIRST INDUSTRIAL REALTY		1507 FAIRVIEW IND BLVD	ST LOUIS	MO	UNKNOWN	16.0	SE	SE	SE	25	45	7	E				
00258038	ABANDONED		NOOTER CORPORATION		1400 S 3RD ST	ST LOUIS	MO	SOILBORING					25	45	7	E				
00258045	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E			20.0	
00258046	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E			29.0	
00258047	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E			29.0	
00258048	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E			37.0	
00258049	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E			19.0	
00258050	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E				
00258051	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E				
00258052	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E				
00258053	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E				
00258054	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E				
00258055	ABANDONED	1400 S 3RD ST	NOOTER CORPORATION		PO BOX 451	ST LOUIS	MO	SOILBORING					25	45	7	E				
00018364	ABANDONED		MONSANTO		1700 S 2ND ST	ST LOUIS	MO	MONITORING	67.0				26	45	7	E				
00105014	ABANDONED		O'BRIEN & GERE ENGINEERS		5000 CEDAR PLAZA PKWY	ST LOUIS	MO	UNKNOWN	24.0				26	45	7	E				
00105731	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	20.0				26	45	7	E				
00105732	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	20.0				26	45	7	E				
00105733	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	20.0				26	45	7	E				
00105734	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	15.0				26	45	7	E				
00105735	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	20.0				26	45	7	E				
00105736	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	15.0				26	45	7	E				
00105737	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	20.0				26	45	7	E				
00105738	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	20.0				26	45	7	E				
00105739	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	25.0				26	45	7	E				
00105744	ABANDONED		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	UNKNOWN	14.0				26	45	7	E				
00106360	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	20.0				26	45	7	E				
00106361	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	20.0				26	45	7	E				
00106362	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	20.0				26	45	7	E				
00106363	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	15.0				26	45	7	E				
00106364	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	20.0				26	45	7	E				
00115730	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	20.0				26	45	7	E				
00115736	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	14.0				26	45	7	E				
00115737	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	25.0				26	45	7	E				
00115738	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	15.0				26	45	7	E				
00115739	MONITORING		UNIVERSITY OF MO		8001 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	20.0				26	45	7	E				
00163688	MONITORING	1535 S 8TH ST MW-1	WELSCH BABY CARRIAGE		8 DRUCILLA COURT	DURHAM	NC	MONITORING	19.0	NW	NW	NE	26	45	7	E			8.0	
00174385	ABANDONED	1520 S BROADWAY	PLAZA AUTOMOTIVE		1520 S BROADWAY	ST LOUIS	MO	UNKNOWN	15.0	SW	SE	NW	26	45	7	E				
00183826	ABANDONED	1535 S 8TH ST ST LOUIS	BLUE DEVIL VENTURES LLC		8 DRUCILLA	DURHAM	NC	SOILBORING	20.0	NW	SE	SW	26	45	7	E				
00195380	ABANDONED		NOOTER CORPORATION		1400 S THIRD ST	ST LOUIS	MO	SOILBORING			SW	SE	26	45	7	E				
00195382	ABANDONED		NOOTER CORPORATION		1400 S THIRD ST	ST LOUIS	MO	MONITORING			SW	SE	26	45	7	E			20.0	
00195383	ABANDONED	NOOTER	NOOTER CORPORATION		1400 S THIRD ST	ST LOUIS	MO	SOILBORING			SW	SE	26	45	7	E				

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00323694	ABANDONED	2323 S JEFFERSON ST LOUIS	TPI PETROLEUM INC		5590 HAVANA STREET	DENVER	CO	SOILBORING					28	45	7	E			
00340818	ABANDONED		SYNERGY OIL COMPANY		503 S MAIN	OFALLON	MO	SOILBORING					28	45	7	E	525		
00353422	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353423	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353424	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353425	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353426	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353427	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353428	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353429	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353430	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00353431	ABANDONED	2323 S JEFFERSON	TPI PETROLEUM		C/O ATC ASSOCIATES INC	ST LOUIS	MO	MONITORING					28	45	7	E			
00354956	ABANDONED	2351 LAFAYETTE AVE	MARY ONE R & Z ENTERPRISES LL		3911 PARK AVE	ST LOUIS	MO	SOILBORING					28	45	7	E			
00359005	ABANDONED	2803 RUSSELL BLVD ST LOUIS	DE SALES COMMUNITY HOUSING		2759 RUSSELL BLVD	ST LOUIS	MO	MONITORING	23.0				28	45	7	E		13.0	
00359006	ABANDONED	2803 RUSSELL BLVD ST LOUIS	DE SALES COMMUNITY HOUSING		2759 RUSSELL BLVD	ST LOUIS	MO	MONITORING	23.0				28	45	7	E		13.0	
00359007	ABANDONED	2803 RUSSELL BLVD ST LOUIS	DE SALES COMMUNITY HOUSING		2759 RUSSELL BLVD	ST LOUIS	MO	MONITORING	23.0				28	45	7	E		13.0	
00359008	ABANDONED	2803 RUSSELL BLVD ST LOUIS	DE SALES COMMUNITY HOUSING		2759 RUSSELL BLVD	ST LOUIS	MO	MONITORING	19.0				28	45	7	E		9.0	
00359009	ABANDONED	2803 RUSSELL BLVD ST LOUIS	DE SALES COMMUNITY HOUSING		2759 RUSSELL BLVD	ST LOUIS	MO	MONITORING	19.0				28	45	7	E		9.0	
00359010	ABANDONED	2803 RUSSELL BLVD ST LOUIS	DE SALES COMMUNITY HOUSING		2759 RUSSELL BLVD	ST LOUIS	MO	MONITORING	23.0				28	45	7	E		13.0	
00103204	MONITORING	2607 GRAVOIS AVE STL	THE SOUTHLAND CORP		2711 N. HASKELL	DALLAS	TX	MONITORING	25.0				29	45	7	E	650		
00325049	ABANDONED	4501 SHAW AVENUE	MBG PROPERTIES INC		4344 SHAW AVENUE	ST LOUIS	MO	SOILBORING	20.0				29	45	7	E		20.0	
00325465	ABANDONED		CARDEN DISTRICT COMM		39TH STREET & CREE	ST LOUIS	MO	SOILBORING					29	45	7	E			
00103145	MONITORING	BISCHOF AND KINGHIGHWAY STL	CARONDELET CORP		8600 COMMERCIAL BLVD	PEVELY	MO	MONITORING	20.0	SW	NW	NE	30	45	7	E			
00106502	MONITORING	5099 ARSENAL ST,ST LOUIS		WITTRSCHEIN	2301 KINGSHWY BLVD	ST LOUIS	MO	MONITORING	29.0			SW	30	45	7	E			
00121275	MONITORING	2286 S KINGSHIGHWAY,ST.LOUIS	PHILLIPS 66 COMPANY		6 E 13 ADAMS BLDG.	BARTLESVILLE	OK	MONITORING	15.0				30	45	7	E			
00121292	MONITORING	2286 S KINGSHIGHWAY,ST. LOUIS	PHILLIPS 66 COMPANY		6E 13 ADAMS BLDG.	BARTLESVILLE	OK	MONITORING	15.0				30	45	7	E			
00121293	MONITORING	2286 S KINGSHIGHWAY,ST. LOUIS	PHILLIPS 66 COMPANY		6E 13 ADAMS BLDG.	BARTLESVILLE	OK	MONITORING	15.0				30	45	7	E			
00121428	MONITORING	2286 S KINGSHIGHWAY,ST.LOUIS	PHILLIPS 66 COMPANY		6E 13 ADAMS BLDG.	BARTLESVILLE	OK	MONITORING	20.0				30	45	7	E			
00183843	ABANDONED		MERCANTILE BANK		PO BOX 524	ST LOUIS	MO	MONITORING	15.0	SW	NW	NW	30	45	7	E			
00204270	ABANDONED	2927 S KINGSHIGHWAY BLVD	SHELL OIL		C\O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	22.0	NW	NE	SE	30	45	7	E			
00229388	MONITORING	2927 S KINGSHWY MW 1	EQUILON C/O GEOTECHNOLOGY		2258 GRISSOM DRL	ST LOUIS	MO	MONITORING	20.0	SE	SW	SE	30	45	7	E		12.0	
00229391	MONITORING	2927 S KINGSHWY MW 2	EQUILON C/O GEOTECHNOLOGY		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	18.0	SE	SW	SE	30	45	7	E		12.0	
00229392	MONITORING	2927 S KINGSHWY MW3	EQUILON C/O GEOTECHNOLOGY		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	19.0	SE	SW	SE	30	45	7	E		12.0	
00229393	MONITORING	2829 S KINGSHWY MW4	EQUILON C/O GEOTECHNOLOGY		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	20.0	SE	SW	SE	30	45	7	E		12.0	
00230459	ABANDONED	5010 KEMPER AVE		HUNTER	5010 KEMPER	ST LOUIS	MO	SUPPLY		SW	NE	SW	30	45	7	E		12.0	
00230914	ABANDONED		ELITE MATTRESS MANUFACTURIN		999 REAR FLYER	ST LOUIS	MO	SOILBORING					30	45	7	E			
00268189	MONITORING	2927 S KINGSHIGHWAY	EQUILON ENT LLC		C/O GEOTECHOLOGY INC	ST LOUIS	MO	MONITORING	20.0			SE	30	45	7	E		12.0	
00268190	MONITORING	2927 S KINGSHIGHWAY	EQUILON ENT LLC		C/O GEOTECHOLOGY INC	ST LOUIS	MO	MONITORING	20.0			SE	30	45	7	E		12.0	
00277973	ABANDONED		COLLISION CENTER		C/O ERNIE PATTI	ST LOUIS	MO	SOILBORING					30	45	7	E			
00300695	ABANDONED	3233 S KINGSHIGHWAY ST LOUIS		MARTIN	55 TRENT DR	ST LOUIS	MO	SOILBORING	12.0				30	45	7	E			
00311253	ABANDONED	2927 S KINGSHIGHWAY	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	30	45	7	E		20.0	
00311254	ABANDONED	2927 S KINGSHIGHWAY	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	30	45	7	E		18.0	
00311255	ABANDONED	2927 S KINGSHIGHWAY	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	30	45	7	E		19.0	
00311256	ABANDONED	2927 S KINGSHIGHWAY	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	30	45	7	E		20.0	
00311257	ABANDONED	2927 S KINGSHIGHWAY	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	30	45	7	E		20.0	
00311258	ABANDONED	2927 S KINGSHIGHWAY	SHELL OIL PRODUCTS US		GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	30	45	7	E		19.0	
00323691	ABANDONED	3410 S KINGSHIGHWAY ST LOUIS	QUIKTRIP CORPORATION		4705 SOUTH 129TH EAST AVE	TULSA	MO	SOILBORING					30	45	7	E			
00324215	ABANDONED	2101 S VANDENTER	LAW OFFICE OF DENNIS MERTZ		5520 TELEGRAPH RD	ST LOUIS	MO	SOILBORING	20.0				30	45	7	E		20.0	
00325329	ABANDONED		STL COKE & FOUNDRY		2817 HEREFORD	ST LOUIS	MO	SOILBORING	20.0				30	45	7	E		20.0	
00325417	ABANDONED	4215 THOLOZAN AVE ST LOUIS MO	BRESNAHAN INC		4215 THOLOZAN AVE	ST LOUIS	MO	SOILBORING					30	45	7	E			
00385869	ABANDONED	3156 S KINGSHIGHWAY ST LOUIS	OREILLY AUTOMOTIVE INC		233 S PATTERSON	SPRINGFIELD	MO	SOILBORING	19.0				30	45	7	E			
00145280	MONITORING		LYON SHEET METAL FACILITY		4085 BINGHAM AVE	ST LOUIS	MO	MONITORING	25.0			SE	31	45	7	E			
00145281	MONITORING		LYON SHEET METAL FACILITY		4085 BINGHAM AVE	ST LOUIS	MO	MONITORING	20.0			SE	31	45	7	E			
00145282	MONITORING		LYON SHEET METAL FACILITY		4085 BINGHAM AVE	ST LOUIS	MO	MONITORING	21.0			SE	31	45	7	E			
00145283	MONITORING		LYON SHEET METAL FACILITY		4085 BINGHAM AVE	ST LOUIS	MO	MONITORING	20.0			SE	31	45	7	E			
00258037	ABANDONED	5415 5423 CHIPPEWA ST		DEATHERAGE	321 NEW SALEM DR	ST LOUIS	MO	SUPPLY	16.0			SW	31	45	7	E		16.0	
00266277	ABANDONED	3601 DUNN ROAD FLORISSANT	EVERBANK COM		555 N NEW BALLAS ROAD	ST LOUIS	MO	SOILBORING	16.0				31	45	7	E	495		
00311259	ABANDONED	5415-5423 CHIPPEWA	MBR MANAGEMENT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SW	31	45	7	E		14.0	
00311552	ABANDONED		H W KROEGER ERECTION CO, INC		4800 PARKER AVE	ST LOUIS	MO	SOILBORING	20.0				31	45	7	E			
00187685	ABANDONED		SOUTHWEST STEEL SUPPLY		3401 MORGANFORD ROAD	ST LOUIS	MO	UNKNOWN	12.0	SW	SW		32	45	7	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00207365	MONITORING	2ND & DORCAS STREETS	ANHEUSER BUSCH		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	35	45	7	E		60.0	
00207366	MONITORING	2ND DORCAS STREETS	ANHEUSER BUSCH		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	47.0	SE	SE	NW	35	45	7	E		60.0	
00207367	MONITORING	2ND & DORCAS STREETS, ST LOUIS	ANHEUSER BUSCH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	48.0	SE	SE	NW	35	45	7	E		60.0	
00207368	MONITORING	2ND & DORCAS STREETS, ST LOUIS	ANHEUSER BUSCH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	49.0	SE	SE	NW	35	45	7	E		60.0	
00207377	MONITORING	2ND AND DORLAS STREET	ANHEUSER BUSCH		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	22.0	SE	SE	NW	35	45	7	E		60.0	
00207378	MONITORING	2ND AND DORLAS STREET	ANHEUSER BUSCH		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	35	45	7	E		60.0	
00207407	MONITORING	NE CORNER OF LYNCH & 3RD ST	ANHEUSER BUSCH		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	35	45	7	E		12.0	
00207408	MONITORING	SW CORNER OF LYNCH & 3RD ST	ANHEUSER BUSCH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	13.0	SE	SE	NW	35	45	7	E		12.0	
00222713	ABANDONED	2ND & DORCAS	ANHEUSER-BUSCH		C\O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		22.0	
00222714	ABANDONED	2ND & DORCAS	ANHEUSER-BUSCH		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		51.0	
00222741	ABANDONED	2ND & DORCAS ST STL	ANHEUSER-BUSCH		C/0 GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		51.0	
00222742	ABANDONED	2ND & DORCAS	ANHEUSER-BUSCH		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		49.0	
00222744	ABANDONED	2ND & DORCAS	ANHEUSER-BUSCH		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		25.0	
00222745	ABANDONED	2ND & DORCAS	ANHEUSER-BUSCH		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		22.0	
00222746	ABANDONED	2ND & DORCAS	ANHEUSER-BUSCH		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	NW	35	45	7	E		24.0	
00323570	ABANDONED	5400 MURDOCH	AMERICAN ACQUISITION GROUP		4179 CRECENT DR	ST LOUIS	MO	SOILBORING					36	45	7	E	524		
00018417	ABANDONED		GENERAL ELECTRIC CO		1 RIVER RD	SCHENECTADY	NY	MONITORING	19.0					45	7	E			
00018418	ABANDONED		GENERAL ELECTRIC CO		1 RIVER RD	SCHENECTADY	NY	MONITORING	29.0					45	7	E			
00018419	ABANDONED		GENERAL ELECTRIC CO		1 RIVER RD	SCHENECTADY	NY	MONITORING	30.0					45	7	E			
00022297	MONITORING	1 ANGLERODT ST ST LOUIS	US ARMY CORPS OF ENGINEERS		ATTEN: GERALD ALLEN		MO	WATERLEVEL	18.0					45	7	E		1.0	
00022298	MONITORING	1 ANGLERODT ST ST LOUIS	US ARMY CORPS OF ENGINEERS		ATTEN: GERALD ALLEN		MO	WATERLEVEL	15.0					45	7	E	450	1.0	
00022299	MONITORING	1 ANGLERODT ST ST LOUIS	US ARMY CORPS OF ENGINEERS		ATTEN: GERALD ALLEN		MO	WATERLEVEL	20.0					45	7	E	450	1.0	
00024355	MONITORING	3311 CHOUTEAU AVENUE ST LOUIS	SUPREME EQUIPMENT COMPANY		ATTEN: PAULA L BUSSMAN	CHESTERFIELD	MO	MONITORING	24.0					45	7	E		12.0	
00024356	MONITORING	3311 CHOUTEAU AVENUE ST LOUIS	SUPREME EQUIPMENT COMPANY		ATTEN: PAULA L BUSSMAN	CHESTERFIELD	MO	MONITORING	24.0					45	7	E		12.0	
00024357	MONITORING	3311 CHOUTEAU AVENUE ST LOUIS	SUPREME EQUIPMENT COMPANY		ATTEN: PAULA L BUSSMAN	CHESTERFIELD	MO	MONITORING	24.0					45	7	E		12.0	
00103374	MONITORING	4963-5035 MANCHESTER,ST LOUIS	CALGON VESTAL LAB.		4963-5035 MANCHESTER AVE.	ST. LOUIS	MO	MONITORING	24.0					45	7	E	514		
00103375	MONITORING	4963-5035 MANCHESTER ST LOUIS	CALGON VESTAL LAB		4963-5035 MANCHESTER AVE	ST. LOUIS	MO	MONITORING	22.0					45	7	E	505		
00103376	MONITORING		CALGON VESTAL LAB		4963-5035 MANCHESTER AVE	ST LOUIS	MO	MONITORING	26.0					45	7	E	501		
00103377	MONITORING		CALGON VESTAL LAB.		4963-5035 MANCHESTER AVE.	ST. LOUIS	MO	MONITORING	25.0					45	7	E	499		
00103378	MONITORING		CALGON VESTAL LAB		4963-5035 MANCHESTER AVE	ST LOUIS	MO	MONITORING	25.0					45	7	E	509		
00103379	MONITORING		CALGON VESTAL LAB		4963-5035 MANCHESTER AVE	ST LOUIS	MO	MONITORING	27.0					45	7	E	500		
00103962	MONITORING	S. KINGSHWY & CHIPPEWA ST LOUI	MAY DESIGN & CONSTR		611 OLIVE ST	ST LOUIS	MO	MONITORING	18.0					45	7	E			
00103967	MONITORING	S KINGSHWY & CHIPPEWA STL	MAY DESIGN & CONST		611 OLIVE ST	ST LOUIS	MO	MONITORING	14.0					45	7	E			
00103968	MONITORING	S KINGSHWY & CHIPPEWA STL	MAY DESIGN & CONST		611 OLIVE ST	ST LOUIS	MO	MONITORING	18.0					45	7	E			
00103969	MONITORING	S KINGSHWY & CHIPPEWA STL	MAY DESIGN & CONST		611 OLIVE ST	ST LOUIS	MO	MONITORING	18.0					45	7	E			
00103970	MONITORING	S. KINGSHWY & CHIPPEWA STL	MAY DESIGN & CONST		611 OLIVE ST	ST LOUIS	MO	MONITORING	18.0					45	7	E			
00103971	MONITORING	S KINGSHWY & CHIPPEWA STL	MAY DESIGN & CONST		611 OLIVE ST	ST LOUIS	MO	MONITORING	19.0					45	7	E			
00106098	MONITORING		SOUTHLAND CORPORATION		P BOX 711	DALLAS	TX	MONITORING	20.0					45	7	E			
00106102	MONITORING	2607 GRAVIOS AVE ST LOUIS	SOUTHLAND CORPORATION		PO BOX 711 211 N HASKELL	DALLAS	TX	MONITORING	23.0					45	7	E			
00111023	ABANDONED		ENTERPRISE LEASING		2320 MARKET ST.	ST. LOUIS	MO	MONITORING	15.0					45	7	E			
00111999	ABANDONED		AT & T		2654 LOCUST ST.	ST. LOUIS	MO	MONITORING	20.0					45	7	E	500		
00113390	ABANDONED		AT & T		2654 LOCUST ST.	ST. LOUIS	MO	MONITORING	20.0					45	7	E	500		
00113391	ABANDONED		AT & T		2654 LOCUST ST.	ST. LOUIS	MO	MONITORING	20.0					45	7	E	500		
00113392	ABANDONED		AT & T		2654 LOCUST ST.	ST. LOUIS	MO	MONITORING	20.0					45	7	E	500		
00114197	ABANDONED		SHELL OIL COMPANY		1415 W 22ND ST	OAK BROOK	IL	UNKNOWN	13.0	NE	SE			45	7	E	490		
00114696	ABANDONED	CINCINNATTI	ACE DORAN HAULNG&RIGGING		1601 BLUE ROCK	CINCINNATTI	OH	MONITORING						45	7	E			
00114702	ABANDONED	WILMINGTON	ROLLINS LEASING CORP.		PO BOX 1791	WILMINGTON	DE	MONITORING						45	7	E			
00115012	MONITORING	3520 NATURAL BRIDGE,ST.LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115013	MONITORING	3520 NATURAL BRIDGE,ST. LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115014	MONITORING	3520 NATURAL BRIDGE,ST. LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., STE.240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115015	MONITORING	3520 NATURAL BRIDGE,ST. LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115016	MONITORING	3520 NATURAL BRIDGE, ST. LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115017	MONITORING	3520 NATURAL BRIDGE,ST. LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115018	MONITORING	3520 NATURAL BRIDGE,ST. LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115019	MONITORING	3520 NATURAL BRIDGE,ST.LOUIS	AMOCO OIL CO.		400 WOODS MILL RD., SUITE 240	CHESTERFIELD	MO	MONITORING	15.0					45	7	E			
00115020	MONITORING	MARKET & SPRING,ST. LOUIS	O'BRIEN & GERE ENGINEERS		5000 CEDAR PLAZA PKWY, STE 21	ST. LOUIS	MO	MONITORING	28.0					45	7	E			
00115021	MONITORING	MARKET & SPRING,ST. LOUIS	O'BRIEN & GERE ENGINEERS		5000 CEDAR PLAZA PKWY,STE 21	ST. LOUIS	MO	MONITORING	22.0					45	7	E			
00115733	MONITORING	4105 CHOUTEAU,ST. LOUIS	SARAH & CHOUTEAU SERV.CTR		4105 CHOUTEAU	ST. LOUIS	MO	MONITORING	16.0					45	7	E	485		
00122490	MONITORING	721 PINE,ST LOUIS	LACLEDE GAS COMPANY		720 OLIVE BLVD	ST LOUIS	MO	MONITORING	25.0					45	7	E			
00122491	MONITORING	721 PINE,ST LOUIS	LACLEDE GAS COMPANY		720 OLIVE BLVD	ST LOUIS	MO	MONITORING	25.0					45	7	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00183651	ABANDONED		AFFTON PROPERTIES LLC		7301 HALL STREET	ST LOUIS	MO	UNKNOWN	16.0				45	7	E				
00187632	ABANDONED	722 SOUTH 22ND, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	20.0				45	7	E			20.0	
00187633	ABANDONED	722 S 22ND ST, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	20.0				45	7	E			20.0	
00187634	ABANDONED	722 S 22ND ST, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	20.0				45	7	E			20.0	
00187636	ABANDONED	3001 CHOUTEAU, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	20.0				45	7	E			20.0	
00187637	ABANDONED	1ST ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE AVE	OMAHA	NE	MONITORING	24.0				45	7	E			23.0	
00187638	ABANDONED	1ST & BARTON ST, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	23.0				45	7	E	415		21.0	
00187639	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	22.0				45	7	E	415		22.0	
00187640	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	17.0				45	7	E	415		7.0	
00187641	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	22.0				45	7	E	415		21.0	
00187642	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	21.0				45	7	E	415		21.0	
00187643	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	19.0				45	7	E	415		19.0	
00187644	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	19.0				45	7	E	415		19.0	
00187645	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	19.0				45	7	E	415		19.0	
00187646	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	19.0				45	7	E	415		19.0	
00187647	ABANDONED	3001 CHOUTEAU, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	8.0				45	7	E			7.0	
00187648	ABANDONED	3001 CHOUTEAU, STL	UNION PACIFIC RAILROAD		1416 DODGE ST	OMAHA	NE	MONITORING	20.0				45	7	E			20.0	
00187649	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE AVE	OMAHA	NE	MONITORING	27.0				45	7	E	415		27.0	
00187650	ABANDONED	1ST & BARTON, STL	UNION PACIFIC RAILROAD		1416 DODGE AVE	OMAHA	NE	MONITORING	23.0				45	7	E	415		23.0	
00187670	ABANDONED	4403 LACLEDE, STL	AMOCO OIL CO		400 S WOODSMILL RD	CHESTERFIELD	MO	UNKNOWN	14.0				45	7	E				
00187671	ABANDONED	4403 LACLEDE, STL	AMOCO OIL CO		400 S WOODSMILL RD	CHESTERFIELD	MO	UNKNOWN	12.0				45	7	E				
00194060	ABANDONED	MOZEL INC	ELLIS AND EVERARD		700 GALLERIA PKWY	ATLANTA	GA	UNKNOWN	52.0				45	7	E			41.0	
00194061	ABANDONED		ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	UNKNOWN	30.0				45	7	E	475			
00202616	ABANDONED	11210 SCHUETZ RD	BSI CONSTRUCTION		6767 SOUTHWEST AVE	ST LOUIS	MO	DOMESTIC					45	7	E				
00202819	ABANDONED		US PAINTS		831 S 21ST ST	ST LOUIS	MO	MONITORING					45	7	E			5.0	
00204344	ABANDONED	3600-3622 W FLORISSANT		SHREVES	3815 N 21ST ST	ST LOUIS	MO	SOILBORING					45	7	E				
00205064	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	22.0				45	7	E				
00205065	ABANDONED		US ARMY CORPS OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	23.0				45	7	E				
00205066	ABANDONED		US ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	10.5				45	7	E				
00205539	ABANDONED	4003 PARK AVENUE ST. LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	SOILBORING					45	7	E	475			
00207556	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	28.0				45	7	E	475		12.0	
00207557	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	28.0				45	7	E	475		12.0	
00207558	MONITORING	4003 PARK AVE EW-12	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	37.0				45	7	E	475		12.0	
00207559	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	25.0				45	7	E	475		12.0	
00207560	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	39.0				45	7	E	475		12.0	
00207561	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	25.0				45	7	E	475		12.0	
00207562	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	41.0				45	7	E	475		12.0	
00207563	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	25.0				45	7	E	475		12.0	
00207629	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	54.0				45	7	E	475		12.0	
00207630	MONITORING	4003 PARK AVE ST LOUIS MO	ELLIS & EVERARD		700 GALLERIA PARKWAY	ATLANTA	GA	MONITORING	25.0				45	7	E	475		12.0	
00207631	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	25.0				45	7	E	475		12.0	
00207632	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	25.0				45	7	E	475		12.0	
00207633	MONITORING	4003 PARK AVE ST LOUIS	ELLIS & EVERARD		700 GALLERIA PKWY	ATLANTA	GA	MONITORING	25.0				45	7	E			12.0	
00223091	ABANDONED		US ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	18.5				45	7	E				
00223092	ABANDONED		US ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	UNKNOWN	14.5				45	7	E				
00223093	ABANDONED		US ARMY CORP OF ENGINEERS		1 ANGELRODT ST	ST LOUIS	MO	SOILBORING	14.5				45	7	E				
00231789	ABANDONED		JIFFY LUBE		4592 MANCHESTER	ST LOUIS	MO	SOILBORING	21.0				45	7	E	490			
00234705	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	19.6				45	7	E			12.0	
00234706	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	18.85				45	7	E			12.0	
00234707	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	15.2				45	7	E			12.0	
00234708	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	20.25				45	7	E			12.0	
00234709	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	22.65				45	7	E			12.0	
00234710	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	20.5				45	7	E			12.0	
00234711	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	15.22				45	7	E			12.0	
00234712	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	15.15				45	7	E			12.0	
00234713	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	15.2				45	7	E			12.0	
00234714	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	15.32				45	7	E			12.0	
00234715	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	14.64				45	7	E			12.0	
00234716	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	24.85				45	7	E			12.0	
00234717	MONITORING	101 FERRY ST ST LOUIS	JR SIMPLOT CO		C/O MONTGOMERY WATSON	DES MOINES	IA	MONITORING	24.77				45	7	E			12.0	

