

Draft Final Report: Subsurface Feature Removal Phase I Demolition Area

***Liberty Industrial Finishing Superfund Site
55 Motor Avenue – Farmingdale, New York***

Prepared for:

**Liberty Industrial Finishing Superfund Site
Qualified Settlement Trust**

July 2008



***AMO Environmental
Decisions, Inc.***

***Earth & Environmental
Resource Management Consultants***

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1.0 INTRODUCTION

This Report presents the results of AMO Environmental Decisions' (AMO's) investigative and removal activities associated with subsurface features within the Phase I Demolition Area at the Liberty Industrial Finishing Site (Site) located at 55 Motor Avenue in the unincorporated village of Farmingdale, Town of Oyster Bay, Nassau County, New York. **Figure 1-1** identifies the location of the Site. The investigative and removal activities were undertaken in accordance with Administrative Order on Consent (AOC) for Removal Action, Index Number CERCLA-02-2002-2013. The AOC, which was an agreement between the United States Environmental Protection Agency (USEPA) and certain parties (the Respondents), became effective on March 26, 2002. The AOC stipulated that the Respondents address subsurface features and sanitary leaching fields within the Phase I Demolition Area (as shown on Attachment III of the AOC and **Figure 1-2** of this report) as well as the Former Building B Basement Ramp Pile.

Within the Phase I Demolition Area, numerous former process buildings are no longer present; however, below ground sumps, vaults, leaching chambers, drains, underground storage tanks (USTs), pipes, and other structures remain. These structures are referred to as subsurface features (SFs). The Building B Basement Ramp Pile was a soil pile created during construction of a concrete loading dock to service Building A. Soil analytical results indicated that the Building B Ramp Pile contained cadmium and chromium at concentrations exceeding the AOC cleanup goals.

The Building B Basement Ramp Pile was removed in June 2003. The removal action was detailed in their Building B Basement Ramp Pile Removal Report (ERM, October 28, 2003). The first SF removal action was performed by ERM from July 2004 through November 2005. During ERM's removal work in the Phase I Demolition Area, 14 SFs were removed, and post-removal confirmation samples were collected to ensure that soils surrounding the SF did not contain soils exhibiting concentrations above the site cleanup goals. The findings of ERM's remedial activities are contained in a report entitled Final Removal Action Report, Subsurface Features (ERM, March 2006).

Subsequent to ERM's remedial activities, AMO completed remedial activities in the Phase I Demolition Area between March 2006 and March 2008. This draft final report presents the findings of AMO's remedial actions and, in conjunction with reports entitled Building B Basement Ramp Pile Removal Report (ERM, October 28, 2003) and Final Removal Action Report, Subsurface Features (ERM, March 2006) meet the reporting requirements of the AOC for Removal Action at the Site.

1.1 Purpose of Removal Action

Investigation and removal of the SFs was performed in general accordance with a USEPA-approved Removal Action Work Plan and Sampling, Analysis, Monitoring Plan (SAMP) – Subsurface Features (ERM, September 24, 2003). The objectives of the work performed were to:

- Collect characterization samples of liquids and/or solids present in the SFs for laboratory analysis (if none were previously collected), and remove any liquids or solids from the SFs;
- Excavate and remove previously identified SFs located within the Phase I Demolition Area and any SFs discovered during removal activities;
- Excavate and remove potentially impacted soil surrounding the SFs;

- Collect post-remediation confirmation samples to verify remaining soil does not contain constituents of concern at concentrations above the AOC *Cleanup Goals*.
- Protect human health and the environment, particularly potential future construction workers.

1.2 Draft Final Report Organization

The remainder of this Report presents the results of removal activities that were implemented between March 2006 and March 2008 to comply with the AOC in the Phase I Demolition Area. **Section 2.0** provides background information. **Section 3.0** provides the basis for determining the analytical parameters associated with post-removal confirmation samples (PRCSs) at each SF; it also provides remediation criteria used to evaluate removal action effectiveness at each SF. **Section 4.0** describes the SFs investigated, removal operations, quantities of materials removed, and conclusions concerning the potential need for additional remedial activities at each SF (if any). **Section 5.0** describes the data quality. **Section 6.0** provides a summary of waste disposition. **Section 7.0** identifies SFs that require further investigation.

Characterization sample laboratory analytical reports and PRCS laboratory analytical reports are available upon request. The analytical data validation reports are presented in **Appendix A**. Photographs of each SF are presented in **Appendix B**. Disposal manifests and weigh slips are included in **Appendix C**.

2.0 BACKGROUND

Detailed background information for the Site is presented in Section IV of the AOC. The subject property is a National Priority List (NPL) site under the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA), commonly referred to as Superfund. The Site is located approximately one mile south of Bethpage State Park in Nassau County, New York (**Figure 1-1**). The Site is bordered by Long Island Railroad tracks to the north, Motor Avenue to the south, Main Street to the east, and the Ellsworth-Allen Park to the west (**Figure 1-2**). The Phase I Demolition Area, the subject of this report, is also shown on **Figure 1-2**.

3.0 POST REMOVAL TARGET PARAMETERS & POST-REMOVAL EVALUATION CRITERIA

In accordance with the Removal Action Work Plan (RAWP) – Subsurface Features and the Sampling, Analysis, and Monitoring Plan (SAMP) – Subsurface Features (ERM, September 24, 2003), analytical results of the characterization samples collected from the SFs were evaluated to potentially add parameters to the post-removal confirmation analyses (i.e., the AOC *Cleanup Goals*).

3.1 Target Parameters

Post removal confirmation sample (PRCS) target parameter lists for each SF were developed based on analytical results for liquid and solid characterization samples collected at each SF (if applicable). SF aqueous and solid content characterization sample locations are presented in **Figures 4-1 through 4-42**, where applicable. A parameter that was detected in a characterization sample was added to a SF target parameter list based on the following protocols.

- a. SFs containing no sampleable solids or liquids: the SF target parameter list consists of AOC *Cleanup Goal* parameters as stipulated in the USEPA's AOC for Removal Action, Index Number CERCLA-02-2002-2013. These parameters include: volatile organic compounds (VOCs) cis-1,2-dichloroethene, tetrachloroethene and trichloroethene; semi-volatile organic compounds (SVOCs) benzo(a)pyrene, dibenz(a,h)anthracene; inorganic constituents cadmium and chromium; cyanide; and, polychlorinated biphenyls (PCBs).
- b. SFs containing sampleable solids: the SF target parameter list consists of AOC *Cleanup Goal* parameters and constituents detected in the solid content sample* at concentrations exceeding NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046 *Recommended Soil Cleanup Objectives* (*Note: solid content samples were analyzed for Target Compound List (TCL) VOCs, SVOCs, PCBs and pesticides, and Target Analyte List (TAL) metals and cyanide).
- c. SFs containing sampleable liquids: the SF target parameter list consists of AOC *Cleanup Goal* parameters and constituents detected in the liquid content sample* at concentrations exceeding NYSDEC's TAGM 4046 *Groundwater Standards Criteria* (*Note: liquid content samples were analyzed for TCL VOCs, SVOCs, PCBs, pesticides, and TAL metals and cyanide).

3.2 Post-Removal Evaluation Criteria

AMO compared the PRCS analytical results to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Concentrations for Industrial Soil* for determination of remediation completed versus additional remediation required. The following evaluation criteria were used to determine whether a SF was considered "remediated".

- a. For parameters having an AOC *Cleanup Goal*:
 - The parameter was not detected during laboratory analysis; or,
 - The detected parameter concentration was equal to or less than the AOC *Cleanup Goal*.
-

- b. For parameters without an AOC *Cleanup Goal*:
- The parameter was not detected during laboratory analysis; or,
 - The detected parameter concentration was equal to or below USEPA Region III's *Risk-Based Concentrations* (Industrial Soils).

4.0 SUBSURFACE FEATURE RECONNAISSANCE, REMOVAL, AND POST-REMOVAL SAMPLING ACTIVITIES

This section presents investigative and removal activities performed at each SF investigated and remediated by AMO. Each SF section includes a description of the SF prior to removal, the type(s) and amount of material removed during removal activities (if any), a summary of post-excavation sample collection and analysis, a summary of regulatory criteria to which analytical results were compared, and recommendations. **Figures 4-1 through 4-42** present the SF removal locations, characterization sample locations (where applicable), and post-removal confirmation sample locations. **Tables 4-1 through 4-86** present the analytical results of the characterization and post-removal confirmation samples.

SF ID Overview of Investigative and Removal Activities

SF-01 AMO accessed and inspected SF-01 on March 29, 2006. It was located at the northern property boundary within Building H (**Figure 4-1**). SF-01, interpreted as a storm water catch basin, was a 3-foot diameter metal grate covering a circular brick and concrete-walled basin approximately 6.5 feet deep (**Appendix B, Photograph 1**). The basin widened with depth, contained two (2) 12-inch diameter terra cotta inlet/outlet pipes, and appeared to have an open bottom (i.e., the walls of the structure rested on soil). The terra cotta pipes ran in a north-south direction, and the northern pipe entered another small square brick basin that was connected to east-west trending 12-inch diameter terra cotta pipes. No liquid or solids were present in SF-01 at the time of the inspection. Solid and liquid characterization samples were collected from SF-01 in 1997 during the Continued Remedial Investigation (CRI).

SF-01 was excavated and removed on April 5 and 6, 2006. The base of the concrete-walled structure was encountered at 6.5 feet below ground surface (bgs), and AMO observed black-stained soil at the basin bottom (**Appendix B, Photograph 2**). The excavation was deepened and widened to remove the stained soil. An 8-foot diameter, 1-foot thick by 1-foot wide concrete ring was encountered at a depth of 11.5 feet bgs and removed (**Appendix B, Photograph 3**). At completion, the excavation covered an area of 174 square feet (ft²) and was 12.5 feet deep. Approximately 50 cubic yards (yds³) of soil were removed and staged for characterization and off-site disposal. The removed concrete and brick were also staged for off-site disposal/recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample and one composite sample location. All PRCSSs were submitted to STL-Edison for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since liquids and solids within SF-01 were previously characterized, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol described in **Section 3.0**. The analytical results of the samples collected from SF-01 are presented in **Tables 4-1 through 4-3**.

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Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were all below the evaluation criteria, thus no additional remedial activities are necessary for SF-01.

SF-02 SF-02 was initially accessed and inspected by AMO on March 29, 2006. SF-02, interpreted as a slab-mounted utility electrical junction box, is located near the northern property boundary approximately 50 feet south of the north wall of Building H and approximately 45 feet southwest of SF-01 (**Figure 4-2**). SF-02 was a 14-inch wide by 20-inch long by 8-inch deep metal electrical box covered by a 14-inch wide by 20-inch long metal plate (**Appendix B, Photograph 4**). Two (2) horizontal, three-inch diameter conduits enter the box from the east. The northern conduit contains electrical wiring, and the southern conduit is empty. Also, three (3) ¼-inch diameter copper pipes enter the junction box on the east side and exit on the west side. It could not be determined whether the electric lines were energized; therefore, SF-02 was not excavated. No liquid or solids were present in SF-02 at the time of the inspection.

Considering SF-02 was a small structure, contained potentially charged electric lines, and no liquid or solids were present within the structure, the *Sampling, Analysis and Monitoring Plan (SAMP)* sampling protocol was modified from the collection of four (4) grab samples and two (2) composite samples to the collection of one (1) grab sample from beneath the junction box. A hole was jack hammered at the southwestern corner of the electrical box to assess the underlying soil. A hand auger was used to advance a soil boring beneath the electrical junction box, and a confirmation soil sample was collected from approximately 2.0 to 2.5 feet beneath the base of the box or 3.0 to 3.5 feet bgs. The confirmation sample was collected in order to evaluate the potential that SF-02 had impacted underlying soil. Following sample collection, the borehole was backfilled with concrete.

The confirmation sample was submitted to STL for laboratory analysis. The sample was submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from the soil boring. The samples were only analyzed for AOC constituents because characterization samples had never been collected from SF-02. The analytical results of the confirmation sample collected from beneath SF-02 are presented in **Table 4-4**.

Following receipt of the soil analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations for Industrial Soil*. The analytical results were all below the evaluation criteria, thus no remedial activities are necessary for SF-02.

SF-03 AMO accessed and inspected SF-03 on April 17, 2006. It was located approximately 100 feet south of the north wall of Building H and approximately 50 feet south of SF-02 (**Figure 4-3**). SF-03, interpreted as a storm water catch basin, was a 32-inch diameter round cinder block and brick-walled basin approximately 10 feet deep with an open bottom and covered by a 34-inch square steel plate (**Appendix B, Photograph 5**). The basin widened with depth and contained two (2) terra cotta inlet/outlet pipes located approximately two feet bgs. The terra cotta pipes, one 12 inches in diameter and the other 8 inches in diameter, were oriented northeast-

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southwest. Approximately 29 inches of water were present in SF-03 during AMO's inspection. A liquid characterization sample was previously collected in 1997 during the CRI. The liquid content of the vault was pumped into drums and staged for waste characterization.

SF-03 was excavated and removed on April 19, 2006. AMO observed black-stained soil at the basin bottom (**Appendix B, Photograph 6**). The excavation was deepened and widened to remove all visibly stained soil. At completion, the excavation was 11 feet deep and covered an area of 121 ft². Approximately 23 yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling. The cinder block/brick walls were also staged for off-site recycling.

Following SF-03 excavation activities, PRCs were collected from the excavation base and sidewalls to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the excavation sidewalls. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location and one composite sample location. All PRCs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs and the composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since liquid within SF-03 was previously characterized by others, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of samples collected from SF-03 are presented in **Tables 4-5 and 4-6**.

Following receipt of the PRC analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were all below the evaluation criteria, thus no additional remedial activities are necessary for SF-03.

SF-04 SF-04 was initially accessed and inspected by AMO on April 14, 2006. SF-04, interpreted as a storm water catch basin, was located approximately 180 feet south of the northern wall of Building H and approximately 75 feet south of SF-03 (**Figure 4-4**). SF-04 was a 3-foot diameter vertical brick-walled basin approximately 5 feet deep with an open bottom and covered by a 37-inch square steel plate (**Appendix B, Photograph 7**). Two (2) horizontal 12-inch diameter terra cotta inlet/outlet pipes were located approximately three feet bgs and oriented northeast-southwest (**Appendix B, Photograph 8**). The basin contained approximately 12 inches of water at the time of inspection. The liquid content of the vault was pumped into drums and staged for waste characterization. Solid and liquid characterization samples were collected from SF-04 in 1997 during the CRI.

SF-04 was excavated and removed on April 19, 2006. AMO observed black-stained soil at the bottom of the basin. The excavation was deepened and widened to remove all visibly stained soil. At completion, the excavation was 9 feet deep and covered an area of 77 ft². Approximately 13 yds³ of soil were removed and staged on-site for waste characterization and off-site disposal/recycling. The removed brick was also staged for off-site recycling.

Following SF-04 excavation activities, PRCs were collected from the excavation base and

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sidewalls to confirm all impacted soil had been removed. Four (4) grab samples were collected from the excavation base, and four (4) composite samples were collected from the excavation sidewalls. All PRCs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs and the composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since liquids and solids within SF-01 were previously characterized by others, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the samples collected from SF-04 are presented in **Tables 4-7 through 4-9**.

Following receipt of the PRC analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were all below the evaluation criteria, thus no additional remedial activities are necessary for SF-04.

SF-05 & SF-06 SF-05 and SF-06, interpreted as storm water catch basins, were initially accessed and inspected by AMO on April 14, 2006. Since SF-05 and SF-06 were in close proximity to each other and were connected by a common terra cotta pipe, these features were treated as one feature. Both features were located approximately 140 feet north of the south wall of Building H and approximately 190 feet south of SF-04 (**Figure 4-5**).

SF-05 was an approximately 24-inch diameter vertical brick basin with a solid concrete bottom that was covered by a 23-inch diameter steel manhole (**Appendix B, Photograph 9**). The basin walls appeared to extend to a depth of five feet bgs. One (1) 12-inch diameter terra cotta inlet/outlet pipe entered the basin from the east at a depth of two feet bgs. This pipe connected into SF-06, which was located approximately six feet east of SF-05. SF-05 contained approximately 24 inches of water at the time of inspection. The liquid contents of the vaults were pumped into drums and staged for waste characterization. During the 1997 CRI, a liquid characterization sample was collected from SF-05 and a solid characterization sample was collected from SF-06.

SF-06 was a 25-inch diameter vertical brick basin with a solid concrete bottom that was covered by a 37-inch square steel cover (**Appendix B, Photograph 10**). The basin walls appeared to extend to a depth of five feet bgs. The aforementioned 12-inch diameter terra cotta inlet/outlet pipe from SF-05 entered the basin from the west. Another 12-inch diameter terra cotta inlet/outlet pipe entered the basin at a depth of two feet bgs from the southeast. SF-06 contained only solids at the time of inspection.

SF-05 and SF-06 were excavated and removed on April 18, 2006. AMO observed clean soil within the excavation. At completion, the excavation was 6 feet deep and covered an area of 188 ft². Approximately 15 yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling. The excavated brick and concrete were also staged for off-site recycling.

Since SF-05 and SF-06 were combined as one SF, the *SAMP* sampling protocol was modified. The *SAMP* required the collection of four (4) composite and grab samples from each SF excavation along with the collection of duplicate, matrix spike, and matrix spike duplicate

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samples from the SF-05 excavation. Instead, PRCSSs were collected from the SF-05/SF-06 excavation at the base and sidewalls to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample and one composite sample location.

All PRCSSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since liquids within SF-05 and solids within SF-06 were previously characterized by others, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the samples collected from SF-05 and SF-06 are presented in **Tables 4-10 through 4-12**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results for several semi-volatile organic compounds (benzo[a]pyrene 3.8 mg/kg, benzo[a]anthracene 4.4 to 17 mg/kg, and benzo[b]fluoranthene 12 mg/kg) exceed the evaluation criteria. Thus, additional remedial activities are recommended for these SFs.

SF-07 AMO accessed and inspected SF-07 on March 29, 2006. It was located approximately 50 feet north of the southern wall of Building H and approximately 75 feet southeast of SF-05 and SF-06 (**Figure 4-6**). SF-07, interpreted as a storm water catch basin, was a 32-inch diameter vertical brick and concrete-walled basin with a solid bottom (**Appendix B, Photographs 11 and 12**). The catch basin contained two 12-inch diameter terra cotta inlet/outlet pipes that were oriented generally northwest-southeast. The pipe entering from the southeast was approximately 17 inches bgs, and the pipe entering from the northwest was approximately 29 inches bgs. The basin contained approximately 5 inches of water and 19 inches of black sediment at the time of inspection. The liquid content of the vault was pumped into drums and staged for waste characterization. Solid and liquid characterization samples were collected from SF-07 during the 1997 CRI.

SF-07 was excavated and removed on April 7, 2006. The base of the structure was encountered at approximately five feet bgs. Due to restricted equipment operating room during removal of the structure, the excavation was completed to a depth of 6.5 feet bgs and covered an area of 20 ft². AMO did not observe stained soil within the excavation; however, approximately 7 yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling because previous characterization results identified elevated results. The removed concrete and brick were also staged for off-site disposal/recycling.

Following excavation activities at SF-07, PRCSSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. All PRCSSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were

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submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since liquids and solids within SF-07 were previously characterized during the 1997 CRI, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results for the SF-07 samples are presented in **Tables 4-13 through 4-15**.

Following receipt of PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical result of one sample exceeded the AOC *Cleanup Goal* of 0.29 milligrams per kilogram (mg/kg) for benzo(a)pyrene. Benzo(a)pyrene was detected in the composite sample collected from the SF-07 south wall at a concentration of 0.34 (mg/kg). Thus, additional remedial activities are recommended for SF-07.

SF-08 SF-08 was initially accessed and visually inspected by AMO on October 16, 2007. SF-08, interpreted as a small stormwater catch basin that a roof drain was also routed into, was located in the northwestern portion of Building U (**Figure 4-7**), and appeared to be in line with SF-01, UK-02, and UK-44 (additional stormwater catch basins at the northern property boundary). SF-08 was a 4-foot by 4-foot vertical brick-walled basin with a solid bottom (**Appendix B, Photographs 13 and 14**). The catch basin contained two six-inch diameter terra cotta inlet/outlet pipes that were oriented generally west-east. Both pipes entering/exiting the structure were approximately 24 inches bgs. The basin contained no liquid and approximately 1-inch of what appeared to be non-impacted sediment at the time of inspection. A solid characterization sample was collected from SF-08 in 1997 during the CRI.

SF-08 was excavated and removed on March 3, 2008. The base of the structure was encountered at approximately 30-inches bgs. The excavation was completed to a depth of four feet bgs and covered an area of 36 ft². AMO did not observe stained soil within the excavation; however, approximately 1.5 yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling because previous characterization results identified cadmium and chromium at concentrations above the AOC cleanup goals. The removed brick was also staged for off-site disposal/recycling.

Following excavation activities at SF-08, a PRCS was collected from the base of the excavation to confirm all impacted soil had been removed. The PRCS was submitted to Environmental Testing Laboratory, Inc. (ETL) of Farmingdale, New York for laboratory analysis. The PRCS was submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. Since solids within SF-08 were previously characterized during the CRI, the sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the samples collected from SF-08 are presented in **Tables 4-16 and 4-17**.

Following receipt of PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-08.

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SF-13 SF-13 was initially accessed and inspected by AMO on March 29, 2006. SF-13, interpreted as a fire water main access vault, was located along the western wall of Building H approximately 25 feet north of the southern wall and approximately 75 feet southwest of SF-07 (**Figure 4-8**). Historic reports identified SF-13 as a two-foot wide by three-foot long cinder block structure with a steel cover. The only surface feature AMO observed in the vicinity of SF-13 was an 8-inch diameter steel pipe (**Appendix B, Photograph 15**). The pipe extended through the concrete floor to a depth of approximately 7.5 feet bgs and then continued horizontally toward the west. No liquids or solids were present in the pipe at the time of inspection. A solid characterization sample was collected from SF-13 during the 1997 CRI.

The steel pipe was reportedly a former water line that supplied water to an adjacent building. The pipe could not be excavated and removed because of its location along the western wall of Building H and proximity to the new water main. AMO attempted to locate the cinder block structure, which may have been removed during the installation of the new water main, by digging an approximately 18-inch deep excavation around the pipe. The only man-made feature observed within the excavation was broken concrete that appeared to surround the steel pipe. AMO did not observe any stained soil within the excavation. Approximately 0.5 yd³ of soil was removed and staged for waste characterization and offsite disposal/recycling. The removed concrete was also staged for off-site disposal/recycling.

Since the SF-13 structure described historically was not found and the excavation was limited in depth, the *SAMP* sampling protocol was modified. Following excavation activities, soil samples were collected from the base of the excavation only. Four (4) grab soil samples were collected from the sidewalls of the excavation to confirm all potentially impacted soil had been removed. An additional grab sample, along with duplicate, matrix spike and matrix spike duplicate samples, was collected from two feet bgs to further assess subsurface soil conditions. All soil samples were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. Since solids within SF-13 were previously characterized by others, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the soil samples collected from SF-13 are presented in **Tables 4-18 and 4-19**. Although the SF-13 structure described historically was not observed or removed by AMO, the soil samples collected are considered PRCSS because it appears that SF-13 was removed during installation of the new water main.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for SF-13.

SF-14 AMO accessed and inspected SF-14 on March 29, 2006. It was located approximately 15 feet southwest of SF-13 outside of Building H and approximately 15 feet north of the Motor Avenue sidewalk (**Figure 4-9**). SF-14, interpreted as a city water main access vault, was a four-foot square vault with a solid bottom approximately five feet deep. The vault was covered with a 26-inch square steel plate (**Appendix B, Photograph 16**). A 10-inch diameter water main with two capped valve boxes (one 10-inch diameter and one 14-inch diameter) was

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observed trending north-south within the vault (**Appendix B, Photograph 17**). The vault contained less than 12 inches of solids and no water at the time of inspection.

To characterize the vault contents, AMO collected a solids sample and submitted the sample to STL for laboratory analysis of TCL VOCs, SVOCs, PCBs and pesticides along with TAL metals and cyanide. **Table 4-20** summarizes the analytical results of the solid characterization sample.

Due to the solid construction and current vault usage, the vault was not excavated. Based on the solids characterization sample results, approximately three yds³ of sediment from the vault floor were removed, drummed and staged pending waste characterization for offsite disposal/recycling. Following removal of the sediment, the walls and floor of the vault were steam cleaned and pressure washed. The water generated during the cleaning was also drummed and staged for waste characterization and offsite disposal.

The confirmation sampling program implemented at SF-14 differed significantly from the proposed post-removal confirmation sampling program because of the impracticality of removing SF-14 without major modifications to the site water supply.

The *SAMP* required the collection of two (2) composite samples and two (2) grab samples from the proposed SF-14 excavation. Instead, AMO collected one (1) subsurface confirmation soil sample on April 5, 2006 adjacent to SF-14 from the six-inch interval below the vault to assess potential soil impacts. The sample location was topographically down gradient and south of the SF-14 southern wall. The soil sample was submitted to STL for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide along with additional parameters developed through the screening process described in **Section 3.0**. The analytical results of the confirmation soil sample are presented on **Table 4-21**.

Following receipt of soil analytical results, the results were compared to the *AOC Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for SF-14.

SF-15 SF-15 was initially accessed and inspected by AMO on March 29, 2006. SF-15, interpreted as a former sanitary sewer access sump, was located approximately 175 feet west-southwest of SF-14 and adjacent to the south wall of the "Unnamed Building" situated along Motor Avenue and east of Building A, south of Building E and west of Building H (**Figure 4-10**). It was a 24-inch deep concrete basin with a solid bottom and a 20-inch diameter steel manhole cover (**Appendix B, Photograph 18**). The basin widened with depth to 27 inches in diameter. Three (3) 6-inch diameter terra cotta pipes entered the basin from the west; however, two of them were plugged with wood. One (1) 6-inch diameter terra cotta pipe entered the basin from the east.

Approximately three inches of solids were present in SF-15 during AMO's inspection. No liquid was present. To characterize the vault contents, AMO collected a solids sample and submitted the sample to STL for laboratory analysis of TCL VOCs, SVOCs, PCBs and

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pesticides along with TAL metals and cyanide. **Table 4-22** summarizes the analytical results of the solid characterization sample.

Due to the solid construction and location of SF-15 near the building's foundation and outside supporting wall, SF-15 was not excavated. Based on the solids characterization sample results, the sediment on the floor of the vault was removed and drummed with the sediment from SF-14 for waste characterization and offsite disposal/recycling. Following removal of the sediment, the basin walls and floor were steam cleaned and pressure washed. The water generated during the cleaning was also drummed and staged for waste characterization and offsite disposal. After the cleaning was completed, the terra cotta pipes were sealed with cement and the cement was allowed to cure for one day. SF-15 was then completely filled and sealed with concrete to grade.

The confirmation sampling program implemented at SF-15 differed from the proposed post-removal confirmation sampling program because it was not possible to remove SF-15 prior to demolition of the Unnamed Building. The *SAMP* required the collection of two (2) composite samples and four (4) grab samples from the proposed SF-15 excavation. Instead, AMO collected two (2) subsurface soil samples on April 5, 2006 adjacent to SF-15 from the six-inch interval below the basin to assess potential soil impacts. The sample locations were selected to represent the highest potential impact areas, which were areas beneath the terra cotta pipe penetrations at the east and west walls of the structure. Soil samples were submitted to STL for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide along with additional parameters developed through the screening process described in **Section 3.0**. Duplicate, matrix spike, and matrix spike duplicate samples were collected from the western soil boring. The analytical results of the confirmation samples collected from SF-15 are presented in **Table 4-23**.

Following receipt of soil analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-15.