Report Date: 03/12/2007
Selected By: Township Range Direction
Selection: E

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00300663	ABANDONED	10000 W FLORISSANT DELLWOOD	B P AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	SOILBORING					1	46	6	E			
00303046	MONITORING	10393 W FLORISSANT FERGUSON	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	20.0				1	46	6	E		10.0	
00303047	MONITORING	10393 W FLORISSANT FERGUSON	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	19.5				1	46	6	E		10.0	
00303048	MONITORING	10393 W FLORISSANT FERGUSON	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	20.0				1	46	6	E		10.0	
00325761	ABANDONED	10393 W FLORRISANT FERGUSON	SINCALIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	SOILBORING					1	46	6	E			
00161624	MONITORING	1116 NORTH FLORISSANT FERGUSON	P & S MANAGEMENT GROUP		2418 HIGHWAY K	OFALLON	MO	UNKNOWN	25.0	SE	SE	NW	2	46	6	E		8.0	
00230453	ABANDONED	1116 NORTH FLORISSANT	P & S MANAGEMENT GROUP		2418 HIGHWAY K	OFALLON	MO	UNKNOWN		SE	SE	NW	2	46	6	E			
00024208	MONITORING			GREENLAWN	6767 N HANLEY	BERKELEY	MO	MONITORING	40.0				3	46	6	E	540	12.0	
00024209	MONITORING			GREENLAWN	6767 N HANLEY	BERKELEY	MO	MONITORING	24.0				3	46	6	E	540	12.0	
00024210	MONITORING			GREENLAWN	6767 N HANLEY	BERKELEY	MO	MONITORING	24.0				3	46	6	E	540	12.0	
00024211	MONITORING			GREENLAWN	6767 N HANLEY	BERKELY	MO	MONITORING	24.0				3	46	6	E	540	12.0	
00105790	ABANDONED	HAZELWOOD	DELTA ENVIRON. CONSULT.,		501 FIRST CAPITOL DR., SUITE 1	ST. CHARLES	MO	SUPPLY	18.0	NW	NW		3	46	6	E			
00203446	ABANDONED	OUTDOOR SYSTEMS		GREENLAWN	6767 N HANLEY RD	BERKELY	MO	SOILBORING	12.0				3	46	6	E	540		
00205358	ABANDONED	6950 N HANLEY RD HAZELWOOD		STREET	C\O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	30.0	NE	SE	NW	3	46	6	E			
00229443	MONITORING			GREENLAW	OPERATIONS MANAGER	ST LOUIS	MO	MONITORING	25.0				3	46	6	E	540	12.0	
00229444	MONITORING			GREENLAW	OPERATIONS MANAGER	ST LOUIS	MO	UNKNOWN	25.0				3	46	6	E		12.0	
00230285	ABANDONED		OUTDOOR SYSTEMS		6767 N HAMLEY RD	ST LOUIS	MO	MONITORING	24.0				3	46	6	E	540		
00230287	ABANDONED		OUTDOOR SYSTEMS		6767 N HAMLEY RD	ST LOUIS	MO	MONITORING	40.0				3	46	6	E	540		
00230288	ABANDONED		OUTDOOR SYSTEMS		6767 N HAMLEY RD	ST LOUIS	MO	MONITORING	25.0				3	46	6	E	540		
00230289	ABANDONED		OUTDOOR SYSTEMS		6767 N HAMLEY RD	ST LOUIS	MO	MONITORING	24.0				3	46	6	E	540		
00230290	ABANDONED		OUTDOOR SYSTEMS		6767 N HAMLEY RD	ST LOUIS	MO	MONITORING	25.0				3	46	6	E	540		
00230291	ABANDONED		OUTDOOR SYSTEMS		6767 N HAMLEY RD	ST LOUIS	MO	MONITORING	25.0				3	46	6	E			
00230755	ABANDONED		SW BELL MEHLVILLE CENTRAL OFF		1321 LEMAY FERRY ROAD	ST LOUIS	MO	SOILBORING	20.0	NW	NW	NE	3	46	6	E			
00230910	ABANDONED	9340-8352 FROST AVE	ST JOHNS BANK & TRUST CO		8924 ST CHARLES ROCK	ST LOUIS	MO	UNKNOWN					3	46	6	E			
00284367	MONITORING	6950 N HANLEY RD HAZELWOOD	J D STREET & CO		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0			NW	3	46	6	E		12.0	
00301093	MONITORING	6951 N HANLEY/ HAZELWOOD	J D STREETT C/O GEOTECHNOLOG		2258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0			NW	3	46	6	E		12.0	
00315953	MONITORING	8459 WABASH BERKELEY	MSD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	18.0			SW	3	46	6	E		1.0	
00315954	MONITORING	GRAHAM RD BERKELEY	MSD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	28.5			SW	3	46	6	E		1.0	
00323550	ABANDONED	8425 AIRPORT RD	INLAND LAND COMPANY LP		C/O LEWIS RICE & FINGERBAL LC	ST LOUIS	MO	SOILBORING					3	46	6	E			
00324056	ABANDONED	6800 N HANLEY/ BERKELEY	WALLIS OIL COMPANY		106 EAST WASHINGTON	CUBA	MO	SOILBORING	15.0				3	46	6	E			
00325557	ABANDONED	8601 AIRPORT RD/ BERKELY	CONOCO PHILLIPS		1218 PHILLIPS BLDG	BARTELSVILLE	OK	SOILBORING	20.0				3	46	6	E			
00161626	MONITORING	6577-6581 RINUSS CT BERKLEY	SUPREME CORP		16500 COUNTY ROAD 38	GOSHEN	IN	UNKNOWN	19.0	SE	SW	NE	4	46	6	E		60.0	
00174955	ABANDONED	HAZELWOOD	GEORGIA-PACIFIC CORP		133 PEACHTREE ST NE	ATLANTA	GA	UNKNOWN	16.0	NW	NW		4	46	6	E	520		
00187687	ABANDONED		VAN WATERS AND ROGERS		8925 SEEGER IND DRIVE	ST LOUIS	MO	UNKNOWN	16.0	SE	NW		4	46	6	E			
00202827	ABANDONED	6161 AVATION DR	SABRELINER CORPORATION		7733 FORSYTH BLVD	ST LOUIS	MO	WATERLEVEL					4	46	6	E			
00203003	ABANDONED		USCOE		9170 LATTY AVENUE	BERKLEY	MO	MONITORING	24.0	SW	SW	NE	4	46	6	E		25.0	
00204348	ABANDONED	JS MCDONNELL BLVD\BANSHEE RD	BOEING		PO BOX 516	ST LOUIS	MO	SOILBORING					4	46	6	E			
00204349	ABANDONED	JS MCDONNELL BLVD\BANSHEE RD	BOEING		PO BOX 516	ST LOUIS	MO	SOILBORING					4	46	6	E			
00206615	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		10.8	
00206618	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	21.0				4	46	6	E		9.0	
00206619	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	15.0				4	46	6	E		9.0	
00206620	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	18.0				4	46	6	E		9.0	
00206621	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00206622	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00206623	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00206624	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00206626	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00206627	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00206628	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTH 1500	ST LOUIS	MO	MONITORING	12.0				4	46	6	E		9.0	
00222874	ABANDONED	HAZELWOOD	US ARMY CORPS OF ENGINEERS		500 NW PLAZA STE 700	ST ANN	MO	SOILBORING	20.0	SW	SW	NW	4	46	6	E			
00229430	MONITORING	6161 AVIATION DR	SABRELINER CORPORATION		7733 FORSYTHE 1500	ST LOUIS	MO	MONITORING	25.0				4	46	6	E		10.0	
00230454	ABANDONED	6577-6581 ROMISS CT	SUPREME CORP		16500 COUNTY ROAD 38	GOSHEN	IN	UNKNOWN	15.0	NE	SW	SE	4	46	6	E			
00230906	ABANDONED	JS MCDONNELL BLVD BANSHEE STL	BOEING		PO BOX 516 MCS221-1400	ST LOUIS	MO	SOILBORING	20.0				4	46	6	E			
00277731	ABANDONED	BLDG:62,64,65,67MCDONNELL BLVD	BOEING CORP		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	16.0			SW	4	46	6	E		16.0	
00277763	ABANDONED	MCDONNELL BLVD HAZELWOOD	BOEING CORP		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			SW	4	46	6	E		12.0	
00277828	ABANDONED	9835 AIRPORT RD/ BERKELY	BB & T INVESTORS INC		15971 WOODLET WAY CT	CHESTERFIELD	MO	SOILBORING					4	46	6	E			
00300669	ABANDONED	6161 AVIATION DR	THE BOEING COMPANY		PO BOX 516	ST LOUIS	MO	SOILBORING	21.0				4	46	6	E			
00301072	MONITORING	6161 AVIATION DR	SABRELLINER CORP		7733 FORSYTHE BLVD	ST LOUIS	MO	WATERLEVEL	20.0				4	46	6	E		6.0	
00301073	MONITORING	6161 AVIATION DR	SABRELLINER CORP		7733 FORSYTHE BLVD	ST LOUIS	MO	WATERLEVEL	20.0				4	46	6	E		6.0	
00301074	MONITORING	6161 AVIATION DR	SABRELLINER CORP		7733 FORSYTHE BLVD	ST LOUIS	MO	WATERLEVEL	20.0				4	46	6	E		6.0	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00244285	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING	12.0	SW	SE	NE	5	46	6	E	530		
00244286	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING	14.0	SW	SE	NE	5	46	6	E	530		
00244287	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00258147	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USACOE		9170 LATTY AVE	BERKLEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00258148	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USALOE		9170 LATTY AVENUE	BERKLEY	MO	SOILBORING	35.0	SW	SE	NE	5	46	6	E			
00258149	ABANDONED	1100 MCDONNELL BLVD HAZELWOOD	USA COE		9170 LATTY AVE	BERKLEY	MO	SOILBORING		SW	SE	NE	5	46	6	E	526		
00258150	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USACOE		9170 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E	531		
00258151	ABANDONED	1100 MCDONNELL BLVD HAZELWOOD	USA COE		9170 LATTY AVE	BERKLEY	MO	SOILBORING		SW	SE	NE	5	46	6	E	531		
00258153	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USACOE		9170 LATTY AVE	BERKLEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00258160	ABANDONED	110 MCDONNELL HAZELWOOD	USA COE		9170 LATTY AVE	BERLELEY	MO	SOILBORING	25.0	SW	SE	NE	5	46	6	E			
00258162	ABANDONED	110 MCDOMMELL BLVD	USA COE		9170 LATTY AVE	BERKLEY	MO	SOILBORING	35.0	SW	SE	NE	5	46	6	E			
00258164	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USACOE		9170 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E	531		
00258465	ABANDONED		PRINTPACK INC		310 MCDONNELL BLVF	HAZELWOOD	MO	MONITORING	56.0				5	46	6	E		56.0	
00266138	ABANDONED	110 MCDONNELL HAZELWOOD	USA COE		9170 LATTY AVE	BERKELEY	MO	SOILBORING	26.5	SW	SE	NE	5	46	6	E	530		
00266139	ABANDONED	110 MCDONNEL HAZELWOOD	USA COE		9170 LATTY AVE	BERKELEY	MO	SOILBORING	14.0	SW	SE	NE	5	46	6	E	530		
00276180	ABANDONED	110 MCDONNELL HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	40.0	SW	SE	NE	5	46	6	E		23.0	
00276243	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00276356	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING	60.0	SW	SE	NE	5	46	6	E	530		
00276357	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING	80.0	SW	SE	NE	5	46	6	E	530		
00276358	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00276359	ABANDONED	110 MCDONNELL BLVD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00276360	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	SOILBORING		SW	SE	NE	5	46	6	E			
00277978	ABANDONED		BOEING		PO BOX 516 MCS221-1400	ST LOUIS	MO	SOILBORING	21.0				5	46	6	E	560		
00284533	MONITORING	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	30.0	SW	SE	NE	5	46	6	E		60.0	
00284534	MONITORING	110 MCDONNELL BLVD HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	25.0	SW	SE	NE	5	46	6	E		60.0	
00299978	ABANDONED	110 MCDONNELL BLVD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	24.0	SW	SE	NE	5	46	6	E	530	21.0	
00299979	ABANDONED	110 MCDONNELL BLVD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	89.0	SW	SE	NE	5	46	6	E		89.0	
00299980	ABANDONED	110 MCDONNELL BLVD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	22.5	SW	SE	NE	5	46	6	E	530	22.0	
00302106	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	12.0				5	46	6	E		2.5	
00302107	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00302108	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00312259	ABANDONED	143 MCDONNELL BLVD HAZELWOOD	VALLEY INDUSTRIES		143 MCDONNELL BLVD	FLORISSANT	MO	UNKNOWN	15.3				5	46	6	E		5.0	
00312260	ABANDONED	143 MCDONNELL BLVD HAZELWOOD	VALLEY INDUSTRIES		143 MCDONNELL BLVD	FLORISSANT	MO	UNKNOWN	15.5				5	46	6	E		5.0	
00312261	ABANDONED	143 MCDONNELL BLVD HAZELWOOD	VALLEY INDUSTRIES		143 MCDONNELL BLVD	FLORISSANT	MO	UNKNOWN	15.3				5	46	6	E		5.0	
00312262	ABANDONED	143 MCDONNELL BLVD HAZELWOOD	VALLEY INDUSTRIES		143 MCDONNELL BLVD	FLORISSANT	MO	UNKNOWN	15.0				5	46	6	E		5.0	
00312263	ABANDONED	143 MCDONNELL BLVD HAZELWOOD	VALLEY INDUSTRIES		143 MCDONNELL BLVD	FLORISSANT	MO	UNKNOWN	15.3				5	46	6	E		5.0	
00312278	ABANDONED	BANSHEE RD	BOEING CO		PO BOX 516	ST LOUIS	MO	SOILBORING					5	46	6	E		18.0	
00313256	MONITORING	BANSHEE RD BRIDGETON	MSD		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	76.0			NW	5	46	6	E		12.0	
00315732	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315733	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315734	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315736	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315737	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315738	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315739	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	16.0				5	46	6	E		2.5	
00315740	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	24.0				5	46	6	E		8.5	
00315741	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	24.0				5	46	6	E		8.5	
00315742	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	24.0				5	46	6	E		8.5	
00315743	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	18.5				5	46	6	E		2.5	
00315744	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	20.0				5	46	6	E		2.5	
00315746	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	20.0				5	46	6	E		2.5	
00315747	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	20.0				5	46	6	E		2.5	
00315748	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	24.0				5	46	6	E		2.5	
00315749	MONITORING	10701 LAMBERT INTERNATIONAL BL	ALLIED AVIATION FUELING CO		PO BOX 10114	ST LOUIS	MO	MONITORING	20.0				5	46	6	E		2.5	
00315936	MONITORING	235 HIGHLAND HAZELWOOD	HAZELWOOD COMMERCE REDEV CORP		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0			NW	5	46	6	E		1.0	
00316734	MONITORING	10750 LAMBERT INT BLVD	ALLIED AVIATION FUELING CO		C/O WAYNE GUETTERMEN	ST LOUIS	MO	EXTRACTION	15.0		SW	NW	5	46	6	E		1.0	
00316735	MONITORING	10750 LAMBERT INT BLVD	ALLIED AVIATION FUELING CO		C/O WAYNE GUETTERMEN	ST LOUIS	MO	EXTRACTION	10.0		SW	NW	5	46	6	E		1.0	
00317670	MONITORING	10701 LAMBERT INT BLVD ST LOUI	ALLIED AVIATION FUELING CO SL		PO BOX 10114 LAMBERT FIELD	ST LOUIS	MO	WATERLEVEL	16.0				5	46	6	E		2.5	
00323125	ABANDONED	110 MCDONNELL BLVD, HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	22.0	SW	SE	NE	5	46	6	E		24.0	
00323126	ABANDONED	110 MCDONNELL BLVD, HAZELWOOD	USA COE		8945 LATTY AVE	BERKELEY	MO	MONITORING	82.0	SW	SE	NE	5	46	6	E		84.0	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00235506	MONITORING	BRIDGETON	SPK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	30.0	NW	NW	SW	7	46	6	E		12.0	
00235507	MONITORING	BRIDGETON	SPK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0	SE	SE	SW	7	46	6	E		12.0	
00266134	ABANDONED	4500 N LINDBERGH BRIDGETON	EQUILON ENT LLC		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	29.0				7	46	6	E			
00266155	ABANDONED	4690 N LINDBERGH	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	48.0			NW	7	46	6	E			
00266171	ABANDONED	4690 N LINDBERGH BLVD ST LOUIS	LAMBERT INT'L AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	35.0			NW	7	46	6	E			
00267115	MONITORING	4690 N LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	35.0			NW	7	46	6	E		12.0	
00267116	MONITORING	4690 N LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	35.0			NW	7	46	6	E		12.0	
00267117	MONITORING	4690 N LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	35.0			NW	7	46	6	E		12.0	
00267118	MONITORING	4690 N LINDBERG	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	UNKNOWN	35.0			NW	7	46	6	E		12.0	
00267119	MONITORING	4690 N LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	35.0			NW	7	46	6	E		12.0	
00267120	MONITORING	4690 N LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN	35.0			NW	7	46	6	E		12.0	
00267121	MONITORING	4690 N LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	UNKNOWN	52.0			NW	7	46	6	E		12.0	
00276183	ABANDONED	11307 HAMMACK BRIDGETON	SPK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	24.0			NW	7	46	6	E			
00276203	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	35.0			NW	7	46	6	E		34.0	
00276204	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	35.0			NW	7	46	6	E		34.0	
00276205	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	52.0			NW	7	46	6	E		51.0	
00276223	ABANDONED	NE CNR OF HAMMACK/HUNTER	SPK		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SE	SE	SW	7	46	6	E		34.0	
00276224	ABANDONED	NE HAUMACK E OF SCHVELLE	SPK		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	35.0	SE	SE	SW	7	46	6	E		34.0	
00276225	ABANDONED	E HAMMACK 400'N OF HUNTER	SPK		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	40.0	SE	SE	SW	7	46	6	E		39.0	
00276227	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	35.0			NW	7	46	6	E		34.0	
00276228	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	35.0			NW	7	46	6	E		34.0	
00276229	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	35.0			NW	7	46	6	E		34.0	
00276330	ABANDONED	HAMMACK & LONG RD BRIDGETON	LAMBERT INTERNATIONAL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	25.0			NW	7	46	6	E			
00276362	ABANDONED	4690 LINDBERGH BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY HOWE	ST LOUIS	MO	MONITORING	35.0			NW	7	46	6	E		34.0	
00277704	ABANDONED	11332 HAMMACK DR BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	UNKNOWN					7	46	6	E		15.0	
00277709	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		20.0	
00277710	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		15.0	
00277711	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		15.0	
00277712	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		15.0	
00277713	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		15.0	
00277714	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		20.0	
00277715	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		20.0	
00277716	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		20.0	
00277717	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		20.0	
00277718	ABANDONED	BRIDGETON	LAMBERT INTL AIRPORT		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		NE	SE	NW	7	46	6	E		20.0	
00299119	ABANDONED	11216 NATURAL BRIDGE RD	LAMBERT INTERNATIONAL AIRPOR		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	24.0			NE	7	46	6	E		24.0	
00299120	ABANDONED	1123 NATURAL BRIDGE RD/ BRIDGE	LAMBERT INTERNATIONAL AIRPOR		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	24.0			NE	7	46	6	E		24.0	
00300066	ABANDONED	ST ANDREW LANE/ BRIDGETON	LAMBERT INTERNATIONAL AIRPOR		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	28.0			NE	7	46	6	E		28.0	
00300067	ABANDONED	ST THOMAS/ BRIDGETON	LAMBERT INTERNATIONAL AIRPOR		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	24.0			NE	7	46	6	E			
00300068	ABANDONED	ST THOMAS LANE/ BRIDGETON	LAMBERT INTERNATIONAL AIRPOR		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	24.0			NE	7	46	6	E		24.0	
00354980	ABANDONED			HESSELMEYER	4171 CYPRESS RD	ST ANN	MO	SOILBORING					7	46	6	E		5.0	
00122533	MONITORING	EAST TERMINAL,ST. LOUIS	ST. LOUIS AIRPORT AUTHORI		P.O. BOX 10212	ST. LOUIS	MO	MONITORING	64.0				8	46	6	E		30.0	
00122534	MONITORING	EAST TERMINAL,ST. LOUIS	ST. LOUIS AIRPORT AUTH		P.O. BOX 10212	ST. LOUIS	MO	MONITORING	100.0				8	46	6	E			
00125925	ABANDONED		ST.LOUIS LAMBERT AIRPORT		P.O. BOX 10212	ST. LOUIS	MO	UNKNOWN	35.0	SW	SE		8	46	6	E			
00131836	ABANDONED		HERTZ CORPORATION		225 BRAE BLVD	PARK RIDGE	NJ	UNKNOWN	20.0				8	46	6	E			
00131843	ABANDONED		HERTZ CORPORATION		225 BRAE BLVD.	PARK RIDGE	NJ	MONITORING	21.0				8	46	6	E			
00203391	ABANDONED	DPB1-5	OGDEN AVIATION SVC		10735 LAMBERT INTERNATIONAL	ST LOUIS	MO	SOILBORING					8	46	6	E	560		
00206640	MONITORING		THE BOEING COMPANY		BUILDING #28	ST LOUIS	MO	UNKNOWN	20.0				8	46	6	E		18.0	
00229713	MONITORING	2258 GRISSOM DR	CITY OF ST LOUIS		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	24.5	SW	SE	SE	8	46	6	E		12.0	
00229714	MONITORING	LAMBERT INTERNATIONAL DR	CITY OF ST LOUIS		C/O GEOTHNOLOGY	ST LOUIS	MO	MONITORING	22.0	SW	SE	SE	8	46	6	E		12.0	
00229715	MONITORING	LAMBERT INTERNATIONAL DR	CITY OF ST LOUIS		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	SW	SE	SE	8	46	6	E		12.0	
00229778	MONITORING	LAMBERT INTERNATIONAL DR	CITY OF ST LOUIS		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	30.5	SW	SE	SE	8	46	6	E		12.0	
00266163	ABANDONED	AIRFLIGHT DR	EQUILON ENT LLC		C/O GEOTECHOLOGY INC	ST LOUIS	MO	MONITORING	12.0			SW	8	46	6	E		12.0	
00269008	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	15.0			SW	8	46	6	E		12.0	
00269009	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	14.0			SW	8	46	6	E		12.0	
00269010	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	15.0			SW	8	46	6	E		12.0	
00269022	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC C/O GEO TECH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	14.0			SW	8	46	6	E		12.0	
00269023	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC C/O GEO TECH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	14.0			SW	8	46	6	E		12.0	
00269024	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC C/O GEO TECH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	14.0			SW	8	46	6	E		12.0	
00269025	MONITORING	AIRFLIGHT DR	EQUILON ENT LLC C/O GEO TECH		2258 GRISSOM DR	ST LOUIS	MO	MONITORING	14.0			SW	8	46	6	E		12.0	