SF-16, SF-17 and SF-18 AMO accessed and inspected SF-16, SF-17 and SF-18 on March 27, 2006. The subsurface features were located approximately 45 feet northwest of SF-15 in a small open area bordered by Motor Avenue to the south, the eastern end of former Building A to the west, Building E to the north, and the "Unnamed Building" along Motor Avenue to the east (**Figure 4-11**).

SF-16 and SF-17, interpreted as former storm or sanitary sewer access sumps, were 2-foot diameter metal manhole access ways that both led into a 15.5-foot long by 13.5-foot wide by 7.5-foot deep concrete vault (**Appendix B, Photographs 19 and 20**). A six-foot high concrete dividing wall separated the SF-16 side from the SF-17 side. This dividing wall was interpreted as a weir. Two steel pipes entered the vault in the northeastern corner. A northeast-southwest trending four-inch diameter pipe was present on the north wall of the vault. An east-west trending six-inch diameter pipe was present on the east wall of the vault. A third pipe present on the south wall of the vault was a northwest-southeast trending four-inch diameter terra cotta pipe. Approximately 4.75 feet of water was present in the SF-16/SF-17 vault and approximately 0.25 feet of sediment was present in the SF-16 section during the inspection.

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AMO collected a sample of the liquid from SF-16 and SF-17 on April 7, 2006 to provide current characterization data and to evaluate disposal options. The analytical results of the AMO liquid characterization results, as well as results of the liquid characterization samples collected during the CRI are presented in **Table 4-24**.

SF-18, interpreted as a former gas main access point, was a two-inch diameter vertical steel pipe (**Appendix B, Photographs 21 and 22**). The capped steel pipe was in an enclosed seven-foot wide by seven-foot long by six-foot tall brick shed adjacent to Building E. The shed had a cement floor, but the area surrounding the pipe was earthen. The pipe extended to a depth of approximately 1.5 feet bgs and then continued horizontally toward the east. SF-18 had previously been reported to have a hollow sound; however, AMO investigated and the hollow sound was due to the thin concrete floor within the shed. No liquid or solids were present in SF-18 during the inspection.

Prior to excavation, approximately 7,000 gallons of water were evacuated from the SF-16/SF-17 vault by vacuum truck and transported to a Nassau County Wastewater Treatment Plant for disposal on April 27 and May 1, 2006. The SF-16/SF-17 vault was excavated and removed on May 1, 2006. The base of the concrete-walled vault was encountered at 8.5 feet bgs, and the north, west and south walls were one foot thick. The east wall was left in place as it was a portion of the "Unnamed Building" wall. The excavation also abutted SF-18. AMO did not observe any stained soil within the excavation. At completion, the excavation was 9 feet deep and covered an area of 304 ft². Approximately 30 yds³ of soil were removed from the excavation and staged for waste characterization and off-site disposal/recycling. The removed concrete and brick (from the SF-18 shed) were also staged for off-site disposal/recycling.

Since SF-16, SF-17 and SF-18 were treated as one subsurface feature, the *SAMP* sampling protocol was modified. The *SAMP* required the collection of four (4) composite samples and four (4) grab samples from the SF-16/SF-17 excavation and two (2) composite samples and two (2) grab samples from the proposed SF-18 excavation. However, the proposed samples associated with SF-18 were not necessary since all three subsurface features were removed from one excavation. To confirm all impacted soil had been removed, PRCSSs were collected from the excavation base and sidewalls. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location and one composite sample location. All PRCSSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, pesticides, metals and cyanide. Since liquids within the SF-16/SF-17 vault were previously characterized during the CRI, as well as by AMO, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the PRCSSs from the SF-16/17/18 excavation are presented in **Table 4-25**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for these SFs.

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SF-19 SF-19 was initially accessed and inspected by AMO on March 28, 2006. SF-19, interpreted as slab-mounted utility junction boxes, was located approximately 215 feet northeast of SF-18 within the east central portion of Building E (**Figure 4-12**). It consisted of 21 metal boxes with box dimensions ranging from 7.5-inches square to 12-inches square. The majority of the boxes were covered with metal plates, but several were open (**Appendix B, Photograph 23**). The open boxes were three inches deep and contained electrical wiring. A solid characterization sample was collected from SF-19 during the CRI. The analytical results of the solid characterization sample are presented in **Table 4-26**.

SF-19 was excavated and removed on April 12, 2006. During the excavation, it was determined that all the features within SF-19 were electrical junction boxes. The three-inch deep boxes were set in a five-inch thick concrete floor. To remove the electrical junction boxes, the concrete floor around the boxes was broken and removed along with the boxes (**Appendix B, Photograph 24**). At completion, the excavation was one foot deep and covered an area of 2,746 ft². AMO did not observe any stained soil beneath the concrete floor. Therefore, only concrete was staged for off-site recycling.

Since the SF-19 excavation was shallow and there were no excavation sidewalls, the *SAMP* sampling protocol was modified. The *SAMP* required the collection of four composite samples from the excavation sidewalls; however, with the absence of sidewalls, the composite samples were collected from the base of the excavation. Four (4) grab samples and four (4) composite samples were collected from the base of the excavation. All PRCSSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since solids within SF-19 were previously characterized during the CRI, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-19 PRCSSs are presented in **Table 4-27**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for SF-19.

SF-20 AMO accessed and inspected SF-20 on March 28, 2006. SF-20, interpreted as a former machine foundation and pit, consisted of three patched areas in the concrete floor of Building E. SF-20 was located approximately 125 west-northwest of SF-19 (**Figure 4-13**).

The three patched areas covered an area 54 feet long by 17 feet wide (**Appendix B, Photograph 25**). On April 12, 2006, the patched areas and the surrounding concrete were jack hammered to assess the underlying conditions. Each area contained a separate subsurface feature, which are referred to as SF-20a, SF-20b, and SF-20c (**Appendix B, Photograph 26**). SF-20a was an 11-feet long by 10-feet wide by 6-feet deep concrete vault. The vault floor and walls were one foot thick. SF-20b was an approximately seven-feet long by five-feet wide by six-feet deep concrete vault. SF-20c was comprised of four 3-feet wide by 3-feet long by 1.5-feet deep vaults covered by a 2-foot thick concrete slab approximately 121 square feet in

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size. All three subsurface features were filled with demolition debris (i.e., broken cinder block, concrete, brick, sand, etc.). AMO collected a solid characterization sample from SF-20c on April 13, 2006 and submitted the sample for analysis of TCL VOCs, SVOCs, PCBs and pesticides, and TAL inorganics and cyanide. The analytical results of the solid characterization sample are presented in **Table 4-28**.

SF-20 was excavated and removed on April 17, 2006. Due to the differing depths of the three features, the eastern half of the excavation was eight feet deep and the western half of the excavation was five feet deep. AMO did not observe stained soil within the excavation. At completion, the excavation covered an area of 857 ft² (**Appendix B, Photograph 27**) and approximately 78 yds³ of soil were removed and staged for off-site disposal/recycling. The concrete and demolition debris from the SF-20 vaults were also staged for off-site recycling.

Since the size of the excavation was greater than anticipated, the *SAMP* sampling protocol was modified. The *SAMP* required the collection of two (2) grab samples for all analyses. The modified sampling protocol included the collection of four (4) grab samples collected from the base of the excavation and two (2) composite samples collected from the excavation sidewalls. All PRCs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since solids were characterized by AMO prior to the excavation activities, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol described in **Section 3.0**. The analytical results of the SF-20 PRCs are presented in **Table 4-29**.

Following receipt of the PRC analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-20.

SF-21 SF-21 was initially accessed and inspected by AMO on March 28, 2006. SF-21, interpreted as a former septic clean-out access sump, was located approximately 30 feet north-northwest of SF-20 and adjacent to the western wall near the northwestern corner of Building E (**Figure 4-14**). It was a 2.5-foot square poured concrete vault with an open bottom that was covered with a steel plate (**Appendix B, Photograph 28**). SF-21 contained horizontal east-west trending four-inch diameter cast iron piping with cleanouts (**Appendix B, Photograph 29**). A solid characterization sample was collected from SF-21 in 1997 during the CRI. The analytical results of the characterization sample are presented in **Table 4-30**.

SF-21, including the four-inch diameter piping, was excavated and removed on April 21, 2006. AMO did not observe stained soil within the excavation. At completion, the excavation was 4-feet deep and covered an area of 20 ft². Approximately one yd³ of soil was removed from the excavation and staged for waste characterization and offsite disposal/recycling. The concrete removed from SF-21 was also staged for off-site recycling.

Since the SF-21 excavation was smaller in size than estimated, the *SAMP* sampling protocol

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was modified. The *SAMP* required the collection of four (4) composite samples from the base of the excavation and four (4) grab samples from each excavation sidewall. Instead, one (1) grab sample was collected from the base of the excavation, and three (3) grab samples were collected from the excavation sidewalls (only three sidewall samples could be collected because the north wall of the excavation was the concrete loading dock within Building E. All PRCSS were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. Since solids were previously characterized during the CRI, the grab samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-21 PRCSS are presented in **Table 4-31**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-21.

SF-25 AMO accessed and inspected SF-25 on March 29, 2006. It was located approximately 270 feet north-northwest of SF-21 near the northwestern corner of the Phase 1 Demolition Area (**Figure 4-15**). SF-25, interpreted as a fire water main access vault, was a three-foot square cinder block vault approximately four feet deep with a solid bottom and a three-foot square steel cover (**Appendix B, Photograph 30**). The vault contained a six-inch diameter steel pipe trending north-south along the eastern vault wall, and a vertically-oriented shut-off valve offset west of the pipe (**Appendix B, Photograph 31**). Solid and liquid characterization samples were collected from SF-25 during the CRI. The analytical results of the solid and liquid characterization samples are presented in **Tables 4-32 and 4-33**, respectively.

Based on observations and site information, the vault houses an active water main and shut-off valve that supplies the fire sprinkler systems in Building I. With the exception of the water main entering and exiting the walls of the vault, SF-25 appeared to be a solid structure. The areas where the water main entered and exited the vault appeared to be well sealed. For these reasons, the vault was not excavated. Based on the characterization sample results, approximately one yd³ of sediment from the floor of the vault was removed, drummed, and staged for waste characterization and offsite disposal/recycling. Following removal of the sediment, the walls and floor of the vault were steam cleaned and pressure washed. Approximately 25 gallons of water generated during cleaning was also drummed and staged for waste characterization and offsite disposal.

Since it was deemed not practical to remove SF-25 without disrupting the fire protection system, the *SAMP* sampling protocol was modified. The *SAMP* required the collection of four (4) composite samples from the excavation sidewalls and four (4) grab samples from the excavation bottom. Instead, one (1) subsurface confirmation soil sample was collected approximately three feet away from each corner of SF-25 and one subsurface soil sample was collected through a hole, presumably created through the base of the vault for drainage, at the northwest corner of the vault (the hole in the base of the vault was discovered after cleaning the vault). On April 5, 2006, AMO advanced a hand auger to a depth of 4.5 feet bgs at each corner of SF-25. A grab sample was collected from each boring at the six-inch interval below the

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vault bottom of four feet bgs. Additionally, a sample was collected from 5.0 to 5.5 feet bgs through the breach in the vault. All confirmation samples were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. Since liquids and solids were previously characterized during the CRI, the grab samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-25 confirmation samples are presented in **Table 4-34**.

Following receipt of the confirmation sample analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-25.

SF-27 SF-27 was initially accessed and inspected by AMO on March 28, 2006. SF-27, interpreted as an electrical access vault, was located approximately 20 feet north of SF-25 and adjacent to the southern wall of Building I (**Figure 4-16**). SF-27 was a 5-foot wide by 4-foot long by 2.5-foot deep cinder block vault that was covered by two steel plates (**Appendix B, Photograph 32**). The northern vault wall was formed by the south wall of Building I. The open-bottomed vault contained numerous electrical conduits that entered and exited the vault through the north, south and west walls (**Appendix B, Photograph 33**). Several conduits were empty, but several contained large electrical cables. A solid characterization sample was collected from SF-27 during the CRI. The analytical results of the characterization sample are presented in **Table 4-35**.

The south, east and west walls of SF-27 were excavated and removed on April 27, 2006. The north wall was not removed because it is a portion of the southern wall of Building I. AMO observed stained soil within the excavation, and the excavation was deepened and widened to remove the stained soil. During the additional excavation activities, several two-inch diameter steel pipes oriented north-south and one six-inch diameter steel water pipe oriented southeast-northwest, were exposed at a depth of five feet bgs and removed. At completion, the excavation was 6 feet deep and covered an area of 130 ft². Approximately 30 yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling. The removed cinder block walls and concrete sidewalk were also staged for off-site recycling.

Due to difficulties excavating around and beneath the numerous utilities located within and beneath the structure, the *SAMP* sampling protocol was modified. The *SAMP* required the collection of four (4) composite samples for analysis of AOC SVOCs, PCBs, metals and cyanide and four (4) grab samples for analysis of AOC VOCs. The modified sampling protocol consisted of collecting three (3) grab samples from the base of the excavation, and three (3) grab samples from the excavation sidewalls. All PRCs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, inorganics and pesticides. Since solids within SF-27 were previously characterized by others, the grab samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-27 PRCs are presented in **Table 4-36**.

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Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-27.

SF-41 AMO accessed and inspected SF-41 on March 28, 2006. It was located approximately 600 feet southwest of SF-27, slightly west of Building A, near the southern property boundary (**Figure 4-17 and Appendix B, Photograph 34**). SF-41, identified as a steel UST used for containerizing pressurized water, was a 5-foot diameter, 22.75-foot long steel tank (**Appendix B, Photograph 35**). A solid characterization sample was collected from SF-41 during the CRI (presumably from the solids within the access vault pictured in Photograph 34). The analytical results of the solid characterization sample are presented in **Table 4-37**.

SF-41 was excavated and removed on April 8, 2006. Prior to removal, the aforementioned 3,400-gallon steel tank was gauged with an oil-water interface probe and no liquid was present. After the tank was removed, AMO did not observe any stained soil within the excavation. At completion, the excavation was 6 feet deep and covered an area of 220 ft². The steel tank was staged for off-site disposal/recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location and one composite sample location. All PRCSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, inorganics and pesticides. The analytical results of the SF-41 PRCSs are presented in **Table 4-38**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentration*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-41.

SF-42 SF-42 was initially observed and inspected during AMO's site reconnaissance on March 28, 2006. SF-42, interpreted as a blind floor sump, was located approximately 70 feet southeast of SF-41 within former Building A (**Figure 4-18**). It was a vertically-oriented 19-inch diameter by 22-inch long fiberglass cylinder with an open bottom (**Appendix B, Photograph 36**). AMO observed SF-42 filled with sediment, concrete and brick debris (**Appendix B, Photograph 37**). A solid characterization sample was collected from SF-42 during the CRI. The analytical results of the SF-42 solid characterization sample are presented in **Table 4-39**.

SF-42 was excavated and removed on April 3, 2006. At completion, the excavation was 3.5 feet deep and covered an area of 24 ft². Approximately 3 yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling. The fiberglass pipe and contents were also staged with the soil for off-site disposal/recycling.

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PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample

location and one composite sample location. All PRCSSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since solids within SF-42 were previously characterized during the CRI, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-42 PRCSSs are presented in **Table 4-40**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for SF-42.

SF-43 AMO initially inspected SF-43 on March 28, 2006. It was located approximately 70 feet northeast of SF-42 within former Building A (**Figure 4-19**). SF-43, interpreted as a blind floor sump, was initially identified as an 18-inch diameter circular depression in the concrete floor (**Appendix B, Photograph 38**). During excavation, SF-43 was identified as a vertically-oriented 19-inch diameter by 24-inch long fiberglass cylinder with an open bottom filled with bentonite (**Appendix B, Photograph 39**). A solid characterization sample was collected from SF-43 during the CRI. The analytical results of the solid characterization sample are presented in **Table 4-41**.

SF-43 was excavated and removed on April 3, 2006. AMO did not observe any stained soil within the excavation (**Appendix B, Photograph 40**). At completion, the excavation was 3.5 feet deep and covered an area of 48 ft². Approximately one yd³ of soil was removed and staged for waste characterization and off-site disposal/recycling. The fiberglass cylinder and contents were also staged for off-site disposal/recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. All PRCSSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. The additional analyses differed from the proposed *SAMP* sampling protocol with the addition of SVOCs, PCBs, metals and cyanide analyses. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since solids within SF-43 were previously characterized during the CRI, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-43 PRCSSs are presented in **Table 4-42**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical

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results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-43.

SF-44 SF-44 was initially accessed and inspected by AMO on March 28, 2006. SF-44, interpreted as a floor drain in a former electrical room, was located approximately 70 feet southeast of SF-43 within former Building A (**Figure 4-20** and **Appendix B, Photograph 41**). SF-44 was a 3-inch diameter vertical steel pipe located inside a 9-foot by 15-foot concrete structure. The 8-foot long pipe extended to a depth of approximately 22 inches bgs and then continued horizontally toward the southeast. The pipe terminated at a 4-foot square cinder block below ground vault with an open bottom (**Appendix B, Photograph 42**).

SF-44 was excavated and removed on March 30, 2006 after the concrete structure was razed. AMO collected a solid characterization sample from the pipe discharge within the below ground vault. The characterization sample was submitted for analysis of the TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. The analytical results of the solid characterization sample are presented in **Table 4-43**.

The excavation was deepened and widened to remove all features associated with SF-44. At completion, the excavation was 3 feet deep and covered an area of 25 ft². Approximately three yds³ of soil were removed and staged for characterization and off-site disposal/recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and two (2) composite samples were collected from the sidewalls of the excavation. All PRCSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. The additional analyses differed from the proposed *SAMP* sampling protocol with the addition of SVOCs, PCBs, metals and cyanide analyses. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since solids within SF-44 were characterized by AMO, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-44 PRCSs are presented in **Table 4-44**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results for benzo(a)pyrene at two PRCS locations and the analytical results for dibenz(a,h)anthracene at one PRCS location exceeded the evaluation criteria. Thus, additional remedial activities are recommended for SF-44.

SF-45 AMO inspected SF-45 on March 28, 2006. It was located approximately 45 northeast of SF-44 within former Building A (**Figure 4-21**). SF-45, interpreted as a blind floor sump, was initially identified as a two-foot diameter depression and concrete patch in the floor (**Appendix B, Photograph 43**). During excavation, SF-45 was identified as a poured concrete basin with a solid bottom (**Appendix B, Photograph 44**). The structure contained solid resin, concrete and bentonite fill. A solid characterization sample was collected from SF-45 during the CRI in 1997. The analytical results of the solid characterization sample are presented in **Table 4-45**.

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SF-45 was excavated and removed on April 3, 2006. AMO observed no stained soil within the excavation. At completion, the excavation was 3.5 feet deep and covered an area of 28 ft². Approximately eight yds³ of soil were removed and staged for waste characterization and off-site disposal/recycling. The contents of the basin were staged with the soil for off-site disposal/recycling, and concrete generated from the excavation was staged for off-site recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location and one composite sample location. All PRCSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. The additional analyses differed from the proposed *SAMP* sampling protocol with the addition of SVOCs, PCBs, metals and cyanide analyses. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Since solids within SF-45 were previously characterized during the CRI, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-45 PRCSs are presented in **Table 4-46**.

Following receipt of the PRCS analytical results (**Table 4-7**), the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-45.

SF-46 SF-46 was initially inspected by AMO on March 28, 2006. SF-46, interpreted as former lavatory floor drains and water supply piping, was located approximately 60 feet east of SF-45 within former Building A (**Figure 4-22**). It was comprised of a 2.5-foot by 3.0-foot vault and a 2.0-foot by 4.0-foot vault, which was located approximately 23 feet south of the first vault (**Appendix B, Photographs 45 and 46**). The northern vault contained a two-inch diameter horizontal steel pipe at the north side of the vault. The southern vault contained a vertical steel pipe that appeared to connect to the northern vault (**Appendix B, Photograph 47**). Both vaults were filled with sediment, brick and concrete debris. AMO collected a solids characterization sample from the northern vault on March 29, 2006. The characterization sample was submitted to STL for laboratory analysis of TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-47**.

SF-46 was excavated and removed on March 30, 2006. The excavation included both vaults and the connecting two-inch diameter pipe (**Appendix B, Photograph 48**). AMO did not observe any stained soil within the excavation. At completion, the excavation was 3.5 feet deep and covered an area of 238 ft². Approximately one yd³ of soil was removed and staged for waste characterization and off-site disposal/recycling. The concrete removed during excavation of SF-46 was also staged for recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Since the SF-46 excavation was greater in size than anticipated, the

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SAMP sampling protocol was modified. The *SAMP* required the collection of the following: two composite samples for analysis of SVOCs, PCBs, metals and cyanide; two grab samples for analysis of VOCs; and, two grab samples for analysis of analysis of SVOCs, PCBs, metals and cyanide. Instead, two additional composite samples were collected and all four (4) grab

samples were submitted for all the analyses. Considering the SF-46 solids characterization results obtained by AMO, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. All PRCSSs were submitted to STL for laboratory analysis. The analytical results of the SF-46 PRCSSs are presented in **Table 4-48**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results for several constituents were above the evaluation criteria. Thus, additional remedial activities are necessary for SF-46.

SF-47 AMO accessed and inspected SF-47 on March 28, 2006. It was located approximately 100 feet east-northeast of SF-46 within former Building A (**Figure 4-23**). SF-47, interpreted as a former machine foundation pit, was four (4) 2.5-foot square by 2-foot deep concrete vaults with concrete bottoms situated in a concrete structure (**Appendix B, Photograph 49**). The vaults were spaced 1.5 feet apart and were sealed by an 8-foot by 10-foot concrete patch. The four vaults contained approximately 20 gallons of black non-viscous liquid and approximately 4 yds³ of dark sediment. AMO collected solid and liquid characterization samples from the vaults and submitted the characterization samples for analysis of TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. The liquid contents of the vaults were pumped into a drum and staged for waste characterization and off-site disposal, and the solids were staged for waste characterization and off-site disposal/recycling. The analytical results of the solid and liquid characterization samples are presented in **Tables 4-49 and 4-50**.

SF-47 was excavated and removed on April 6, 2006. The base of the concrete structure that contained the four vaults was encountered at 5-feet bgs. AMO did not observe any stained soil beneath the structure. At completion, the excavation was 8 feet deep and covered an area of 238 ft². Approximately three yds³ of soil were removed and staged for characterization and off-site disposal/recycling.

PRCSSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and two (2) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location. All PRCSSs were submitted to STL for laboratory analysis. Two grab samples were submitted for analysis of AOC VOCs, and the other two grab samples were submitted for AOC VOCs, SVOCs, PCBs, metals and cyanide. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Considering the SF-47 solid and liquid characterization results obtained by AMO, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-47 PRCSSs are presented in **Table 4-51**.

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Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-47.

SF-48 AMO accessed and inspected SF-48 on October 16, 2007. SF-48 was located within the main entrance door of Building U (**Figure 4-24**). No interpretation was offered for SF-48 prior to excavation. SF-48 consisted of two parallel, north-south oriented "lines" of fill ports and what appeared to be associated "rail" structures for potentially moving heavy equipment between work stations (**Appendix B, Photograph 50**). The fill ports were evenly spaced 10.3-feet apart in the north-south direction, and were spaced approximately 15-feet apart in the east-west direction. Prior to excavation, the only thing that could be determined concerning SF-48 was that the fill ports connected to 3-inch inside diameter vertical piping; each vertical pipe extended approximately 12-inches vertically, and that the vertical pipes connected to horizontal pipes running north-south. The vertical pipes at the north end of SF-48 connected to the horizontal piping with elbows, and the vertical pipes near the middle of SF-48 were connected to the horizontal pipes with tees. No liquids or solids were observed in any of the piping at SF-48; therefore, no characterization samples were collected from SF-48.

SF-48 was excavated and removed from February 12 through February 15, 2008. The base of the concrete surrounding the fill ports was encountered at 9-inches bgs. The base of the concrete surrounding the rail structures was encountered at 18-inches bgs. AMO did not observe any stained soil beneath the concrete. The fill ports were connected to horizontal piping that was oriented north-south beneath the Building U floor slab. The southern end of the piping contained electrical wiring (**Appendix B, Photograph 51**). Electrical junction boxes, which had been previously filled with concrete, were connected to the piping at the northeastern and southwestern corners of SF-48. The piping from the southwestern box continued traveling to the west toward an old transformer pad. No piping was observed running from the northeastern junction box. At completion, the excavation was 18-inches deep and covered an area of approximately 3,000 ft² (**Appendix B, Photograph 52**). Concrete from the excavation was staged for offsite recycling. Since no subsurface feature associated with SF-48 was identified, and no signs of impacted soil were observed, the minimal amount of soil disturbed was staged near the excavation pending completion.

Following excavation of the concrete, piping, and rail structures that comprised SF-48, east-west test trenches were excavated at the north end, south end, and center of the SF-48 excavation. An additional test trench was excavated outside of the Building U slab, west of the Building U Loading Dock. The test trenches were excavated to ensure that no piping was overlooked that was potentially connected to an underground storage tank (due to the original makeup of SF-48 consisting of multiple fill ports). During the excavation of the southern test trench within the Building U slab, a 2-foot diameter manhole encased in a 5-foot diameter concrete ring was encountered. This "structure" was identified as UK-46; a summary of the investigation and excavation of UK-46 is provided in the UK-46 section of this report.

No subsurface feature associated with SF-48 was identified. Thus, no PRCSs were collected from the SF-48 excavation. No remedial activities are necessary for SF-48.

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SF-49 SF-49 was initially inspected by AMO on March 28, 2006. SF-49, interpreted as a former machine foundation pit, was located approximately 250 feet from SF-47 in the northeast corner of Building E (**Figure 4-25**). SF-49 was a 4-foot wide by 9-foot long by 6-foot deep concrete vault with an open bottom that was sealed by a 4.5-foot by 9.5-foot concrete patch (**Appendix B, Photograph 53**). The concrete vault walls were one foot thick, and the vault was filled with demolition debris when accessed during the excavation activities conducted on April 13, 2006. Prior to excavation, the demolition debris was removed from the vault (**Appendix B, Photograph 54**). A solid characterization sample was collected from SF-49 during the 1997 CRI. The analytical results of the SF-49 solid characterization sample are presented in **Table 4-52**.

SF-49 was excavated and removed on April 13, 2006. AMO observed no stained soil within the excavation. At completion, the excavation was 7 feet deep and covered an area of 86 ft² (**Appendix B, Photograph 55**). No soil was removed from the excavation. Concrete generated from the excavation was staged for off-site recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and four (4) composite samples were collected from the sidewalls of the excavation. All PRCSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Considering the SF-49 solid characterization sample results obtained during the CRI did not exceed the comparison to cleanup goals or soil screening criteria described in **Section 3.0**, no additional analyses were added to the target parameter list. The analytical results of the SF-49 PRCSs are presented in **Table 4-53**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were all below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-49.

SF-51 AMO accessed and inspected SF-51 on March 29, 2006. As shown on **Figure 4-26**, it was located approximately 240 feet south-southwest of SF-49 in the northwest corner of the "Unnamed Building" located along the southern property boundary. SF-51, interpreted as a former septic clean-out access sump, was a 2-foot by 2.5-foot poured concrete vault with an open bottom and covered with a metal plate (**Appendix B, Photograph 56**). AMO observed two north-south trending four-inch diameter cast iron pipes with two cleanouts within the vault. AMO collected a solid characterization sample from a depth of one foot beneath the earthen floor of the vault. The sample was submitted for analysis of TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. No liquid was present in SF-51 during the inspection. The analytical results of the solid characterization sample are presented in **Table 4-54**.

SF-51, including the four-inch diameter piping within the vault, was excavated and removed on April 20, 2006. AMO did not observe any stained soil within the excavation. At completion, the excavation was 4 feet deep and covered an area of 25 ft². Approximately one-half yd³ of soil was removed and staged for characterization and off-site disposal/recycling.

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PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and two (2) composite samples were collected from the sidewalls of the excavation. All PRCSSs were submitted to STL for laboratory analysis. Two grab samples were submitted for analysis of AOC VOCs, and the other two grab samples were submitted for AOC VOCs, SVOCs, PCBs, metals and cyanide. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Considering the SF-51 solids characterization results obtained by AMO, the grab and composite samples were also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the SF-51 PRCSSs are presented in **Table 4-55**.

Following receipt of the PRCSS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for SF-51.

SF-55 SF-55 was initially accessed and inspected by AMO on March 27, 2006. SF-55, interpreted as a former production water well vault and steel UST used for containing pressurized water, was located approximately 525 feet north of SF-51 and north of former Building F near the northern property boundary (**Figure 4-27**). The vault was constructed of concrete, was 10-feet by 10-feet by 8-feet deep, and had two 32-inch square steel manhole covers (**Appendix B, Photograph 57**). Within the vault was a 65-foot deep, 12-inch diameter water well with associated piping and electrical equipment (**Appendix B, Photograph 58**). The end of a 6.5-foot diameter steel water tank was visible within the western wall of the vault, and a 6-inch diameter pipe ran from the tank horizontally through the south wall of the vault at 5 feet bgs. No solids or liquids were present within the SF-55 vault; therefore, no solid or liquid characterization samples were collected.

On March 29, 2006, the water well was abandoned by Aquifer Drilling and Testing, Inc. (ADT) of New York, N.Y. ADT filed a well abandonment report with NYSDEC following completion of the well abandonment. SF-55 was excavated and removed on April 11, 2006. AMO did not observe any stained soil within the excavation. At completion, the excavation was 8.5 feet deep and covered an area of 735 ft². The 6,200-gallon steel water tank was approximately 25 feet long (**Appendix B, Photograph 59**). The tank, concrete from the vault, and concrete that covered the tank were staged for off-site recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and two (2) composite samples were collected from the sidewalls of the excavation. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location. All PRCSSs were submitted to STL for laboratory analysis. Two grab samples were submitted for analysis of AOC VOCs, and the other two grab samples were submitted for AOC VOCs, SVOCs, PCBs, metals and cyanide. Duplicate, matrix spike, and matrix spike duplicate samples were also collected from one grab sample location and submitted for analysis of all AOC constituents. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. The analytical results of the SF-55 PRCSSs are presented in **Table 4-56**.

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Following receipt of the PRCS analytical results, they were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentration*. The analytical result at one sample location for benzo(a)pyrene was above the evaluation criteria, thus, additional remedial activities are recommended for SF-55.

UK-01 AMO inspected UK-01 on March 28, 2006. UK-01 was located at the base of the western side of the Building U Loading Dock (**Figure 4-28**). UK-01 consisted of a small catch basin that drained stormwater from the base of the loading dock (**Appendix B, Photograph 60**). The catch basin piping ran to a large dry well that was approximately 13-feet deep and approximately 12-feet in diameter at its earthen base. The manhole for the drywell was located approximately 15-feet south of the UK-01 catch basin. No piping was observed within the UK-01 dry well prior to excavation; however, the catch basin was charged with water and the water could be heard entering the dry well. AMO collected a solid characterization sample from UK-01 during the 2006 removal action. During UK-01 excavation in 2008, two additional features were exposed, and a second solid characterization sample was collected. The analytical results of the solid characterization samples collected from UK-01 are presented in **Table 4-57**.

Excavation of UK-01 began on March 4 and was completed on March 12, 2008. The pipe from the catch basin was traced southward to the dry well and removed. Once excavation of the dry well was started, an additional terra cotta pipe was exposed that ran eastward from the dry well. That pipe was traced and was observed to enter a second dry well, to the east of UK-01. This feature was identified as UK-01A (**Appendix B, Photograph 61**). Exploratory excavation around UK-01A exposed an additional terra cotta pipe traveling east from UK-01A. The additional pipe was traced to a third dry well (UK-01B, **Appendix B, Photograph 62**). The only piping exposed during exploratory excavation at UK-01B ran to the north where it connected to another catch basin within the Building U Loading Dock, identical to the original UK01 feature. Following discovery of the additional dry wells, excavation commenced to remove each of them. AMO observed minor soil discoloration at the base of each UK-01 dry well. The excavation was deepened to remove the discolored soil from beneath each of the dry wells, the depth of which coincided with groundwater (**Appendix B, Photograph 63**). At completion, the excavation was 15-feet deep and covered an area of approximately 1,650 ft². Approximately 900 yds³ of soil were staged for characterization and off-site disposal/recycling.

Considering the base of the excavation encountered groundwater, no PRCSs were collected from the UK-01 excavation, and no additional remedial activities are necessary for UK-01.

UK-05 AMO inspected UK-05 on March 28, 2006. It was located approximately 215 feet southwest of SF-55 at the southwest corner of former Building F (**Figure 4-29**). UK-05, interpreted as potentially being associated with the Northern Leaching Chamber Field, was visible as a depression partially beneath an 18-inch thick concrete slab south of the "small brick building" (**Appendix B, Photograph 64**). Four pipes were observed beneath the concrete slab. One six-inch diameter steel pipe and one three-inch diameter steel pipe ran horizontally in a northwest-southeast trend, and two (2) four-inch diameter fiberglass pipes were oriented east-west. The fiberglass pipes contained resin similar to that observed elsewhere onsite. The feature was previously identified and reportedly removed by ERM during their 2004/2005 removal action, but no characterization or PRCSs were collected. At the time of removal, UK-5 reportedly had

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a solid bottom and contained gray brick, slag and hardened epoxy.

On March 31, 2006, the area near UK-05 was excavated to a depth of 10 feet bgs and covered an area of 240 ft². The two fiberglass pipes ended within the excavation, but the two steel pipes continued toward the southeast within the Phase 1 Demolition Area. On April 21, 2006, the steel pipes were excavated to determine each pipe's terminus and to determine if the pipes were connected to other subsurface features. The 3-inch diameter pipe, which was on the north side of the excavation, turned eastward after 12 feet and terminated approximately 12 feet further. The 6-inch diameter pipe continued southeastward approximately 26 feet before terminating (**Appendix B, Photograph 65**). At completion, the excavation area was 358 ft². No other subsurface features were encountered. AMO did not observe any stained soil within the excavations or beneath the pipe discharge points; therefore, no PRCs were collected. Soil removed from the UK-05 area was reused as backfill for the excavation.

UK-07 UK-07 was initially inspected by AMO on March 28, 2006. This feature was not previously identified or documented. UK-07, interpreted as a blind floor sump, was located approximately 415 feet south of UK-05 and within the footprint of former Building A near the southern property boundary (**Figure 4-30**). UK-07 was a five-gallon plastic bucket placed vertically within the concrete floor (**Appendix B, Photograph 66**). AMO observed holes drilled through the side and bottom of the bucket presumably for drainage. It was filled primarily with brick and concrete demolition debris with minor amounts of sediment and leaves. No characterization sample was collected because the majority of the contents were demolition debris.

UK-07 was excavated and removed on March 29, 2006. AMO observed minor soil discoloration beneath the bucket. At completion, the excavation was two feet deep and covered an area of six ft². Approximately one-half yd³ of soil was staged for characterization and off-site disposal/recycling. The bucket was also staged for off-site disposal/recycling.

A PRCs was collected from the base of the UK-07 excavation to confirm all impacted soil had been removed from the limited excavation area. One (1) grab sample was collected from the base of the excavation. The PRCs was submitted to STL for laboratory analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. The analytical results of the UK-07 PRCs are presented in **Table 4-58**.

Following receipt of the PRCs analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-07.

UK-08 AMO inspected UK-08 on March 29, 2006. This feature was not previously identified or documented. It was located approximately 270 feet north-northeast of UK-07 within former Building E. UK-08 was identified by property owner representatives as a six- to eight-year old interior loading dock with two five-inch diameter plastic storm water drainage pipes (**Appendix B, Photograph 67**). These pipes extend approximately two feet vertically beneath the base of the concrete loading dock ramp into an inaccessible vault of unknown construction. A solid

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characterization sample was collected from UK-08 at a depth of four feet beneath the top of sediment within the vault. The characterization sample was submitted to STL for analysis of the TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. The analytical results of the UK-08 solid characterization sample are presented in **Table 4-59**.

Following receipt of the solid characterization sample analytical results, they were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus, no remedial activities are recommended for UK-08.

UK-09 UK-09 was initially accessed and inspected by AMO on March 28, 2006. This feature was not previously identified or documented. UK-09, identified as a blind floor sump, was located approximately 250 feet southwest of UK-08 within former Building A (**Figure 4-31**). It was a 12-inch diameter by 38-inch long open-bottomed fiberglass pipe with an expanded metal screen at the top (**Appendix B, Photograph 68**). The pipe was situated vertically in the concrete floor. The upper portion of the pipe contained some demolition debris, but the lower portion of the pipe contained mainly sediment. On March 29, 2006, a solid characterization sample was collected from UK-09 at a depth of three feet bgs. The characterization sample was submitted for analysis of the TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. The analytical results of the solid characterization sample are presented in **Table 4-60**.

UK-09 was excavated and removed on March 29, 2006 (**Appendix B, Photograph 69**). AMO observed approximately six inches of discolored soil beneath the base of the pipe. The excavation was deepened to remove the discolored soil. At completion, the excavation was 5 feet deep and covered an area of 13 ft². Approximately two yds³ of soil were removed and staged for characterization and off-site disposal/recycling. The fiberglass pipe was staged with the excavated soil.

A PRCS was collected from the base of the UK-09 excavation to confirm all impacted soil had been removed from the limited excavation area. One (1) grab sample was collected from the base of the excavation. The PRCS was submitted to STL for laboratory analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. Considering the UK-09 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the UK-09 PRCS are presented in **Table 4-61**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-09.

UK-10 AMO accessed and inspected UK-10 on March 28, 2006. This feature was not previously identified or documented. It was located approximately 205 feet north-northeast of UK-09

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within former Building D (**Figure 4-32**). UK-10, interpreted as a blind floor sump, was a 32-inch diameter concrete basin with a concrete bottom covered by a 24-inch diameter metal drainage grate (**Appendix B, Photograph 70**). The concrete basin was nearly full of sediment. A solid characterization sample and duplicate sample were collected from UK-10 at a depth of 1.5 to 2.0 feet bgs. The characterization sample was submitted to STL for analysis of TCL VOCs, SVOCs, PCBs and pesticides, and TAL metals and cyanide. The analytical results of the UK-10 solid characterization sample are presented in **Table 4-62**.

UK-10 was excavated and removed on April 3, 2006. AMO observed no stained soil within the excavation. At completion, the excavation was 5 feet deep and covered an area of 64 ft². Approximately one yd³ of soil was removed and staged for off-site disposal/recycling. The concrete structure was also staged for off-site disposal/recycling.

PRCSs were collected from the base and sidewalls of the excavation to confirm all impacted soil had been removed. Four (4) grab samples were collected from the base of the excavation, and two (2) composite samples were collected from the sidewalls of the excavation. A duplicate sample was also collected from one grab sample location. All PRCSs were submitted to STL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. The composite samples were submitted for analysis of AOC SVOCs, PCBs, metals and cyanide. Considering the UK-10 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the UK-10 PRCSs are presented in **Table 4-63**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-10.

UK-33 & UST-13A AMO accessed and inspected UK-33 on September 27, 2007. This feature was not previously identified or documented. It was located approximately 25 feet southwest of SF-45 within the floor slab of former Building A (**Figure 4-33 and Appendix B, Photographs 71 and 72**). UK-33 was an 8-foot by 5-foot concrete vault with a solid concrete bottom. The vault was empty except for fiberglass piping that ran vertically down the north and south walls, and 0.75-inch steel piping that entered the vault through the east wall. No solids or liquids were present in UK-33; therefore, no characterization samples were collected.

UK-33 was excavated and removed on April 27, 2006. Once the eastern wall was broken by the excavator, the 0.75-inch piping was traced to a 275-gallon former fuel oil underground storage tank (UST) that was empty (**Appendix B, Photograph 73**). The UST was excavated along with the vault. The AMO observed no stained soil within either excavation. At completion, the UK-33 excavation was 12 feet deep and covered an area of 267 ft². Approximately 20 yds³ of soil were removed and staged for off-site disposal/recycling. The concrete structure and UST were also staged for off-site disposal/recycling. The UST -13A excavation was 8-feet deep and covered an area of 142 ft². Approximately 10 yds³ of soil were removed and staged for off-site disposal/recycling.

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PRCSs were collected from the base of the UK-33 excavation, and from the base and sidewalls of the UST-13A excavation to confirm all impacted soil had been removed. One grab sample was collected from the base of the UK-33 excavation and was submitted to ETL for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide. One grab sample was collected from the base and three grab samples were collected from the sidewalls of the UST-13A excavation (no west wall existed for the UST-13A excavation as it was removed during the UK-33 excavation). The UST-13A PRCSs were submitted to ETL for laboratory analysis. The grab samples were submitted for analysis of AOC VOCs, SVOCs, PCBs, metals and cyanide, as well as NYSDEC Spill Technology and Remediation Series (STARS) constituents. The analytical results of the UK-33 PRCSs are presented in **Table 4-64** and the analytical results of the UST-13A PRCSs are presented in **Table 4-65**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria. Thus, no additional remedial activities are necessary for UK-33 and UST-13A.

UK-37 UK-37 was discovered on November 2, 2007 during excavation of Area 3F (part of Remedial Work Element I). The feature was not previously identified or documented. UK-37 consisted of three cylindrical solid concrete dry wells with earthen bottoms. Each dry well had a two-foot diameter steel manhole, and an earthen base was encountered at 6-feet below the top of the structure (approximately 9-feet bgs), and was approximately 6-feet in diameter at the base. UK-37 was oriented northwest-southeast (**Appendix B, Photograph 74**), and appeared to represent the southeastern most portion of the Northern Leaching Chamber Field depicted on historic drawings of the Site. The northwestern-most structure was located approximately 10-feet south of the southeastern corner of the "small red brick building" (**Figure 4-34**). A solid characterization sample was collected from the middle structure at a depth of 6-feet below the top of the structure. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the solid characterization sample are presented in **Table 4-66**.

Excavation and removal of UK-37 was completed November 2, 2007 (**Appendix B, Photograph 75**). AMO observed no stained soil within the excavation. At completion, the excavation was 15-feet deep and covered an area of 360 ft². Since UK-37 was within excavation area 3F, all soil removed from the excavation was staged with the soil removed from excavation 3F for offsite disposal.

In accordance with the SAMP for Remedial Elements I and II, a PRCS was collected from the base of the UK-37 excavation. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. The analytical results of the UK-37 PRCS are presented in **Table 4-67**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for this UK-37.

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UK-42 UK-42 was initially discovered and investigated by AMO on December 7, 2007 following the demolition of Building H. The feature was not previously identified or documented. UK-42 was a 7-foot x 15-foot vault that appeared to be associated with the city water main that formerly entered Building H then traveled west to the pump room (**Figure 4-35 and Appendix B, Photograph 76**). A water shut-off valve box was located near the northeastern corner of the vault. UK-42 was approximately 15-feet west of SF-13. The vault was full of demolition debris; therefore, a solid characterization sample could not be collected from UK-42.

UK-42 was excavated and removed on February 18, 2008. Upon completion of the excavation, it was determined that UK-42 had an earthen bottom, and contained the previously mentioned shut-off valve box and water mains that traveled north to the shut off valve and then west. At completion, the UK-42 excavation was 5.5-feet deep and covered an area of 225 ft².

A PRCS was collected from the base of the UK-42 excavation along with a duplicate sample, a matrix spike sample and a matrix spike duplicate sample. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. The analytical results of the UK-42 PRCS are presented in **Table 4-68**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentration*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for this SF.

UK-43 UK-43 was initially discovered and investigated by AMO on December 7, 2007 following the demolition of Building H. The feature was not previously identified or documented. UK-43 was a former 11-foot x 14-foot bathroom with two vaults that contained 3-inch cast-iron piping interpreted to be sewer cleanouts. The vaults were located along the former eastern wall of Building H (**Figure 4-36**) and had solid concrete bottoms with the piping penetrating the eastern and western walls of the vaults. An additional pipe ran north-south to connect the two vaults and their associated piping. The northern vault piping appeared to have been connected to a vent pipe to the east. Both vaults were filled with demolition debris. AMO attempted to advance a hand auger through the debris to obtain a solid characterization sample, but encountered the solid base of the vaults; therefore, no solid characterization sample was collected from UK-43.

UK-43 was excavated and removed on February 13, 2008 (**Appendix B, Photograph 77**). No stained soil was observed within the excavation. At completion, the UK-43 excavation was 4-feet deep and covered an area of 300 ft².

A PRCS was collected from the base of the UK-43 excavation. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. The analytical results of the UK-43 PRCS are presented in **Table 4-69**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical

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results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-43.

UK-44 UK-44 was initially discovered and investigated on December 7, 2007. UK-44 was located east of the northeastern corner of Building U (**Figure 4-37**), and was interpreted to be stormwater catch basin (**Appendix B, Photograph 78**). It appeared that UK-44 was in line with other SFs excavated previously that were also interpreted as being stormwater catch basins (e.g., SF-01 and SF-08 [**Appendix B, Photograph 79**]). UK-44 was a 7-foot by 7-foot brick and mortar structure with an earthen base present at 4-feet bgs. The structure was topped by a 2-foot diameter steel drainage grate and had 6-inch terra cotta piping entering/exiting the western wall and the southern wall. All piping associate with UK-44 was excavated during the pipe chase from SF-08 to UK-44 and from UK-44 to UK-45. A solid characterization sample was collected from UK-44 at a depth of 5-feet bgs on February 14, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-70**.

UK-44 was excavated and removed March 3, 2008. AMO observed no stained or discolored soil within the UK-44 excavation. At completion, the excavation was 7-feet deep and covered an area of 225 ft². Approximately 45 yds³ of soil were removed and staged separately for offsite disposal/recycling. The brick from the structure and the terra cotta piping was also staged for recycling.

In accordance with the SAMP for Remedial Elements I and II, a PRCS was collected from the base of the UK-44 excavation on March 4, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-44 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the UK-44 PRCS are presented in **Table 4-71**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-44.

UK-45 UK-45 was initially discovered and investigated on December 7, 2007. UK-45 was located approximately 75-feet south of UK-44 and 25-feet southeast of the Building U Loading Dock (**Figure 4-38**), and was interpreted to be stormwater catch basin (**Appendix B, Photograph 80**). UK-45 was a 5-foot x 5-foot concrete structure with an asphalt base present at 6-feet bgs. The structure was topped by a 2-foot x 3-foot rectangular steel drainage grate and had 6-inch terra cotta piping entering/exiting the northern wall and the southern wall (**Appendix B, Photograph 81**). The northern piping was followed from UK-44 to UK-45. All piping associate with UK-45 was excavated during the pipe chase from UK-44 to UK-45, and eventually to the south to UK-59. A solid characterization sample was collected from UK-45 at

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a depth of 5-feet bgs on February 14, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-72**.

UK-45 was excavated and removed March 3, 2008. AMO observed no stained or discolored soil within the UK-45 excavation. At completion, the excavation was 7-feet deep and covered an area of 49 ft². Approximately 7 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete structure and the terra cotta piping were also staged for recycling.

A PRCS was collected from the base of the UK-45 excavation on March 4, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-45 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the UK-45 PRCS are presented in **Table 4-73**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus, no additional remedial activities are necessary for UK-45.

UK-46 UK-46 was initially exposed and investigated on February 15, 2008 during excavation of test trenches across the SF-48 excavation (**Appendix B, Photograph 82**). UK-46 was located approximately 25-feet north of the Building U Loading Dock and 20-feet west of the eastern Building U wall (**Figure 4-39**), and was interpreted to be stormwater catch basin. UK-46 was a 4-foot diameter cast concrete ring with a 2-foot diameter manhole. The structure was filled with what appeared to be native soil. The concrete ring sat on a vertical cylinder of concrete blocks that, upon excavation, was found to sit on an earthen base at a depth of 3-feet bgs. One 6-inch terra cotta piping entered/exited the northwestern wall and one 12-inch diameter terra cotta pipe entered/exited the northern wall of the structure (**Appendix B, Photograph 83**). The northwestern oriented pipe rose toward the top of the excavation at an angle of approximately 30-degrees, and ended at ground surface approximately 54-feet northwest of UK-46. The northern piping was followed the entire length of the SF-48 excavation. During excavation of the pipe running east-west between SF-08 and UK-44, the pipe running north from UK-46 was observed to connect to the east-west oriented piping. Without breaking additional concrete, it was not possible to excavate the approximately 20-foot section of the pipe running north from UK-46 below the concrete; both ends of that portion of the piping were sealed with concrete after verifying that the piping contained no sediment. A solid characterization sample was not collected from UK-46 because the structure appeared to have been filled in with native material prior to the construction of Building U.

UK-46 was excavated and removed February 15, 2008. AMO observed no stained or discolored soil within the UK-44 excavation. At completion, the excavation was 7-feet deep and covered an area of 49 ft². Approximately 7 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete structure and the terra cotta piping were

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also staged for recycling.

A PRCS was collected from the base of the UK-45 excavation on March 4, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. The analytical results of the UK-46 PRCS are presented in **Table 4-74**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus, no additional remedial activities are necessary for UK-46.

**Eastern
Leaching
Chamber
Field**

Subsurface features UK-54 through UK-58 were identified as features believed to be portions of the Eastern Leaching Chamber Field (ELCF). As shown on **Figure 4-40**, once these five features were exposed, AMO excavated an area covering approximately 11,500 ft² attempting to locate additional features of the ELCF depicted on historical drawings of the Site. No additional features were located in the excavation depicted on **Figure 4-40**.

UK-54

UK-54 was initially accessed and inspected by AMO on February 25, 2008 during the search for the Eastern Leaching Chamber Field. UK-54 was located approximately 45-feet north of Motor Avenue and 55-feet east of SF-13 (**Figure 4-41 and Appendix B, Photograph 84**). UK-54 was interpreted to be the southern-most feature of the Eastern Leaching Chamber Field. UK-54 was approximately 11-feet deep, and was constructed of a 5-foot diameter cast concrete top that contained a 2-foot diameter steel manhole. The cast concrete top sloped outward and downward at an approximately a 45-degree angle. The concrete top rested on a cylindrical wall constructed of concrete blocks (**Appendix B, Photograph 85**). The walls were essentially vertical with the concrete blocks staggered, such that they sloped slightly toward the outside. The cylindrical structure was approximately 12-feet in diameter at the base of the walls. The only piping observed entering/exiting UK-54 was 4-inch diameter terra cotta penetrating the eastern side of the structure. The pipe was followed to the east approximately 7-feet, where it was "teed" into a north-south running pipe. A solid characterization sample was collected from UK-54 at a depth of 12-feet bgs on February 26, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-75**.

UK-54 was excavated and removed February 27, 2008. AMO observed no stained or discolored soil within the UK-54 excavation. At completion, the excavation was 14-feet deep and covered an area of 300 ft². Approximately 100 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete top and concrete block were also staged for recycling.

A PRCS was collected from the base of the UK-54 excavation on March 27, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-54 solid characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol.

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The analytical results of the UK-54 PRCS are presented in **Table 4-76**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-54.

UK-55 UK-55 was initially accessed and inspected by AMO on February 25, 2008 during the search for the Eastern Leaching Chamber Field. UK-55 was located approximately 30-feet north of UK-54 (**Figure 4-41**). UK-55 was interpreted to be a feature of the Eastern Leaching Chamber

Field. UK-55 was approximately 11-feet deep, and was constructed of a 5-foot diameter cast concrete top that contained a 2-foot diameter steel manhole. The cast concrete top sloped outward and downward at an approximately a 45-degree angle (**Appendix B, Photograph 86**). The concrete top rested on a cylindrical wall constructed of concrete blocks. The walls were essentially vertical with the concrete blocks staggered, such that they sloped slightly toward the outside. The cylindrical structure was approximately 12-feet in diameter at the base of the walls. The only piping observed entering/exiting UK-55 penetrate the eastern side of the structure. The pipe was followed to the east approximately 7-feet, where it was "teed" into a north-south running pipe. A solid characterization sample was collected from UK-55 at a depth of 12-feet bgs on February 26, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-77**.

UK-55 was excavated and removed February 27, 2008. AMO observed no stained or discolored soil within the UK-55 excavation. At completion, the excavation was 14-feet deep and covered an area of 300 ft². Approximately 100 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete top and concrete block were also staged for recycling.

A PRCS was collected from the base of the UK-55 excavation on March 27, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-55 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the UK-55 PRCS are presented in **Table 4-78**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-55.

UK-56 UK-56 was initially accessed and inspected by AMO on February 25, 2008 during the search for the Eastern Leaching Chamber Field. UK-56 was located approximately 30-feet north of UK-55 (**Figure 4-41**). UK-56 was interpreted to be a feature of the Eastern Leaching Chamber Field. UK-56 was approximately 11-feet deep, and was constructed of a 5-foot diameter cast

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concrete top that contained a 2-foot diameter steel manhole. The cast concrete top sloped outward and downward at an approximately a 45-degree angle. The concrete top rested on a cylindrical wall constructed of concrete blocks. The walls were essentially vertical with the concrete blocks staggered, such that they sloped slightly toward the outside (**Appendix B, Photograph 87**). The cylindrical structure was approximately 12-feet in diameter at the base of the walls. The only piping observed entering/exiting UK-56 penetrate the eastern side of the structure. The pipe was followed to the east approximately 7-feet, where it was “teed” into a north-south running pipe. A solid characterization sample was collected from UK-56 at a depth of 12-feet bgs on February 26, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-79**.

UK-56 was excavated and removed February 27, 2008. AMO observed no stained or discolored soil within the UK-56 excavation. At completion, the excavation was 14-feet deep and covered an area of 300 ft². Approximately 100 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete top and concrete block were also staged for recycling.

In accordance with the SAMP for Remedial Elements I and II, a PRCS was collected from the base of the UK-56 excavation on March 27, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-56 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol described in **Section 3.0**. The analytical results of the UK-56 PRCS are presented in **Table 4-80**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III’s *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-56.

UK-57 UK-57 was initially accessed and inspected by AMO on February 25, 2008 during the search for the Eastern Leaching Chamber Field. UK-57 was located approximately 30-feet north of UK-56 (**Figure 4-41**). UK-57 was interpreted to be a feature of the Eastern Leaching Chamber Field. UK-57 was approximately 11-feet deep, and was constructed of a 5-foot diameter cast concrete top that contained a 2-foot diameter steel manhole. The cast concrete top sloped outward and downward at an approximately a 45-degree angle. The concrete top rested on a cylindrical wall constructed of concrete blocks. The walls were essentially vertical with the concrete blocks staggered, such that they sloped slightly toward the outside (**Appendix B, Photograph 88**). The cylindrical structure was approximately 12-feet in diameter at the base of the walls. The only piping observed entering/exiting UK-57 penetrate the eastern side of the structure. The pipe was followed to the east approximately 7-feet, where it was “teed” into a north-south running pipe. A solid characterization sample was collected from UK-57 at a depth of 12-feet bgs on February 26, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-81**.

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UK-57 was excavated and removed February 27, 2008. AMO observed no stained or discolored soil within the UK-57 excavation. At completion, the excavation was 14-foot deep and covered an area of 300 ft². Approximately 100 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete top and concrete block were also staged for recycling.

In accordance with the SAMP for Remedial Elements I and II, a PRCS was collected from the base of the UK-57 excavation on March 27, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-57 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol described in **Section 3.0**. The analytical results of the UK-57 PRCS are presented in **Table 4-82**.

Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-57.