Legal Description Report

Ref Num	Well Type	Site Address		Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00022271	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	41.0	SW	NE	NE	13	46	6	E		12.0	
00022272	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	35.0	SW	NE	NE	13	46	6	E		12.0	
00022273	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	30.0	SW	NE	NE	13	46	6	E		12.0	
00022289	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	32.0	SW	NE	NE	13	46	6	E		12.0	
00022290	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	24.0	SW	NE	NE	13	46	6	E		12.0	
00022292	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	28.0	SW	NE	NE	13	46	6	E		12.0	
00022293	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	25.0	SW	NE	NE	13	46	6	E		12.0	
00022294	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	34.0	SW	NE	NE	13	46	6	E		12.0	
00022295	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	28.0	SW	NE	NE	13	46	6	E		12.0	
00022616	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	15.0	SW	NE	NE	13	46	6	E		12.0	
00022617	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	28.0	SW	NE	NE	13	46	6	E		12.0	
00022618	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	15.0	SW	NE	NE	13	46	6	E		12.0	
00022619	MONITORING	8100 W FLORISSANT		E & S MFG FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	15.0	SW	NE	NE	13	46	6	E		12.0	
00022620	MONITORING	8100 W FLORISSANT		E & S MFG FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	23.0	SW	NE	NE	13	46	6	E		12.0	
00022621	MONITORING	8100 W FLORISSANT		E & S MFG FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	25.0	SW	NE	NE	13	46	6	E		12.0	
00022622	MONITORING	8100 W FLORISSANT		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	34.0	SW	NE	NE	13	46	6	E		12.0	
00022623	MONITORING	8100 W FLORISSANT		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	34.0	SW	NE	NE	13	46	6	E		12.0	
00022624	MONITORING	8100 W FLORISSANT		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	14.0	SW	NE	NE	13	46	6	E		12.0	
00022625	MONITORING	8100 W FLORISSANT		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	20.0	SW	NE	NE	13	46	6	E		12.0	
00022627	MONITORING	8100 W FLORISSANT		E & S MFG FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	29.0	SW	NE	NE	13	46	6	E		12.0	
00121116	MONITORING	1210 S FLORISSANT,COOL VALLEY		TOTAL PETROLEUM		999 18TH ST., STE. 2201	DENVER	CO	MONITORING	15.0	SW	NW	NW	13	46	6	E	550		
00121141	MONITORING	1210 S FLORISSANT, COOL VALLEY		TOTAL PETROLEUM		999 18TH ST., STE. 2201	DENVER	CO	MONITORING	25.0	SW	NW	NW	13	46	6	E	550		
00121142	MONITORING	1210 S FLORISSANT,COOL VALLEY		TOTAL PETROLEUM		999 18TH ST., STE.2201	DENVER	CO	MONITORING	15.0	SW	NW	NW	13	46	6	E	550		
00161145	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING	46.0	SE	SW	NE	13	46	6	E			
00161146	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING	25.0	SE	SW	NE	13	46	6	E			
00161147	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING	46.0	SE	SW	NE	13	46	6	E			
00161148	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING	20.0	SE	SW	NE	13	46	6	E			
00161149	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING	42.0	SE	SW	NE	13	46	6	E			
00161150	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING	45.0	SE	SW	NE	13	46	6	E		23.0	
00161151	RECNSTRUCT			E&S MANUFACTURING		8100 W FLORISSANT AVENUE	ST LOUIS	MO	MONITORING		SE	SW	NE	13	46	6	E			
00161701	MONITORING			E&S MANUFACTURING		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	25.0				13	46	6	E			
00162286	MONITORING	PAUL & ST LOUIS AVE		MALINE CREEK SEWER		2000 HAMPTON AVENUE	ST LOUIS	MO	MONITORING	20.0			NW	13	46	6	E			
00203998	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING					13	46	6	E		25.0	
00203999	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING					13	46	6	E		22.0	
00204000	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING					13	46	6	E		51.0	
00204681	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING					13	46	6	E		20.0	
00204682	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING					13	46	6	E		38.0	
00204684	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING					13	46	6	E		30.0	
00204685	ABANDONED			E & S MANUFACTURING FACILITY		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING					13	46	6	E		41.0	
00206919	MONITORING	8100 W FLORISSANT		E & S MFG FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	35.0	SW	NE	NE	13	46	6	E		12.0	
00222890	MONITORING			E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	MONITORING		SW	NE	NE	13	46	6	E			
00235026	MONITORING			EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	28.0	SE	NE	NE	13	46	6	E		72.0	
00235027	MONITORING			EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	23.0	SE	NE	NE	13	46	6	E		72.0	
00235028	MONITORING			EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	18.0	SE	NE	NE	13	46	6	E		72.0	
00235030	MONITORING			EMERSON ELECTRIC		8100 FLORISSANT	ST LOUIS	MO	MONITORING	47.0	SE	NE	NE	13	46	6	E		48.0	
00235031	MONITORING			EMERSON ELECTRIC		8100 FLORISSANT	ST LOUIS	MO	MONITORING	48.0	SE	NE	NE	13	46	6	E		48.0	
00267293	MONITORING			EMERSON ELECTRIC		8100 FLORISSANT	ST LOUIS	MO	MONITORING	52.0	SE	NE	NE	13	46	6	E		48.0	
00267294	MONITORING			EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	MONITORING	47.0	SE	NE	NE	13	46	6	E		48.0	
00267303	MONITORING	8100 W FLORISSANT ST LOUIS		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	WATERLEVEL	21.0	SE	NE	NE	13	46	6	E		5.0	
00267304	MONITORING	8100 W FLORISSANT ST LOUIS		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	WATERLEVEL	22.0	SE	NE	NE	13	46	6	E		5.0	
00267318	MONITORING	8100 W FLORISSANT		EMERSON ELECTRIC		8100 W FLORISSANT	ST LOUIS	MO	WATERLEVEL	26.0	SE	NE	NE	13	46	6	E		5.0	
00024703	ABANDONED	1108 S FLORISSANT RD	FLORISSANT	SITE OIL CO		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	20.0			NE	14	46	6	E			
00184440	ABANDONED	411 S HARVEY		CITY OF FERGUSON		901 FERGUSON AVENUE	FERGUSON	MO	UNKNOWN	20.0	NE	SW	NW	14	46	6	E			
00202703	ABANDONED	B11-B13		SITE OIL CO		50SOUTH BEMISTON	ST LOUIS	MO	SOILBORING	20.0	SW	NE	NE	14	46	6	E			
00204363	ABANDONED	728 S FLORISSANT FERGUSON		LEWIS BROTHERS BAKERIES INC		500 NORTH FULTON AVE	EVANSVILLE	IN	SOILBORING					14	46	6	E			
00207370	MONITORING	1108 FLORISSANT ROAD		SITE OIL		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	SE	NW	NE	14	46	6	E		12.0	
00207371	MONITORING	1108 FLORISSANT RD		SITE OIL		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	20.0	SE	NW	NE	14	46	6	E		12.0	
00207372	MONITORING	2258 GRISSOM DR ST LOUIS		SITE OIL		C/O GEOTECHNOLOGY	FERGUSON	MO	MONITORING	20.0	SE	NW	NE	14	46	6	E		12.0	
00268634	MONITORING	8230 FLORISSANT FERGUSON		QUIK TRIP CORPORATION		4705 S 129TH EAST AVE	TULSA	OK	MONITORING	14.5	SE	SE	SW	14	46	6	E		6.0	
00277836	ABANDONED	1700 S FLORISSANT COOL VALLEY		WHITE CASTLE MGMT CO		555 W GOODALE ST	COLUMBUS	OH	SOILBORING	18.0				14	46	6	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00325908	ABANDONED	4399 WOODSON RD WOODSON TERRAC	SUNOCO INC		9736 MALTBY RD	BRIGHTON	MI	MONITORING	25.0				17	46	6	E		25.0	
00325909	ABANDONED	4399 WOODSON RD WOODSON TERRAC	SUNOCO INC		9736 MALTBY RD	BRIGHTON	MI	MONITORING	25.0				17	46	6	E		25.0	
00325910	ABANDONED	4399 WOODSON RD WOODSON TERRAC	SUNOCO INC		9736 MALTBY RD	BRIGHTON	MI	MONITORING	25.0				17	46	6	E		25.0	
00325911	ABANDONED	4399 WOODSON RD WOODSON TERRAC	SUNOCO INC		9736 MALTBY RD	BRIGHTON	MI	MONITORING	25.0				17	46	6	E		25.0	
00325912	ABANDONED	4399 WOODSON RD WOODSON TERRAC	SUNOCO INC		9736 MALTBY RD	BRIGHTON	MI	MONITORING	25.0				17	46	6	E		25.0	
00114803	ABANDONED		THE MIDLAND GROUP		12655 OLIVE BLVD., STE. 200	ST. LOUIS	MO	MONITORING	15.0				18	46	6	E			
00115660	MONITORING	10635 ST CHARLES RK,ST. ANN	AMOCO OIL CO.		400 S. WOODS MILL RD., STE. 24	CHESTERFIELD	MO	MONITORING	19.0				18	46	6	E			
00115661	MONITORING	10635 ST CHARLES ROCK RD,ST. A	AMOCO OIL CO.		400 S. WOODS MILL RD., STE. 24	CHESTERFIELD	MO	MONITORING	20.0				18	46	6	E			
00121120	MONITORING	10201 ST CHARLES RK RD,ST. ANN	TOTAL PETROLEUM		999 18TH ST., STE.2201	DENVER	CO	MONITORING	20.0	NE	SE	SW	18	46	6	E	550		
00151640	ABANDONED	ST ANN	NEXTEL CORPORATION		ONE CITY PLACE SUITE 100	ST LOUIS	MO	UNKNOWN	16.0				18	46	6	E	570		
00159406	MONITORING	10835-10993 ST CHL RCK BRIDGET	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	559		
00159407	MONITORING	10835-10993 ST CHL RCK BRIDGET	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTLA ENGINEER	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	555		
00159409	MONITORING	10835-10993 ST CHLS RCK RD BRI	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	556		
00159410	MONITORING	10835-10993 ST CHL RCK BRIDGET	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	56.0	SW	NE	NW	18	46	6	E	554		
00159411	MONITORING	10835-10993 ST CRLS RCK RD BRI	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	554		
00159412	MONITORING	10835-10993 ST CHLS RCK RD BRI	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	58.0	SW	NE	NW	18	46	6	E	556		
00159413	MONITORING	10835-10993 ST CHARLES ROCK RD	NPN ENVIRONMENTAL		927 HORAN DR	ST LOUIS	MO	MONITORING	21.0	SW	NE	NW	18	46	6	E	558	12.0	
00159414	MONITORING	10835-10993 ST CHARLES ROCK RD	NPN ENVIRONMENTAL		927 HORAN DR	ST LOUIS	MO	MONITORING	22.0	SW	NE	NW	18	46	6	E	558	12.0	
00159415	MONITORING	10835-10993 ST CHARLES ROCK RD	NPN ENVIRONMENTAL		927 HORAN DR	ST LOUIS	MO	MONITORING	54.0	SW	NE	NW	18	46	6	E	561	12.0	
00159416	MONITORING	10835-10993 ST CHARLES ROCK RD	NPN ENVIRONMENTAL		927 HORAN DR	ST LOUIS	MO	MONITORING	21.0	SW	NE	NW	18	46	6	E	557	12.0	
00159417	MONITORING	10835-10993 ST CHARLES ROCK RD	NPN ENVIRONMENTAL		927 HORAN DR	ST LOUIS	MO	MONITORING	21.0	SW	NE	NW	18	46	6	E	561	12.0	
00159418	MONITORING	10835-10993 ST CHARLES ROCK RD	NPN ENVIRONMENTAL		927 HORAN DR	ST LOUIS	MO	MONITORING	59.0	SW	NE	NW	18	46	6	E	559	12.0	
00160899	MONITORING	10835-10993 ST CHL RCK BRIDGET	CYPRESS VILLAGE SHOPPING CTR		NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	565		
00161132	MONITORING	10835-10993 ST CHL RCK BRIDGET	CYPRESS VILLAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	559		
00258043	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	556	26.0	
00258238	ABANDONED	10835 STCHARLES ROCKRD/BRIDGET	METLIFE REALTY GROUP INC		ONE NORTH BROADWAY SUITE 500	WHITE PLAINS	NY	SOILBORING	30.0	SW	NE	NW	18	46	6	E			
00312986	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	565	26.0	
00312987	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	48.0	SW	NE	NW	18	46	6	E	565	48.0	
00313243	MONITORING	ASHBY RD ST ANN	MSD		C/O GEOTECHNOLOGY	ST LOUIS	MO	WATERLEVEL	63.0			SW	18	46	6	E		12.0	
00324455	ABANDONED	10835-10993 ST CHARLES ROCK RO	RMS PROPERTIES II LLC		331 W GOLF ROAD	SCHAUMBERG	IL	MONITORING	21.0	SW	NE	NW	18	46	6	E	558	21.0	
00325052	ABANDONED	3738 ST GREGORY CT	VATTE ROTT COMMERCIAL PROPER		3449 ST CHARLES ROCK RD	ST ANN	MO	SOILBORING	24.0				18	46	6	E		25.0	
00325061	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	58.0	SW	NE	NW	18	46	6	E	556	58.0	
00325062	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	555	26.0	
00339038	ABANDONED		VATTEROTT PROPERTIES INC		3738 ST GREGORY CT	ST ANN	MO	SOILBORING					18	46	6	E		16.0	
00339791	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	554	26.0	
00339792	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	54.0	SW	NE	NW	18	46	6	E	554	54.0	
00339793	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	21.0	SW	NE	NW	18	46	6	E	557	21.0	
00339794	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	22.0	SW	NE	NW	18	46	6	E	558	22.0	
00339795	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	21.0	SW	NE	NW	18	46	6	E		21.0	
00339796	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	59.0	SW	NE	NW	18	46	6	E	559	59.0	
00339797	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	54.0	SW	NE	NW	18	46	6	E	561	54.0	
00339799	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	24.0	SW	NE	NW	18	46	6	E	562	24.0	
00363518	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	17.0	SW	NE	NW	18	46	6	E	560	17.0	
00363519	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	24.0	SW	NE	NW	18	46	6	E		24.0	
00363520	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	24.0	SW	NE	NW	18	46	6	E	564	24.0	
00363521	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	559	26.0	
00363522	ABANDONED	ST CHARLES RX RD BRIDGETON	NPN ENVIRONMENTAL ENGINEERS		1631 HEADLAND DRIVE	ST LOUIS	MO	MONITORING	26.0	SW	NE	NW	18	46	6	E	559	26.0	
00204302	ABANDONED	DP1,2,3	EQUILON ENTERPRISES		2258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	30.0	NE	NE	SW	19	46	6	E			
00258131	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTHNOLOGY INC	ST LOUIS	MO	MONITORING	25.0	SE	SE	NW	19	46	6	E		25.0	
00258132	ABANDONED	3191 ASHBY RD	EQUILON ENTERPRISES		C/O GEOTHNOLOGY INC	ST LOUIS	MO	MONITORING	25.0	SE	SE	NW	19	46	6	E		25.0	
00258133	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTHNOLOGY INC	ST LOUIS	MO	MONITORING	25.0	SE	SE	NW	19	46	6	E		25.0	
00258134	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTHNOLOGY INC	ST LOUIS	MO	MONITORING	25.0	SE	SE	NW	19	46	6	E		25.0	
00258135	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	25.0	SE	SE	NW	19	46	6	E		25.0	
00258136	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	19	46	6	E		20.0	
00258137	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	19	46	6	E		20.0	
00258138	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	19	46	6	E		20.0	
00258139	ABANDONED	3191 ASHBY RD ST ANN	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0	SE	SE	NW	19	46	6	E		20.0	
00115410	MONITORING	9410 BALTIMORE,OVERLAND	SOUTHWESTERN BELL TELE		1010 E PINE 21-E-13	ST LOUIS	MO	MONITORING	29.0			SE	20	46	6	E	680		
00115411	MONITORING	9410 BALTIMORE,OVERLAND	SOUTHWESTERN BELL TELE		1010 E PINE 21-E-13	ST LOUIS	MO	MONITORING	21.0			SE	20	46	6	E	680		
00115412	MONITORING	9410 BALTIMORE ST,OVERLAND	SOUTHWESTERN BELL TELE		1010 E PINE 21-E-13	ST LOUIS	MO	MONITORING	20.0			SE	20	46	6	E	680		