UK-58 UK-58 was initially accessed and inspected by AMO on February 25, 2008 during the search for the Eastern Leaching Chamber Field. UK-58 was located approximately 30-foot north of UK-57 (**Figure 4-41**). UK-58 was interpreted to be the northern-most feature of the Eastern Leaching Chamber Field. UK-58 was approximately 11-foot deep, and was constructed of a 5-foot diameter cast concrete top that contained a 2-foot diameter steel manhole. The cast concrete top sloped outward and downward at an approximately a 45-degree angle. The concrete top rested on a cylindrical wall constructed of concrete blocks (**Appendix B, Photograph 89**). The walls were essentially vertical with the concrete blocks staggered, such that they sloped slightly toward the outside. The cylindrical structure was approximately 12-foot in diameter at the base of the walls. The only piping observed entering/exiting UK-58 penetrate the southeastern side of the structure. The pipe was followed to the southeast approximately 10-feet, where it was connected with a 45° pipe adapter into the north end (the start of) of the north-south running pipe. A solid characterization sample was collected from UK-58 at a depth of 12-feet bgs on February 26, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-83**.

UK-58 was excavated and removed February 27, 2008. AMO observed no stained or discolored soil within the UK-58 excavation. At completion, the excavation was 14-foot deep and covered an area of 300 ft². Approximately 100 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete top and concrete block were also staged for recycling.

A PRCS was collected from the base of the UK-58 excavation on March 27, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-58 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the UK-58 PRCS are presented in **Table 4-84**.

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Following receipt of the PRCS analytical results, the results were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentrations*. The analytical results were below the evaluation criteria, thus no additional remedial activities are necessary for UK-58.

UK-59 UK-59 was accessed and inspected by AMO on March 3, 2008. UK-59 was discovered while following terra cotta piping that ran south from UK-45 (**Appendix B, Photograph 90**). UK-59 was a 5-foot by -foot concrete vault, with a cast concrete lid that contained a 2-foot diameter steel manhole (**Appendix B, Photograph 91**), and a solid concrete bottom at 5.5-feet bgs. UK-59 located approximately 45-feet north of Motor Avenue and 140-feet east of UK-55 (**Figure 4-42**). UK-59 was interpreted to be stormwater pipe cleanout basin. UK-59 was approximately 5-feet deep, and was constructed of a 5-foot diameter cast concrete top that contained a 2-foot diameter steel manhole. A 12-inch diameter terra cotta pipe entered the vault from the north (from UK-45) at 4-feet bgs, and a 12-inch diameter steel pipe exited the vault to the southeast at 5-feet bgs, and appeared to be running toward Motor Avenue. A solid characterization sample was collected from UK-59 at a depth of 4-feet bgs on March 3, 2008. The characterization sample was submitted to ETL for analysis of TCL VOCs, SVOCs, PCBs, and pesticides, and TAL metals and cyanide. The analytical results of the characterization sample are presented in **Table 4-85**.

UK-59 was excavated and removed March 3, 2008. AMO observed no stained or discolored soil within the UK-59 excavation. At completion, the excavation was 6-feet deep and covered an area of 36 ft². Approximately 6 yds³ of soil were removed and staged separately for offsite disposal/recycling. The concrete top and concrete block were also staged for recycling.

A PRCS was collected from the base of the UK-59 excavation on March 4, 2008. The PRCS was submitted to ETL for analysis of AOC VOCs, SVOCs, metals, PCBs, and cyanide. Considering the UK-59 solids characterization results obtained by AMO, the grab sample was also submitted for additional parameters identified through the target parameter list protocol. The analytical results of the PRCS collected from UK-59 on March 4, 2008 indicated that benzo(a)pyrene and dibenz(a,h)anthracene were detected at concentrations exceeding the AOC cleanup goals. The UK-59 excavation was over-excavated on March 26, 2008. Two-feet of soil were removed from each wall, and three-feet of soil were removed from the base of the excavation. An additional PRCS was collected from the base of the excavation and submitted to ETL for analysis of benzo(a)pyrene and dibenz(a,h)anthracene. The analytical results of the UK-59 PRCSs are presented in **Table 4-86**.

Following receipt of the PRCS analytical results, the results for the March 4, 2008 and March 26, 2008 samples were compared to the AOC *Cleanup Goals* and USEPA Region III's *Risk-Based Soil Concentration*. The analytical results of the two PRCSs were below the evaluation criteria, thus no additional remedial activities are necessary for UK-59.

5.0 LABORATORY DATA QUALITY

All samples collected during the Phase I Demolition Area 2006 Subsurface Feature Removal Action for regulatory evaluation were delivered properly preserved and with a chain of custody to Severn Trent Laboratories of Edison, New Jersey (STL-Edison). All samples collected during the Phase I Demolition Area 2008 Subsurface Feature Removal Action were delivered properly preserved and with a chain of custody to Environmental Testing Laboratories, Inc. of Farmingdale, New York (ETL).

All laboratory analytical reports discussed in this report have been or are being validated by URS Corporation (URS) of Fort Washington, Pennsylvania following EPA's Region II data validation protocols. The data was reviewed using a Level III review process. This process included reviewing the following: initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates; surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only). Individual data validation reports were prepared for each laboratory data package and are presented in **Appendix A** for laboratory data packages that have been completed. Additional data validation reports that are received following submission of this report will be presented in an addendum to this report. Any significant changes to the data presented in this report as a result of forthcoming data validation reports will also be included in the addendum.

Each data validation report includes a description of major deficiencies, minor deficiencies and other deficiencies as well as a comment section and summary table. Major deficiencies were identified as follows:

- VOC Analyses
 - Initial and continuing calibrations on specific instruments displayed relative response factors (RRF) less than the control limits for 2-butanone, acetone, chloroethane, and trichlorofluoromethane. Associated sample results with positive detections were considered estimated due to a minor quality control anomaly and flagged "J"; non-detects were considered unusable and flagged "R".
- SVOC Analyses
 - Initial calibrations analyzed on specific instruments displayed r^2 values less than the control limits for benzaldehyde. An r^2 value is used when the percent relative standard deviation (%RSD) value exceeds the control limit of 15.0%. Associated sample results were non-detect and were flagged "R".
 - Internal standard perylene-d12 displayed a percent recovery (%R) less than the lower control limit (i.e., 50%). Analytes (including di-n-octyl phthalate and dibenz(a,h)anthracene) associated with the internal standard with positive detections were flagged "J"; non-detects were flagged "R".
- Metals Analyses
 - The preparation blank and continuing calibration blanks displayed positive detections for potassium. Associated sample results less than the blank concentrations were flagged "R".
 - The laboratory duplicate sample analyzed in conjunction with a specific sample batch displayed a relative percent difference (RPD) greater than the control limit (i.e., 35%) for

chromium at 125.6%. Associated sample results were positive detections and were qualified as “R”.

Sample parameters identified with minor deficiencies were considered one of the following: estimated due to a minor quality control anomaly and flagged “J” if the associated sample result was a positive detection; non-detect either at the reporting limit or at sample concentration due to a minor quality control anomaly and flagged “U”; or non-detect estimated due to a minor quality control anomaly and flagged “UJ” if the associated sample result was non-detect. Sample parameters identified with other deficiencies were noted, but no additional data qualifiers were added.

Based on a review of the data, the unusable data did not have an adverse impact on the project. Three samples (SF1617AQ01, SF1617AQ02 and SF47AQ01) qualified as unusable were collected for waste characterization only. These samples were not used to develop the PRCS target parameter lists or to confirm the remediation was complete.

Twelve characterization samples (SF20SL01, SF14SL01, SF15SL01, SF44SL01, SF46SL01, SF47SL01, SF51SL01, UK01SL01, UK08SL01, UK09SL01, UK10SL01 and DUP01 for UK10SL01) qualified as unusable. The impacted parameters included: 2-butanone, acetone, benzaldehyde, chloroethane, dibenz(a,h)anthracene, di-n-octyl phthalate and trichlorofluoromethane. All positive detections were qualified with a “J” and were still used to assess whether the parameter should be included as a SF target parameter. Therefore, the unusable data qualifier did not adversely impact the project.

From the remaining samples (SF46BS01, SF47BNE01, SF47BNW01, SF47BSE01, SF47BSW01, SF47CN01, SF47CS01 and DUP09 for SF47), only acetone and chromium were qualified as unusable. Acetone was not detected; therefore, the unusable qualifier had no adverse impact on the results. If acetone had been detected, it would have been qualified as estimated with a “J”. The chromium data was rejected because the laboratory duplicate sample analyzed displayed a RPD greater than the control limit for chromium. In a follow-up inquiry, STL stated the following: “This issue was detailed in the Non-Conformance Summary of the final lab report. The QC data for *lab* duplicates indicates poor precision likely due to inability to obtain a representative homogeneous subsample. The lab controls via the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) which were within method limits (as detailed in the data package Non-Conformance Summary). In our opinion, rather than rejecting data ('R'), it would be more appropriate to qualify all positive results as 'estimated'.” Considering STL’s comments, the liquid and solid chromium characterization results being 15.6 micrograms per liter (µg/L) and 18.7 milligrams per kilogram (mg/kg), respectively, and the chromium analytical results in question (ranging from 1.5 to 10.6 mg/kg) being less than an order of magnitude below the AOC *Cleanup Goal* for chromium of 143 mg/kg, the unusable qualifier had no adverse impact on the project at these sample locations.

6.0 WASTE DISPOSITION

Waste materials generated during the subsurface feature removal activities included liquids, soil, concrete, brick, construction debris and steel USTs. The waste materials generated during the 2006 Subsurface Feature Removal Action were segregated on-site and disposed of accordingly. Disposal manifests and weigh slips are included as **Appendix C**.

Approximately 7,000 gallons of water were removed from SF-16/SF-17, former storm or sanitary sewer access sumps, by Busch Bros. Cesspool, Sewer & Drain, Corp. (BBC) of North Amityville, New York and disposed of at the Bay Park Scavenger Waste Disposal (BPSWD) facility on April 27, 2006. On May 1, 2006, approximately 3,000 gallons of water, collected from various subsurface features, were removed by BBC and transported to BPSWD.

Concrete, brick and construction debris were removed from several subsurface features. Approximately 70 yd³ of construction and demolition debris were disposed of at the 110 Sand Company landfill in Melville, New York. Approximately 587 tons of clean concrete were disposed of at Con-Strux, LLC, a recycled concrete aggregate company located in Westbury, New York.

Approximately 189 yd³ of soil were transported by J&D Trucking for disposal at Clean Earth of North Jersey, Inc.'s South Kearny, New Jersey facility.

Light iron and mixed steel was transported to Gershow Recycling in Lindenhurst, New York for recycling. Approximately 8,700 pounds of material were recycled.

The waste soil materials generated during the 2008 Subsurface Feature Removal Action were segregated and stockpiled on-site. The stockpiles were covered with tarps and will be shipped offsite pending future offsite soil shipments related to Remedial Work Element I or future work associated with the remaining onsite SFs. Clean concrete generated during the 2008 Subsurface Feature Removal Action in the Phase I Demolition Area was shipped offsite for recycling at Con-Strux, LLC. Concrete generated during the removal of SF-35, which contained large amounts of rebar, was disposed at the 110 Sand Company landfill.

7.0 FUTURE SUBSURFACE FEATURE ACTIVITIES

Following the 2004/2005 Subsurface Feature Removal Action by ERM, all remaining SFs in the Phase I Demolition Area were addressed during AMO's 2006 and 2008 Subsurface Feature Removal Actions. The locations of features requiring additional remedial activities (SF-05 and SF-06, SF-07, SF-44, SF-46 and SF-55) are shown on **Figure 7-1**. A summary of the status of the SFs in the Phase I Demolition Area is provided in **Table 7-1**. These locations are being currently being addressed by over-excavating the locations that exceed the AOC *Cleanup Goal* and/or the USEPA Region III *Risk-based Soil Concentrations for Industrial Soil*, and collecting additional end point samples. The results of this excavation and sampling program will be presented in the addendum submitted with outstanding data validation reports.

TABLES

Table 4-1

**Summary of Analytical Results
SF-01 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-01	5/7/1997	1,1,1-Trichloroethane	0.04	U	NA	286,160
SF-SL-01	5/7/1997	1,1,2,2-Tetrachloroethane	0.04	UJ	NA	14.31
SF-SL-01	5/7/1997	1,1,2-Trichloroethane	0.04	U	NA	50.20
SF-SL-01	5/7/1997	1,1-Dichloroethane	0.04	U	NA	204,400
SF-SL-01	5/7/1997	1,1-Dichloroethene	0.04	U	NA	51,100
SF-SL-01	5/7/1997	1,2-Dichloroethane	0.04	U	NA	31.45
SF-SL-01	5/7/1997	1,2-Dichloroethene (total)	0.04	U	0.25	9,198
SF-SL-01	5/7/1997	1,2-Dichloropropane	0.04	U	NA	42.08
SF-SL-01	5/7/1997	2-Butanone	0.04	U	NA	613,200
SF-SL-01	5/7/1997	2-Hexanone	0.04	UJ	NA	NA
SF-SL-01	5/7/1997	4-Methyl-2-pentanone	0.04	UJ	NA	NA
SF-SL-01	5/7/1997	Acetone	0.04	U	NA	919,800
SF-SL-01	5/7/1997	Benzene	0.00	J	NA	52.03
SF-SL-01	5/7/1997	Bromodichloromethane	0.04	U	NA	46.15
SF-SL-01	5/7/1997	Bromoform	0.04	U	NA	362.23
SF-SL-01	5/7/1997	Bromomethane	0.04	U	NA	1,430.8
SF-SL-01	5/7/1997	c-1,3-Dichloropropene	0.04	U	NA	NA
SF-SL-01	5/7/1997	Carbon Tetrachloride	0.04	U	NA	22.01
SF-SL-01	5/7/1997	Chlorobenzene	0.04	UJ	NA	20,440
SF-SL-01	5/7/1997	Chloroethane	0.04	U	NA	986.76
SF-SL-01	5/7/1997	Chloroform	0.04	U	NA	10,220
SF-SL-01	5/7/1997	Chloromethane	0.04	U	NA	NA
SF-SL-01	5/7/1997	Dibromochloromethane	0.04	U	NA	34.07
SF-SL-01	5/7/1997	Ethylbenzene	0.04	UJ	NA	102,200
SF-SL-01	5/7/1997	Methylene Chloride	0.04	U	NA	381.55
SF-SL-01	5/7/1997	Styrene	0.04	UJ	NA	204,400
SF-SL-01	5/7/1997	t-1,3-Dichloropropene	0.04	U	NA	NA
SF-SL-01	5/7/1997	TCE	0.00	J	0.7	7.15
SF-SL-01	5/7/1997	Tetrachloroethene	0.04	UJ	1.4	5.30
SF-SL-01	5/7/1997	Toluene	0.04	UJ	NA	81,760
SF-SL-01	5/7/1997	Vinyl Chloride	0.04	U	NA	3.97
SF-SL-01	5/7/1997	Xylene (Total)	0.04	UJ	NA	204,400
SF-SL-01	5/7/1997	1,2,4-Trimethylbenzene	130	U	NA	NA
SF-SL-01	5/7/1997	1,2-Dichlorobenzene	130	U	NA	91,980
SF-SL-01	5/7/1997	1,3-Dichlorobenzene	130	U	NA	3,066
SF-SL-01	5/7/1997	1,4-Dichlorobenzene	130	U	NA	119.23
SF-SL-01	5/7/1997	2,4,5-Trichlorophenol	320	U	NA	102,200
SF-SL-01	5/7/1997	2,4,6-Trichlorophenol	130	U	NA	260.15
SF-SL-01	5/7/1997	2,4-Dichlorophenol	130	U	NA	3,066
SF-SL-01	5/7/1997	2,4-Dimethylphenol	130	U	NA	20,440
SF-SL-01	5/7/1997	2,4-Dinitrophenol	320	U	NA	2,044
SF-SL-01	5/7/1997	2,4-Dinitrotoluene	130	U	NA	2,044
SF-SL-01	5/7/1997	2,6-Dinitrotoluene	130	U	NA	1,022
SF-SL-01	5/7/1997	2-Chloronaphthalene	130	U	NA	81,760

Table 4-1

**Summary of Analytical Results
SF-01 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-01	5/7/1997	2-Chlorophenol	130	U	NA	5,110
SF-SL-01	5/7/1997	2-Methylnaphthalene	5.5	J	NA	4,088
SF-SL-01	5/7/1997	2-Methylphenol	130	U	NA	51,100
SF-SL-01	5/7/1997	2-Nitroaniline	320	U	NA	NA
SF-SL-01	5/7/1997	2-Nitrophenol	130	U	NA	NA
SF-SL-01	5/7/1997	3,3'-Dichlorobenzidine	130	U	NA	6.36
SF-SL-01	5/7/1997	3+4-Methylphenol	130	U	NA	5,110
SF-SL-01	5/7/1997	3-Nitroaniline	320	U	NA	NA
SF-SL-01	5/7/1997	4,6-Dinitro-2-methylphenol	320	U	NA	NA
SF-SL-01	5/7/1997	4-Bromophenyl phenyl ether	130	U	NA	NA
SF-SL-01	5/7/1997	4-Chloro-3-methylphenol	130	U	NA	NA
SF-SL-01	5/7/1997	4-Chloroaniline	130	U	NA	4,088
SF-SL-01	5/7/1997	4-Chlorophenyl phenyl ether	130	U	NA	NA
SF-SL-01	5/7/1997	4-Nitroaniline	320	U	NA	NA
SF-SL-01	5/7/1997	4-Nitrophenol	320	U	NA	NA
SF-SL-01	5/7/1997	Acenaphthene	41	J	NA	61,320
SF-SL-01	5/7/1997	Acenaphthylene	2.7	J	NA	NA
SF-SL-01	5/7/1997	Anthracene	67	J	NA	306,600
SF-SL-01	5/7/1997	Benzo(a)anthracene	250		NA	3.92
SF-SL-01	5/7/1997	Benzo(a)pyrene	160		0.29	0.39
SF-SL-01	5/7/1997	Benzo(b)fluoranthene	270		NA	3.92
SF-SL-01	5/7/1997	Benzo(g,h,i)perylene	75	J	NA	NA
SF-SL-01	5/7/1997	Benzo(k)fluoranthene	100	J	NA	39.20
SF-SL-01	5/7/1997	bis(2-Chloroethoxy)methane	130	U	NA	NA
SF-SL-01	5/7/1997	bis(2-Chloroethyl)ether	130	U	NA	2.60
SF-SL-01	5/7/1997	bis(2-Chloroisopropyl)ether	130	U	NA	40.88
SF-SL-01	5/7/1997	bis(2-Ethylhexyl)phthalate	130	U	NA	204.40
SF-SL-01	5/7/1997	Carbazole	52	J	NA	143.08
SF-SL-01	5/7/1997	Chrysene	250		NA	392
SF-SL-01	5/7/1997	Dibenz(a,h)anthracene	26	J	0.29	0.39
SF-SL-01	5/7/1997	Dibenzofuran	25	J	NA	1,022
SF-SL-01	5/7/1997	Diethyl phthalate	130	U	NA	817,600
SF-SL-01	5/7/1997	Dimethyl phthalate	130	U	NA	NA
SF-SL-01	5/7/1997	Di-n-butyl phthalate	130	U	NA	102,200
SF-SL-01	5/7/1997	Di-n-octyl phthalate	130	U	NA	NA
SF-SL-01	5/7/1997	Fluoranthene	650		NA	40,880
SF-SL-01	5/7/1997	Fluorene	38	J	NA	40,880
SF-SL-01	5/7/1997	Hexachlorobenzene	130	U	NA	1.79
SF-SL-01	5/7/1997	Hexachlorobutadiene	130	U	NA	36.69
SF-SL-01	5/7/1997	Hexachlorocyclopentadiene	130	U	NA	6,132
SF-SL-01	5/7/1997	Hexachloroethane	130	U	NA	204.40
SF-SL-01	5/7/1997	Indeno(1,2,3-cd)pyrene	94	J	NA	3.92
SF-SL-01	5/7/1997	Isophorone	130	U	NA	3012.21
SF-SL-01	5/7/1997	Naphthalene	12	J	NA	20,440

Table 4-1

**Summary of Analytical Results
SF-01 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-01	5/7/1997	Nitrobenzene	130	U	NA	511
SF-SL-01	5/7/1997	N-Nitrosodi-n-propylamine	130	U	NA	0.41
SF-SL-01	5/7/1997	N-Nitrosodiphenylamine	130	U	NA	584
SF-SL-01	5/7/1997	Pentachlorophenol	320	U	NA	23.85
SF-SL-01	5/7/1997	Phenanthrene	490		NA	NA
SF-SL-01	5/7/1997	Phenol	130	U	NA	306,600
SF-SL-01	5/7/1997	Pyrene	500		NA	30,660
SF-SL-01	5/7/1997	4,4'-DDD	4.1		NA	11.92
SF-SL-01	5/7/1997	4,4'-DDE	0.96		NA	8.42
SF-SL-01	5/7/1997	4,4'-DDT	5		NA	8.42
SF-SL-01	5/7/1997	Aldrin	0.0067	U	NA	0.17
SF-SL-01	5/7/1997	alpha-BHC	0.0067	U	NA	0.45
SF-SL-01	5/7/1997	alpha-Chlordane	0.0067	U	NA	NA
SF-SL-01	5/7/1997	beta-BHC	0.0067	U	NA	1.59
SF-SL-01	5/7/1997	delta-BHC	0.0067	U	NA	NA
SF-SL-01	5/7/1997	Dieldrin	0.013	U	NA	0.18
SF-SL-01	5/7/1997	Endosulfan I	0.0067	U	NA	6,132
SF-SL-01	5/7/1997	Endosulfan II	0.013	U	NA	6,132
SF-SL-01	5/7/1997	Endosulfan sulfate	0.013	U	NA	NA
SF-SL-01	5/7/1997	Endrin	0.013	U	NA	307
SF-SL-01	5/7/1997	Endrin Aldehyde	0.013	U	NA	NA
SF-SL-01	5/7/1997	Endrin ketone	0.013	U	NA	NA
SF-SL-01	5/7/1997	gamma-BHC (Lindane)	0.0067	U	NA	2.20
SF-SL-01	5/7/1997	gamma-Chlordane	0.0067	U	NA	NA
SF-SL-01	5/7/1997	Heptachlor	0.0067	U	NA	0.64
SF-SL-01	5/7/1997	Heptachlor epoxide	0.0067	U	NA	0.31
SF-SL-01	5/7/1997	Methoxychlor	0.0670	U	NA	5,110
SF-SL-01	5/7/1997	Toxaphene	0.67	U	NA	2.60
SF-SL-01	5/7/1997	Aroclor 1016	0.13	U	NA	40.88
SF-SL-01	5/7/1997	Aroclor 1221	0.26	U	NA	1.43
SF-SL-01	5/7/1997	Aroclor 1232	0.13	U	NA	1.43
SF-SL-01	5/7/1997	Aroclor 1242	0.13	U	NA	1.43
SF-SL-01	5/7/1997	Aroclor 1248	0.13	U	NA	1.43
SF-SL-01	5/7/1997	Aroclor 1254	0.13	U	NA	1.43
SF-SL-01	5/7/1997	Aroclor 1260	0.13	U	NA	1.43
SF-SL-01	5/7/1997	PCBs(total)	0.26	U	10	1.43
SF-SL-01	5/7/1997	Aluminum	11,100	J	NA	1,022,000
SF-SL-01	5/7/1997	Antimony	5.3	J	NA	408.8
SF-SL-01	5/7/1997	Arsenic	15.3	J	NA	1.91
SF-SL-01	5/7/1997	Barium	309	J	NA	204,400
SF-SL-01	5/7/1997	Beryllium	0.78	J	NA	2,044
SF-SL-01	5/7/1997	Cadmium	53.3	J	10	511
SF-SL-01	5/7/1997	Calcium	6,150	J	NA	NA
SF-SL-01	5/7/1997	Chromium	1,340	J	143	3,066

Table 4-1

**Summary of Analytical Results
SF-01 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-01	5/7/1997	Cobalt	8	J	NA	NA
SF-SL-01	5/7/1997	Copper	1,740	J	NA	40,880
SF-SL-01	5/7/1997	Cyanide	15.5	J	35	20,440
SF-SL-01	5/7/1997	Iron	27,500	J	NA	715,400
SF-SL-01	5/7/1997	Lead	1,910	J	NA	NA
SF-SL-01	5/7/1997	Magnesium	2,970	J	NA	NA
SF-SL-01	5/7/1997	Manganese	638	J	NA	20,440
SF-SL-01	5/7/1997	Mercury	1.5	J	NA	NA
SF-SL-01	5/7/1997	Nickel	74.2	J	NA	20,440
SF-SL-01	5/7/1997	Potassium	607	J	NA	NA
SF-SL-01	5/7/1997	Selenium	5.6	J	NA	5,110
SF-SL-01	5/7/1997	Silver	7.8	J	NA	5,110
SF-SL-01	5/7/1997	Sodium	322	J	NA	NA
SF-SL-01	5/7/1997	Thallium	2.5	UJ	NA	71.54
SF-SL-01	5/7/1997	Vanadium	259	J	NA	1,022
SF-SL-01	5/7/1997	Zinc	1,810	J	NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) J - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. AOC Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-01 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-2

**Summary of Analytical Results
SF-01 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-01	5/7/1997	1,1,1-Trichloroethane	10	U
SF-AQ-01	5/7/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-01	5/7/1997	1,1,2-Trichloroethane	10	U
SF-AQ-01	5/7/1997	1,1-Dichloroethane	10	U
SF-AQ-01	5/7/1997	1,1-Dichloroethene	10	U
SF-AQ-01	5/7/1997	1,2-Dichloroethane	10	U
SF-AQ-01	5/7/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-01	5/7/1997	1,2-Dichloropropane	10	U
SF-AQ-01	5/7/1997	2-Butanone	10	U
SF-AQ-01	5/7/1997	2-Hexanone	10	U
SF-AQ-01	5/7/1997	4-Methyl-2-pentanone	10	U
SF-AQ-01	5/7/1997	Acetone	10	U
SF-AQ-01	5/7/1997	Benzene	10	U
SF-AQ-01	5/7/1997	Bromodichloromethane	10	U
SF-AQ-01	5/7/1997	Bromoform	10	U
SF-AQ-01	5/7/1997	Bromomethane	10	U
SF-AQ-01	5/7/1997	c-1,3-Dichloropropene	10	U
SF-AQ-01	5/7/1997	Carbon Tetrachloride	10	U
SF-AQ-01	5/7/1997	Chlorobenzene	10	U
SF-AQ-01	5/7/1997	Chloroethane	10	U
SF-AQ-01	5/7/1997	Chloroform	10	U
SF-AQ-01	5/7/1997	Chloromethane	10	U
SF-AQ-01	5/7/1997	Dibromochloromethane	10	U
SF-AQ-01	5/7/1997	Ethylbenzene	10	U
SF-AQ-01	5/7/1997	Methylene Chloride	10	U
SF-AQ-01	5/7/1997	Styrene	10	U
SF-AQ-01	5/7/1997	t-1,3-Dichloropropene	10	U
SF-AQ-01	5/7/1997	TCE	10	U
SF-AQ-01	5/7/1997	Tetrachloroethene	10	U
SF-AQ-01	5/7/1997	Toluene	10	U
SF-AQ-01	5/7/1997	Vinyl Chloride	10	U
SF-AQ-01	5/7/1997	Xylene (Total)	10	U
SF-AQ-01	5/7/1997	1,2,4-Trimethylbenzene	10	U
SF-AQ-01	5/7/1997	1,2-Dichlorobenzene	10	U
SF-AQ-01	5/7/1997	1,3-Dichlorobenzene	10	U
SF-AQ-01	5/7/1997	1,4-Dichlorobenzene	10	U
SF-AQ-01	5/7/1997	2,4,5-Trichlorophenol	26	U
SF-AQ-01	5/7/1997	2,4,6-Trichlorophenol	10	U
SF-AQ-01	5/7/1997	2,4-Dichlorophenol	10	U
SF-AQ-01	5/7/1997	2,4-Dimethylphenol	10	U
SF-AQ-01	5/7/1997	2,4-Dinitrophenol	26	U
SF-AQ-01	5/7/1997	2,4-Dinitrotoluene	10	U
SF-AQ-01	5/7/1997	2,6-Dinitrotoluene	10	U
SF-AQ-01	5/7/1997	2-Chloronaphthalene	10	U
SF-AQ-01	5/7/1997	2-Chlorophenol	10	U