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00353663	ABANDONED	3708 N HANLEY BEL RIDGE	SHELL OIL PRODUCTS US		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				SW	23	46	6	E			
00354248	ABANDONED	8260 FLORISSANT NORMANDY	QUICKTRIP CORPORATION		4705 S 129TH E AVE	TULSA	OK	MONITORING					23	46	6	E		13.0	
00106660	MONITORING	1005 BERMUDA,NORMANDY	MHTD NORMANDY MAINT. LOT		1005 BERMUDA AVE.	NORMANDY	MO	MONITORING	23.0				24	46	6	E		12.0	
00106661	MONITORING	1005 BERMUDA,NORMANDY	MHTD NORMANDY MAINT. LOT		1005 BERMUDA AVE.	NORMANDY	MO	MONITORING	29.0				24	46	6	E			
00115617	MONITORING	1005 BERMUDA,NORMANDY	MHTD NORMANDY MAINT. LOT		1005 BERMUDA AVE.	NORMANDY	MO	MONITORING	38.0				24	46	6	E			
00115618	MONITORING	1005 BERMUDA,NORMANDY	MHTD NORMANDY MAINT. LOT		1005 BERMUDA AVE.	NORMANDY	MO	MONITORING	30.0				24	46	6	E			
00115619	MONITORING	1005 BERMUDA,NORMANDY	MHTD NORMANDY MAINT. LOT		1005 BERMUDA AVE.	NORMANDY	MO	MONITORING	30.0				24	46	6	E			
00115620	MONITORING	1005 BERMUDA,NORMANDY	MHTD NORMANDY MAINT. LOT		1005 BERMUDA AVE.	NORMANDY	MO	MONITORING	29.0				24	46	6	E		24.0	
00202399	ABANDONED	STL MO 63121	NORMANDY SCHOOL DISTRICT		7837 NATURAL BRIDGE ROAD	ST LOUIS	MO	SOILBORING	12.0				24	46	6	E			
00275403	ABANDONED	1018 BERMUDA RD NORMANDY	SINCLAIR OIL CO		3401 FAIRBANKS AVE	KANSAS CITY	KS	SOILBORING					24	46	6	E			
00277586	ABANDONED	1018 BERMUDA RD NORMANDY	SINCLAIR OIL CO		3401 FAIRBANKS AVE	KANSAS CITY	KS	SOILBORING					24	46	6	E			
00303049	MONITORING	1018 BERMUDA ROAD NORMANDY MO	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	24.0				24	46	6	E		12.0	
00303050	MONITORING	1018 BERMUDA ROAD NORMANDY MO	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	24.5				24	46	6	E		12.0	
00303051	MONITORING	1018 BERMUDA ROAD NORMANDY MO	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	24.0				24	46	6	E		12.0	
00303052	MONITORING	1018 BERMUDA ROAD NORMANDY MO	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	24.0				24	46	6	E		12.0	
00303053	MONITORING	1018 BERMUDA ROAD NORMANDY MO	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVENUE	KANSAS CITY	KS	MONITORING	23.0				24	46	6	E		12.0	
00311702	ABANDONED	1018 BERMUDA RD NORMANDY	SINCLAIR OIL CORPORATION		3401 FAIR BANKS AVE	KANSAS CITY	MO	SOILBORING					24	46	6	E		15.0	
00024610	MONITORING	SHELL NATURAL BRIDGE NORMANDY	SHELL OIL PRODUCTS/CO GEOTEC		[illegible]SOM DRIVE	ST LOUIS	MO	MONITORING	15.0			NW	25	46	6	E		12.0	
00024611	MONITORING	SHELL NATURAL BRIDGE NORMANDY	SHELL OIL PRODUCTS/CO GEOTEC		[illegible]SOM DRIVE	ST LOUIS	MO	MONITORING	15.0			NW	25	46	6	E		12.0	
00163117	MONITORING		TEXACO REFINING		PO BOX 1650	TULSA	OK	MONITORING	17.0				25	46	6	E			
00163118	MONITORING		TEXACO REFINING		PO BOX 1650	TULSA	OK	MONITORING	15.0	NE	SE	NW	25	46	6	E			
00163119	MONITORING		TEXACO REFINING		7199 NATURAL BRIDGE	TULSA	OK	MONITORING	15.0				25	46	6	E			
00177648	HEAT PUMP	ST CHARLES ROCK RD/HOLIDAY RD	PETERS HEATING & AIR		377 TRAVIS	TROY	MO	VERTICAL	150.0				25	46	6	E			
00266141	ABANDONED	7201 NATURAL BRIDGE NORMANDY	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING	20.0			NW	25	46	6	E		20.0	
00269040	MONITORING	7201 NAT. BRIDGE PASADENA HILL	EQUIILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0			NW	25	46	6	E		12.0	
00269041	MONITORING	7201 NAT. BRIDGE PASADENA HILL	EQUIILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0			NW	25	46	6	E		12.0	
00269055	MONITORING	7201 NAT. BRIDGE PASADENA HILL	EQUIILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0			NW	25	46	6	E		12.0	
00269073	MONITORING	7201 NAT. BRIDGE PASADENA HILL	EQUIILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.0			NW	25	46	6	E		12.0	
00301095	MONITORING	7201 NATURAL BRIDGE RD	SHELL OIL PRODUCTS US C/O GEO		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0			NW	25	46	6	E		12.0	
00301096	MONITORING	7201 NATURAL BRIDGE RD	SHELL OIL PRODUCTS US C/O GEO		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	14.0			NW	25	46	6	E		12.0	
00301097	MONITORING	7201 NATURAL BRIDGE RD	SHELL OIL PRODUCTS US C/O GEO		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	14.0			NW	25	46	6	E		12.0	
00354223	ABANDONED		LIONS ROCK LLC		7199 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING					25	46	6	E			
00354224	ABANDONED		LIONS ROCK LLC		7199 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING					25	46	6	E			
00354225	ABANDONED		LIONS ROCK LLC		7199 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING					25	46	6	E			
00354226	ABANDONED		LIONS ROCK LLC		7199 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING					25	46	6	E			
00354227	ABANDONED		LIONS ROCK LLC		7199 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING					25	46	6	E			
00325448	ABANDONED	1905 KIENLEN HILLSDALE	ARMSTRONG-TEASDALE		ONE METROPOLITION SQUARE	ST LOUIS	MO	SOILBORING					26	46	6	E			
00163754	MONITORING			MILLENBAUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING	15.0			SW	27	46	6	E			
00163755	MONITORING			MILLENBAUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING	15.0			SW	27	46	6	E		30.0	
00163756	MONITORING			MILLENBOUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING	15.0			SW	27	46	6	E			
00163757	MONITORING			MILLENBAUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING	15.0			SW	27	46	6	E		30.0	
00174373	ABANDONED	FLORISSANT	MERCANTILE BANK		PO BOX 524	ST LOUIS	MO	UNKNOWN	15.0	SE	SW	SE	27	46	6	E			
00230422	ABANDONED			MILLERBAUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING			SW	NE	27	46	6	E			
00230424	ABANDONED			MILLERBAUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING			SW	NE	27	46	6	E			
00230425	ABANDONED			MILLERBAUGH	8000 ST CHARLES ROCK RD	ST LOUIS	MO	MONITORING			SW	NE	27	46	6	E			
00259256	ABANDONED	8905 PAGE BLVD	KRCV CORPORATION		IN PF DRAWER	NEW HYDE PARK	NY	UNKNOWN					28	46	6	E			
00260106	MONITORING	7800 N LINDBERGH HAZELWOOD	EQUILON ENT LLC C/O GEOTECHN		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	21.0				28	46	6	E		12.0	
00260120	MONITORING	7800 N LINDBERGH HAZELWOOD	EQUILON ENT LLC C/O GEOTECHN		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	21.0				28	46	6	E		12.0	
00260121	MONITORING	7800 N LINDBERGH HAZELWOOD	EQUILON ENT LLC C/O GEOTECHN		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	25.0			NW	28	46	6	E		12.0	
00267092	MONITORING	7800 N LINDBERGH HAZELWOOD	EQUICON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	25.5			NW	28	46	6	E		12.0	
00300511	ABANDONED	7800 N LINDBERGH/ HAZELWOOD	SUN PROPERTIES		PO BOX 6641	CHESTERFIELD	MO	MONITORING	10.0				28	46	6	E			
00107889	MONITORING	9725 LACKLAND,OVERLAND	TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	18.0			NW	29	46	6	E	670		
00164660	ABANDONED	TULSA	TEXACO REFINING & MKTNG		PO BOX 1650	TULSA	OK	UNKNOWN					29	46	6	E		15.0	
00164661	ABANDONED	TULSA	TEXACO REFINING & MKTNG		PO BOX 1650	TULSA	OK	UNKNOWN					29	46	6	E		15.0	
00164662	ABANDONED	TULSA	TEXACO REFINING & MKTNG		PO BOX 1650	TULSA	OK	UNKNOWN					29	46	6	E			
00195933	ABANDONED		OVERLAND FUEL&CONTRACTING		2251 WOODSON RD	OVERLAND	MO	SOILBORING					29	46	6	E			
00205405	ABANDONED	7201 NATURAL BRIDGE NORMANDY	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		SE	NE	NW	29	46	6	E			
00222753	ABANDONED	7201 NATURAL BRIDGE NORMANDY	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	SOILBORING		SE	NE	NW	29	46	6	E			
00277587	ABANDONED	2251 WOODSON ROAD, OVERLAND		BROWNE	7441 RALEIGH DRIVE	ST LOUIS	MO	SOILBORING					29	46	6	E			
00324454	ABANDONED	9413-9425 MARLOWE AVE		SIMON	2415 WOODSON RD	ST LOUIS	MO	SOILBORING	24.0				29	46	6	E		26.0	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00269972	MONITORING	9395 OLIVE BLVD OLIVETTE	B.P. AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	15.0				31	46	6	E		12.0	
00269973	MONITORING	9395 OLIVE BLVD OLIVETTE	B.P. AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	20.0				31	46	6	E		12.0	
00269974	MONITORING	9395 OLIVE BLVD OLIVETTE	B.P. AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	20.0				31	46	6	E		12.0	
00269975	MONITORING	9395 OLIVE BLVD OLIVETTE	B.P. AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	15.0				31	46	6	E		12.0	
00269976	MONITORING	9395 OLIVE BLVD OLIVETTE	B.P. AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	20.0				31	46	6	E		12.0	
00269977	MONITORING	9395 OLIVE BLVD OLIVETTE	B P AMOCO CORP		400 S WOODSMILL RD	CHESTERFIELD	MO	MONITORING	15.0				31	46	6	E		12.0	
00300649	ABANDONED	9395 OLIVE BLVD STL	B P AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	SOILBORING	12.0				31	46	6	E			
00311225	ABANDONED	1555 PAGE IND OVERLAND	ALPHA PACKAGING		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				NW	31	46	6	E		15.0	
00312077	ABANDONED	9970 PAGE BLVD OVERLAND	PERKIN ELMER INC		549 ALBANY ST	BOSTON	MA	SOILBORING					31	46	6	E			
00317524	MONITORING	1333 N ASHBY RD, OLIVETTE 6313	QUIK TRIP CORPORATION		4705 S 129TH E AVE	TULSA	OK	MONITORING	17.0	SW	SW	SW	31	46	6	E		1.0	
00114195	ABANDONED		SHELL OIL PRODUCTS		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	28.0				32	46	6	E	570		
00133710	ABANDONED		THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	UNKNOWN	70.0	SE	SE		32	46	6	E		43.0	
00133711	ABANDONED		THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	UNKNOWN	74.0	SE	SE		32	46	6	E		44.0	
00133712	ABANDONED		THOMAS & BETTS CORP		1555 LYNNFIELD	MEMPHIS	MO	UNKNOWN	40.0		SE	SE	32	46	6	E		40.0	
00145023	MONITORING	1525 & 8685 PENNELL,OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	20.0				32	46	6	E		60.0	
00145024	MONITORING	1525 & 8685 PENNELL,OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	15.0	SE	NE	SW	32	46	6	E		60.0	
00145025	MONITORING	1525 & 8685 PENNELL,OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	21.0	NE	SW	SE	32	46	6	E		60.0	
00145026	MONITORING	1525 & 8685 PENNELL,OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	23.0	SW	NW	SE	32	46	6	E		60.0	
00145027	MONITORING	1525 & 8685 PENNELL,OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	22.0	NW	NW	SE	32	46	6	E		60.0	
00145028	MONITORING	1525 & 8685 PENNELL,OVERLAND	THOMAS & BETTS CORP		1555 LYNNFIELD RD	MEMPHIS	TN	MONITORING	15.0	NE	SW	NE	32	46	6	E		60.0	
00152021	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	15.0	SE	SW	NW	32	46	6	E	596	15.0	
00152463	ABANDONED	MEMPHIS	THOMAS & BETTS CORP		1555 LYNNFIELD ROAD	MEMPHIS	TN	UNKNOWN				SE	32	46	6	E			
00160293	MONITORING	9889 PAGE AVENUE,OVERLAND MO	HANKINS REAL ESTATE PARTN		9889 PAGE BLVD	ST LOUIS	MO	MONITORING	20.0	NW	SW	NW	32	46	6	E			
00160528	MONITORING	9889PAGE AVENUE OVERLAND	HANKINS REAL ESTATE		9889 PAGE BLVD	ST LOUIS	MO	MONITORING	20.0	NW	SW	NW	32	46	6	E			
00160566	MONITORING		HANKINS REAL ESTATE		9889 PAGE BLVD	ST LOUIS	MO	MONITORING	20.0	NW	SW	NW	32	46	6	E			
00183989	ABANDONED	FL INDUSTRIES	SDR ENVIRONMENTAL SERVICE		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	20.0	SE	SW	NW	32	46	6	E	594	20.0	
00183990	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	20.0	SE	SW	NE	32	46	6	E	592	20.0	
00183991	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	13.0	SE	SW	NW	32	46	6	E	596	13.0	
00183992	ABANDONED	FL INDUSTRIES	SDR ENVIRONMENTAL		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	15.0	NE	SW	SE	32	46	6	E	590	15.0	
00183993	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	15.0	NE	SW	NE	32	46	6	E	566	15.0	
00183994	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES INC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	15.0	NW	NE	SE	32	46	6	E	590	15.0	
00183995	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	22.0	SW	NE	SE	32	46	6	E	590	22.0	
00183996	ABANDONED	FL INDUSTRIES	SDR ENVIRONMENTAL SER		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	24.0	SE	NW	SW	32	46	6	E	591	23.0	
00183997	ABANDONED	FL INDUSTRIES	SDR ENV SVC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	30.0	SE	SW	NW	32	46	6	E	577	29.0	
00183998	ABANDONED	FL INDUSTRIES	SDR ENVIRONMENTAL SVC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	42.0	SE	SW	NW	32	46	6	E	577	42.0	
00183999	ABANDONED	FL INDUSTRIES	SDR ENV SVC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	36.0	SE	SW	NW	32	46	6	E	589	35.0	
00184000	ABANDONED	FL INDUSTRIES	SDR ENVIRONMENTAL		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	20.0	SE	SW	NW	32	46	6	E	590	20.0	
00184001	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	23.0	SE	SW	NW	32	46	6	E	591	23.0	
00184002	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES INC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	48.0	SE	SW	NW	32	46	6	E	594	48.0	
00184003	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES INC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	19.0	SE	SW	NW	32	46	6	E	590	19.0	
00184004	ABANDONED	FL INDUSTRIES	SDR ENV SERVICES INC		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	44.0	SE	SW	NW	32	46	6	E	590	44.0	
00184005	ABANDONED	FL INDUSTRIES	SDR ENVIRONMENTAL SERVICE		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	13.0	SE	SW	NW	32	46	6	E	596	13.0	
00184006	ABANDONED	FL INDUSTRIES	SDR ENVIORNMENTAL		8685 PENNELL DRIVE	OVERLAND	MO	UNKNOWN	13.0	SE	SW	NW	32	46	6	E	596	13.0	
00312282	ABANDONED	1400 N PRICE RD	T M PROPERTIES LP		7701 FORSYTH BLVD	ST LOUIS	MO	MONITORING					32	46	6	E		13.0	
00312283	ABANDONED	1400 N PRICE RD	T M PROPERTIES L P		7701 FORSYTH BLVD	ST LOUIS	MO	MONITORING					32	46	6	E		8.0	
00312284	ABANDONED	1400 N PRICE RD	T M PROPERTIES LP		7701 FORSYTH BLVD	ST LOUIS	MO	MONITORING					32	46	6	E		9.0	
00312285	ABANDONED	1400 N PRICE RD	T M PROPERTIES L P		7701 FORSYTH BLVD	ST LOUIS	MO	MONITORING					32	46	6	E		9.0	
00021856	HEAT PUMP	PAGE AVE AT I70	ALBERICI CONSTRUCTORS		2150 KIENLEN AVE	ST LOUIS	MO	VERTICAL	300.0				33	46	6	E			
00121156	MONITORING		TOTAL PETROLEUM STA. 2131		8433 PAGE BLVD.	VINITA PARK	MO	MONITORING	15.0	SE	SE	NE	33	46	6	E	530		
00121157	MONITORING		TOTAL PETROLEUM STA. 2130		8433 PAGE BLVD.	VINITA PARK	MO	MONITORING	10.0	SE	SE	NE	33	46	6	E	530		
00121158	MONITORING		TOTAL PETROLEUM STA. 2130		8433 PAGE BLVD.	VINITA PARK	MO	MONITORING	10.0	SE	SE	NE	33	46	6	E	530		
00121159	MONITORING		TOTAL PETROLEUM STA. 2130		8433 PAGE BLVD.	VINITA PARK	MO	MONITORING	10.0	SE	SE	NE	33	46	6	E	530		
00121160	MONITORING		TOTAL PETROLEUM STA #2130		8433 PAGE BLVD	VINITA PARK	MO	MONITORING	10.0	SE	SE	NE	33	46	6	E	530		
00132857	ABANDONED	OVERLAND	THE LIPTON GROUP		9100 OVERLAND PLAZA	ST LOUIS	MO	UNKNOWN	12.0				33	46	6	E			
00160654	MONITORING	8433 PAGE BLVD VINITA PARK MO	TPI PETROLUEM INC		PO BOX 696000	SAN ANTONIO	TX	UNKNOWN	13.0	SE	SE	NE	33	46	6	E			
00160655	MONITORING	8433 PAGE BLVD VINITA PARKS	TPI PETROLEUM INC		PO BOX 696000	SAN ANTONIO	TX	MONITORING	15.0	NE	SE	SE	33	46	6	E			
00160656	MONITORING	8433 PAGE BLVD VINITA PARK	TPI PETROLEUM INC		PO BOX 69600	SAN ANTONIO	TX	MONITORING	17.0	NE	SE	SE	33	46	6	E	530		
00160673	MONITORING		ULTRAMAR DIAMOND SHAMROCK		100 WAUGH DRIVE	HOUSTON	TX	MONITORING	15.0				33	46	6	E			
00163227	MONITORING		ULTRAMAR DIAMOND SHAMROCK		100 WAUGH DRIVE	HOUSTON	TX	MONITORING	15.0	SE	SE	NE	33	46	6	E			
00163228	MONITORING		ULTRAMAR DIAMOND SHAMROCK		100 WAUGH DRIVE	HOUSTON	TX	MONITORING	15.0	SE	SE	NE	33	46	6	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00121416	MONITORING	1378 KINGSLAND,ST.LOUIS	SINNET EL-PACO		1378 KINGSLAND	ST. LOUIS	MO	MONITORING	15.0				46	6	E				
00122541	MONITORING	EAST TERMINAL,ST. LOUIS	ST.LOUIS AIRPORT AUTH		P.O. BOX 10212	ST. LOUIS	MO	MONITORING	47.0				46	6	E			30.0	
00122745	MONITORING	5995 MCDONNELL BLVD,ST.LOUIS	MIDCOAST AVIATION		5995 MCDONNELL BLVD	ST LOUIS	MO	MONITORING	20.0				46	6	E				
00122746	MONITORING	5995 MCDONNELL BLVD,ST. LOUIS	MIDCOAST AVIATION		5595 MCDONNELL BLVD	ST LOUIS	MO	MONITORING	18.0				46	6	E				
00124802	ABANDONED		AMOCO OIL CO.		400 S. WOODS MILL RD.,STE. 240	CHESTERFIELD	MO	MONITORING	17.0				46	6	E				
00129406	ABANDONED		B.G. PROPERTIES LLC		#2 DARYL LANE	ST LOUIS	MO	UNKNOWN	15.0				46	6	E				
00129408	ABANDONED		ENTERPRISE LEASING CO		8844 LADUE RD	ST LOUIS	MO	UNKNOWN	28.0				46	6	E				
00131823	ABANDONED		SUPERAMERICA GROUP		3499 DABNEY DRIVE	LEXINGTON	KY	UNKNOWN	20.0				46	6	E			16.0	
00131854	ABANDONED		ST LOUIS AIRPORT AUTHOR.		P.O. BOX 10212	ST. LOUIS	MO	UNKNOWN	28.0				46	6	E				
00152410	ABANDONED	COLUMBIA	COLUMBIA COLLEGE		1001 ROGERS ST	COLUMBIA	MO	UNKNOWN					46	6	E			24.0	
00152466	ABANDONED		MCDONALD'S CORPORATION		922 ROOSEVELT PKWY, STE 300	CHESTERFIELD	MO	UNKNOWN	11.0				46	6	E				
00159162	MONITORING		ST LOUIS AIRPORT AUTH		PO BOX 10212	ST LOUIS	MO	MONITORING	15.0				46	6	E				
00159163	MONITORING		ST LOUIS AIRPORT AUTH		PO BOX 10212	ST LOUIS	MO	MONITORING	23.0				46	6	E				
00159164	MONITORING		ST LOUIS AIRPORT AUTH		PO BOX 10212	ST LOUIS	MO	MONITORING	22.0				46	6	E				
00159165	MONITORING		ST LOUIS AIRPORT AUTH		PO BOX 10212	ST LOUIS	MO	MONITORING	23.0				46	6	E				
00159765	MONITORING	LAMBERT INTERNATIONAL AIRPORT	CITY OF ST LOUIS		10701 LAMBERT INTERNATIONAL	ST LOUIS	MO	MONITORING	16.0				46	6	E	530			
00159766	MONITORING	LAMBERT INTERNATIONAL AIRPORT	CITY OF ST LOUIS		10701 LAMBERT INTERNATIONAL	ST LOUIS	MO	MONITORING	16.0				46	6	E	530			
00159767	MONITORING	LAMBERT INTERNATIONAL AIRPORT	CITY OF ST LOUIS		10701 LAMBERT INTERNATIONAL	ST LOUIS	MO	MONITORING	22.0				46	6	E	530			
00160898	MONITORING	10835-10993 ST CHL RCK BRIDGET	CYPRESS VILAGE SHOPPING CTR		C/O NPN ENVIRONMENTAL ENGINEER	ST LOUIS	MO	MONITORING	48.0	SW	NE	NW	46	6	E	565			
00161295	MONITORING	5750 N HANLEY	AMOCO OIL CO.		400 S WOODS MILL RD	CHESTERFIELD	MO	MONITORING	18.0				46	6	E				
00161307	MONITORING	5750 N HANLEY	AMOCO OIL CO.		400 S WOODS MILL RD	CHESTERFIELD	MO	MONITORING	15.0				46	6	E				
00161308	MONITORING	5750 N HANLEY	AMOCO OIL CO.		400 S WOODS MILL RD	CHESTERFIELD	MO	MONITORING	14.0				46	6	E				
00161363	MONITORING	3602 WOODSON RD. ST. JOHN	HARTOG OIL COMPANY		6746 ROMISS CT	ST LOUIS	MO	MONITORING	20.0			SE	46	6	E				
00161364	MONITORING	3602 WOODSON RD. ST. JOHN	HARTOG OIL COMPANY		6746 ROMISS CT	ST LOUIS	MO	MONITORING	20.0			SE	46	6	E				
00161365	MONITORING	3602 WOODSON RD. ST. JOHN	HARTOG OIL COMPANY		6746 ROMISS CT	ST LOUIS	MO	MONITORING	19.0			SE	46	6	E				
00162956	MONITORING		AMERICAN HOME PRODUCTS		ONE BURTT ROAD	ANDOVER	MA	MONITORING	40.0				46	6	E				
00162957	MONITORING		AMERICAN HOME PRODUCTS		ONE BURTT ROAD	ANDOVER	MA	MONITORING	23.0				46	6	E				
00187170	ABANDONED		CITY OF ST LOUIS AIRPORT		10701 LAMBERT INTERNATIONAL	ST LOUIS	MO	UNKNOWN	16.0				46	6	E	530			
00195366	ABANDONED	B8,C4,C9,F6,F9,G5	METROPOLITAN LIFE INS CO		ONE N BROADWAY	WHITE PLAINS	NY	SOILBORING	12.0				46	6	E			10.0	
00195371	ABANDONED	10835 ST. CHARLES ROCK RD	METROPOLITAN LIFE INSURAN		ONE NORTH BROADWAY SUITE 500	WHITE PLAINS	NY	SOILBORING					46	6	E	564			
00202633	ABANDONED		AMERICAN HOMES PRODUCTS		ONE BURTT RD	ANDOVER	MA	SOILBORING	20.0				46	6	E				
00203800	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	US ARMY CORPS OF ENGINEERS		9170 LATTY AVE	BERKELEY	MO	MONITORING					46	6	E			15.0	
00203802	ABANDONED	110 MCDONALD BLVD HAZELWOOD	US ARMY CORPS OF ENGINEERS		9170 LATTY AVE	BERKELEY	MO	MONITORING					46	6	E			15.0	
00203803	ABANDONED	110 MC DONNELL BLVD HAZELWOOD	US ARMY CORPS OF ENGINEERS		9170 LATTY AVE	BERKELEY	MO	NON-COMM					46	6	E			68.0	
00203804	ABANDONED	110 MCDONNELL BLVD HAZELWOOD	US ARMY CORPS OF ENGINEERS		9170 LATTY AVE	BERKELEY	MO	MONITORING					46	6	E			10.0	
00234872	MONITORING	N HWY67&WASHINGTON ST FLORISSA	DIEIRBERGS MARKETS		116690 SWINGLEY RIDGE RD	CHESTERFIELD	MO	MONITORING	20.5				46	6	E			12.0	
00267195	MONITORING	420 HOWDERSHELL RD FLORISSANT	COMMUNITY BANK OF BAYMORE		BOX 200	RAYMORE	MO	MONITORING	20.0				46	6	E			12.0	
00268092	MONITORING		LODHOLZ AUTOMOTIVE SUPPLY		517 SOUTH FLORISSANT	FERGUSON	MO	UNKNOWN	20.0				46	6	E			12.0	
00268093	MONITORING		LODHOLZ AUTOMOTIVE SUPPLY		517 SOUTH FLORISSANT	FERGUSON	MO	UNKNOWN	28.0				46	6	E			12.0	
00268109	MONITORING		INTERSTATE BRAND COMPANIES		6301 N BROADWAY	ST LOUIS	MO	MONITORING	24.0				46	6	E			12.0	
00268110	MONITORING		INTERSTATE BRAND COMPANIES		6301 N BROADWAY	ST LOUIS	MO	MONITORING	14.0				46	6	E			12.0	
00268111	MONITORING		INTERSTATE BRAND COMPANIES		6301 N BROADWAY	ST LOUIS	MO	MONITORING	19.0				46	6	E			12.0	
00300481	ABANDONED	12000 MO BOTTOM RD	BEHLMAN FAMILY LIMITED PARTNER		720 MCDONALD BLVD	HAZELWOOD	MO	SOILBORING					46	6	E				
00301446	MONITORING	2708 KIENLEN ST LOUIS 63120	KING MANAGEMENT CORP		6025 NATURAL BRIDGE RD	ST LOUIS	MO	MONITORING	15.0				46	6	E			0.8	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00106003	MONITORING	10450 RIVERVIEW DR STL	CITY OF ST LOUIS WTR.DIV		10450 RIVERVIEW DR.	ST LOUIS	MO	MONITORING	24.0	NE	NW	NW	1	46	7	E			
00106004	MONITORING	10450 RIVERVIEW DR ST LOUIS	CITY OF ST LOUIS WTR DIV		10450 RIVERVIEW DR	ST LOUIS	MO	MONITORING	22.0	NE	NW	NW	1	46	7	E			
00106013	MONITORING	10450 RIVERVIEW DR STL	CITY OF ST LOUIS WTR DIV		10450 RIVERVIEW DR.	ST LOUIS	MO	MONITORING	25.0	NE	NW	NW	1	46	7	E			
00114867	ABANDONED		CITY OF ST. LOUIS		C/O DAVID VISINTAINER	ST. LOUIS	MO	MONITORING	15.0	NE	NW	NW	1	46	7	E			
00120909	WELL			HAIRSTON	647 ADRIAN SPUR	ST. LOUIS	MO	DOMESTIC	205.0	NW	NW	NW	2	46	7	E	160	60.0	70.0
00325759	ABANDONED	949 CHAMBERS RD BELLEFONTAINE	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	SOILBORING					3	46	7	E	8.0		
00339041	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	15.0	
00339042	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	15.0	
00339043	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	20.0	
00339044	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	30.0	
00339045	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	20.0	
00339046	ABANDONED	201 CHAMBER ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	20.0	
00339047	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	25.0	
00339048	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	25.0	
00339049	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	30.0	
00339050	ABANDONED	201 CHAMBERS ST LOUIS	SINCLAIR OIL CORPORATION		3401 FAIRBANKS AVE	KANSAS CITY	KS	MONITORING					3	46	7	E	520	30.0	
00129394	ABANDONED	10004 HALLS FERRY RD,ST LOUIS		ROSENBAUM	11457 OLD CABIN RD	ST LOUIS	MO	UNKNOWN	15.0				5	46	7	E			
00183776	ABANDONED	MODINE ACRES	DEPT OF HWYS & TRAFFIC STL		121 S MERAMEC AVE	CLAYTON	MO	SOILBORING					5	46	7	E			
00183778	ABANDONED	CHAMBER/HALLS FERRY MOLINE ACR	DEPT OF HIGHWAY & TRAFFIC		ST LOUIS COUNTY	CLAYTON	MO	SOILBORING					5	46	7	E			
00187686	ABANDONED	DELLWOOD		SCHLEMMER	4067 LES CHERBOURG	FLORISSANT	MO	UNKNOWN	16.0				5	46	7	E			
00222721	ABANDONED	2468 CHAMBERS MOLINE ACRES	CENTRAL INST FOR THE DEAF		818 S EUCLID AVE	ST LOUIS	MO	SOILBORING		SE	SE	SE	5	46	7	E	450		
00202387	ABANDONED		NORTHLAND HILLS PLAZA LL		11457 OLDE CABIN ROAD	ST LOUIS	MO	SOILBORING	16.0				6	46	7	E			
00202817	ABANDONED	10484 WEST FLORISSANT, DELWOOD		SIMINGTON	65 CHATEAU	FLORISSANT	MO	SOILBORING	20.0				6	46	7	E			
00324210	ABANDONED	1921-33 CHAMBER RD	SWAINE PROPERTIES		PO BOX 410618	ST LOUIS	MO	SOILBORING	25.0				6	46	7	E			
00201501	ABANDONED		EMERSON ELECTRIC		8000 W FLORISSANT	ST LOUIS	MO	MONITORING	28.0	SW	SW	SW	7	46	7	E			
00201502	ABANDONED		EMERSON ELECTRIC		8000 W FLORISSANT	ST LOUIS	MO	MONITORING	28.0	SW	SW	SW	7	46	7	E			
00201503	ABANDONED		EMERSON ELECTRIC		8000 W FLORISSANT	ST LOUIS	MO	MONITORING	43.0	SW	SW	SW	7	46	7	E			
00203996	ABANDONED	CANFIELD RD & FLORISSANT	EMERSON ELECTRIC CO		8000 W FLORISSANT	ST LOUIS	MO	SOILBORING		NE	NW	SW	7	46	7	E			
00203997	ABANDONED	CORNER OF FERGUSON & FLORISSAN	EMERSON ELECTRIC CO		8000 W FLORISSANT AVE	ST LOUIS	MO	SOILBORING		SW	SW	SW	7	46	7	E			
00204656	ABANDONED	CORNER OF FERGUSON DR@W FLORRI	EMERSON ELECTRIC CO		8000 W FLORISSANT AVE	ST.LOUIS	MO	SOILBORING	34.0	SW	SW	SW	7	46	7	E			
00204670	ABANDONED		EMERSON ELECTRIC CO		8000 W FLORISSANT	ST LOUIS	MO	SOILBORING		SW	SW	SW	7	46	7	E			
00204672	ABANDONED	4000 KOCH RD MEHLVILLE	KERR-MCGEE CORPORATION		PO BOX 25861	OKLAHOMA CITY	OK	SOILBORING					7	46	7	E			
00204674	ABANDONED	4000 KOCH RD MEHLVILLE	KERR-MCGEE CORPORATION		PO BOX 25861	OKLAHOMA CITY	OK	SOILBORING					7	46	7	E			
00277804	ABANDONED	4140 LINDELL BLVD STL	HANDEX ENVIRONMENTAL		16940 WEST VICTOR RD	NEW BERLIN	WI	SOILBORING					7	46	7	E	20.0		
00325202	ABANDONED	9928 WEST FLORISSANT/ DELLWOOD	STRIPE ENTERPRISES		8805 PARAGON CIRCLE	ST LOUIS	MO	SOILBORING	28.0				7	46	7	E	30.0		
00353686	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	7	46	7	E	20.0		
00024457	ABANDONED	200 NEMNICH	SCHOOL DISTRICT OF RIVERVIEW G		370 NORTHUMBERLAND	ST LOUIS	MO	HAND DUG	24.0				8	46	7	E	467		
00194326	ABANDONED	10005 NEW HALLS FERRY RD MOLIN	7 ELEVEN, INC		814 BAKER ROAD	VIRGINIA BEACH	VA	SOILBORING			NW	NW	8	46	7	E			
00230933	ABANDONED	2211 CHAMBERS RD		LIGHT	2601 OLIVE ST	ST LOUIS	MO	SOILBORING	20.0				8	46	7	E			
00300887	ABANDONED	9503 LEWIS & CLARK MOLINE ACRE	BP AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	MONITORING	10.0				8	46	7	E	10.0		
00300888	ABANDONED	9503 LEWIS & CLARK MOLINE ACRE	BP AMOCO CORP		2240 BLUESTONE DR	ST CHARLES	MO	MONITORING	10.0				8	46	7	E	10.0		
00300905	ABANDONED	JENNINGS STATION ROAD ST LOUI	TAYLOR MORLEY HOMES INC		17107 CHESTERFIELD AIRPORT RO	CHESTERFIELD	MO	SOILBORING	30.0				8	46	7	E			
00324850	ABANDONED	9495 LEWIS & CLARK JENNINGS	TAYLOR MORLEY HOMES		17107 CHESTERFIELD APT RD	CHESTERFIELD	MO	MONITORING					8	46	7	E	4.0		
00324852	ABANDONED	9495 LEWIS & CLARK JENNINGS	TAYLOR MORLEY HOMES		17107 CHESTERFIELD APT RD	CHESTERFIELD	MO	MONITORING					8	46	7	E	4.0		
00152443	ABANDONED		CYR ASSOCIATES LIMITED		147 N MERAMEC SUITE A	CLAYTON	MO	UNKNOWN	21.0				9	46	7	E	15.0		
00162264	MONITORING	TANGEWOOD PARK	MALINE CREEK EWER		2000 HAMPTON AVENUE	ST LOUIS	MO	MONITORING	15.0			NE	9	46	7	E			
00353679	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					9	46	7	E	15.0		
00353680	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					9	46	7	E	25.0		
00353681	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	9	46	7	E	20.0		
00353682	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	9	46	7	E	20.0		
00353683	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	9	46	7	E	25.0		
00353684	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	9	46	7	E	20.0		
00353685	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	9	46	7	E	20.0		
00353687	ABANDONED	9301 BELLEFONTAINE B NEIGHBORS	JD STREET		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING				SE	9	46	7	E	24.0		
00162258	MONITORING	ST CYR DR	MALINE CREEK SEWER		2000 HAMPTON AVENUE	ST LOUIS	MO	MONITORING	25.0			SW	10	46	7	E			
00183845	ABANDONED	ST LOUIS		KLIPSCH	1015 LOCUST STREET	ST LOUIS	MO	UNKNOWN	16.0	SW	SW	SW	10	46	7	E			
00222674	ABANDONED	200 N FLORISSANT FERGNSON	SINCLAIR OIL COMPANY		3401 FAIRBANKS AVE	KANSAS CITY	MO	SOILBORING					12	46	7	E			
00222677	ABANDONED	200 N FLORISSANT, FERGUSON	SINCLAIR OIL COMPANY		3401 FAIRBANKS AVENUE	KANSAS CITY	MO	UNKNOWN					12	46	7	E			
00014670	WELL		ROSS CASTLE CONST		2222 REDMAN	ST LOUIS	MO	DOMESTIC	340.0		NE	SW	13	46	7	E	84	4.0	280.0
00111328	ABANDONED		ABF FREIGHT SYSTEMS		8630 N. HALL ST.	ST. LOUIS	MO	MONITORING	30.0	SW	SW	SW	15	46	7	E			

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00103291	MONITORING	8101 W FLORISSANT AVE JENNINGS	SHELL OIL CO		1415 W 22ND ST	OAK BROOK	IL	MONITORING	20.0			NW	18	46	7	E	530		
00103292	MONITORING	8101 W FLORISSANT JENNINGS	SHELL OIL CO		1415 W 22ND ST	OAK BROOK	IL	MONITORING	20.0			NW	18	46	7	E	530		
00106093	MONITORING	1506 N KINGSHIGHWAY	AMOCO OIL CO.		400 S. WOODSMILL RD., STE. 240	CHESTERFIELD	MO	MONITORING	13.0				18	46	7	E	535		
00106095	MONITORING	1506 N KINGSHIGHWAY,ST. LOUIS	AMOCO OIL CO.		400 S. WOODSMILL RD., STE. 240	CHESTERFIELD	MO	MONITORING	14.0				18	46	7	E	535		
00106101	MONITORING	1506 N KINGSHIGHWAY,ST. LOUIS	AMOCO OIL CO.		400 S. WOODS MILL RD.	CHESTERFIELD	MO	MONITORING	13.0				18	46	7	E	535		
00107871	MONITORING	145 NORTHLAND SHOP CENT,JENNIN	TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	21.0	NW	NE	SW	18	46	7	E	530		
00107885	MONITORING	145 NORTHLAND SHOP CENT,JENNIN	TEXACO REFINING&MARKETING		ATTN: RAVELLE JONES	TULSA	OK	MONITORING	21.0	NW	NE	SW	18	46	7	E	530		
00162244	MONITORING	8101 W FLORISSANT AVE,JENNINGS	SHELL OIL COMPANY		1415 W 22ND ST	OAK BROOK	IL	MONITORING	20.0			NW	18	46	7	E			
00162245	MONITORING	8101 W FLORISSANT AVE,JENNINGS	SHELL OIL COMPANY		1415 W 22ND ST	OAK BROOK	IL	MONITORING	20.0			NW	18	46	7	E			
00164801	ABANDONED	ST LOUIS	MAY DESIGN & CONSTRUCTION		611 OLIVE ST	ST LOUIS	MO	UNKNOWN					18	46	7	E			
00174603	ABANDONED	TEXACO 29-142-049	TEXACO REFINING & MKTNG		145 NORTHLAND CENTER	JENNINGS	MO	UNKNOWN	19.0	SW	NE	NW	18	46	7	E	530	19.0	
00174604	ABANDONED	MW-2	TEXACO REFINING & MKTNG		145 NORTHLAND CENTER	JENNINGS	MO	UNKNOWN	15.0	SW	NE	NW	18	46	7	E	530	15.0	
00174605	ABANDONED	MW-3	TEXACO REFINING & MKTNG		145 NORTHLAND CENTER	JENNINGS	MO	UNKNOWN	16.0	SW	NE	NW	18	46	7	E	530	15.0	
00204057	ABANDONED		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN		NW	NW	NW	18	46	7	E		14.0	
00204256	ABANDONED		EMERSON ELECTRIC		8000 W FLORISSANT	ST LOUIS	MO	MONITORING	26.0	SW	SW	NW	18	46	7	E		26.0	
00204257	ABANDONED		EMERSON ELECTRIC		8000 W FLORISSANT	ST LOUIS	MO	MONITORING	27.0	SW	SW	NW	18	46	7	E		27.0	
00222833	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		18.0	
00222834	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		15.0	
00222835	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		20.0	
00222836	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		20.0	
00222837	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		20.0	
00222838	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		20.0	
00222839	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		15.0	
00222840	ABANDONED	8101 W FLORISSANT JENNINGS	EQUILON ENTERPRISES		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING		SW	SE	NW	18	46	7	E		20.0	
00235009	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	26.0	NW	NW	NW	18	46	7	E		12.0	
00235010	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	26.0	NW	NW	NW	18	46	7	E		12.0	
00235012	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	20.0	SW	NW	NW	18	46	7	E		12.0	
00235013	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	21.0	NW	NW	NW	18	46	7	E		12.0	
00235014	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	21.0	NW	NW	NW	18	46	7	E		12.0	
00235015	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	21.0	NW	NW	NW	18	46	7	E		12.0	
00235016	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	21.0	NW	NW	NW	18	46	7	E		12.0	
00235017	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	22.0	NW	NW	NW	18	46	7	E		12.0	
00235018	MONITORING		E & S MANUFACTURING FACILITY		8100 W FLORISSANT	ST LOUIS	MO	UNKNOWN	21.0	NW	NW	NW	18	46	7	E		12.0	
00268914	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	20.0			NW	18	46	7	E		12.0	
00268915	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	24.0			NW	18	46	7	E		12.0	
00268916	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	23.0			NW	18	46	7	E		12.0	
00268917	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	15.0			NW	18	46	7	E		12.0	
00268918	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	14.0			NW	18	46	7	E		12.0	
00269060	MONITORING	8200 W FLORISSANT AVE ST LOUIS	EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	22.0			NW	18	46	7	E		12.0	
00269061	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	32.0			NW	18	46	7	E		12.0	
00269063	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	51.5			NW	18	46	7	E		12.0	
00269064	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	473.0			NW	18	46	7	E		12.0	
00269065	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	53.0			NW	18	46	7	E		12.0	
00269066	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	52.0			NW	18	46	7	E		12.0	
00269067	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	12.0			NW	18	46	7	E		12.0	
00269068	MONITORING		EMERSON		8100 W FLORISSANT AVE	ST LOUIS	MO	MONITORING	12.0			NW	18	46	7	E		12.0	
00277745	ABANDONED	8000 W FLORRISANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING					18	46	7	E			
00284361	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY	ST LOUIS	MO	MONITORING	16.0			NW	18	46	7	E		12.0	
00284362	MONITORING	800 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	14.0			NW	18	46	7	E		12.0	
00284363	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	16.0			NW	18	46	7	E		12.0	
00284364	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	16.0			NW	18	46	7	E		12.0	
00285143	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	17.0			NW	18	46	7	E		12.0	
00285144	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	27.0			NW	18	46	7	E		12.0	
00285145	MONITORING	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	20.0			NW	18	46	7	E		12.0	
00291363	RECNSTRUCT		EMERSON ELECTRIC COMPANY		8100 WEST FLORISSANT	ST LOUIS	MO	MONITORING		NW	NW	NW	18	46	7	E			
00291364	RECNSTRUCT		EMERSON ELECTRIC COMPANY		8100 WEST FLORISSANT	ST LOUIS	MO	MONITORING		NW	NW	NW	18	46	7	E			
00291365	RECNSTRUCT		EMERSON ELECTRIC COMPANY		8100 WEST FLORISSANT	ST LOUIS	MO	MONITORING		NW	NW	NW	18	46	7	E			
00291366	RECNSTRUCT		EMERSON ELECTRIC COMPANY		8100 WEST FLORISSANT	ST LOUIS	MO	MONITORING		NW	NW	NW	18	46	7	E			
00299055	ABANDONED	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	26.0			NW	18	46	7	E		26.0	
00299056	ABANDONED	8000 W FLORISSANT FERGUSON	EMERSON ELECTRIC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	WATERLEVEL	23.0			NW	18	46	7	E		23.0	