Table 4-2

**Summary of Analytical Results
SF-01 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-01	5/7/1997	2-Methylnaphthalene	10	U
SF-AQ-01	5/7/1997	2-Methylphenol	10	U
SF-AQ-01	5/7/1997	2-Nitroaniline	26	U
SF-AQ-01	5/7/1997	2-Nitrophenol	10	U
SF-AQ-01	5/7/1997	3,3'-Dichlorobenzidine	10	U
SF-AQ-01	5/7/1997	3+4-Methylphenol	10	U
SF-AQ-01	5/7/1997	3-Nitroaniline	26	U
SF-AQ-01	5/7/1997	4,6-Dinitro-2-methylphenol	26	U
SF-AQ-01	5/7/1997	4-Bromophenyl phenyl ether	10	U
SF-AQ-01	5/7/1997	4-Chloro-3-methylphenol	10	U
SF-AQ-01	5/7/1997	4-Chloroaniline	10	U
SF-AQ-01	5/7/1997	4-Chlorophenyl phenyl ether	10	U
SF-AQ-01	5/7/1997	4-Nitroaniline	26	U
SF-AQ-01	5/7/1997	4-Nitrophenol	26	U
SF-AQ-01	5/7/1997	Acenaphthene	10	U
SF-AQ-01	5/7/1997	Acenaphthylene	10	U
SF-AQ-01	5/7/1997	Anthracene	0.1	J
SF-AQ-01	5/7/1997	Benzo(a)anthracene	0.6	J
SF-AQ-01	5/7/1997	Benzo(a)pyrene	0.5	J
SF-AQ-01	5/7/1997	Benzo(b)fluoranthene	1	J
SF-AQ-01	5/7/1997	Benzo(g,h,i)perylene	0.4	J
SF-AQ-01	5/7/1997	Benzo(k)fluoranthene	0.4	J
SF-AQ-01	5/7/1997	bis(2-Chloroethoxy)methane	10	U
SF-AQ-01	5/7/1997	bis(2-Chloroethyl)ether	10	U
SF-AQ-01	5/7/1997	bis(2-Chloroisopropyl)ether	10	U
SF-AQ-01	5/7/1997	bis(2-Ethylhexyl)phthalate	10	U
SF-AQ-01	5/7/1997	Carbazole	0.1	J
SF-AQ-01	5/7/1997	Chrysene	0.7	J
SF-AQ-01	5/7/1997	Dibenz(a,h)anthracene	0.1	J
SF-AQ-01	5/7/1997	Dibenzofuran	10	U
SF-AQ-01	5/7/1997	Diethyl phthalate	10	U
SF-AQ-01	5/7/1997	Dimethyl phthalate	10	U
SF-AQ-01	5/7/1997	Di-n-butyl phthalate	10	U
SF-AQ-01	5/7/1997	Di-n-octyl phthalate	10	U
SF-AQ-01	5/7/1997	Fluoranthene	1	J
SF-AQ-01	5/7/1997	Fluorene	10	U
SF-AQ-01	5/7/1997	Hexachlorobenzene	10	U
SF-AQ-01	5/7/1997	Hexachlorobutadiene	10	U
SF-AQ-01	5/7/1997	Hexachlorocyclopentadiene	10	U
SF-AQ-01	5/7/1997	Hexachloroethane	10	U
SF-AQ-01	5/7/1997	Indeno(1,2,3-cd)pyrene	0.4	J
SF-AQ-01	5/7/1997	Isophorone	10	U
SF-AQ-01	5/7/1997	Naphthalene	10	U
SF-AQ-01	5/7/1997	Nitrobenzene	10	U
SF-AQ-01	5/7/1997	N-Nitrosodi-n-propylamine	10	U

Table 4-2

**Summary of Analytical Results
SF-01 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-01	5/7/1997	N-Nitrosodiphenylamine	10	U
SF-AQ-01	5/7/1997	Pentachlorophenol	26	U
SF-AQ-01	5/7/1997	Phenanthrene	0.6	J
SF-AQ-01	5/7/1997	Phenol	10	U
SF-AQ-01	5/7/1997	Pyrene	1	J
SF-AQ-01	5/7/1997	4,4'-DDD	0.13	J
SF-AQ-01	5/7/1997	4,4'-DDE	0.11	U
SF-AQ-01	5/7/1997	4,4'-DDT	0.32	
SF-AQ-01	5/7/1997	Aldrin	0.054	U
SF-AQ-01	5/7/1997	alpha-BHC	0.054	U
SF-AQ-01	5/7/1997	alpha-Chlordane	0.054	U
SF-AQ-01	5/7/1997	beta-BHC	0.054	U
SF-AQ-01	5/7/1997	delta-BHC	0.054	U
SF-AQ-01	5/7/1997	Dieldrin	0.11	U
SF-AQ-01	5/7/1997	Endosulfan I	0.054	U
SF-AQ-01	5/7/1997	Endosulfan II	0.11	U
SF-AQ-01	5/7/1997	Endosulfan sulfate	0.11	U
SF-AQ-01	5/7/1997	Endrin	0.11	U
SF-AQ-01	5/7/1997	Endrin Aldehyde	0.11	U
SF-AQ-01	5/7/1997	Endrin ketone	0.11	U
SF-AQ-01	5/7/1997	gamma-BHC (Lindane)	0.054	U
SF-AQ-01	5/7/1997	gamma-Chlordane	0.054	U
SF-AQ-01	5/7/1997	Heptachlor	0.054	U
SF-AQ-01	5/7/1997	Heptachlor epoxide	0.054	U
SF-AQ-01	5/7/1997	Methoxychlor	0.54	U
SF-AQ-01	5/7/1997	Toxaphene	5.4	U
SF-AQ-01	5/7/1997	Aroclor 1016	1.1	U
SF-AQ-01	5/7/1997	Aroclor 1221	2.2	U
SF-AQ-01	5/7/1997	Aroclor 1232	1.1	U
SF-AQ-01	5/7/1997	Aroclor 1242	1.1	U
SF-AQ-01	5/7/1997	Aroclor 1248	1.1	U
SF-AQ-01	5/7/1997	Aroclor 1254	1.1	U
SF-AQ-01	5/7/1997	Aroclor 1260	1.1	U
SF-AQ-01	5/7/1997	PCBs(total)	2.2	U
SF-AQ-01	5/7/1997	Aluminum	611	
SF-AQ-01	5/7/1997	Antimony	2.2	U
SF-AQ-01	5/7/1997	Arsenic	3.8	
SF-AQ-01	5/7/1997	Barium	42.6	
SF-AQ-01	5/7/1997	Beryllium	0.28	
SF-AQ-01	5/7/1997	Cadmium	2.8	
SF-AQ-01	5/7/1997	Calcium	6590	
SF-AQ-01	5/7/1997	Chromium	72.9	
SF-AQ-01	5/7/1997	Cobalt	1.7	
SF-AQ-01	5/7/1997	Copper	99.9	
SF-AQ-01	5/7/1997	Cyanide	10	U

Table 4-2

**Summary of Analytical Results
SF-01 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-01	5/7/1997	Iron	2070	
SF-AQ-01	5/7/1997	Lead	106	
SF-AQ-01	5/7/1997	Magnesium	1730	
SF-AQ-01	5/7/1997	Manganese	58.1	
SF-AQ-01	5/7/1997	Mercury	0.1	U
SF-AQ-01	5/7/1997	Nickel	6.4	
SF-AQ-01	5/7/1997	Potassium	348	
SF-AQ-01	5/7/1997	Selenium	3.2	U
SF-AQ-01	5/7/1997	Silver	1	U
SF-AQ-01	5/7/1997	Sodium	1760	
SF-AQ-01	5/7/1997	Thallium	3.1	U
SF-AQ-01	5/7/1997	Vanadium	14.2	
SF-AQ-01	5/7/1997	Zinc	271	J

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) **J** - reported result is estimated due to a minor quality control anomaly.
- 5) SF-01 liquid characterization sample was collected during the Continued Remedial Investigation.

Table 4-3

**Summary of Analytical Results
SF-01 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF01BE01	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF01BE01	4/6/2006	TCE	0.001	U	0.7	7.15
SF01BE01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF01BN01	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF01BN01	4/6/2006	TCE	0.001	U	0.7	7.15
SF01BN01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF01BS01	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF01BS01	4/6/2006	TCE	0.001	U	0.7	7.15
SF01BS01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF01BW01	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF01BW01	4/6/2006	TCE	0.001	U	0.7	7.15
SF01BW01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP07	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
DUP07	4/6/2006	TCE	0.001	U	0.7	7.15
DUP07	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF01CNE01	4/6/2006	Anthracene	0.36	U	NA	306,600
SF01CNE01	4/6/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF01CNE01	4/6/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
SF01CNE01	4/6/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF01CNE01	4/6/2006	Benzo(g,h,i)perylene	0.36	U	NA	NA
SF01CNE01	4/6/2006	Benzo(k)fluoranthene	0.036	U	NA	39.2
SF01CNE01	4/6/2006	Chrysene	0.36	U	NA	392
SF01CNE01	4/6/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF01CNE01	4/6/2006	Dibenzofuran	0.36	U	NA	1,022
SF01CNE01	4/6/2006	Fluoranthene	0.36	U	NA	40,880
SF01CNE01	4/6/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF01CNE01	4/6/2006	Phenanthrene	0.36	U	NA	NA
SF01CNE01	4/6/2006	Pyrene	0.36	U	NA	30,660
SF01CNE01	4/6/2006	4,4'-DDD	0.007	U	NA	11.92
SF01CNE01	4/6/2006	4,4'-DDT	0.007	U	NA	8.42
SF01CNE01	4/6/2006	PCBs(total)	0.072	U	10	1.43
SF01CNE01	4/6/2006	Arsenic	1	B	NA	1.91
SF01CNE01	4/6/2006	Cadmium	0.13	U	10	511
SF01CNE01	4/6/2006	Chromium	3.9		143	3,066
SF01CNE01	4/6/2006	Copper	3	B	NA	40,880
SF01CNE01	4/6/2006	Lead	1.5		NA	NA
SF01CNE01	4/6/2006	Mercury	0.015	U	NA	NA
SF01CNE01	4/6/2006	Nickel	2.1	B	NA	20,440
SF01CNE01	4/6/2006	Selenium	1.1	U	NA	5,110
SF01CNE01	4/6/2006	Zinc	20.3		NA	306,600
SF01CNE01	4/6/2006	Cyanide	0.5	U	35	20,440
SF01CNW01	4/6/2006	Anthracene	0.34	U	NA	306,600
SF01CNW01	4/6/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF01CNW01	4/6/2006	Benzo(a)pyrene	0.034	U	0.29	0.39
SF01CNW01	4/6/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF01CNW01	4/6/2006	Benzo(g,h,i)perylene	0.340	U	NA	NA
SF01CNW01	4/6/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2

Table 4-3

**Summary of Analytical Results
SF-01 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF01CNW01	4/6/2006	Chrysene	0.34	U	NA	392
SF01CNW01	4/6/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF01CNW01	4/6/2006	Dibenzofuran	0.34	U	NA	1,022
SF01CNW01	4/6/2006	Fluoranthene	0.34	U	NA	40,880
SF01CNW01	4/6/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF01CNW01	4/6/2006	Phenanthrene	0.34	U	NA	NA
SF01CNW01	4/6/2006	Pyrene	0.34	U	NA	30,660
SF01CNW01	4/6/2006	4,4'-DDD	0.007	U	NA	11.92
SF01CNW01	4/6/2006	4,4'-DDT	0.007	U	NA	8.42
SF01CNW01	4/6/2006	PCBs(total)	0.069	U	10	1.43
SF01CNW01	4/6/2006	Arsenic	0.97	U	NA	1.91
SF01CNW01	4/6/2006	Cadmium	0.29	B	10	511
SF01CNW01	4/6/2006	Chromium	2	B	143	3,066
SF01CNW01	4/6/2006	Copper	1.8	B	NA	40,880
SF01CNW01	4/6/2006	Lead	1.2		NA	NA
SF01CNW01	4/6/2006	Mercury	0.017	U	NA	NA
SF01CNW01	4/6/2006	Nickel	2.4	B	NA	20,440
SF01CNW01	4/6/2006	Selenium	1	U	NA	5,110
SF01CNW01	4/6/2006	Zinc	33.3		NA	306,600
SF01CNW01	4/6/2006	Cyanide	0.5	U	35	20,440
SF01CSE01	4/6/2006	Anthracene	0.35	U	NA	306,600
SF01CSE01	4/6/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF01CSE01	4/6/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF01CSE01	4/6/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF01CSE01	4/6/2006	Benzo(g,h,i)perylene	0.35	U	NA	NA
SF01CSE01	4/6/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
SF01CSE01	4/6/2006	Chrysene	0.35	U	NA	392
SF01CSE01	4/6/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF01CSE01	4/6/2006	Dibenzofuran	0.35	U	NA	1,022
SF01CSE01	4/6/2006	Fluoranthene	0.35	U	NA	40,880
SF01CSE01	4/6/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
SF01CSE01	4/6/2006	Phenanthrene	0.35	U	NA	NA
SF01CSE01	4/6/2006	Pyrene	0.35	U	NA	30,660
SF01CSE01	4/6/2006	4,4'-DDD	0.007	U	NA	11.92
SF01CSE01	4/6/2006	4,4'-DDT	0.007	U	NA	8.42
SF01CSE01	4/6/2006	PCBs(total)	0.071	U	10	1.43
SF01CSE01	4/6/2006	Arsenic	1	U	NA	1.91
SF01CSE01	4/6/2006	Cadmium	0.13	U	10	511
SF01CSE01	4/6/2006	Chromium	6.6		143	3,066
SF01CSE01	4/6/2006	Copper	4.9	B	NA	40,880
SF01CSE01	4/6/2006	Lead	3.3		NA	NA
SF01CSE01	4/6/2006	Mercury	0.018	U	NA	NA
SF01CSE01	4/6/2006	Nickel	4.2	B	NA	20,440
SF01CSE01	4/6/2006	Selenium	1	U	NA	5,110
SF01CSE01	4/6/2006	Zinc	12.8		NA	306,600
SF01CSE01	4/6/2006	Cyanide	0.5	U	35	20,440
SF01CSW01	4/6/2006	Anthracene	0.34	U	NA	306,600

Table 4-3

**Summary of Analytical Results
SF-01 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF01CSW01	4/6/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF01CSW01	4/6/2006	Benzo(a)pyrene	0.034	U	0.29	0.39
SF01CSW01	4/6/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF01CSW01	4/6/2006	Benzo(g,h,i)perylene	0.34	U	NA	NA
SF01CSW01	4/6/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF01CSW01	4/6/2006	Chrysene	0.34	U	NA	392
SF01CSW01	4/6/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF01CSW01	4/6/2006	Dibenzofuran	0.34	U	NA	1,022
SF01CSW01	4/6/2006	Fluoranthene	0.34	U	NA	40,880
SF01CSW01	4/6/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF01CSW01	4/6/2006	Phenanthrene	0.34	U	NA	NA
SF01CSW01	4/6/2006	Pyrene	0.34	U	NA	30,660
SF01CSW01	4/6/2006	4,4'-DDD	0.007	U	NA	11.92
SF01CSW01	4/6/2006	4,4'-DDT	0.007	U	NA	8.42
SF01CSW01	4/6/2006	PCBs(total)	0.069	U	10	1.43
SF01CSW01	4/6/2006	Arsenic	1.5		NA	1.91
SF01CSW01	4/6/2006	Cadmium	0.12	U	10	511
SF01CSW01	4/6/2006	Chromium	5.2		143	3,066
SF01CSW01	4/6/2006	Copper	2.6	B	NA	40,880
SF01CSW01	4/6/2006	Lead	2		NA	NA
SF01CSW01	4/6/2006	Mercury	0.017	U	NA	NA
SF01CSW01	4/6/2006	Nickel	2.4	B	NA	20,440
SF01CSW01	4/6/2006	Selenium	1	U	NA	5,110
SF01CSW01	4/6/2006	Zinc	6.3		NA	306,600
SF01CSW01	4/6/2006	Cyanide	0.5	U	35	20,440
DUP08	4/6/2006	Anthracene	0.36	U	NA	306,600
DUP08	4/6/2006	Benzo(a)anthracene	0.036	U	NA	3.92
DUP08	4/6/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
DUP08	4/6/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
DUP08	4/6/2006	Benzo(g,h,i)perylene	0.36	U	NA	NA
DUP08	4/6/2006	Benzo(k)fluoranthene	0.036	U	NA	39.2
DUP08	4/6/2006	Chrysene	0.36	U	NA	392
DUP08	4/6/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
DUP08	4/6/2006	Dibenzofuran	0.36	U	NA	1,022
DUP08	4/6/2006	Fluoranthene	0.36	U	NA	40,880
DUP08	4/6/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
DUP08	4/6/2006	Phenanthrene	0.36	U	NA	NA
DUP08	4/6/2006	Pyrene	0.36	U	NA	30,660
DUP08	4/6/2006	4,4'-DDD	0.007	U	NA	11.92
DUP08	4/6/2006	4,4'-DDT	0.007	U	NA	8.42
DUP08	4/6/2006	PCBs(total)	0.073	U	10	1.43
DUP08	4/6/2006	Arsenic	1.2		NA	1.91
DUP08	4/6/2006	Cadmium	0.13	U	10	511
DUP08	4/6/2006	Chromium	6		143	3,066
DUP08	4/6/2006	Copper	5	B	NA	40,880
DUP08	4/6/2006	Lead	3.2		NA	NA
DUP08	4/6/2006	Mercury	0.018	U	NA	NA

Table 4-3

**Summary of Analytical Results
SF-01 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
DUP08	4/6/2006	Nickel	4.2	B	NA	20,440
DUP08	4/6/2006	Selenium	1.1	U	NA	5,110
DUP08	4/6/2006	Zinc	12		NA	306,600
DUP08	4/6/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. AOC Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-01 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-4

**Summary of Analytical Results
SF-02 Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF02BNW01	3/31/2006	cis-1,2-Dichloroethene	0.005	U	0.25	10,220
SF02BNW01	3/31/2006	TCE	0.001	U	0.7	7.15
SF02BNW01	3/31/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF02BNW01	3/31/2006	Benzo(a)pyrene	0.034	U	0.29	0.39
SF02BNW01	3/31/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.39
SF02BNW01	3/31/2006	PCBs(total)	0.069	U	10	1.43
SF02BNW01	3/31/2006	Cadmium	0.083	U	10	511
SF02BNW01	3/31/2006	Chromium	21.8		143	3,066
SF02BNW01	3/31/2006	Cyanide	0.5	U	35	20,440
DUP03	3/31/2006	cis-1,2-Dichloroethene	0.005	U	0.25	10,220
DUP03	3/31/2006	TCE	0.001	U	0.7	7.15
DUP03	3/31/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP03	3/31/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
DUP03	3/31/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
DUP03	3/31/2006	PCBs(total)	0.07	U	10	1.43
DUP03	3/31/2006	Cadmium	0.084	U	10	511

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 3) TCE - trichloroethene.
- 4) PCBs - polychlorinated biphenyls.
- 5) U - not detected at a concentration equal to or exceeding the method detection limit.
- 6) SF-02 confirmation sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-5

**Summary of Analytical Results
SF-03 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-03	5/7/1997	1,1,1-Trichloroethane	10	U
SF-AQ-03	5/7/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-03	5/7/1997	1,1,2-Trichloroethane	10	U
SF-AQ-03	5/7/1997	1,1-Dichloroethane	10	U
SF-AQ-03	5/7/1997	1,1-Dichloroethene	10	U
SF-AQ-03	5/7/1997	1,2-Dichloroethane	10	U
SF-AQ-03	5/7/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-03	5/7/1997	1,2-Dichloropropane	10	U
SF-AQ-03	5/7/1997	2-Butanone	10	U
SF-AQ-03	5/7/1997	2-Hexanone	10	U
SF-AQ-03	5/7/1997	4-Methyl-2-pentanone	10	U
SF-AQ-03	5/7/1997	Acetone	10	U
SF-AQ-03	5/7/1997	Benzene	10	U
SF-AQ-03	5/7/1997	Bromodichloromethane	10	U
SF-AQ-03	5/7/1997	Bromoform	10	U
SF-AQ-03	5/7/1997	Bromomethane	10	U
SF-AQ-03	5/7/1997	c-1,3-Dichloropropene	10	U
SF-AQ-03	5/7/1997	Carbon Tetrachloride	10	U
SF-AQ-03	5/7/1997	Chlorobenzene	10	U
SF-AQ-03	5/7/1997	Chloroethane	10	U
SF-AQ-03	5/7/1997	Chloroform	10	U
SF-AQ-03	5/7/1997	Chloromethane	10	U
SF-AQ-03	5/7/1997	Dibromochloromethane	10	U
SF-AQ-03	5/7/1997	Ethylbenzene	10	U
SF-AQ-03	5/7/1997	Methylene Chloride	10	U
SF-AQ-03	5/7/1997	Styrene	10	U
SF-AQ-03	5/7/1997	t-1,3-Dichloropropene	10	U
SF-AQ-03	5/7/1997	TCE	10	U
SF-AQ-03	5/7/1997	Tetrachloroethene	10	U
SF-AQ-03	5/7/1997	Toluene	10	U
SF-AQ-03	5/7/1997	Vinyl Chloride	10	U
SF-AQ-03	5/7/1997	Xylene (Total)	10	U
SF-AQ-03	5/7/1997	1,2,4-Trimethylbenzene	10	U
SF-AQ-03	5/7/1997	1,2-Dichlorobenzene	10	U
SF-AQ-03	5/7/1997	1,3-Dichlorobenzene	10	U
SF-AQ-03	5/7/1997	1,4-Dichlorobenzene	10	U
SF-AQ-03	5/7/1997	2,4,5-Trichlorophenol	25	U
SF-AQ-03	5/7/1997	2,4,6-Trichlorophenol	10	U
SF-AQ-03	5/7/1997	2,4-Dichlorophenol	10	U
SF-AQ-03	5/7/1997	2,4-Dimethylphenol	10	U
SF-AQ-03	5/7/1997	2,4-Dinitrophenol	25	U
SF-AQ-03	5/7/1997	2,4-Dinitrotoluene	10	U
SF-AQ-03	5/7/1997	2,6-Dinitrotoluene	10	U
SF-AQ-03	5/7/1997	2-Chloronaphthalene	10	U
SF-AQ-03	5/7/1997	2-Chlorophenol	10	U

Table 4-5

**Summary of Analytical Results
SF-03 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-03	5/7/1997	2-Methylnaphthalene	10	U
SF-AQ-03	5/7/1997	2-Methylphenol	10	U
SF-AQ-03	5/7/1997	2-Nitroaniline	25	U
SF-AQ-03	5/7/1997	2-Nitrophenol	10	U
SF-AQ-03	5/7/1997	3,3'-Dichlorobenzidine	10	U
SF-AQ-03	5/7/1997	3+4-Methylphenol	10	U
SF-AQ-03	5/7/1997	3-Nitroaniline	25	U
SF-AQ-03	5/7/1997	4,6-Dinitro-2-methylphenol	25	U
SF-AQ-03	5/7/1997	4-Bromophenyl phenyl ether	10	U
SF-AQ-03	5/7/1997	4-Chloro-3-methylphenol	10	U
SF-AQ-03	5/7/1997	4-Chloroaniline	10	U
SF-AQ-03	5/7/1997	4-Chlorophenyl phenyl ether	10	U
SF-AQ-03	5/7/1997	4-Nitroaniline	25	U
SF-AQ-03	5/7/1997	4-Nitrophenol	25	U
SF-AQ-03	5/7/1997	Acenaphthene	10	U
SF-AQ-03	5/7/1997	Acenaphthylene	10	U
SF-AQ-03	5/7/1997	Anthracene	10	U
SF-AQ-03	5/7/1997	Benzo(a)anthracene	0.1	J
SF-AQ-03	5/7/1997	Benzo(a)pyrene	0.1	J
SF-AQ-03	5/7/1997	Benzo(b)fluoranthene	0.2	J
SF-AQ-03	5/7/1997	Benzo(g,h,i)perylene	10	U
SF-AQ-03	5/7/1997	Benzo(k)fluoranthene	0.1	J
SF-AQ-03	5/7/1997	bis(2-Chloroethoxy)methane	10	U
SF-AQ-03	5/7/1997	bis(2-Chloroethyl)ether	10	U
SF-AQ-03	5/7/1997	bis(2-Chloroisopropyl)ether	10	U
SF-AQ-03	5/7/1997	bis(2-Ethylhexyl)phthalate	10	U
SF-AQ-03	5/7/1997	Carbazole	10	U
SF-AQ-03	5/7/1997	Chrysene	0.2	J
SF-AQ-03	5/7/1997	Dibenz(a,h)anthracene	10	U
SF-AQ-03	5/7/1997	Dibenzofuran	10	U
SF-AQ-03	5/7/1997	Diethyl phthalate	10	U
SF-AQ-03	5/7/1997	Dimethyl phthalate	10	U
SF-AQ-03	5/7/1997	Di-n-butyl phthalate	10	U
SF-AQ-03	5/7/1997	Di-n-octyl phthalate	10	U
SF-AQ-03	5/7/1997	Fluoranthene	0.3	J
SF-AQ-03	5/7/1997	Fluorene	10	U
SF-AQ-03	5/7/1997	Hexachlorobenzene	10	U
SF-AQ-03	5/7/1997	Hexachlorobutadiene	10	U
SF-AQ-03	5/7/1997	Hexachlorocyclopentadiene	10	U
SF-AQ-03	5/7/1997	Hexachloroethane	10	U
SF-AQ-03	5/7/1997	Indeno(1,2,3-cd)pyrene	10	U
SF-AQ-03	5/7/1997	Isophorone	10	U
SF-AQ-03	5/7/1997	Naphthalene	10	U
SF-AQ-03	5/7/1997	Nitrobenzene	10	U
SF-AQ-03	5/7/1997	N-Nitrosodi-n-propylamine	10	U

Table 4-5

**Summary of Analytical Results
SF-03 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-03	5/7/1997	N-Nitrosodiphenylamine	10	U
SF-AQ-03	5/7/1997	Pentachlorophenol	25	U
SF-AQ-03	5/7/1997	Phenanthrene	0.1	J
SF-AQ-03	5/7/1997	Phenol	10	U
SF-AQ-03	5/7/1997	Pyrene	0.2	J
SF-AQ-03	5/7/1997	4,4'-DDD	0.1	U
SF-AQ-03	5/7/1997	4,4'-DDE	0.1	U
SF-AQ-03	5/7/1997	4,4'-DDT	0.1	U
SF-AQ-03	5/7/1997	Aldrin	0.05	U
SF-AQ-03	5/7/1997	alpha-BHC	0.05	U
SF-AQ-03	5/7/1997	alpha-Chlordane	0.05	U
SF-AQ-03	5/7/1997	beta-BHC	0.05	U
SF-AQ-03	5/7/1997	delta-BHC	0.05	U
SF-AQ-03	5/7/1997	Dieldrin	0.1	U
SF-AQ-03	5/7/1997	Endosulfan I	0.05	U
SF-AQ-03	5/7/1997	Endosulfan II	0.1	U
SF-AQ-03	5/7/1997	Endosulfan sulfate	0.1	U
SF-AQ-03	5/7/1997	Endrin	0.1	U
SF-AQ-03	5/7/1997	Endrin Aldehyde	0.1	U
SF-AQ-03	5/7/1997	Endrin ketone	0.1	U
SF-AQ-03	5/7/1997	gamma-BHC (Lindane)	0.05	U
SF-AQ-03	5/7/1997	gamma-Chlordane	0.05	U
SF-AQ-03	5/7/1997	Heptachlor	0.05	U
SF-AQ-03	5/7/1997	Heptachlor epoxide	0.05	U
SF-AQ-03	5/7/1997	Methoxychlor	0.5	U
SF-AQ-03	5/7/1997	Toxaphene	5	U
SF-AQ-03	5/7/1997	Aroclor 1016	1	U
SF-AQ-03	5/7/1997	Aroclor 1221	2	U
SF-AQ-03	5/7/1997	Aroclor 1232	1	U
SF-AQ-03	5/7/1997	Aroclor 1242	1	U
SF-AQ-03	5/7/1997	Aroclor 1248	1	U
SF-AQ-03	5/7/1997	Aroclor 1254	1	U
SF-AQ-03	5/7/1997	Aroclor 1260	1	U
SF-AQ-03	5/7/1997	PCBs(total)	2	U
SF-AQ-03	5/7/1997	Aluminum	48.5	U
SF-AQ-03	5/7/1997	Antimony	2.2	U
SF-AQ-03	5/7/1997	Arsenic	2.9	
SF-AQ-03	5/7/1997	Barium	21.9	
SF-AQ-03	5/7/1997	Beryllium	0.28	
SF-AQ-03	5/7/1997	Cadmium	0.98	
SF-AQ-03	5/7/1997	Calcium	3,500	
SF-AQ-03	5/7/1997	Chromium	6.3	
SF-AQ-03	5/7/1997	Cobalt	1.1	U
SF-AQ-03	5/7/1997	Copper	16	
SF-AQ-03	5/7/1997	Cyanide	10	U

Table 4-5

**Summary of Analytical Results
SF-03 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-03	5/7/1997	Iron	237	
SF-AQ-03	5/7/1997	Lead	8.1	
SF-AQ-03	5/7/1997	Magnesium	1,160	
SF-AQ-03	5/7/1997	Manganese	19.4	
SF-AQ-03	5/7/1997	Mercury	0.1	U
SF-AQ-03	5/7/1997	Nickel	4	
SF-AQ-03	5/7/1997	Potassium	258	
SF-AQ-03	5/7/1997	Selenium	3.2	U
SF-AQ-03	5/7/1997	Silver	1	U
SF-AQ-03	5/7/1997	Sodium	2,420	
SF-AQ-03	5/7/1997	Thallium	3.1	U
SF-AQ-03	5/7/1997	Vanadium	3.9	
SF-AQ-03	5/7/1997	Zinc	122	J

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) **J** - reported result is estimated due to minor quality control anomaly.
- 5) SF-03 liquid characterization sample was collected during the Continued Remedial Investigation.

Table 4-6

**Summary of Analytical Results
SF-03 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF03BSW01	4/19/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF03BSW01	4/19/2006	TCE	0.0011	U	0.7	7.15
SF03BSW01	4/19/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF03BSE01	4/19/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF03BSE01	4/19/2006	TCE	0.001	U	0.7	7.15
SF03BSE01	4/19/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF03BNW01	4/19/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF03BNW01	4/19/2006	TCE	0.0011	U	0.7	7.15
SF03BNW01	4/19/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF03BNE01	4/19/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF03BNE01	4/19/2006	TCE	0.001	U	0.7	7.15
SF03BNE01	4/19/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP16	4/19/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
DUP16	4/19/2006	TCE	0.001	U	0.7	7.15
DUP16	4/19/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF03CW01	4/19/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF03CW01	4/19/2006	Benzo(a)pyrene	0.034	U	0.29	0.39
SF03CW01	4/19/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF03CW01	4/19/2006	Benzo(k)fluoranthene	0.034	U	NA	39.20
SF03CW01	4/19/2006	Chrysene	0.34	U	NA	392
SF03CW01	4/19/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.39
SF03CW01	4/19/2006	PCBs(total)	0.069	U	10	1.43
SF03CW01	4/19/2006	Cadmium	0.1	U	10	511
SF03CW01	4/19/2006	Chromium	2.7		143	3,066
SF03CW01	4/19/2006	Cyanide	0.5	U	35	20,440
SF03CS01	4/19/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF03CS01	4/19/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF03CS01	4/19/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF03CS01	4/19/2006	Benzo(k)fluoranthene	0.035	U	NA	39.20
SF03CS01	4/19/2006	Chrysene	0.35	U	NA	392
SF03CS01	4/19/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF03CS01	4/19/2006	PCBs(total)	0.071	U	10	1.43
SF03CS01	4/19/2006	Cadmium	0.11	U	10	511
SF03CS01	4/19/2006	Chromium	6.3		143	3,066
SF03CS01	4/19/2006	Cyanide	0.5	U	35	20,440
SF03CN01	4/19/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF03CN01	4/19/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
SF03CN01	4/19/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF03CN01	4/19/2006	Benzo(k)fluoranthene	0.036	U	NA	39.20
SF03CN01	4/19/2006	Chrysene	0.36	U	NA	392
SF03CN01	4/19/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.39
SF03CN01	4/19/2006	PCBs(total)	0.073	U	10	1.43
SF03CN01	4/19/2006	Cadmium	0.11	U	10	511

Table 4-6

**Summary of Analytical Results
SF-03 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF03CN01	4/19/2006	Chromium	6.8		143	3,066
SF03CN01	4/19/2006	Cyanide	0.5	U	35	20,440
SF03CE01	4/19/2006	Benzo(a)anthracene	0.016	J	NA	3.92
SF03CE01	4/19/2006	Benzo(a)pyrene	0.015	J	0.29	0.39
SF03CE01	4/19/2006	Benzo(b)fluoranthene	0.014	J	NA	3.92
SF03CE01	4/19/2006	Benzo(k)fluoranthene	0.018	J	NA	39.20
SF03CE01	4/19/2006	Chrysene	0.02	J	NA	392
SF03CE01	4/19/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF03CE01	4/19/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF03CE01	4/19/2006	PCBs(total)	0.071	U	10	1.43
SF03CE01	4/19/2006	Cadmium	0.11	U	10	511
SF03CE01	4/19/2006	Chromium	6.3		143	3,066
SF03CE01	4/19/2006	Cyanide	0.5	U	35	20,440
DUP17	4/19/2006	Benzo(a)anthracene	0.03	J	NA	3.92
DUP17	4/19/2006	Benzo(a)pyrene	0.025	J	0.29	0.39
DUP17	4/19/2006	Benzo(b)fluoranthene	0.024	J	NA	3.92
DUP17	4/19/2006	Benzo(k)fluoranthene	0.026	J	NA	39.20
DUP17	4/19/2006	Chrysene	0.036	J	NA	392
DUP17	4/19/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
DUP17	4/19/2006	PCBs(total)	0.071	U	10	1.43
DUP17	4/19/2006	Cadmium	0.11	U	10	511
DUP17	4/19/2006	Chromium	15		143	3,066
DUP17	4/19/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - constituent detected at a concentration below the instrument detection limit. Reported result is estimated.
- 6) NA - not applicable. AOC Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-03 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-7

**Summary of Analytical Results
SF-04 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-04	5/8/1997	1,1,1-Trichloroethane	0.024	U	NA	286,160
SF-SL-04	5/8/1997	1,1,2,2-Tetrachloroethane	0.024	U	NA	14.31
SF-SL-04	5/8/1997	1,1,2-Trichloroethane	0.024	U	NA	50.20
SF-SL-04	5/8/1997	1,1-Dichloroethane	0.024	U	NA	204,400
SF-SL-04	5/8/1997	1,1-Dichloroethene	0.024	U	NA	51,100
SF-SL-04	5/8/1997	1,2-Dichloroethane	0.024	U	NA	31.45
SF-SL-04	5/8/1997	1,2-Dichloroethene (total)	0.024	U	0.25	9,198
SF-SL-04	5/8/1997	1,2-Dichloropropane	0.024	U	NA	42.08
SF-SL-04	5/8/1997	2-Butanone	0.024	U	NA	613,200
SF-SL-04	5/8/1997	2-Hexanone	0.024	U	NA	NA
SF-SL-04	5/8/1997	4-Methyl-2-pentanone	0.024	U	NA	NA
SF-SL-04	5/8/1997	Acetone	0.019	J	NA	919,800
SF-SL-04	5/8/1997	Benzene	0.024	U	NA	52.03
SF-SL-04	5/8/1997	Bromodichloromethane	0.024	U	NA	46.15
SF-SL-04	5/8/1997	Bromoform	0.024	U	NA	362.23
SF-SL-04	5/8/1997	Bromomethane	0.024	U	NA	1430.80
SF-SL-04	5/8/1997	c-1,3-Dichloropropene	0.024	U	NA	NA
SF-SL-04	5/8/1997	Carbon Tetrachloride	0.024	U	NA	22.01
SF-SL-04	5/8/1997	Chlorobenzene	0.024	U	NA	20,440
SF-SL-04	5/8/1997	Chloroethane	0.024	U	NA	986.76
SF-SL-04	5/8/1997	Chloroform	0.024	U	NA	10,220
SF-SL-04	5/8/1997	Chloromethane	0.024	U	NA	NA
SF-SL-04	5/8/1997	Dibromochloromethane	0.024	U	NA	34.07
SF-SL-04	5/8/1997	Ethylbenzene	0.024	U	NA	102,200
SF-SL-04	5/8/1997	Methylene Chloride	0.024	U	NA	381.55
SF-SL-04	5/8/1997	Styrene	0.024	U	NA	204,400
SF-SL-04	5/8/1997	t-1,3-Dichloropropene	0.024	U	NA	NA
SF-SL-04	5/8/1997	TCE	0.024	U	0.7	7.15
SF-SL-04	5/8/1997	Tetrachloroethene	0.024	U	1.4	5.30
SF-SL-04	5/8/1997	Toluene	0.024	U	NA	81,760
SF-SL-04	5/8/1997	Vinyl Chloride	0.024	U	NA	3.97
SF-SL-04	5/8/1997	Xylene (Total)	0.024	U	NA	204,400
SF-SL-04	5/8/1997	1,2,4-Trimethylbenzene	39	UJ	NA	NA
SF-SL-04	5/8/1997	1,2-Dichlorobenzene	39	UJ	NA	91,980
SF-SL-04	5/8/1997	1,3-Dichlorobenzene	39	UJ	NA	3,066
SF-SL-04	5/8/1997	1,4-Dichlorobenzene	39	UJ	NA	119.23
SF-SL-04	5/8/1997	2,4,5-Trichlorophenol	95	UJ	NA	102,200
SF-SL-04	5/8/1997	2,4,6-Trichlorophenol	39	UJ	NA	260.15
SF-SL-04	5/8/1997	2,4-Dichlorophenol	39	UJ	NA	3,066
SF-SL-04	5/8/1997	2,4-Dimethylphenol	39	UJ	NA	20,440
SF-SL-04	5/8/1997	2,4-Dinitrophenol	95	UJ	NA	2,044
SF-SL-04	5/8/1997	2,4-Dinitrotoluene	39	UJ	NA	2,044
SF-SL-04	5/8/1997	2,6-Dinitrotoluene	39	UJ	NA	1,022
SF-SL-04	5/8/1997	2-Chloronaphthalene	39	UJ	NA	81,760
SF-SL-04	5/8/1997	2-Chlorophenol	39	UJ	NA	5,110

Table 4-7

**Summary of Analytical Results
SF-04 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-04	5/8/1997	2-Methylnaphthalene	0.97	J	NA	4,088
SF-SL-04	5/8/1997	2-Methylphenol	39	UJ	NA	51,100
SF-SL-04	5/8/1997	2-Nitroaniline	95	UJ	NA	NA
SF-SL-04	5/8/1997	2-Nitrophenol	39	UJ	NA	NA
SF-SL-04	5/8/1997	3,3'-Dichlorobenzidine	39	UJ	NA	6.36
SF-SL-04	5/8/1997	3+4-Methylphenol	39	UJ	NA	5,110
SF-SL-04	5/8/1997	3-Nitroaniline	95	UJ	NA	NA
SF-SL-04	5/8/1997	4,6-Dinitro-2-methylphenol	95	UJ	NA	NA
SF-SL-04	5/8/1997	4-Bromophenyl phenyl ether	39	UJ	NA	NA
SF-SL-04	5/8/1997	4-Chloro-3-methylphenol	39	UJ	NA	NA
SF-SL-04	5/8/1997	4-Chloroaniline	39	UJ	NA	4,088
SF-SL-04	5/8/1997	4-Chlorophenyl phenyl ether	39	UJ	NA	NA
SF-SL-04	5/8/1997	4-Nitroaniline	95	UJ	NA	NA
SF-SL-04	5/8/1997	4-Nitrophenol	95	UJ	NA	NA
SF-SL-04	5/8/1997	Acenaphthene	7.3	J	NA	61,320
SF-SL-04	5/8/1997	Acenaphthylene	0.45	J	NA	NA
SF-SL-04	5/8/1997	Anthracene	9.6	J	NA	306,600
SF-SL-04	5/8/1997	Benzo(a)anthracene	52	J	NA	3.92
SF-SL-04	5/8/1997	Benzo(a)pyrene	44	J	0.29	0.39
SF-SL-04	5/8/1997	Benzo(b)fluoranthene	68	J	NA	3.92
SF-SL-04	5/8/1997	Benzo(g,h,i)perylene	23	J	NA	NA
SF-SL-04	5/8/1997	Benzo(k)fluoranthene	27	J	NA	39.20
SF-SL-04	5/8/1997	bis(2-Chloroethoxy)methane	39	UJ	NA	NA
SF-SL-04	5/8/1997	bis(2-Chloroethyl)ether	39	UJ	NA	2.60
SF-SL-04	5/8/1997	bis(2-Chloroisopropyl)ether	39	UJ	NA	40.88
SF-SL-04	5/8/1997	bis(2-Ethylhexyl)phthalate	47	J	NA	204.40
SF-SL-04	5/8/1997	Carbazole	10	J	NA	143.08
SF-SL-04	5/8/1997	Chrysene	60	J	NA	392
SF-SL-04	5/8/1997	Dibenz(a,h)anthracene	7	J	0.29	0.39
SF-SL-04	5/8/1997	Dibenzofuran	4	J	NA	1,022
SF-SL-04	5/8/1997	Diethyl phthalate	39	UJ	NA	817,600
SF-SL-04	5/8/1997	Dimethyl phthalate	39	UJ	NA	NA
SF-SL-04	5/8/1997	Di-n-butyl phthalate	39	UJ	NA	102,200
SF-SL-04	5/8/1997	Di-n-octyl phthalate	39	UJ	NA	NA
SF-SL-04	5/8/1997	Fluoranthene	120	J	NA	40,880
SF-SL-04	5/8/1997	Fluorene	6.2	J	NA	40,880
SF-SL-04	5/8/1997	Hexachlorobenzene	39	UJ	NA	1.79
SF-SL-04	5/8/1997	Hexachlorobutadiene	39	UJ	NA	36.69
SF-SL-04	5/8/1997	Hexachlorocyclopentadiene	39	UJ	NA	6,132
SF-SL-04	5/8/1997	Hexachloroethane	39	UJ	NA	204.40
SF-SL-04	5/8/1997	Indeno(1,2,3-cd)pyrene	26	J	NA	3.92
SF-SL-04	5/8/1997	Isophorone	39	UJ	NA	3012.21
SF-SL-04	5/8/1997	Naphthalene	3.4	J	NA	20,440
SF-SL-04	5/8/1997	Nitrobenzene	39	UJ	NA	511
SF-SL-04	5/8/1997	N-Nitrosodi-n-propylamine	39	UJ	NA	0.41

Table 4-7

**Summary of Analytical Results
SF-04 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-04	5/8/1997	N-Nitrosodiphenylamine	39	UJ	NA	584
SF-SL-04	5/8/1997	Pentachlorophenol	95	UJ	NA	23.85
SF-SL-04	5/8/1997	Phenanthrene	64	J	NA	NA
SF-SL-04	5/8/1997	Phenol	39	UJ	NA	306,600
SF-SL-04	5/8/1997	Pyrene	90	J	NA	30,660
SF-SL-04	5/8/1997	4,4'-DDD	0.44		NA	11.92
SF-SL-04	5/8/1997	4,4'-DDE	0.0079	U	NA	8.42
SF-SL-04	5/8/1997	4,4'-DDT	0.051	J	NA	8.42
SF-SL-04	5/8/1997	Aldrin	0.004	U	NA	0.17
SF-SL-04	5/8/1997	alpha-BHC	0.004	U	NA	0.45
SF-SL-04	5/8/1997	alpha-Chlordane	0.004	U	NA	NA
SF-SL-04	5/8/1997	beta-BHC	0.004	U	NA	1.59
SF-SL-04	5/8/1997	delta-BHC	0.004	U	NA	NA
SF-SL-04	5/8/1997	Dieldrin	0.0079	U	NA	0.18
SF-SL-04	5/8/1997	Endosulfan I	0.004	U	NA	6,132
SF-SL-04	5/8/1997	Endosulfan II	0.0079	U	NA	6,132
SF-SL-04	5/8/1997	Endosulfan sulfate	0.0079	U	NA	NA
SF-SL-04	5/8/1997	Endrin	0.0079	U	NA	307
SF-SL-04	5/8/1997	Endrin Aldehyde	0.0079	U	NA	NA
SF-SL-04	5/8/1997	Endrin ketone	0.039	U	NA	NA
SF-SL-04	5/8/1997	gamma-BHC (Lindane)	0.004	U	NA	2.20
SF-SL-04	5/8/1997	gamma-Chlordane	0.004	U	NA	NA
SF-SL-04	5/8/1997	Heptachlor	0.004	U	NA	0.64
SF-SL-04	5/8/1997	Heptachlor epoxide	0.004	U	NA	0.31
SF-SL-04	5/8/1997	Methoxychlor	0.040	U	NA	5,110
SF-SL-04	5/8/1997	Toxaphene	0.400	U	NA	2.60
SF-SL-04	5/8/1997	Aroclor 1016	0.079	U	NA	40.88
SF-SL-04	5/8/1997	Aroclor 1221	0.16	U	NA	1.43
SF-SL-04	5/8/1997	Aroclor 1232	0.079	U	NA	1.43
SF-SL-04	5/8/1997	Aroclor 1242	0.079	U	NA	1.43
SF-SL-04	5/8/1997	Aroclor 1248	0.079	U	NA	1.43
SF-SL-04	5/8/1997	Aroclor 1254	0.079	U	NA	1.43
SF-SL-04	5/8/1997	Aroclor 1260	0.079	U	NA	1.43
SF-SL-04	5/8/1997	PCBs(total)	0.16	U	10	1.43
SF-SL-04	5/8/1997	Aluminum	22,900	J	NA	1,022,000
SF-SL-04	5/8/1997	Antimony	9	J	NA	408.800000
SF-SL-04	5/8/1997	Arsenic	22	J	NA	1.91
SF-SL-04	5/8/1997	Barium	1,720	J	NA	204,400
SF-SL-04	5/8/1997	Beryllium	0.73	J	NA	2,044
SF-SL-04	5/8/1997	Cadmium	26.5	J	10	511
SF-SL-04	5/8/1997	Calcium	3,020	J	NA	NA
SF-SL-04	5/8/1997	Chromium	577	J	143	3,066
SF-SL-04	5/8/1997	Cobalt	24.1	J	NA	NA
SF-SL-04	5/8/1997	Copper	1,440	J	NA	40,880
SF-SL-04	5/8/1997	Cyanide	1	UJ	35	20,440

Table 4-7

**Summary of Analytical Results
SF-04 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-04	5/8/1997	Iron	36,600	J	NA	715,400
SF-SL-04	5/8/1997	Lead	1,570	J	NA	NA
SF-SL-04	5/8/1997	Magnesium	2,710	J	NA	NA
SF-SL-04	5/8/1997	Manganese	240	J	NA	20,440
SF-SL-04	5/8/1997	Mercury	2.3	J	NA	NA
SF-SL-04	5/8/1997	Nickel	518	J	NA	20,440
SF-SL-04	5/8/1997	Potassium	278	J	NA	NA
SF-SL-04	5/8/1997	Selenium	6	J	NA	5,110
SF-SL-04	5/8/1997	Silver	4	J	NA	5,110
SF-SL-04	5/8/1997	Sodium	183	J	NA	NA
SF-SL-04	5/8/1997	Thallium	2	UJ	NA	71.54
SF-SL-04	5/8/1997	Vanadium	247	J	NA	1,022
SF-SL-04	5/8/1997	Zinc	6,110	J	NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) **J** - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. AOC Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-04 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-8

**Summary of Analytical Results
SF-04 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-04	5/8/1997	1,1,1-Trichloroethane	10	U
SF-AQ-04	5/8/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-04	5/8/1997	1,1,2-Trichloroethane	10	U
SF-AQ-04	5/8/1997	1,1-Dichloroethane	10	U
SF-AQ-04	5/8/1997	1,1-Dichloroethene	10	U
SF-AQ-04	5/8/1997	1,2-Dichloroethane	10	U
SF-AQ-04	5/8/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-04	5/8/1997	1,2-Dichloropropane	10	U
SF-AQ-04	5/8/1997	2-Butanone	10	U
SF-AQ-04	5/8/1997	2-Hexanone	10	U
SF-AQ-04	5/8/1997	4-Methyl-2-pentanone	10	U
SF-AQ-04	5/8/1997	Acetone	10	U
SF-AQ-04	5/8/1997	Benzene	10	U
SF-AQ-04	5/8/1997	Bromodichloromethane	10	U
SF-AQ-04	5/8/1997	Bromoform	10	U
SF-AQ-04	5/8/1997	Bromomethane	10	U
SF-AQ-04	5/8/1997	c-1,3-Dichloropropene	10	U
SF-AQ-04	5/8/1997	Carbon Tetrachloride	10	U
SF-AQ-04	5/8/1997	Chlorobenzene	10	U
SF-AQ-04	5/8/1997	Chloroethane	10	U
SF-AQ-04	5/8/1997	Chloroform	10	U
SF-AQ-04	5/8/1997	Chloromethane	10	U
SF-AQ-04	5/8/1997	Dibromochloromethane	10	U
SF-AQ-04	5/8/1997	Ethylbenzene	10	U
SF-AQ-04	5/8/1997	Methylene Chloride	2	U
SF-AQ-04	5/8/1997	Styrene	10	U
SF-AQ-04	5/8/1997	t-1,3-Dichloropropene	10	U
SF-AQ-04	5/8/1997	TCE	10	U
SF-AQ-04	5/8/1997	Tetrachloroethene	10	U
SF-AQ-04	5/8/1997	Toluene	10	U
SF-AQ-04	5/8/1997	Vinyl Chloride	10	U
SF-AQ-04	5/8/1997	Xylene (Total)	10	U
SF-AQ-04	5/8/1997	1,2,4-Trimethylbenzene	11	U
SF-AQ-04	5/8/1997	1,2-Dichlorobenzene	11	U
SF-AQ-04	5/8/1997	1,3-Dichlorobenzene	11	U
SF-AQ-04	5/8/1997	1,4-Dichlorobenzene	11	U
SF-AQ-04	5/8/1997	2,4,5-Trichlorophenol	27	U
SF-AQ-04	5/8/1997	2,4,6-Trichlorophenol	11	U
SF-AQ-04	5/8/1997	2,4-Dichlorophenol	11	U
SF-AQ-04	5/8/1997	2,4-Dimethylphenol	11	U
SF-AQ-04	5/8/1997	2,4-Dinitrophenol	27	U
SF-AQ-04	5/8/1997	2,4-Dinitrotoluene	11	U
SF-AQ-04	5/8/1997	2,6-Dinitrotoluene	11	U
SF-AQ-04	5/8/1997	2-Chloronaphthalene	11	U
SF-AQ-04	5/8/1997	2-Chlorophenol	11	U
SF-AQ-04	5/8/1997	2-Methylnaphthalene	11	U

Table 4-8

**Summary of Analytical Results
SF-04 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-04	5/8/1997	2-Methylphenol	11	U
SF-AQ-04	5/8/1997	2-Nitroaniline	27	U
SF-AQ-04	5/8/1997	2-Nitrophenol	11	U
SF-AQ-04	5/8/1997	3,3'-Dichlorobenzidine	11	U
SF-AQ-04	5/8/1997	3+4-Methylphenol	11	U
SF-AQ-04	5/8/1997	3-Nitroaniline	27	U
SF-AQ-04	5/8/1997	4,6-Dinitro-2-methylphenol	27	U
SF-AQ-04	5/8/1997	4-Bromophenyl phenyl ether	11	U
SF-AQ-04	5/8/1997	4-Chloro-3-methylphenol	11	U
SF-AQ-04	5/8/1997	4-Chloroaniline	11	U
SF-AQ-04	5/8/1997	4-Chlorophenyl phenyl ether	11	U
SF-AQ-04	5/8/1997	4-Nitroaniline	27	U
SF-AQ-04	5/8/1997	4-Nitrophenol	27	U
SF-AQ-04	5/8/1997	Acenaphthene	0.2	J
SF-AQ-04	5/8/1997	Acenaphthylene	11	U
SF-AQ-04	5/8/1997	Anthracene	0.6	J
SF-AQ-04	5/8/1997	Benzo(a)anthracene	3	J
SF-AQ-04	5/8/1997	Benzo(a)pyrene	4	J
SF-AQ-04	5/8/1997	Benzo(b)fluoranthene	7	J
SF-AQ-04	5/8/1997	Benzo(g,h,i)perylene	3	J
SF-AQ-04	5/8/1997	Benzo(k)fluoranthene	3	J
SF-AQ-04	5/8/1997	bis(2-Chloroethoxy)methane	11	U
SF-AQ-04	5/8/1997	bis(2-Chloroethyl)ether	11	U
SF-AQ-04	5/8/1997	bis(2-Chloroisopropyl)ether	11	U
SF-AQ-04	5/8/1997	bis(2-Ethylhexyl)phthalate	2	J
SF-AQ-04	5/8/1997	Carbazole	0.8	J
SF-AQ-04	5/8/1997	Chrysene	5	J
SF-AQ-04	5/8/1997	Dibenz(a,h)anthracene	0.8	J
SF-AQ-04	5/8/1997	Dibenzofuran	0.2	J
SF-AQ-04	5/8/1997	Diethyl phthalate	11	U
SF-AQ-04	5/8/1997	Dimethyl phthalate	11	U
SF-AQ-04	5/8/1997	Di-n-butyl phthalate	11	U
SF-AQ-04	5/8/1997	Di-n-octyl phthalate	11	U
SF-AQ-04	5/8/1997	Fluoranthene	8	J
SF-AQ-04	5/8/1997	Fluorene	0.2	J
SF-AQ-04	5/8/1997	Hexachlorobenzene	11	U
SF-AQ-04	5/8/1997	Hexachlorobutadiene	11	U
SF-AQ-04	5/8/1997	Hexachlorocyclopentadiene	11	U
SF-AQ-04	5/8/1997	Hexachloroethane	11	U
SF-AQ-04	5/8/1997	Indeno(1,2,3-cd)pyrene	3	J
SF-AQ-04	5/8/1997	Isophorone	11	U
SF-AQ-04	5/8/1997	Naphthalene	0.3	J
SF-AQ-04	5/8/1997	Nitrobenzene	11	U
SF-AQ-04	5/8/1997	N-Nitrosodi-n-propylamine	11	U
SF-AQ-04	5/8/1997	N-Nitrosodiphenylamine	11	U
SF-AQ-04	5/8/1997	Pentachlorophenol	27	U

Table 4-8

**Summary of Analytical Results
SF-04 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-04	5/8/1997	Phenanthrene	3	J
SF-AQ-04	5/8/1997	Phenol	11	U
SF-AQ-04	5/8/1997	Pyrene	7	J
SF-AQ-04	5/8/1997	4,4'-DDD	0.1	U
SF-AQ-04	5/8/1997	4,4'-DDE	0.1	U
SF-AQ-04	5/8/1997	4,4'-DDT	0.1	U
SF-AQ-04	5/8/1997	Aldrin	0.053	U
SF-AQ-04	5/8/1997	alpha-BHC	0.053	U
SF-AQ-04	5/8/1997	alpha-Chlordane	0.053	U
SF-AQ-04	5/8/1997	beta-BHC	0.053	U
SF-AQ-04	5/8/1997	delta-BHC	0.053	U
SF-AQ-04	5/8/1997	Dieldrin	0.1	U
SF-AQ-04	5/8/1997	Endosulfan I	0.053	U
SF-AQ-04	5/8/1997	Endosulfan II	0.1	U
SF-AQ-04	5/8/1997	Endosulfan sulfate	0.1	U
SF-AQ-04	5/8/1997	Endrin	0.1	U
SF-AQ-04	5/8/1997	Endrin Aldehyde	0.1	U
SF-AQ-04	5/8/1997	Endrin ketone	0.1	U
SF-AQ-04	5/8/1997	gamma-BHC (Lindane)	0.053	U
SF-AQ-04	5/8/1997	gamma-Chlordane	0.053	U
SF-AQ-04	5/8/1997	Heptachlor	0.053	U
SF-AQ-04	5/8/1997	Heptachlor epoxide	0.053	U
SF-AQ-04	5/8/1997	Methoxychlor	0.53	U
SF-AQ-04	5/8/1997	Toxaphene	5.3	U
SF-AQ-04	5/8/1997	Aroclor 1016	1	U
SF-AQ-04	5/8/1997	Aroclor 1221	2.1	U
SF-AQ-04	5/8/1997	Aroclor 1232	1	U
SF-AQ-04	5/8/1997	Aroclor 1242	1	U
SF-AQ-04	5/8/1997	Aroclor 1248	1	U
SF-AQ-04	5/8/1997	Aroclor 1254	1	U
SF-AQ-04	5/8/1997	Aroclor 1260	1	U
SF-AQ-04	5/8/1997	PCBs(total)	2.1	U
SF-AQ-04	5/8/1997	Aluminum	912	
SF-AQ-04	5/8/1997	Antimony	2.2	U
SF-AQ-04	5/8/1997	Arsenic	5.1	
SF-AQ-04	5/8/1997	Barium	68.6	
SF-AQ-04	5/8/1997	Beryllium	0.2	U
SF-AQ-04	5/8/1997	Cadmium	2.1	
SF-AQ-04	5/8/1997	Calcium	11,600	
SF-AQ-04	5/8/1997	Chromium	30	U
SF-AQ-04	5/8/1997	Cobalt	1.3	
SF-AQ-04	5/8/1997	Copper	216	
SF-AQ-04	5/8/1997	Cyanide	10	U
SF-AQ-04	5/8/1997	Iron	2,480	
SF-AQ-04	5/8/1997	Lead	115	
SF-AQ-04	5/8/1997	Magnesium	3,110	

Table 4-8

**Summary of Analytical Results
SF-04 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-04	5/8/1997	Manganese	88.7	
SF-AQ-04	5/8/1997	Mercury	0.17	
SF-AQ-04	5/8/1997	Nickel	8.2	
SF-AQ-04	5/8/1997	Potassium	433	
SF-AQ-04	5/8/1997	Selenium	3.2	U
SF-AQ-04	5/8/1997	Silver	1.2	
SF-AQ-04	5/8/1997	Sodium	2,400	
SF-AQ-04	5/8/1997	Thallium	6.4	
SF-AQ-04	5/8/1997	Vanadium	21.6	
SF-AQ-04	5/8/1997	Zinc	381	

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) SF-04 liquid characterization sample was collected during the Continued Remedial Investigation.