Legal Description Report

Ref Num	Well Type	Site Address	Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00354938	ABANDONED	8430 HALL ST	NU-WAY SERVICES INC		PO BOX 470427	ST LOUIS	MO	MONITORING					22	46	7	E	525	20.0	
00354939	ABANDONED	8430 HALL ST	NU-WAY SERVICES INC		PO BOX 470427	ST LOUIS	MO	MONITORING					22	46	7	E	525	20.0	
00354940	ABANDONED	8430 HALL ST	NU-WAY SERVICES INC		PO BOX 470427	ST LOUIS	MO	MONITORING					22	46	7	E	525	20.0	
00354941	ABANDONED	8430 HALL ST	NU-WAY SERVICES INC		PO BOX 470427	ST LOUIS	MO	MONITORING					22	46	7	E	525	20.0	
00103212	MONITORING	7410 HALL ST STL	EQUITABLE REAL ESTATE MGM		BOATMAN'S PLAZA	ST. LOUIS	MO	MONITORING	18.0				27	46	7	E			
00160315	MONITORING		NORFOLK SOUTHERN CORP		110 FRANKLIN RD BOX 13	ROANOKE	VA	MONITORING	19.0	SW	SW	SE	27	46	7	E		1.0	17.0
00160316	MONITORING		NORFOLK SOUTHERN CORP		110 FANKLIN RD SE BOX 13	ROANOKE	VA	MONITORING	29.0	SW	SW	SE	27	46	7	E		1.0	27.0
00160317	MONITORING		NORFOLK SOUTHERN CORP		110 FRANKLIN RD SE BOX 13	ROANOKE	VA	MONITORING	35.0	SW	SW	SE	27	46	7	E		1.0	18.0
00161555	MONITORING		NORFOLK SOUTHERN CORPORAT		110 FRANKLIN RD BOX 13	ROANOKE	VA	MONITORING	28.0	SW	SW	SE	27	46	7	E		1.0	17.0
00174377	ABANDONED	SPANISH LAKE	MERCANTILE BANK		PO BOX 524	ST LOUIS	MO	UNKNOWN	15.0	SW	NE	SE	27	46	7	E			
00183798	ABANDONED	ST LOUIS	LANCORP INC		1ST TENN PLAZA, SUITE 2621	KNOXVILLE	TN	UNKNOWN	18.0	SW	NW	NW	27	46	7	E		6.0	
00183799	ABANDONED	ST LOUIS	LANCORP INC		1ST TENN PLAZA, SUITE 2621	KNOXVILLE	TN	UNKNOWN	15.0	SW	NW	NW	27	46	7	E			
00194760	ABANDONED	ST LOUIS	NORFOLK AND WESTERN RR		110 FRANKLIN RD SE BOX 13	ROANOKE	VA	MONITORING	25.0	SW	SW	SE	27	46	7	E		25.0	
00194761	ABANDONED	ST LOUIS	NORFOLK & WESTERN RAILWAY		110 FRANKLIN RD SE BOX 13	ROANOKE	VA	MONITORING	25.0	SW	SW	SE	27	46	7	E		25.0	
00194762	ABANDONED	LUTHER YARD	NORFOLK AND WESTERN RR CO		110 FRANKLIN ROAD SE	ROANOKE	VA	MONITORING	25.0	SW	SW	SE	27	46	7	E		25.0	
00194931	ABANDONED		NORFOLK SOUTHERN CORP		7021 HALL ST	ST LOUIS	MO	SOILBORING	20.0	NE	NW	SW	27	46	7	E			
00205357	ABANDONED	6900 N BROADWAY ST LOUIS	ST LOUIS SCREW&BOLT		2258 CORISSOM DR	ST LOUIS	MO	SOILBORING		NW	NW	SE	27	46	7	E			
00207436	MONITORING	HALL STREET 6950 ST LOUIS	BURLINGTON NORTH SANTE FE RR		4200 DEER RD	FORT WORTH	TX	MONITORING	20.0	NW	NW	SE	27	46	7	E		12.0	
00207437	MONITORING	6950 HALL ST ST LOUIS	BURLINGTON NORTH SANTE FE RR		4200 DEER RD	FORT WORTH	TX	MONITORING	15.0	NW	NW	SE	27	46	7	E		12.0	
00207438	MONITORING	6950 HALL ST ST LOUIS	BURLINGTON NORTH SANTA FE R		7200 DEER RD	FORT WORTH	TX	MONITORING	15.0	NW	NW	SE	27	46	7	E		12.0	
00207439	MONITORING	6950 HALL ST ST LOUIS	BIRLINGTON NORTHERN SANTA FE		4200 DEER RD	FORT WORTH	TX	MONITORING	18.0	NW	NW	SE	27	46	7	E		12.0	
00207440	MONITORING	6950 HALL ST ST LOUIS	BURLINGTON SANTE FE RAILROAD		4200 DEER RD	FORT WORTH	TX	MONITORING	15.0	NW	NW	SE	27	46	7	E		12.0	
00230298	ABANDONED	7601 HALL ST ST LOUIS	R L R INVESTMENTS LLC		600 GILLAM RD	WILMINGTON	OH	SOILBORING					27	46	7	E			
00275218	ABANDONED		U-WRENCH IT		7557 HALL STREET	ST LOUIS	MO	SOILBORING					27	46	7	E			
00299098	ABANDONED	222 AURORA STREET	NU-WAY SERVICE INC		PO BOX 470427	ST LOUIS	MO	SOILBORING	25.0				27	46	7	E			
00300157	ABANDONED	1257 S LACLEDE STATION RD	YORKSHIRE VILLAGE INC		8050 WATSON RD SUITE 340	ST LOUIS	MO	SOILBORING	14.0				27	46	7	E	420		
00300896	ABANDONED		WALKINS MOTOR LINES		7337 HALL ST	ST LOUIS	MO	SOILBORING					27	46	7	E			
00311264	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		27.0	
00311265	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		28.0	
00311266	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		23.0	
00311268	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		22.0	
00311269	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		23.0	
00311270	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		26.0	
00311271	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		28.0	
00311272	ABANDONED	514 EAST CALVARY	CRODA INK		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING					27	46	7	E		28.0	
00163714	MONITORING	1940 REDMAN RD ST LOUIS	UNION PLANTERS BANK		8182 MARYLAND AVE	CLAYTON	MO	MONITORING	34.8	SE	NW	SE	28	46	7	E		60.0	
00163715	MONITORING	1940 REDMAN RD	UNION PLANTERS BANK		8182 MARYLAND AVE	CLAYTON	MO	MONITORING	25.0	SE	NW	SE	28	46	7	E		60.0	
00022216	MONITORING	5003 GOODFELLOW	MID JOINT VENTURE		11360 LARIMORE RD	ST LOUIS	MO	MONITORING	14.2				29	46	7	E		1.2	
00022217	MONITORING	5003 GOODFELLOW	MID JOINT VENTURE		11360 LARIMORE RD	ST LOUIS	MO	MONITORING	20.0				29	46	7	E		1.2	
00022218	MONITORING	5003 GOODFELLOW	MID JOINT VENTURE		11360 LARIMORE RD	ST LOUIS	MO	MONITORING	14.1				29	46	7	E		1.2	
00022219	MONITORING	5003 GOODFELLOW	MID JOINT VENTURE		11360 LARIMORE RD	ST LOUIS	MO	MONITORING	14.0				29	46	7	E		1.2	
00129101	ABANDONED		H. B. FULLER CO.		4100 UNION BLVD.	ST. LOUIS	MO	MONITORING	20.0				29	46	7	E			
00195875	ABANDONED	5003 GOODFELLOW	MLD JOINT VENTURE		11360 LARIMORE RD	ST LOUIS	MO	UNKNOWN					29	46	7	E			
00277589	ABANDONED	5003 GOODFELLOW BLVD	MLD JOINT VENTURE		000011360 LARIMORE ROAD	ST LOUIS	MO	SOILBORING					29	46	7	E			
00340842	ABANDONED	4903 GOODFELLOW ST LOUIS	SHELL OIL PRODUCTS US		2258 GRISSOM DR	ST LOUIS	MO	SOILBORING	20.0			NW	29	46	7	E			
00123145	ABANDONED		ALLIED SERVICES DIV. SEV.		3113 WEST OLD HIGGINS RD.	ELK GROVE VILLAGE		MONITORING	13.0				30	46	7	E			
00231091	ABANDONED	4903 GOODFELLOW BLVD ST LOUIS	EQUILON ENTERPRISES LLC		16800 GREENSPOINT PARK	HOUSTON	TX	SOILBORING			SE	NE	30	46	7	E			
00258168	ABANDONED	4600 JENNINGS STATION ROAD JEN	EQUILON ENTERPRISES LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING				NE	30	46	7	E			
00268473	MONITORING	4207 JENNINGS STA.RD PINE LAW		SAFI	4200 JENNINGS STATION RD	ST LOUIS	MO	MONITORING	15.0				30	46	7	E		12.0	
00268474	MONITORING	4207 JENNINGS STA.RD PINE LAW		SAFI	4200 JENNINGS STATION RD	ST LOUIS	MO	MONITORING	15.0				30	46	7	E		12.0	
00268871	MONITORING	4600 JENNINGS STA RD PINE LAWN	SHELL OIL PRODUCTS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	14.0			NE	30	46	7	E		12.0	
00268912	MONITORING	4600 JENNINGS STA RD PINE LAWN	SHELL OIL PRODUCTS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	12.0			NE	30	46	7	E		12.0	
00268913	MONITORING	4600 JENNINGS STA RD PINE LAWN	SHELL OIL PRODUCTS		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	12.5			NE	30	46	7	E		12.0	
00299111	ABANDONED	4903 GOODFELLOW ST LOUIS	EQUILON ENT LLC		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	SOILBORING	20.0			NE	30	46	7	E			
00303514	MONITORING	4800 GOODFELLOW BLVD ST LOUIS	US ARMY COE C/O BOB SKACH UR		$0975 EL MONTE	OVERLAND PARK	KS	MONITORING	16.3				30	46	7	E		12.0	
00303515	MONITORING	4800 GOODFELLOW BLVD ST LOUIS	US ARMY COE C/O BOB SKACH UR		$0975 EL MONTE	OVERLAND PARK	KS	MONITORING	20.0				30	46	7	E		12.0	
00303516	MONITORING	4800 GOODFELLOW BLVD ST LOUIS	US ARMY COE C/O BOB SKACH UR		$0975 EL MONTE	OVERLAND PARK	KS	MONITORING	26.9				30	46	7	E		12.0	
00303517	MONITORING	4800 GOODFELLOW BLVD ST LOUIS	US ARMY COE C/O BOB SKACH UR		$0975 EL MONTE	OVERLAND PARK	KS	MONITORING	22.0				30	46	7	E		12.0	
00311218	ABANDONED	5200 JANET AVE JENNINGS	ST LOUIS CO HWY & TRAFFIC		C/O RICK FOLKMER	CLAYTON	MO	SOILBORING				NE	30	46	7	E			
00311219	ABANDONED	5211 JANET AVE JENNINGS	ST LOUIS CO HWY & TRAFFIC		C/O RICK FOLKMER	CLAYTON	MO	SOILBORING				NE	30	46	7	E			