Table 4-9

**Summary of Analytical Results
SF-04 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF04BNE01	4/19/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF04BNE01	4/19/2006	TCE	0.001	U	0.7	7.15
SF04BNE01	4/19/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF04BNW01	4/19/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF04BNW01	4/19/2006	TCE	0.001	U	0.7	7.15
SF04BNW01	4/19/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF04BSE01	4/19/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF04BSE01	4/19/2006	TCE	0.0011	U	0.7	7.15
SF04BSE01	4/19/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF04BSW01	4/19/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF04BSW01	4/19/2006	TCE	0.001	U	0.7	7.15
SF04BSW01	4/19/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF04CE01	4/19/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF04CE01	4/19/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF04CE01	4/19/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF04CE01	4/19/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
SF04CE01	4/19/2006	Chrysene	0.35	U	NA	392
SF04CE01	4/19/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF04CE01	4/19/2006	Fluoranthene	0.35	U	NA	40,880
SF04CE01	4/19/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
SF04CE01	4/19/2006	Phenanthrene	0.35	U	NA	NA
SF04CE01	4/19/2006	Pyrene	0.35	U	NA	30,660
SF04CE01	4/19/2006	PCBs(total)	0.07	U	10	1.43
SF04CE01	4/19/2006	Arsenic	1.8		NA	1.91
SF04CE01	4/19/2006	Barium	8.3	B	NA	204,400
SF04CE01	4/19/2006	Cadmium	0.11	U	10	511
SF04CE01	4/19/2006	Chromium	5.1		143	3,066
SF04CE01	4/19/2006	Copper	3.2	B	NA	40,880
SF04CE01	4/19/2006	Lead	4.4		NA	NA
SF04CE01	4/19/2006	Mercury	0.02	B	NA	NA
SF04CE01	4/19/2006	Nickel	2.4	B	NA	20,440
SF04CE01	4/19/2006	Selenium	1	U	NA	5,110
SF04CE01	4/19/2006	Zinc	11.7		NA	306,600
SF04CE01	4/19/2006	Cyanide	0.5	U	35	20,440
SF04CN01	4/19/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF04CN01	4/19/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
SF04CN01	4/19/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF04CN01	4/19/2006	Benzo(k)fluoranthene	0.036	U	NA	39.2
SF04CN01	4/19/2006	Chrysene	0.36	U	NA	392
SF04CN01	4/19/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF04CN01	4/19/2006	Fluoranthene	0.36	U	NA	40,880
SF04CN01	4/19/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF04CN01	4/19/2006	Phenanthrene	0.36	U	NA	NA
SF04CN01	4/19/2006	Pyrene	0.36	U	NA	30,660
SF04CN01	4/19/2006	PCBs(total)	0.072	U	10	1.43
SF04CN01	4/19/2006	Arsenic	1.4		NA	1.91

Table 4-9

**Summary of Analytical Results
SF-04 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF04CN01	4/19/2006	Barium	11.7	B	NA	204,400
SF04CN01	4/19/2006	Cadmium	0.11	U	10	511
SF04CN01	4/19/2006	Chromium	8.3		143	3,066
SF04CN01	4/19/2006	Copper	3	B	NA	40,880
SF04CN01	4/19/2006	Lead	3		NA	NA
SF04CN01	4/19/2006	Mercury	0.018	U	NA	NA
SF04CN01	4/19/2006	Nickel	3.3	B	NA	20,440
SF04CN01	4/19/2006	Selenium	1	U	NA	5,110
SF04CN01	4/19/2006	Zinc	10.2		NA	306,600
SF04CN01	4/19/2006	Cyanide	0.5	U	35	20,440
SF04CS01	4/19/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF04CS01	4/19/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
SF04CS01	4/19/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF04CS01	4/19/2006	Benzo(k)fluoranthene	0.036	U	NA	39.2
SF04CS01	4/19/2006	Chrysene	0.36	U	NA	392
SF04CS01	4/19/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF04CS01	4/19/2006	Fluoranthene	0.36	U	NA	40,880
SF04CS01	4/19/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF04CS01	4/19/2006	Phenanthrene	0.36	U	NA	NA
SF04CS01	4/19/2006	Pyrene	0.36	U	NA	30,660
SF04CS01	4/19/2006	PCBs(total)	0.072	U	10	1.43
SF04CS01	4/19/2006	Arsenic	1.7		NA	1.91
SF04CS01	4/19/2006	Barium	10.7	B	NA	204,400
SF04CS01	4/19/2006	Cadmium	0.11	U	10	511
SF04CS01	4/19/2006	Chromium	6.8		143	3,066
SF04CS01	4/19/2006	Copper	3.3	B	NA	40,880
SF04CS01	4/19/2006	Lead	3		NA	NA
SF04CS01	4/19/2006	Mercury	0.018	U	NA	NA
SF04CS01	4/19/2006	Nickel	2.8	B	NA	20,440
SF04CS01	4/19/2006	Selenium	1	U	NA	5,110
SF04CS01	4/19/2006	Zinc	15		NA	306,600
SF04CS01	4/19/2006	Cyanide	0.5	U	35	20,440
SF04CW01	4/19/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF04CW01	4/19/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
SF04CW01	4/19/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF04CW01	4/19/2006	Benzo(k)fluoranthene	0.036	U	NA	39.2
SF04CW01	4/19/2006	Chrysene	0.36	U	NA	392
SF04CW01	4/19/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF04CW01	4/19/2006	Fluoranthene	0.36	U	NA	40,880
SF04CW01	4/19/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF04CW01	4/19/2006	Phenanthrene	0.36	U	NA	NA
SF04CW01	4/19/2006	Pyrene	0.36	U	NA	30,660
SF04CW01	4/19/2006	PCBs(total)	0.072	U	10	1.43
SF04CW01	4/19/2006	Arsenic	2.1		NA	1.91
SF04CW01	4/19/2006	Barium	14.6	B	NA	204,400
SF04CW01	4/19/2006	Cadmium	0.11	U	10	511

Table 4-9

**Summary of Analytical Results
SF-04 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF04CW01	4/19/2006	Chromium	6.7		143	3,066
SF04CW01	4/19/2006	Copper	5.5		NA	40,880
SF04CW01	4/19/2006	Lead	2.7		NA	NA
SF04CW01	4/19/2006	Mercury	0.018	U	NA	NA
SF04CW01	4/19/2006	Nickel	3.7	B	NA	20,440
SF04CW01	4/19/2006	Selenium	1	U	NA	5,110
SF04CW01	4/19/2006	Zinc	42.2		NA	306,600
SF04CW01	4/19/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. AOC Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-04 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-10

**Summary of Analytical Results
SF-06 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-06	5/6/1997	1,1,1-Trichloroethane	0.016	U	NA	286,160
SF-SL-06	5/6/1997	1,1,2,2-Tetrachloroethane	0.016	U	NA	14.31
SF-SL-06	5/6/1997	1,1,2-Trichloroethane	0.016	U	NA	50.20
SF-SL-06	5/6/1997	1,1-Dichloroethane	0.016	U	NA	204,400
SF-SL-06	5/6/1997	1,1-Dichloroethene	0.016	U	NA	51,100
SF-SL-06	5/6/1997	1,2-Dichloroethane	0.016	U	NA	31.45
SF-SL-06	5/6/1997	1,2-Dichloroethene (total)	0.016	U	0.25	9,198
SF-SL-06	5/6/1997	1,2-Dichloropropane	0.016	U	NA	42.08
SF-SL-06	5/6/1997	2-Butanone	0.012	J	NA	613,200
SF-SL-06	5/6/1997	2-Hexanone	0.016	U	NA	NA
SF-SL-06	5/6/1997	4-Methyl-2-pentanone	0.016	U	NA	NA
SF-SL-06	5/6/1997	Acetone	0.016	U	NA	919,800
SF-SL-06	5/6/1997	Benzene	0.002	J	NA	52.03
SF-SL-06	5/6/1997	Bromodichloromethane	0.016	U	NA	46.15
SF-SL-06	5/6/1997	Bromoform	0.016	U	NA	362.23
SF-SL-06	5/6/1997	Bromomethane	0.016	U	NA	1430.80
SF-SL-06	5/6/1997	c-1,3-Dichloropropene	0.016	U	NA	NA
SF-SL-06	5/6/1997	Carbon Tetrachloride	0.008	J	NA	22.01
SF-SL-06	5/6/1997	Chlorobenzene	0.016	U	NA	20,440
SF-SL-06	5/6/1997	Chloroethane	0.016	U	NA	986.76
SF-SL-06	5/6/1997	Chloroform	0.016	U	NA	10,220
SF-SL-06	5/6/1997	Chloromethane	0.016	U	NA	NA
SF-SL-06	5/6/1997	Dibromochloromethane	0.016	U	NA	34.07
SF-SL-06	5/6/1997	Ethylbenzene	0.001	J	NA	102,200
SF-SL-06	5/6/1997	Methylene Chloride	0.016	U	NA	381.55
SF-SL-06	5/6/1997	Styrene	0.016	U	NA	204,400
SF-SL-06	5/6/1997	t-1,3-Dichloropropene	0.016	U	NA	NA
SF-SL-06	5/6/1997	TCE	0.016	U	0.7	7.15
SF-SL-06	5/6/1997	Tetrachloroethene	0.016	U	1.4	5.30
SF-SL-06	5/6/1997	Toluene	0.11		NA	81,760
SF-SL-06	5/6/1997	Vinyl Chloride	0.016	U	NA	3.97
SF-SL-06	5/6/1997	Xylene (Total)	0.016	U	NA	204,400
SF-SL-06	5/6/1997	1,2,4-Trimethylbenzene	27	U	NA	NA
SF-SL-06	5/6/1997	1,2-Dichlorobenzene	27	U	NA	91,980
SF-SL-06	5/6/1997	1,3-Dichlorobenzene	27	U	NA	3,066
SF-SL-06	5/6/1997	1,4-Dichlorobenzene	27	U	NA	119.23
SF-SL-06	5/6/1997	2,4,5-Trichlorophenol	66	U	NA	102,200
SF-SL-06	5/6/1997	2,4,6-Trichlorophenol	27	U	NA	260.15
SF-SL-06	5/6/1997	2,4-Dichlorophenol	27	U	NA	3,066
SF-SL-06	5/6/1997	2,4-Dimethylphenol	27	U	NA	20,440
SF-SL-06	5/6/1997	2,4-Dinitrophenol	66	U	NA	2,044
SF-SL-06	5/6/1997	2,4-Dinitrotoluene	27	U	NA	2,044
SF-SL-06	5/6/1997	2,6-Dinitrotoluene	27	U	NA	1,022
SF-SL-06	5/6/1997	2-Chloronaphthalene	27	U	NA	81,760
SF-SL-06	5/6/1997	2-Chlorophenol	27	U	NA	5,110

Table 4-10

**Summary of Analytical Results
SF-06 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-06	5/6/1997	2-Methylnaphthalene	27	U	NA	4,088
SF-SL-06	5/6/1997	2-Methylphenol	27	U	NA	51,100
SF-SL-06	5/6/1997	2-Nitroaniline	66	U	NA	NA
SF-SL-06	5/6/1997	2-Nitrophenol	27	U	NA	NA
SF-SL-06	5/6/1997	3,3'-Dichlorobenzidine	27	U	NA	6.36
SF-SL-06	5/6/1997	3+4-Methylphenol	27	U	NA	5,110
SF-SL-06	5/6/1997	3-Nitroaniline	66	U	NA	NA
SF-SL-06	5/6/1997	4,6-Dinitro-2-methylphenol	66	U	NA	NA
SF-SL-06	5/6/1997	4-Bromophenyl phenyl ether	27	U	NA	NA
SF-SL-06	5/6/1997	4-Chloro-3-methylphenol	27	U	NA	NA
SF-SL-06	5/6/1997	4-Chloroaniline	27	U	NA	4,088
SF-SL-06	5/6/1997	4-Chlorophenyl phenyl ether	27	U	NA	NA
SF-SL-06	5/6/1997	4-Nitroaniline	66	U	NA	NA
SF-SL-06	5/6/1997	4-Nitrophenol	66	U	NA	NA
SF-SL-06	5/6/1997	Acenaphthene	0.45	J	NA	61,320
SF-SL-06	5/6/1997	Acenaphthylene	27	U	NA	NA
SF-SL-06	5/6/1997	Anthracene	1.2	J	NA	306,600
SF-SL-06	5/6/1997	Benzo(a)anthracene	6.1	J	NA	3.92
SF-SL-06	5/6/1997	Benzo(a)pyrene	4.9	J	0.29	0.39
SF-SL-06	5/6/1997	Benzo(b)fluoranthene	7.7	J	NA	3.92
SF-SL-06	5/6/1997	Benzo(g,h,i)perylene	2.6	J	NA	NA
SF-SL-06	5/6/1997	Benzo(k)fluoranthene	3.5	J	NA	39.20
SF-SL-06	5/6/1997	bis(2-Chloroethoxy)methane	27	U	NA	NA
SF-SL-06	5/6/1997	bis(2-Chloroethyl)ether	27	U	NA	2.60
SF-SL-06	5/6/1997	bis(2-Chloroisopropyl)ether	27	U	NA	40.88
SF-SL-06	5/6/1997	bis(2-Ethylhexyl)phthalate	4.3	J	NA	204.40
SF-SL-06	5/6/1997	Carbazole	0.94	J	NA	143.08
SF-SL-06	5/6/1997	Chrysene	7	J	NA	392
SF-SL-06	5/6/1997	Dibenz(a,h)anthracene	0.77	J	0.29	0.39
SF-SL-06	5/6/1997	Dibenzofuran	0.3	J	NA	1,022
SF-SL-06	5/6/1997	Diethyl phthalate	27	U	NA	817,600
SF-SL-06	5/6/1997	Dimethyl phthalate	27	U	NA	NA
SF-SL-06	5/6/1997	Di-n-butyl phthalate	27	U	NA	102,200
SF-SL-06	5/6/1997	Di-n-octyl phthalate	27	U	NA	NA
SF-SL-06	5/6/1997	Fluoranthene	12	J	NA	40,880
SF-SL-06	5/6/1997	Fluorene	0.48	J	NA	40,880
SF-SL-06	5/6/1997	Hexachlorobenzene	27	U	NA	1.79
SF-SL-06	5/6/1997	Hexachlorobutadiene	27	U	NA	36.69
SF-SL-06	5/6/1997	Hexachlorocyclopentadiene	27	U	NA	6,132
SF-SL-06	5/6/1997	Hexachloroethane	27	U	NA	204.40
SF-SL-06	5/6/1997	Indeno(1,2,3-cd)pyrene	2.7	J	NA	3.92
SF-SL-06	5/6/1997	Isophorone	27	U	NA	3012.21
SF-SL-06	5/6/1997	Naphthalene	0.32	J	NA	20,440
SF-SL-06	5/6/1997	Nitrobenzene	27	U	NA	511
SF-SL-06	5/6/1997	N-Nitrosodi-n-propylamine	27	U	NA	0.41

Table 4-10

**Summary of Analytical Results
SF-06 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-06	5/6/1997	N-Nitrosodiphenylamine	27	U	NA	584
SF-SL-06	5/6/1997	Pentachlorophenol	66	U	NA	23.85
SF-SL-06	5/6/1997	Phenanthrene	6.4	J	NA	NA
SF-SL-06	5/6/1997	Phenol	27	U	NA	306,600
SF-SL-06	5/6/1997	Pyrene	12	J	NA	30,660
SF-SL-06	5/6/1997	4,4'-DDD	0.054		NA	11.92
SF-SL-06	5/6/1997	4,4'-DDE	0.14		NA	8.42
SF-SL-06	5/6/1997	4,4'-DDT	0.18	J	NA	8.42
SF-SL-06	5/6/1997	Aldrin	0.0028	U	NA	0.17
SF-SL-06	5/6/1997	alpha-BHC	0.0028	U	NA	0.45
SF-SL-06	5/6/1997	alpha-Chlordane	0.0028	U	NA	NA
SF-SL-06	5/6/1997	beta-BHC	0.0028	U	NA	1.59
SF-SL-06	5/6/1997	delta-BHC	0.0028	U	NA	NA
SF-SL-06	5/6/1997	Dieldrin	0.0054	U	NA	0.18
SF-SL-06	5/6/1997	Endosulfan I	0.0028	U	NA	6,132
SF-SL-06	5/6/1997	Endosulfan II	0.0054	U	NA	6,132
SF-SL-06	5/6/1997	Endosulfan sulfate	0.0054	U	NA	NA
SF-SL-06	5/6/1997	Endrin	0.0054	U	NA	307
SF-SL-06	5/6/1997	Endrin Aldehyde	0.0054	U	NA	NA
SF-SL-06	5/6/1997	Endrin ketone	0.051	J	NA	NA
SF-SL-06	5/6/1997	gamma-BHC (Lindane)	0.0028	U	NA	2.20
SF-SL-06	5/6/1997	gamma-Chlordane	0.014	U	NA	NA
SF-SL-06	5/6/1997	Heptachlor	0.0028	U	NA	0.64
SF-SL-06	5/6/1997	Heptachlor epoxide	0.0028	U	NA	0.31
SF-SL-06	5/6/1997	Methoxychlor	0.028	U	NA	5,110
SF-SL-06	5/6/1997	Toxaphene	0.28	U	NA	2.60
SF-SL-06	5/6/1997	Aroclor 1016	0.054	U	NA	40.88
SF-SL-06	5/6/1997	Aroclor 1221	0.11	U	NA	1.43
SF-SL-06	5/6/1997	Aroclor 1232	0.054	U	NA	1.43
SF-SL-06	5/6/1997	Aroclor 1242	0.054	U	NA	1.43
SF-SL-06	5/6/1997	Aroclor 1248	0.054	U	NA	1.43
SF-SL-06	5/6/1997	Aroclor 1254	0.054	U	NA	1.43
SF-SL-06	5/6/1997	Aroclor 1260	0.054	U	NA	1.43
SF-SL-06	5/6/1997	PCBs(total)	0.11	U	10	1.43
SF-SL-06	5/6/1997	Aluminum	17,100		NA	1,022,000
SF-SL-06	5/6/1997	Antimony	41.9	J	NA	408.8
SF-SL-06	5/6/1997	Arsenic	15		NA	1.91
SF-SL-06	5/6/1997	Barium	252		NA	204,400
SF-SL-06	5/6/1997	Beryllium	0.49		NA	2,044
SF-SL-06	5/6/1997	Cadmium	14.3	J	10	511
SF-SL-06	5/6/1997	Calcium	25,000		NA	NA
SF-SL-06	5/6/1997	Chromium	344		143	3,066
SF-SL-06	5/6/1997	Cobalt	71.3		NA	NA
SF-SL-06	5/6/1997	Copper	889		NA	40,880
SF-SL-06	5/6/1997	Cyanide	0.82	UJ	35	20,440

Table 4-10

**Summary of Analytical Results
SF-06 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-06	5/6/1997	Iron	60,400		NA	715,400
SF-SL-06	5/6/1997	Lead	3,380		NA	NA
SF-SL-06	5/6/1997	Magnesium	3,050		NA	NA
SF-SL-06	5/6/1997	Manganese	643		NA	20,440
SF-SL-06	5/6/1997	Mercury	7.9		NA	NA
SF-SL-06	5/6/1997	Nickel	452		NA	20,440
SF-SL-06	5/6/1997	Potassium	282		NA	NA
SF-SL-06	5/6/1997	Selenium	2.4		NA	5,110
SF-SL-06	5/6/1997	Silver	10		NA	5,110
SF-SL-06	5/6/1997	Sodium	173		NA	NA
SF-SL-06	5/6/1997	Thallium	1	U	NA	71.54
SF-SL-06	5/6/1997	Vanadium	105		NA	1,022
SF-SL-06	5/6/1997	Zinc	1,280		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) **J** - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-06 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-11

**Summary of Analytical Results
SF-05 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-05	5/6/1997	Carbon Tetrachloride	10	U
SF-AQ-05	5/6/1997	Acetone	10	U
SF-AQ-05	5/6/1997	Chloroform	10	U
SF-AQ-05	5/6/1997	Benzene	10	U
SF-AQ-05	5/6/1997	1,1,1-Trichloroethane	10	U
SF-AQ-05	5/6/1997	Bromomethane	10	U
SF-AQ-05	5/6/1997	Chloroethane	10	U
SF-AQ-05	5/6/1997	Vinyl Chloride	10	U
SF-AQ-05	5/6/1997	Methylene Chloride	10	U
SF-AQ-05	5/6/1997	Bromoform	10	U
SF-AQ-05	5/6/1997	Bromodichloromethane	10	U
SF-AQ-05	5/6/1997	1,1-Dichloroethane	10	U
SF-AQ-05	5/6/1997	1,1-Dichloroethene	10	U
SF-AQ-05	5/6/1997	1,2-Dichloropropane	10	U
SF-AQ-05	5/6/1997	2-Butanone	10	U
SF-AQ-05	5/6/1997	1,1,2-Trichloroethane	10	U
SF-AQ-05	5/6/1997	TCE	10	U
SF-AQ-05	5/6/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-05	5/6/1997	Ethylbenzene	10	U
SF-AQ-05	5/6/1997	Styrene	10	U
SF-AQ-05	5/6/1997	1,2-Dichloroethane	10	U
SF-AQ-05	5/6/1997	4-Methyl-2-pentanone	10	U
SF-AQ-05	5/6/1997	Toluene	10	U
SF-AQ-05	5/6/1997	Chlorobenzene	10	U
SF-AQ-05	5/6/1997	Dibromochloromethane	10	U
SF-AQ-05	5/6/1997	Tetrachloroethene	10	U
SF-AQ-05	5/6/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-05	5/6/1997	2-Hexanone	10	U
SF-AQ-05	5/6/1997	Xylene (Total)	10	U
SF-AQ-05	5/6/1997	Chloromethane	10	U
SF-AQ-05	5/6/1997	c-1,3-Dichloropropene	10	U
SF-AQ-05	5/6/1997	t-1,3-Dichloropropene	10	U
SF-AQ-05	5/6/1997	Anthracene	0.2	J
SF-AQ-05	5/6/1997	Dibenz(a,h)anthracene	0.3	J
SF-AQ-05	5/6/1997	Carbazole	0.3	J
SF-AQ-05	5/6/1997	Benzo(k)fluoranthene	0.8	J
SF-AQ-05	5/6/1997	Benzo(a)pyrene	1	J
SF-AQ-05	5/6/1997	Benzo(a)anthracene	1	J
SF-AQ-05	5/6/1997	Phenanthrene	1	J
SF-AQ-05	5/6/1997	bis(2-Ethylhexyl)phthalate	1	J
SF-AQ-05	5/6/1997	Benzo(g,h,i)perylene	1	J
SF-AQ-05	5/6/1997	Indeno(1,2,3-cd)pyrene	1	J
SF-AQ-05	5/6/1997	Benzo(b)fluoranthene	2	J
SF-AQ-05	5/6/1997	Chrysene	2	J
SF-AQ-05	5/6/1997	Pyrene	3	J
SF-AQ-05	5/6/1997	Fluoranthene	3	J