Legal Description Report

Ref Num	Well Type	Site Address		Business	Last Name	Owner Address			Usage	Depth	SQ	MQ	LQ	Sec	Twn	Rng	Dir	Elev	CaseYield	SWL
00024589	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.5			SW	35	46	7	E		20.0	
00024590	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	17.8			SW	35	46	7	E		17.0	
00024591	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	22.3			SW	35	46	7	E		22.0	
00024592	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	20.5			SW	35	46	7	E		20.0	
00024593	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	16.4			SW	35	46	7	E		16.0	
00024594	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	18.0			SW	35	46	7	E		18.0	
00024596	ABANDONED	239 EAST PRAIRIE AVE	ST LOUIS	BUCKEYE PIPELINE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	18.0			SW	35	46	7	E		18.0	
00103215	MONITORING	239 E. PRAIRIE AVE STL		SHELL OIL CO		239 EAST PRAIRIE AVE	ST. LOUIS	MO	MONITORING	20.0	NW	NW	SE	35	46	7	E			
00106866	MONITORING			US CORPS OF ENGINEERS		1222 SPRUCE ST	ST LOUIS	MO	MONITORING	49.0				35	46	7	E			
00284490	MONITORING	6506 HALL ST ST LOUIS		BNSF RAILROAD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	12.0	NE	SE	NW	35	46	7	E		12.0	
00284491	MONITORING	6506 HALL ST ST LOUIS		BNSF RAILROAD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	15.0	NE	SE	NW	35	46	7	E		12.0	
00284492	MONITORING	6506 HALL ST ST LOUIS		BNSF RAILROAD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	12.0	NE	SE	NW	35	46	7	E		12.0	
00284493	MONITORING	6506 HALL ST ST LOUIS		BNSF RAILROAD		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	15.0	NE	SE	NW	35	46	7	E		12.0	
00303090	MONITORING	239 EAST PRAIRIE AVE		SHELL OIL PRODUCTS US C/O GEO		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0			SE	35	46	7	E		12.0	
00303091	MONITORING	239 EAST PRAIRIE AVE		SHELL OIL PRODUCTS US C/O GEO		3258 GRISSOM DRIVE	ST LOUIS	MO	MONITORING	20.0			SE	35	46	7	E		12.0	
00313259	MONITORING	6500 HALL ST, ST LOUIS		AMEREN UE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	28.0			NE	35	46	7	E		84.0	
00313260	MONITORING	6500 HALL ST, ST LOUIS		AMEREN UE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	31.0			NE	35	46	7	E		84.0	
00313261	MONITORING	6500 HALL ST, ST LOUIS		AMEREN UE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	24.0			NE	35	46	7	E		84.0	
00313262	MONITORING	6500 HALL ST, ST LOUIS		AMEREN UE		C/O GEOTECHNOLOGY INC	ST LOUIS	MO	MONITORING	28.0			NE	35	46	7	E		84.0	
00323113	ABANDONED	239 E PRAIRIE AVE		SHELL OIL PRODUCTS US C/O GEO		3258 GRISSOM DRIVE	ST LOUIS	MO	SOILBORING	20.0			SE	35	46	7	E			
00325414	ABANDONED	3801 N FLORISSANT		BETTER LIVING COMMUNITIES		C/O ND CONSULTING GROUP	ST LOUIS	MO	SOILBORING					35	46	7	E			
00354261	ABANDONED	5300 HALL ST ST LOUIS		AMERICAN FREIGHWAYS INC		125 W INDUSTRIAL PARK	HARRISON	AR	SOILBORING					35	46	7	E			
00022697	MONITORING			NORFOLK SOUTHERN CORP		378 LUTHER AVE	ST LOUIS	MO	MONITORING	30.0					46	7	E		12.0	
00022698	MONITORING			NORFOLK SOUTHERN CORP		378 LUTHER AVE	ST LOUIS	MO	MONITORING	30.0					46	7	E		12.0	
00103886	MONITORING	4402 JENNINGS RD PINE LAWN		TOTAL PETROLEUM		999 18TH ST. STE. 2201	DENVER	CO	MONITORING	50.0					46	7	E			
00103887	MONITORING	4402 JENNINGS RD PINE LAWN		TOTAL PETROLEUM		999 18TH ST STE 2201	DENVER	CO	MONITORING	52.0					46	7	E	1550		
00103888	MONITORING	4402 JENNINGS RD PINE LAWN		TOTAL PETROLEUM		999 18TH ST STE 2201	DENVER	CO	MONITORING	30.0					46	7	E			
00105849	ABANDONED			EQUITABLE REAL EST. INV.		ONE BOATMEN'S PLAZA STE 2100	ST LOUIS	MO	MONITORING	18.0					46	7	E			
00105850	ABANDONED			EQUITABLE REAL EST INV		ONE BOATMENS PLAZA STE 2100	ST LOUIS	MO	MONITORING	16.0					46	7	E			
00105851	ABANDONED			EQUITABLE REAL EST INV		ONE BOATMEN'S PLAZA SUITE 2100	ST LOUIS	MO	MONITORING	17.0					46	7	E			
00105852	ABANDONED			EQUITABLE REAL EST INV		ONE BOATMENS PLAZA STE 2100	ST LOUIS	MO	MONITORING	17.0					46	7	E			
00111020	ABANDONED			CENTRAL MINE EQUIPMENT CO		6200 N. BROADWAY	ST. LOUIS	MO	MONITORING	33.0					46	7	E			
00111029	ABANDONED			ANPAUL WINDOW COMPANY		209 LANGE DRIVE	WASHINGTON	MO	UNKNOWN	34.0					46	7	E			
00111652	ABANDONED			CITY BLOCK #233		FLORIDA & 1ST ST.	ST. LOUIS	MO	MONITORING	25.0					46	7	E			
00114194	ABANDONED			EQUITABLE REAL ESTATE MGT		BOATMEN'S PLAZA, SUITE 2100	ST. LOUIS	MO	MONITORING	17.0					46	7	E			
00114196	ABANDONED			SHELL OIL PRODUCTS CO.		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	34.0					46	7	E	500		
00114704	ABANDONED	ST LOUIS		REITZ & JENS		1055 CORPORATE SQ. DR.	ST. LOUIS	MO	MONITORING						46	7	E			
00115055	MONITORING	7140 N BROADWAY,ST. LOUIS		CROWN CORK & SEAL CO.,INC		PO BOX 887	SCHERAW	SC	MONITORING	24.0					46	7	E			
00115347	MONITORING	8630 N HALL ST, ST. LOUIS		ABF FREIGHT SYSTEMS		8630 N. HALL ST.	ST. LOUIS	MO	MONITORING	22.0					46	7	E			
00115422	MONITORING	4903 GOODFELLOW,ST. LOUIS		SHELL OIL PRODUCTS		1415 W. 22ND ST.	OAK BROOK	IL	MONITORING	25.0					46	7	E	500		
00115621	MONITORING	7410 HALL ST,ST.LOUIS		EQUITABLE REALESTATE MGMT		BOATMENS PLAZA, SUITE 2100	ST. LOUIS	MO	MONITORING	18.0					46	7	E			
00115622	MONITORING	7410 HALL ST, ST. LOUIS		EQUITABLE REALESTATE MGMT		BOATMENS PLAZA SUITE 2100	ST. LOUIS	MO	MONITORING	17.0					46	7	E			
00115623	MONITORING	7410 HALL ST,ST. LOUIS		EQUITABLE REALESTATE MGMT		BOATMENS PLAZA, SUITE 2100	ST. LOUIS	MO	MONITORING	17.0					46	7	E			
00115624	MONITORING	7410 HALL ST,ST. LOUIS		EQUITABLE REALESTATE MGMT		BOATMENS PLAZA, SUITE 2100	ST. LOUIS	MO	MONITORING	17.0					46	7	E			
00115719	MONITORING	7140 N BROADWAY,ST. LOUIS		CROWN CORK & SEAL CO.,INC		PO BOX 887	CHERAW	SC	MONITORING	23.0					46	7	E	435		
00121145	MONITORING	4402 JENNINGS STA RD,PINE LAWN		TOTAL PETROLEUM		999 18TH ST. STE. 2201	DENVER	CO	MONITORING	25.0					46	7	E			
00121387	MONITORING	4100 UNION BLVD,ST LOUIS		HB FULLER CO		4100 UNION BLVD.	ST LOUIS	MO	MONITORING	18.0					46	7	E			
00121388	MONITORING	4100 UNION BLVD, ST LOUIS		HB FULLER COMPANY		4100 UNION BLVD	ST LOUIS	MO	MONITORING	20.0					46	7	E			
00121395	MONITORING	201 CHAMBERS RD		SINCLAIR STATION		WELL # MW-10	ST LOUIS	MO	MONITORING	32.0					46	7	E			
00121396	MONITORING	201 CHAMBERS RD		SINCLAIR STATION		WELL # MW-11	ST LOUIS	MO	MONITORING	28.0					46	7	E			
00121397	MONITORING	201 CHAMBERS RD		SINCLAIR STATION		WELL # MW-12	ST LOUIS	MO	MONITORING	28.0					46	7	E			
00121398	MONITORING	201 CHAMBERS RD		SINCLAIR STATION		WELL # MW-13	ST LOUIS	MO	MONITORING	26.0					46	7	E			
00122740	MONITORING	3250 NATURAL BRIDGE,ST LOUIS		AMOCO OIL CO.		400 S. WOODS MILL RD., STE. 24	CHESTERFIELD	MO	MONITORING	18.0					46	7	E			
00122741	MONITORING	3520 NATURAL BRIDGE,ST LOUIS		AMOCO OIL CO.		400 S. WOODS MILL RD. STE. 240	CHESTERFIELD	MO	MONITORING	18.0					46	7	E			
00122747	MONITORING	4100 UNION BLVD,ST LOUIS		H B FULLER COMPANY		4100 UNION BLVD	ST LOUIS	MO	MONITORING	20.0					46	7	E			
00123291	ABANDONED			SUPREME EXPRESS&TRANSFER		3311 CHOUTEAU AVE.	ST. LOUIS	MO	MONITORING	20.0					46	7	E			
00123293	ABANDONED	SEE 114696		ACE DORAN HAULING&RIGGING		1601 BLUE ROCK	CINCINNATI	OH	MONITORING	31.0					46	7	E			
00123294	ABANDONED			ACE DORAN HAULING&RIGGING		1601 BLUE ROCK	CINCINNATI	OH	MONITORING	15.0					46	7	E			
00124801	ABANDONED			AMOCO OIL CO.		400 S. WOODS MILL RD., STE. 24	CHESTERFIELD	MO	MONITORING	19.0					46	7	E			
00124803	ABANDONED			AMOCO OIL CO.		400 S. WOODS MILL RD., STE. 24	CHESTERFIELD	MO	MONITORING	19.0					46	7	E			

APPENDIX E

MISSOURI DEPARTMENT OF CONSERVATION HERITAGE REPORT

Heritage Review Report

Missouri Department of Conservation
Attn: Shannon Cave
Public Involvement Coordinator
P. O. Box 180
Jefferson City, MO 65102
Shannon.Cave@mdc.mo.gov
573-522-4115 Ext. 3250

Mr. Jarrett Domling
SCS Engineers
10401 Holmes Road, Suite 400
Kansas City, MO 64131-3406

Project type: Site assessment, within 2 miles and 15 miles downstream
Location: Ordinance Plant area on Goodfellow, St. Louis, MO
County: St. Louis
Date query received: January 14, 2005

RECEIVED
JAN 21 2005

This is not a site clearance letter, but a report of Missouri Department of Conservation records concerning public lands and sensitive resources known to be near and possibly affected by the proposed project. There are no records of concern within 2 miles of this site.

Species/habitats with Federal restrictions: *No Records Found*

Drainage routes from the site to the Mississippi River are not clear, but from the south tip of Mosenthein Island downstream to the Jefferson Barracks bridge there are no records of federally listed species. The lack of records probably reflects limited sampling in this busy corridor, so note that the Mississippi River generally is host to a number of federally endangered species, notably bald eagles and pallid sturgeon.

Species/habitats with State concerns do not lie within two miles.

Peregrine falcons, including some reintroduced birds, are present within close enough range to potentially have occupied nest sites on buildings in the project area. If encountered on the site, best management practices we recommend are available at http://www.mdc.mo.gov/documents/nathis/endangered/peregrinefalcon.pdf. Two state watched species – not on the state endangered list but being tracked – occur in the Mississippi within the reach described above.

Scientific Name	Common Name	Federal Status	State Status	State Rank
Falco peregrinus	Peregrine Falcon	none	E	S1
Notropis buchanani	Ghost Shiner	none	none	S2
Hiodon tergisus	Mooneye	none	none	S3

"STATE STATUS" is either E, for "endangered," or blank. STATE RANKs are S1 = Critically imperiled, S2 = Imperiled, or S3 = Rare and uncommon in the state.

Concerns & management recommendations[1] based on site or project details, not related to specific heritage records:

The river species seem unlikely to beaffected by any activity at the Goodfellow site if wastes and runoff are managed in compliance with Clean Water Act requirements. You may also consider Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers, a Conservation Department publication available at http://www.mdc.mo.gov/documents/nathis/endangered/streams.pdf.

A greater concern than pollution of the Mississippi River, which has tremendous ability to dilute, would be activity that could impact ground water. The project area occurs in a region of karst geology, characterized by subterranean water movement. Features like caves, springs, and sinkholes are common. Cave fauna are influenced by water

Prepared by [redacted] (b) (6)

Date 1-14-2005

[1] If you would like printed copies of best management practices cited as internet URLs, please contact us.

pollution and other changes to water quality. Every effort should be made to protect groundwater in the project area. See http://www.mdc.mo.gov/documents/nathis/endangered/karst.pdf for best management information.

A HERITAGE REVIEW requires a project description and specific site location. Based on that information, the review provides information about species and habitats of concern that could be affected by the project. Heritage records note things that were positively identified at some date and time, marked at a location that may be more or less precise. Animals move quickly but plant communities can move also. To say "there is a record" does not mean the species/habitat is still there. To say that "there is no record" does not mean the project may not encounter something. Because of this, reports include information about records near but not necessarily on the project site. Three different kinds of information are provided.

- "**Species/Habitats With FEDERAL RESTRICTIONS**" lists species that have been known to exist near enough to the project site to warrant concern and protected under the Federal Endangered Species Act. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.
- **"Species/habitats with STATE RESTRICTIONS"** lists species known to exist near enough to the project site to warrant concern and protected under the Wildlife Code of Missouri (RSMo 3 CSR 10). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR10-4.111. "State Rank" is numeric rank of relative rarity, protected under general provisions of the Wildlife Code.
- **"Concerns & management recommendations"** are things one might prudently look for at the identified site, but of which we have no specific record. With 93% of Missouri land in private ownership, most sites in Missouri have never been carefully inspected by conservation professionals, but our knowledge of the surrounding landscape suggests that the project consider these items.

With all of the above, we attempt to provide information to help the requestor determine if the species is actually on site, and available best management recommendations.

This report is not a site clearance letter. Rather, this letter provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project.

Incorporating information from our Heritage Database into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive natural resources. However, the Heritage Database is only one reference that should be used to evaluate potential adverse impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information and species biological characteristics would additionally ensure that species of conservation concern are appropriately identified and addressed.

Additional information on rare, endangered and watched species may be found at http://www.mdc.mo.gov/nathis/endangered/

APPENDIX F

NPN ENVIRONMENTAL – LABORATORY DATA REPORTS

NPN ENVIRONMENTAL

September 29, 2003
Contract C-03186

VIA FAX 816-941-8025

Mr. David E. Brewer, P.G.
SCS Engineers
10401 Holmes Road
Suite 400
Kansas City, MO 64131-34-6

RE: Mercury Monitoring
GSA Armory on Goodfellow
St. Louis, MO

David:

This letter transmits results of particulate mercury, particulate lead, and mercury vapor sampling performed by NPN Environmental on September 4, 2003 at Buildings 102, 103, 104, and 112 on the above-referenced property. The following sections describe the scope of work performed and findings.

Passive Vapor Air Monitoring

NPN Environmental collected 8 passive ambient air samples for mercury vapor at locations indicated in the field by SCS Engineers. Samples were collected on ChemDisk™ gold film media badges over the sampling interval. Samples were submitted via overnight express courier to Assay Technology AT Labs in Boardman, Ohio (AIHA Accreditation No. 100903) for analysis by OSHA Method 140.

Two samples contained detectable quantities of mercury vapor. Sample 103D from the second floor air handler room of Building 103D contained 0.0050 mg/m^3 mercury. Sample 103T from the utility tunnel under Building 103 contained 0.0045 mg/m^3 mercury. Both samples are below the OSHA Permissible Exposure Limit (PEL) of 0.05 mg/m^3 (8-hour time weighted average).

Results are presented in **Table 1 – Passive Vapor Ambient Air Monitoring Results.** Included in the table are sample identification number, location, duration and volume of sample, quantity detected, calculated exposure level, and OSHA PEL. The complete analytical report is provided in *Attachment A – Analytical Results*.

Particulate Air Monitoring

NPN Environmental collected 9 ambient air monitoring samples at locations indicated in the field by SCS Engineers. Samples were collected with calibrated sampling pumps on closed-face 37 mm 0.8 micron MCE filter cassettes over the sampling interval. At the request of SCS Engineers, the sample collected from the crawl space under the cafeteria of Building 112 (sample 112C) was analyzed for lead instead of mercury. Two field blanks were prepared for quality assurance/quality control purposes. Samples and field blanks were submitted by overnight express courier to Assay Technology AT Labs. Particulate mercury samples were analyzed by OSHA Method 145 and lead samples by OSHA Method 125.

None of the ambient air monitoring samples contained levels of particulate mercury or lead above laboratory detection limits. Results are presented in **Table 2 – Particulate Ambient Air Monitoring Results.** Included in the table are sample identification number, location, duration and volume of sample, quantity detected, calculated exposure level, and OSHA PEL. The complete analytical report is provided in *Attachment A*.

We appreciate the opportunity to provide our professional environmental engineering services to you and SCS Engineers. If you have any questions or require additional information, please call me at 636-343-1300.

Sincerely,

(b) (6)

Ruth C. Mannebach
Senior Environmental Scientist

Enclosures Table 1 – Passive Vapor Ambient Air Monitoring Results
Table 2 – Particulate Ambient Air Monitoring Results
Attachment 1 – Analytical Results

TABLE 1
Passive Vapor Ambient Air Monitoring Results

Sample ID	Sample Date	Sample Location	Sample Duration (minutes)	Sample Volume (liters)	Quantity Detected (µg)	Exposure (mg/m^3)	OSHA PEL (mg/m^3)
Mercury[1]							
103C	9/4/2003	Bldg. 103C, 2nd floor office area	421	6.27	<0.0100	<0.0016	0.05
102D	9/4/2003	Bldg. 102D, tunnel under dark rooms	363	5.41	<0.0100	<0.0018	0.05
103D	9/4/2003	Bldg. 103D, 2nd floor air handler room	369	5.50	0.0277	0.0050	0.05
104C	9/4/2003	Bldg. 104C, freight elevator	395	5.89	<0.0100	<0.0017	0.05
103T	9/4/2003	Bldg. 103T, utility tunnel	377	5.62	0.0255	0.0045	0.05
104T	9/4/2003	Bldg. 104T, utility tunnel	339	5.05	<0.0100	<0.0020	0.05
104D	9/4/2003	Bldg. 104D, 2nd floor hallway near exit	398	5.93	<0.0100	<0.0017	0.05
102A	9/4/2003	Bldg. 102A, freight elevator	370	5.51	<0.0100	<0.0018	0.05

Notes: Samples collected on Chem-Disk™ Monitor gold film media badges
[1]OSHA Method 140

TABLE 2
Particulate Ambient Air Monitoring Results

Sample ID	Sample Date	Sample Location	Sample Duration (minutes)	Sample Volume (liters)	Quantity Detected (µg)	Exposure (mg/m^3)	OSHA PEL (mg/m^3)
Mercury[1]							
103C	9/4/2003	Bldg. 103C, 2nd floor office area	304	608	<0.02	<0.00003	0.01
104D	9/4/2003	Bldg. 104D, 2nd floor hallway near exit	400	800	<0.02	<0.00003	0.01
104C	9/4/2003	Bldg. 104C, freight elevator	394	788	<0.02	<0.00003	0.01
104T	9/4/2003	Bldg. 104T, utility tunnel	130	234	<0.02	<0.00009	0.01
103D	9/4/2003	Bldg. 103D, 2nd floor air handling room	370	740	<0.02	<0.00003	0.01
103T	9/4/2003	Bldg. 103T, utility tunnel	378	756	<0.02	<0.00003	0.01
102A	9/4/2003	Bldg. 102A, freight elevator	371	742	<0.02	<0.00003	0.01
102D	9/4/2003	Bldg. 102D, tunnel under darkrooms	364	728	<0.02	<0.00003	0.01
FB - Hg	9/4/2003	Field Blank	NA	NA	<0.02	NA	NA
Lead[2]							
112C	9/4/2003	Bldg. 112C, crawlspace under cafeteria	393	786	<0.5	<0.0006	0.05
FB – Pb	9/4/2003	Field Blank	NA	NA	<0.5	NA	NA

Notes: *NA = Not Applicable*
Samples collected on 37 mm 0.8 um MCE filter cassettes
[1]OSHA Method 125
[2]OSHA Method 145

ATTACHMENT 1

Analytical Results

assay technology

AT Labs *a unit of* **assay technology**

LABORATORY REPORT
(Air Sampling)

The Innovation & Value Leader in Occupational Hygiene Analysis

Batch No: 2003090216

Customer: NPN ENVIRONMENTAL
Attention: RUTH MANNEBACH
Address: 927 HORAN DRIVE

City, State: ST LOUIS, MO 63026
Country:

Tel No: (636) 343-1300
Fax No: (636) 343-8192

Contact No: 43927
Project No:
PO No:

Date Received: September 8, 2003
Date Reported: September 11, 2003

Date(s) Analyzed: 09/11/03

Exposure results are the average concentration for the period of time monitored. ND = None Detected. The results relate only to the items tested. Unless noted below, samples were received in acceptable condition and all applicable quality control were within method specifications. The molar volume at 22 C (24.1 L/mole) was used to calculate parts per million, ppm. Lab blanks are always subtracted before a result is reported, unless stated otherwise. Air surface concentrations reported are based upon field sampling information provided by the customer. For assistance with the content of this report, please visit the Customer Services section of our web site at http://www.assaytech.com or contact Technical Support at 1-800-833-1258.

Lab Sample ID / Lab Code	Date Sampled	Media Code - Client Sample ID	Media Lot / Serial #	Chemical Analyzed	Quantity Found (µg)	Detection Limit (µg)	Sample Volume (L)	Sample Time (min)	Exposure (mg/M^3)	Exposure (ppm)	Detection Limit (ppm)
2003028250 - ATOH	9/4/03	J593 - 103C	11K02 - DU1629	MERCURY (1)	ND	0.01	6.27	421	ND	ND	0.0002
2003028251 - ATOH	9/4/03	J593 - 102D	11K02 - DU1259	MERCURY (1)	ND	0.01	5.41	363	ND	ND	0.0002
2003028252 - ATOH	9/4/03	J593 - 103D	11K02 - DU1296	MERCURY (1)	0.0277	0.01	5.5	369	0.005	0.00061	0.0002
2003028253 - ATOH	9/4/03	J593 - 104C	11K02 - DU1402	MERCURY (1)	ND	0.01	5.89	395	ND	ND	0.0002
2003028254 - ATOH	9/4/03	J593 - 103T	11K02 - DU1797	MERCURY (1)	0.0255	0.01	5.62	377	0.0045	0.00055	0.0002
2003028255 - ATOH	9/4/03	J593 - 104T	11K02 - DU1455	MERCURY (1)	ND	0.01	5.05	339	ND	ND	0.0002
2003028256 - ATOH	9/4/03	J593 - 104D	11K02 - DU1126	MERCURY (1)	ND	0.01	5.93	398	ND	ND	0.0002
2003028257 - ATOH	9/4/03	J593 - 102A	11K02 - DU0922	MERCURY (1)	ND	0.01	5.51	370	ND	ND	0.0002

Messages

Lab Sample ID	Message	Method	Method Name	Analyzed By	Approved By
		1	OSHA 140 (OSHA PEL 0.1 MG/M3)	S. LAUDERBAUC	K. TAYLOR

Results Reviewed by Person Monitored (If Applicable): _____
(Initials/Date)

AIHA Accredited Lab #101728
AIHA Accredited Lab #100903

1252 Quarry Lane • Pleasanton, CA 94566 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, # 2525 • Boardman, OH 44512 • (800) 365-3396 • FAX: (330) 758-1245

www.assaytech.com

assay technology

AT Labs *a unit of* **assay technology**

LABORATORY REPORT
(Air Sampling)

The Innovation & Value Leader in Occupational Hygiene Analysis

Batch No: 2003090217

Customer: NPN ENVIRONMENTAL
Attention: RUTH MANNEBACH
Address: 927 HORAN DRIVE

City, State: ST LOUIS, MO 63026
Country:

Tel No: (636) 343-1300
Fax No: (636) 343-8192

Contact No: 43927
Project No: C-03186
PO No:

Date Received: September 8, 2003
Date Reported: September 11, 2003

Date(s) Analyzed: 09/11/03

Exposure results are the average concentration for the period of time monitored. ND = None Detected. The results relate only to the items tested. Unless noted below, samples were received in acceptable condition and all applicable quality control were within method specifications. The molar volume at 22 C (24.1 L/mole) was used to calculate parts per million, ppm. Lab blanks are always subtracted before a result is reported, unless stated otherwise. Air surface concentrations reported are based upon field sampling information provided by the customer. For assistance with the content of this report, please visit the Customer Services section of our web site at http://www.assaytech.com or contact Technical Support at 1-800-833-1258.

Lab Sample ID / Lab Code	Date Sampled	Media Code - Client Sample ID	Media Lot / Serial #	Chemical Analyzed	Quantity Found (µg)	Detection Limit (µg)	Sample Volume (L)	Sample Time (min)	Exposure (mg/M^3)	Exposure (ppm)	Detection Limit (ppm)
2003028258 - ATOH	9/4/03	CASSETTE - 103C	-	MERCURY (2)	ND	0.02	608	304	ND	ND	0.000004
2003028259 - ATOH	9/4/03	CASSETTE - 104D	-	MERCURY (2)	ND	0.02	800	400	ND	ND	0.000003
2003028260 - ATOH	9/4/03	CASSETTE - 104C	-	MERCURY (2)	ND	0.02	788	394	ND	ND	0.000003
2003028261 - ATOH	9/4/03	CASSETTE - 104T	-	MERCURY (2)	ND	0.02	234	130	ND	ND	0.00001
2003028262 - ATOH	9/4/03	CASSETTE - 112C	-	LEAD (1)	ND	0.5	786	393	ND	ND	0.00007
2003028263 - ATOH	9/4/03	CASSETTE - 103D	-	MERCURY (2)	ND	0.02	740	370	ND	ND	0.000003
2003028264 - ATOH	9/4/03	CASSETTE - 103T	-	MERCURY (2)	ND	0.02	756	378	ND	ND	0.000003
2003028265 - ATOH	9/4/03	CASSETTE - 102A	-	MERCURY (2)	ND	0.02	742	371	ND	ND	0.000003
2003028266 - ATOH	9/4/03	CASSETTE - 102D	-	MERCURY (2)	ND	0.02	728	364	ND	ND	0.000003
2003028267 - ATOH	9/4/03	CASSETTE - FB	-	MERCURY (2)	ND	0.02		N/A	ND	ND	
2003028268 - ATOH	9/4/03	CASSETTE - BLANK ADDED BY LAB	-	LEAD (1)	ND	0.5		N/A	ND	ND	

Messages

Lab Sample ID	Message

Method	Method Name
1	OSHA ID 125
2	OSHA ID 145

Analyzed By: S. LAUDERBAUC
Approved By: K. TAYLOR

Results Reviewed by Person Monitored (if Applicable): _____
(Initials/Date)

AIHA Accredited Lab #101728
AIHA Accredited Lab #100903

1252 Quarry Lane • Pleasanton, CA 94566 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, # 2525 • Boardman, OH 44512 • (800) 365-3396 • FAX: (330) 758-1245

www.assaytech.com

AT Labs
a unit of assay technology
(800) 833-1258

250 DeBartolo Place, Ste. 2525
Boardman, OH 44512
(AIHA Lab #9349)
Fax: (330) 758-1245
www.assaytech.com
askassay@assaytech.com

LAB REQUEST FORM

(CLIENT WORK ORDER & CHAIN of CUSTODY)

Please fill out form completely—incomplete forms will be returned.

DO NOT WRITE in Shaded Boxes—Lab Use Only

Service Authorized Ruth Mannebach
(IMPORTANT!...Client Signature Required).
☒ REG (6th DAY after receipt for IH samples) 0% Surcharge
☐ EXP (3rd DAY after receipt for IH samples) 50% Surcharge
☐ RSH (1st DAY after receipt for IH samples) 100% Surcharge

Purchase Order or Credit Card No.	*Send Lab Report To:*	*Send Invoice To:*
Project No. (Optional) C-03186	Name/Title/Mail Stop: Ruth Mannebach	Name/Title/Mail Stop: Same
Universal Client No. (UCN)	Company/Organization: NPN Environmental	Company/Organization:
Client Phone 636-343-1300 Fax 636-343-8192	Address: 927 Horan Dr	Address:
Sample Batch No.	City, State, Zip: St Louis MO 63026	City, State, Zip:

Please check [✓] if Samples submitted are... ☐ Soil ☐ Water...and use these legends for the columns below:

LAB SAMPLE ID No.	CLIENT SAMPLE ID (30 CHARACTERS)	MEDIA CODE (SEE BELOW*)	DATE SAMPLED	COMP FLOW (L/MIN)	GRAB TIME (MIN)	# Containers VOLUME (L)	ANALYTES: Mercury	ANALYTES: Lead	3	4	5	6	7
							Check Box [✓] to indicate ANALYTES TESTED for each SAMPLE						
	103C	C	9/4/03	2.0	304	608	✓						
	104D	C	9/4/03	2.0	400	800	✓						
	104C	C	9/4/03	2.0	394	788	✓	✓					
	104T	C	9/4/03	1.8	130	234	✓						
	112C	C	9/4/03	2.0	368	736		✓					
	103D	C	9/4/03	2.0	370	740	✓						
	103T	C	9/4/03	2.0	363	726	✓						
	102A	C	9/4/03	2.0	371	742	✓						
	102D	C	9/4/03	2.0	364	728	✓						
	FB	C	9/4/03	NA	NA	NA	✓						

***Media Codes**

C = Filter Cassette
OVS = OSHA Versatile Sample
PUF = PUF
T = Sampling Tube
W = Surface Wipe
T&C = Tube with Cassette
Badge = (Enter all Nos. on Badge)
Ppd Media = (Enter all Nos. from label)

Chain of Custody

Sampled By	Date	Shipment Method	Date
(b) (6)	9/4/03	(b) (6)	9/5/03
	Date	Received By (Optional)	Date
	Date	Received By LAB	Date

ANALYTES/Test Price Codes

WHITE — LAB COPY YELLOW — ACCOUNTING COPY PINK — CLIENT COPY

NPN ENVIRONMENTAL

APR 19 2004

April 15, 2004
Contract C-04079

VIA FAX 816-941-8025

Mr. David E. Brewer, P.G.
SCS Engineers
10401 Holmes Road, Suite 400
Kansas City, MO 64131-34-6

RE: Lead Air Monitoring
GSA Armory – Building 112
St. Louis, MO

David:

This letter transmits results of lead air monitoring performed by NPN Environmental on April 7, 2004 in the basement of Building 112 at the above-referenced property. The following paragraphs describe the scope of work performed and findings.

Lead Air Monitoring

NPN Environmental collected 2 personnel and 3 ambient air monitoring samples at locations indicated in the field by SCS Engineers. Samples were collected with calibrated sampling pumps on closed-face 37 mm 0.8 micron MCE filter cassettes over the sampling interval. One field blank was prepared for quality assurance/quality control purposes. Samples and field blank were submitted by overnight express courier to Assay Technology AT Labs. Lead air samples were analyzed by OSHA Method 125.

Both personnel samples and one ambient sample contained lead levels above laboratory detection limits but below the OSHA Permissible Exposure Level (PEL) and Action Level (AL). Results are presented in **Table 1 – Lead Air Monitoring Results.** Included in the table are sample identification number, location, duration and volume of sample, quantity detected, calculated exposure level, and OSHA PEL. The complete analytical report is provided in *Attachment A – Analytical Results*.

We appreciate the opportunity to provide our professional environmental engineering services to you and SCS Engineers. If you have any questions or require additional information, please call me at 636-343-1300.

Sincerely,

(b) (6)

Ruth C. Mannebach
Senior Environmental Scientist

Enclosures Table 1 – Lead Air Monitoring Results
Attachment 1 – Analytical Results

NPN ENVIRONMENTAL

TABLE 1
Lead Air Monitoring Results

Sample ID	Sample Date	Sample Location	Sample Duration (minutes)	Sample Volume (liters)	Quantity Detected (µg)	Exposure (mg/m^3)	OSHA AL (mg/m^3)	OSHA PEL (mg/m^3)
Personnel Samples								
112-1P	4/7/2004	Jessica Swan	382	573	0.730	0.0013	0.03	0.05
112-2P	4/7/2004	Jerett Downling	385	578	0.865	0.0015		
Ambient Samples								
112-3A	4/7/2004	Tank Wash Area and North Scale Pit	85	255	<0.500	<0.0002	0.03	0.05
112-4A	4/7/2004	Lead Press Vault	198	594	0.995	0.0017		
112-5A	4/7/2004	South Scale Pit	147	441	<0.500	<0.0001		
FB-1	4/7/2004	Field Blank	NA	NA	<0.500	NA	NA	NA

Notes: Samples collected on 37 mm 0.8 um MCE filter cassettes
[1]OSHA Method 125
NA = Not Applicable

NPN ENVIRONMENTAL

August 28, 2003
Proposal P-03105

VIA FAX 816-941-8025

Mr. David E. Brewer, P.G.
SCS Engineers
10401 Holmes Road, Suite 400
Kansas City, MO 64131

RE: Mercury Monitoring
GSA Armory on Goodfellow
St. Louis, MO

David:

Per your conversations with Joe Darmody, NPN Environmental appreciates the opportunity to provide our proposal for mercury monitoring at the GSA Armory on Goodfellow in St. Louis, Missouri. NPN Environmental proposes the following scope of work be conducted at the facility:

Scope of Work

Particulate Mercury Monitoring

- NPN Environmental proposes to collect up to 10 particulate mercury samples (including 1 field blank for quality assurance/quality control) from locations specified in the field by SCS Engineers.

Sampling and analytical procedures will be performed in accordance with OSHA Method ID 145. Samples will be collected with calibrated sampling pumps utilizing closed-face 37 mm 0.8 micron MCE filter cassettes. Seven to eight hours of sampling is anticipated to be necessary to fully characterize ambient particulate mercury concentrations and obtain adequate sample volume. Samples will be submitted to an AIHA-accredited laboratory for particulate mercury analysis by cold vapor atomic absorption (CVAA) under standard turnaround time (5 – 7 days).

Mercury Vapor Monitoring (Optional)

NPN Environmental is also prepared to provide passive mercury vapor monitoring upon request. This sampling would be performed to complement mercury vapor monitoring

conducted by direct-read instrument by SCS Engineers. Direct-read instruments are useful screening tools to provide short-term measurements. Passive mercury vapor monitoring badges would be placed in up to 10 areas specified by SCS Engineers for longer periods of time (up to 8 hours) and would provide detection limits down to 0.001 mg/m^3.

Sampling and analytical procedures will be performed in accordance with OSHA Method ID 140. Samples will be collected on gold film media badges for up to 8 hours. Samples will be submitted to an AIHA-accredited laboratory for mercury vapor analysis by CVAA under standard turnaround time.

Report

A written final report with descriptions of all sampling, analytical data, and calculations will be submitted. Calculations and evaluation of the sample results will be performed and reported for each particulate mercury and/or mercury vapor sample in comparison with applicable OSHA Permissible Exposure Limits (PEL). All sampling procedures, descriptions, QA/QC documentation, and applicable operational information will be presented in this final report.

Cost Estimate

NPN Environmental estimates the cost for the described scope of work including particulate mercury monitoring (10 samples) and reporting at $2,200. Optional passive mercury vapor monitoring would be an additional $670. This estimate includes all professional sampling and reporting services, analytical and equipment costs, and all necessary expenses associated with performing the scope of work. This cost estimate is based on the proposed number of samples being completed in a single day and standard laboratory turnaround of sample results.

We look forward to working with SCS Engineers on this mercury monitoring project! If you have any questions, please contact me at 636-343-1300. Thank you for allowing us to present our professional environmental engineering services to SCS Engineers.

Sincerely,

(b) (6)

Ruth C. Mannebach
Senior Project Manager

Accepted by: _____

Accepted for: _____

Date: _____

927 Horan Drive • St. Louis, MO 63026 • (636) 343-1300 • FAX (636) 343-8192

NPN ENVIRONMENTAL

LABORATORY REPORT
(Air Sampling)

Batch No: 2004040288

Customer: NPN ENVIRONMENTAL ENGINEERS
Attention: RUTH MANNEBACH
Address: 927 HORAN DRIVE

City, State: ST LOUIS, MO 63026
Country:

Tel No: (636) 343-1300
Fax No: (636) 343-8192

Contact No: 43927
Project No: C-04079
PO No: C-04079

Date Received: April 12, 2004
Date Reported: April 14, 2004

Date(s) Analyzed: 04/13/04

Exposure results are the average concentration for the period of time monitored. ND = None Detected. The results relate only to the items tested. Unless noted below, samples were received in acceptable condition and all applicable quality control were within method specifications. The molar volume at 22 C (24.1 L/mole) was used to calculate parts per million, ppm. Lab blanks are always subtracted before a result is reported, unless stated otherwise. Air surface concentrations reported are based upon field sampling information provided by the customer. For assistance with the content of this report, please visit the Customer Services section of our web site at http://www.assaytech.com or contact Technical Support at 1-800-833-1258.

Lab Sample ID / Lab Code	Date Sampled	Media Code - Client Sample ID	Media Lot / Serial #	Chemical Analyzed	Quantity Found (µg)	Detection Limit (µg)	Sample Volume (L)	Sample Time (min)	Exposure (mg/M^3)	Exposure (ppm)	Detection Limit (ppm)
2004011023 - ATOH	4/8/04	CASSETTE - 112-1P	-	LEAD (1)	0.73	0.5	573	382	0.0013	0.00015	0.0001
2004011024 - ATOH	4/8/04	CASSETTE - 112-2P	-	LEAD (1)	0.865	0.5	578	385	0.0015	0.00017	0.0001
2004011025 - ATOH	4/8/04	CASSETTE - 112-3A	-	LEAD (1)	ND	0.5	255	85	ND	ND	0.0002
2004011029 - ATOH	4/8/04	CASSETTE - 112-4A	-	LEAD (1)	0.995	0.5	594	198	0.0017	0.00019	0.0001
2004011030 - ATOH	4/8/04	CASSETTE - 112-5A	-	LEAD (1)	ND	0.5	441	147	ND	ND	0.0001
2004011031 - ATOH	4/8/04	CASSETTE - FB-1	-	LEAD (1)	ND	0.5		N/A	ND	ND	

Messages

Lab Sample ID	Message	Method	Method Name	Analyzed By	Approved By
		1	OSHA ID 125	S. LAUDERBAUC	K. TAYLOR

Results Reviewed by Person Monitored (If Applicable): _____
(Initials/Date)