Table 4-11

**Summary of Analytical Results
SF-05 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-05	5/6/1997	4-Chloro-3-methylphenol	10	U
SF-AQ-05	5/6/1997	Hexachloroethane	10	U
SF-AQ-05	5/6/1997	Hexachlorocyclopentadiene	10	U
SF-AQ-05	5/6/1997	Isophorone	10	U
SF-AQ-05	5/6/1997	Acenaphthene	10	U
SF-AQ-05	5/6/1997	Diethyl phthalate	10	U
SF-AQ-05	5/6/1997	Di-n-butyl phthalate	10	U
SF-AQ-05	5/6/1997	N-Nitrosodiphenylamine	10	U
SF-AQ-05	5/6/1997	Fluorene	10	U
SF-AQ-05	5/6/1997	Hexachlorobutadiene	10	U
SF-AQ-05	5/6/1997	2,4,6-Trichlorophenol	10	U
SF-AQ-05	5/6/1997	Nitrobenzene	10	U
SF-AQ-05	5/6/1997	2-Nitrophenol	10	U
SF-AQ-05	5/6/1997	Naphthalene	10	U
SF-AQ-05	5/6/1997	2-Methylnaphthalene	10	U
SF-AQ-05	5/6/1997	2-Chloronaphthalene	10	U
SF-AQ-05	5/6/1997	3,3'-Dichlorobenzidine	10	U
SF-AQ-05	5/6/1997	2-Methylphenol	10	U
SF-AQ-05	5/6/1997	1,2-Dichlorobenzene	10	U
SF-AQ-05	5/6/1997	2-Chlorophenol	10	U
SF-AQ-05	5/6/1997	1,2,4-Trimethylbenzene	10	U
SF-AQ-05	5/6/1997	4-Bromophenyl phenyl ether	10	U
SF-AQ-05	5/6/1997	2,4-Dimethylphenol	10	U
SF-AQ-05	5/6/1997	3+4-Methylphenol	10	U
SF-AQ-05	5/6/1997	1,4-Dichlorobenzene	10	U
SF-AQ-05	5/6/1997	4-Chloroaniline	10	U
SF-AQ-05	5/6/1997	bis(2-Chloroisopropyl)ether	10	U
SF-AQ-05	5/6/1997	Phenol	10	U
SF-AQ-05	5/6/1997	bis(2-Chloroethyl)ether	10	U
SF-AQ-05	5/6/1997	bis(2-Chloroethoxy)methane	10	U
SF-AQ-05	5/6/1997	Di-n-octyl phthalate	10	U
SF-AQ-05	5/6/1997	Hexachlorobenzene	10	U
SF-AQ-05	5/6/1997	2,4-Dichlorophenol	10	U
SF-AQ-05	5/6/1997	2,4-Dinitrotoluene	10	U
SF-AQ-05	5/6/1997	Dimethyl phthalate	10	U
SF-AQ-05	5/6/1997	Dibenzofuran	10	U
SF-AQ-05	5/6/1997	Acenaphthylene	10	U
SF-AQ-05	5/6/1997	1,3-Dichlorobenzene	10	U
SF-AQ-05	5/6/1997	2,6-Dinitrotoluene	10	U
SF-AQ-05	5/6/1997	N-Nitrosodi-n-propylamine	10	U
SF-AQ-05	5/6/1997	4-Chlorophenyl phenyl ether	10	U
SF-AQ-05	5/6/1997	2,4-Dinitrophenol	26	U
SF-AQ-05	5/6/1997	Pentachlorophenol	26	U
SF-AQ-05	5/6/1997	2-Nitroaniline	26	U
SF-AQ-05	5/6/1997	2,4,5-Trichlorophenol	26	U
SF-AQ-05	5/6/1997	3-Nitroaniline	26	U

Table 4-11

**Summary of Analytical Results
SF-05 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-05	5/6/1997	4-Nitroaniline	26	U
SF-AQ-05	5/6/1997	4-Nitrophenol	26	U
SF-AQ-05	5/6/1997	4,6-Dinitro-2-methylphenol	26	U
SF-AQ-05	5/6/1997	alpha-Chlordane	0.052	U
SF-AQ-05	5/6/1997	gamma-BHC (Lindane)	0.052	U
SF-AQ-05	5/6/1997	Heptachlor	0.052	U
SF-AQ-05	5/6/1997	Aldrin	0.052	U
SF-AQ-05	5/6/1997	alpha-BHC	0.052	U
SF-AQ-05	5/6/1997	beta-BHC	0.052	U
SF-AQ-05	5/6/1997	delta-BHC	0.052	U
SF-AQ-05	5/6/1997	Endosulfan I	0.052	U
SF-AQ-05	5/6/1997	Heptachlor epoxide	0.052	U
SF-AQ-05	5/6/1997	gamma-Chlordane	0.052	U
SF-AQ-05	5/6/1997	4,4'-DDT	0.1	U
SF-AQ-05	5/6/1997	Dieldrin	0.1	U
SF-AQ-05	5/6/1997	Endrin	0.1	U
SF-AQ-05	5/6/1997	4,4'-DDD	0.1	U
SF-AQ-05	5/6/1997	4,4'-DDE	0.1	U
SF-AQ-05	5/6/1997	Endosulfan sulfate	0.1	U
SF-AQ-05	5/6/1997	Endrin Aldehyde	0.1	U
SF-AQ-05	5/6/1997	Endosulfan II	0.1	U
SF-AQ-05	5/6/1997	Endrin ketone	0.1	U
SF-AQ-05	5/6/1997	Methoxychlor	0.52	U
SF-AQ-05	5/6/1997	Toxaphene	5.2	U
SF-AQ-05	5/6/1997	Aroclor 1260	1	U
SF-AQ-05	5/6/1997	Aroclor 1254	1	U
SF-AQ-05	5/6/1997	Aroclor 1232	1	U
SF-AQ-05	5/6/1997	Aroclor 1248	1	U
SF-AQ-05	5/6/1997	Aroclor 1016	1	U
SF-AQ-05	5/6/1997	Aroclor 1242	1	U
SF-AQ-05	5/6/1997	PCBs(total)	2.1	U
SF-AQ-05	5/6/1997	Aroclor 1221	2.1	U
SF-AQ-05	5/6/1997	Mercury	0.1	U
SF-AQ-05	5/6/1997	Beryllium	0.26	
SF-AQ-05	5/6/1997	Cadmium	0.58	
SF-AQ-05	5/6/1997	Silver	1	U
SF-AQ-05	5/6/1997	Cobalt	1.2	
SF-AQ-05	5/6/1997	Antimony	2.2	U
SF-AQ-05	5/6/1997	Thallium	3.1	U
SF-AQ-05	5/6/1997	Selenium	3.2	U
SF-AQ-05	5/6/1997	Nickel	3.8	
SF-AQ-05	5/6/1997	Arsenic	3.9	
SF-AQ-05	5/6/1997	Chromium	6.7	
SF-AQ-05	5/6/1997	Cyanide	10	U
SF-AQ-05	5/6/1997	Vanadium	10	
SF-AQ-05	5/6/1997	Barium	35.3	

Table 4-11

**Summary of Analytical Results
SF-05 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-05	5/6/1997	Lead	66.3	
SF-AQ-05	5/6/1997	Manganese	112	
SF-AQ-05	5/6/1997	Zinc	158	J
SF-AQ-05	5/6/1997	Aluminum	159	
SF-AQ-05	5/6/1997	Copper	159	
SF-AQ-05	5/6/1997	Potassium	449	
SF-AQ-05	5/6/1997	Iron	709	
SF-AQ-05	5/6/1997	Sodium	2,630	
SF-AQ-05	5/6/1997	Magnesium	2,790	
SF-AQ-05	5/6/1997	Calcium	11,100	

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 4) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 5) **J** - reported result is estimated due to a minor quality control anomaly.
- 6) SF-05 liquid characterization sample was collected during the Continued Remedial Investigation.

Table 4-12

**Summary of Analytical Results
SF-05/06 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF0506BSW01	4/18/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF0506BSW01	4/18/2006	TCE	0.001	U	0.7	7.15
SF0506BSW01	4/18/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF0506BSE01	4/18/2006	c-1,2-Dichloroethene	0.0055	U	0.25	10,220
SF0506BSE01	4/18/2006	TCE	0.0011	U	0.7	7.15
SF0506BSE01	4/18/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF0506BNW01	4/18/2006	c-1,2-Dichloroethene	0.0056	U	0.25	10,220
SF0506BNW01	4/18/2006	TCE	0.0011	U	0.7	7.15
SF0506BNW01	4/18/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF0506BNE01	4/18/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF0506BNE01	4/18/2006	TCE	0.001	U	0.7	7.15
SF0506BNE01	4/18/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP14	4/18/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
DUP14	4/18/2006	TCE	0.001	U	0.7	7.15
DUP14	4/18/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF0506CSW01	4/18/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF0506CSW01	4/18/2006	Benzo(a)pyrene	0.034	U	0.29	0.39
SF0506CSW01	4/18/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF0506CSW01	4/18/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF0506CSW01	4/18/2006	Chrysene	0.34	U	NA	392
SF0506CSW01	4/18/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF0506CSW01	4/18/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF0506CSW01	4/18/2006	PCBs(total)	0.023	J	10	1.43
SF0506CSW01	4/18/2006	Arsenic	9.8		NA	1.91
SF0506CSW01	4/18/2006	Cadmium	0.12	U	10	511
SF0506CSW01	4/18/2006	Chromium	4.6		143	3,066
SF0506CSW01	4/18/2006	Cobalt	1.2	B	NA	NA
SF0506CSW01	4/18/2006	Copper	4.4	B	NA	40,880
SF0506CSW01	4/18/2006	Lead	3.4		NA	NA
SF0506CSW01	4/18/2006	Mercury	0.017	U	NA	NA
SF0506CSW01	4/18/2006	Nickel	1.3	B	NA	20,440
SF0506CSW01	4/18/2006	Zinc	3	B	NA	306,600
SF0506CSW01	4/18/2006	Cyanide	0.5	U	35	20,440
SF0506CSE01	4/18/2006	Benzo(a)anthracene	4.4		NA	3.92
SF0506CSE01	4/18/2006	Benzo(a)pyrene	3.8		0.29	0.392
SF0506CSE01	4/18/2006	Benzo(b)fluoranthene	3.6		NA	3.92
SF0506CSE01	4/18/2006	Benzo(k)fluoranthene	3.9		NA	39.2
SF0506CSE01	4/18/2006	Chrysene	4.6		NA	392
SF0506CSE01	4/18/2006	Dibenz(a,h)anthracene	0.74		0.29	0.392
SF0506CSE01	4/18/2006	Indeno(1,2,3-cd)pyrene	1.9		NA	3.92
SF0506CSE01	4/18/2006	PCBs(total)	0.072	U	10	1.43
SF0506CSE01	4/18/2006	Arsenic	1.7		NA	1.91
SF0506CSE01	4/18/2006	Cadmium	0.25	B	10	511
SF0506CSE01	4/18/2006	Chromium	5.8		143	3,066
SF0506CSE01	4/18/2006	Cobalt	1.8	B	NA	NA
SF0506CSE01	4/18/2006	Copper	5.5		NA	40,880

Table 4-12

**Summary of Analytical Results
SF-05/06 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF0506CSE01	4/18/2006	Lead	6.8		NA	NA
SF0506CSE01	4/18/2006	Mercury	0.04		NA	NA
SF0506CSE01	4/18/2006	Nickel	3.4	B	NA	20,440
SF0506CSE01	4/18/2006	Zinc	29		NA	306,600
SF0506CSE01	4/18/2006	Cyanide	0.5	U	35	20,440
SF0506CNW01	4/18/2006	Benzo(a)anthracene	17		NA	3.92
SF0506CNW01	4/18/2006	Benzo(a)pyrene	14		0.29	0.392
SF0506CNW01	4/18/2006	Benzo(b)fluoranthene	12		NA	3.92
SF0506CNW01	4/18/2006	Benzo(k)fluoranthene	15		NA	39.2
SF0506CNW01	4/18/2006	Chrysene	16		NA	392
SF0506CNW01	4/18/2006	Dibenz(a,h)anthracene	2.9		0.29	0.392
SF0506CNW01	4/18/2006	Indeno(1,2,3-cd)pyrene	7.2		NA	3.92
SF0506CNW01	4/18/2006	PCBs(total)	0.07	U	10	1.43
SF0506CNW01	4/18/2006	Arsenic	0.98	U	NA	1.91
SF0506CNW01	4/18/2006	Cadmium	0.12	U	10	511
SF0506CNW01	4/18/2006	Chromium	2.3		143	3,066
SF0506CNW01	4/18/2006	Cobalt	0.78	B	NA	NA
SF0506CNW01	4/18/2006	Copper	2.3	B	NA	40,880
SF0506CNW01	4/18/2006	Lead	1.7		NA	NA
SF0506CNW01	4/18/2006	Mercury	0.017	U	NA	NA
SF0506CNW01	4/18/2006	Nickel	1.5	B	NA	20,440
SF0506CNW01	4/18/2006	Zinc	4.7	B	NA	306,600
SF0506CNW01	4/18/2006	Cyanide	0.5	U	35	20,440
SF0506CNE01	4/18/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF0506CNE01	4/18/2006	Benzo(a)pyrene	0.034	U	0.29	0.39
SF0506CNE01	4/18/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF0506CNE01	4/18/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF0506CNE01	4/18/2006	Chrysene	0.34	U	NA	392
SF0506CNE01	4/18/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF0506CNE01	4/18/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF0506CNE01	4/18/2006	PCBs(total)	0.068	U	10	1.43
SF0506CNE01	4/18/2006	Arsenic	0.96	U	NA	1.91
SF0506CNE01	4/18/2006	Cadmium	0.12	U	10	511
SF0506CNE01	4/18/2006	Chromium	3.1		143	3,066
SF0506CNE01	4/18/2006	Cobalt	1	B	NA	NA
SF0506CNE01	4/18/2006	Copper	0.98	U	NA	40,880
SF0506CNE01	4/18/2006	Lead	0.99	B	NA	NA
SF0506CNE01	4/18/2006	Mercury	0.017	U	NA	NA
SF0506CNE01	4/18/2006	Nickel	1	B	NA	20,440
SF0506CNE01	4/18/2006	Zinc	2.9	B	NA	306,600
SF0506CNE01	4/18/2006	Cyanide	0.5	U	35	20,440
DUP15	4/18/2006	Benzo(a)anthracene	0.038		NA	3.92
DUP15	4/18/2006	Benzo(a)pyrene	0.032	J	0.29	0.39
DUP15	4/18/2006	Benzo(b)fluoranthene	0.03	J	NA	3.92
DUP15	4/18/2006	Benzo(k)fluoranthene	0.044		NA	39.2
DUP15	4/18/2006	Chrysene	0.043	J	NA	392

Table 4-12

**Summary of Analytical Results
SF-05/06 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
DUP15	4/18/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
DUP15	4/18/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
DUP15	4/18/2006	PCBs(total)	0.069	U	10	1.43
DUP15	4/18/2006	Arsenic	0.97	U	NA	1.91
DUP15	4/18/2006	Cadmium	0.12	U	10	511
DUP15	4/18/2006	Chromium	2.4		143	3,066
DUP15	4/18/2006	Cobalt	0.89	B	NA	NA
DUP15	4/18/2006	Copper	4.9	B	NA	40,880
DUP15	4/18/2006	Lead	2		NA	NA
DUP15	4/18/2006	Mercury	0.017	U	NA	NA
DUP15	4/18/2006	Nickel	1.4	B	NA	20,440
DUP15	4/18/2006	Zinc	5.3	B	NA	306,600
DUP15	4/18/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) SF-05/06 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Explanation:

- Reported concentration exceeds the AOC *Cleanup Goal*.
- Reported concentration exceeds the AOC *Cleanup Goal* and USEPA *Risk-based Concentration for Industrial Soil*.

Table 4-13

**Summary of Analytical Results
SF-07 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-07	5/7/1997	1,1,1-Trichloroethane	0.021	U	NA	286,160
SF-SL-07	5/7/1997	1,1,2,2-Tetrachloroethane	0.021	U	NA	14.31
SF-SL-07	5/7/1997	1,1,2-Trichloroethane	0.021	U	NA	50.20
SF-SL-07	5/7/1997	1,1-Dichloroethane	0.021	U	NA	204,400
SF-SL-07	5/7/1997	1,1-Dichloroethene	0.021	U	NA	51,100
SF-SL-07	5/7/1997	1,2-Dichloroethane	0.021	U	NA	31.45
SF-SL-07	5/7/1997	1,2-Dichloroethene (total)	0.021	U	0.25	9,198
SF-SL-07	5/7/1997	1,2-Dichloropropane	0.021	U	NA	42.08
SF-SL-07	5/7/1997	2-Butanone	0.09		NA	613,200
SF-SL-07	5/7/1997	2-Hexanone	0.021	U	NA	NA
SF-SL-07	5/7/1997	4-Methyl-2-pentanone	0.021	U	NA	NA
SF-SL-07	5/7/1997	Acetone	0.11	U	NA	919,800
SF-SL-07	5/7/1997	Benzene	0.021	U	NA	52.03
SF-SL-07	5/7/1997	Bromodichloromethane	0.021	U	NA	46.15
SF-SL-07	5/7/1997	Bromoform	0.021	U	NA	362.23
SF-SL-07	5/7/1997	Bromomethane	0.021	U	NA	1430.80
SF-SL-07	5/7/1997	c-1,3-Dichloropropene	0.021	U	NA	NA
SF-SL-07	5/7/1997	Carbon Tetrachloride	0.021	U	NA	22.01
SF-SL-07	5/7/1997	Chlorobenzene	0.021	U	NA	20,440
SF-SL-07	5/7/1997	Chloroethane	0.021	U	NA	986.76
SF-SL-07	5/7/1997	Chloroform	0.002	J	NA	10,220
SF-SL-07	5/7/1997	Chloromethane	0.021	U	NA	NA
SF-SL-07	5/7/1997	Dibromochloromethane	0.021	U	NA	34.07
SF-SL-07	5/7/1997	Ethylbenzene	0.021	U	NA	102,200
SF-SL-07	5/7/1997	Methylene Chloride	0.021	U	NA	381.55
SF-SL-07	5/7/1997	Styrene	0.021	U	NA	204,400
SF-SL-07	5/7/1997	t-1,3-Dichloropropene	0.021	U	NA	NA
SF-SL-07	5/7/1997	TCE	0.021	U	0.7	7.15
SF-SL-07	5/7/1997	Tetrachloroethene	0.021	U	1.4	5.30
SF-SL-07	5/7/1997	Toluene	0.004	J	NA	81,760
SF-SL-07	5/7/1997	Vinyl Chloride	0.021	U	NA	3.97
SF-SL-07	5/7/1997	Xylene (Total)	0.021	U	NA	204,400
SF-SL-07	5/7/1997	1,2,4-Trimethylbenzene	34	U	NA	NA
SF-SL-07	5/7/1997	1,2-Dichlorobenzene	34	U	NA	91,980
SF-SL-07	5/7/1997	1,3-Dichlorobenzene	34	U	NA	3,066
SF-SL-07	5/7/1997	1,4-Dichlorobenzene	34	U	NA	119.23
SF-SL-07	5/7/1997	2,4,5-Trichlorophenol	84	U	NA	102,200
SF-SL-07	5/7/1997	2,4,6-Trichlorophenol	34	U	NA	260.15
SF-SL-07	5/7/1997	2,4-Dichlorophenol	34	U	NA	3,066
SF-SL-07	5/7/1997	2,4-Dimethylphenol	34	U	NA	20,440
SF-SL-07	5/7/1997	2,4-Dinitrophenol	84	U	NA	2,044
SF-SL-07	5/7/1997	2,4-Dinitrotoluene	34	U	NA	2,044
SF-SL-07	5/7/1997	2,6-Dinitrotoluene	34	U	NA	1,022
SF-SL-07	5/7/1997	2-Chloronaphthalene	34	U	NA	81,760
SF-SL-07	5/7/1997	2-Chlorophenol	34	U	NA	5,110

Table 4-13

**Summary of Analytical Results
SF-07 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-07	5/7/1997	2-Methylnaphthalene	3.3	J	NA	4,088
SF-SL-07	5/7/1997	2-Methylphenol	34	U	NA	51,100
SF-SL-07	5/7/1997	2-Nitroaniline	84	U	NA	NA
SF-SL-07	5/7/1997	2-Nitrophenol	34	U	NA	NA
SF-SL-07	5/7/1997	3,3'-Dichlorobenzidine	34	U	NA	6.36
SF-SL-07	5/7/1997	3+4-Methylphenol	1.5	J	NA	5,110
SF-SL-07	5/7/1997	3-Nitroaniline	84	U	NA	NA
SF-SL-07	5/7/1997	4,6-Dinitro-2-methylphenol	84	U	NA	NA
SF-SL-07	5/7/1997	4-Bromophenyl phenyl ether	34	U	NA	NA
SF-SL-07	5/7/1997	4-Chloro-3-methylphenol	34	U	NA	NA
SF-SL-07	5/7/1997	4-Chloroaniline	34	U	NA	4,088
SF-SL-07	5/7/1997	4-Chlorophenyl phenyl ether	34	U	NA	NA
SF-SL-07	5/7/1997	4-Nitroaniline	84	U	NA	NA
SF-SL-07	5/7/1997	4-Nitrophenol	84	U	NA	NA
SF-SL-07	5/7/1997	Acenaphthene	10	J	NA	61,320
SF-SL-07	5/7/1997	Acenaphthylene	1.1	J	NA	NA
SF-SL-07	5/7/1997	Anthracene	24	J	NA	306,600
SF-SL-07	5/7/1997	Benzo(a)anthracene	80		NA	3.92
SF-SL-07	5/7/1997	Benzo(a)pyrene	63		0.29	0.39
SF-SL-07	5/7/1997	Benzo(b)fluoranthene	98		NA	3.92
SF-SL-07	5/7/1997	Benzo(g,h,i)perylene	39		NA	NA
SF-SL-07	5/7/1997	Benzo(k)fluoranthene	38		NA	39.20
SF-SL-07	5/7/1997	bis(2-Chloroethoxy)methane	34	U	NA	NA
SF-SL-07	5/7/1997	bis(2-Chloroethyl)ether	34	U	NA	2.60
SF-SL-07	5/7/1997	bis(2-Chloroisopropyl)ether	34	U	NA	40.88
SF-SL-07	5/7/1997	bis(2-Ethylhexyl)phthalate	12	J	NA	204.40
SF-SL-07	5/7/1997	Carbazole	24	J	NA	143.08
SF-SL-07	5/7/1997	Chrysene	82		NA	392
SF-SL-07	5/7/1997	Dibenz(a,h)anthracene	11	J	0.29	0.39
SF-SL-07	5/7/1997	Dibenzofuran	9.2	J	NA	1,022
SF-SL-07	5/7/1997	Diethyl phthalate	34	U	NA	817,600
SF-SL-07	5/7/1997	Dimethyl phthalate	34	U	NA	NA
SF-SL-07	5/7/1997	Di-n-butyl phthalate	34	U	NA	102,200
SF-SL-07	5/7/1997	Di-n-octyl phthalate	34	U	NA	NA
SF-SL-07	5/7/1997	Fluoranthene	190		NA	40,880
SF-SL-07	5/7/1997	Fluorene	13	J	NA	40,880
SF-SL-07	5/7/1997	Hexachlorobenzene	34	U	NA	1.79
SF-SL-07	5/7/1997	Hexachlorobutadiene	34	U	NA	36.69
SF-SL-07	5/7/1997	Hexachlorocyclopentadiene	34	U	NA	6,132
SF-SL-07	5/7/1997	Hexachloroethane	34	U	NA	204.40
SF-SL-07	5/7/1997	Indeno(1,2,3-cd)pyrene	41		NA	3.92
SF-SL-07	5/7/1997	Isophorone	34	U	NA	3012.21
SF-SL-07	5/7/1997	Naphthalene	8	J	NA	20,440
SF-SL-07	5/7/1997	Nitrobenzene	34	U	NA	511
SF-SL-07	5/7/1997	N-Nitrosodi-n-propylamine	34	U	NA	0.41

Table 4-13

**Summary of Analytical Results
SF-07 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-07	5/7/1997	N-Nitrosodiphenylamine	34	U	NA	584
SF-SL-07	5/7/1997	Pentachlorophenol	84	U	NA	23.85
SF-SL-07	5/7/1997	Phenanthrene	130		NA	NA
SF-SL-07	5/7/1997	Phenol	1.3	J	NA	306,600
SF-SL-07	5/7/1997	Pyrene	150		NA	30,660
SF-SL-07	5/7/1997	4,4'-DDD	32		NA	11.92
SF-SL-07	5/7/1997	4,4'-DDE	7.4	J	NA	8.42
SF-SL-07	5/7/1997	4,4'-DDT	5	J	NA	8.42
SF-SL-07	5/7/1997	Aldrin	0.0036	U	NA	0.17
SF-SL-07	5/7/1997	alpha-BHC	0.18	U	NA	0.45
SF-SL-07	5/7/1997	alpha-Chlordane	0.18	U	NA	NA
SF-SL-07	5/7/1997	beta-BHC	0.18	U	NA	1.59
SF-SL-07	5/7/1997	delta-BHC	0.18	U	NA	NA
SF-SL-07	5/7/1997	Dieldrin	0.34	U	NA	0.18
SF-SL-07	5/7/1997	Endosulfan I	0.18	U	NA	6,132
SF-SL-07	5/7/1997	Endosulfan II	0.34	U	NA	6,132
SF-SL-07	5/7/1997	Endosulfan sulfate	0.34	U	NA	NA
SF-SL-07	5/7/1997	Endrin	0.34	U	NA	307
SF-SL-07	5/7/1997	Endrin Aldehyde	0.34	U	NA	NA
SF-SL-07	5/7/1997	Endrin ketone	0.34	U	NA	NA
SF-SL-07	5/7/1997	gamma-BHC (Lindane)	0.18	U	NA	2.20
SF-SL-07	5/7/1997	gamma-Chlordane	0.18	U	NA	NA
SF-SL-07	5/7/1997	Heptachlor	0.18	U	NA	0.64
SF-SL-07	5/7/1997	Heptachlor epoxide	0.18	U	NA	0.31
SF-SL-07	5/7/1997	Methoxychlor	1.8	U	NA	5,110
SF-SL-07	5/7/1997	Toxaphene	18	U	NA	2.60
SF-SL-07	5/7/1997	Aroclor 1016	3.4	U	NA	40.88
SF-SL-07	5/7/1997	Aroclor 1221	7	U	NA	1.43
SF-SL-07	5/7/1997	Aroclor 1232	3.4	U	NA	1.43
SF-SL-07	5/7/1997	Aroclor 1242	3.4	U	NA	1.43
SF-SL-07	5/7/1997	Aroclor 1248	3.4	U	NA	1.43
SF-SL-07	5/7/1997	Aroclor 1254	3.4	U	NA	1.43
SF-SL-07	5/7/1997	Aroclor 1260	3.4	U	NA	1.43
SF-SL-07	5/7/1997	PCBs(total)	7	U	10	1.43
SF-SL-07	5/7/1997	Aluminum	11,400	J	NA	1,022,000
SF-SL-07	5/7/1997	Antimony	0.93	J	NA	408.8
SF-SL-07	5/7/1997	Arsenic	17	J	NA	1.91
SF-SL-07	5/7/1997	Barium	234	J	NA	204,400
SF-SL-07	5/7/1997	Beryllium	0.57	J	NA	2,044
SF-SL-07	5/7/1997	Cadmium	12.7	J	10	511
SF-SL-07	5/7/1997	Calcium	4,470	J	NA	NA
SF-SL-07	5/7/1997	Chromium	360	J	143	3,066
SF-SL-07	5/7/1997	Cobalt	22.2	J	NA	NA
SF-SL-07	5/7/1997	Copper	1,140	J	NA	40,880
SF-SL-07	5/7/1997	Cyanide	2	J	35	20,440

Table 4-13

**Summary of Analytical Results
SF-07 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-07	5/7/1997	Iron	55,900	J	NA	715,400
SF-SL-07	5/7/1997	Lead	811	J	NA	NA
SF-SL-07	5/7/1997	Magnesium	3,850	J	NA	NA
SF-SL-07	5/7/1997	Manganese	306	J	NA	20,440
SF-SL-07	5/7/1997	Mercury	0.91	J	NA	NA
SF-SL-07	5/7/1997	Nickel	87.7	J	NA	20,440
SF-SL-07	5/7/1997	Potassium	369	J	NA	NA
SF-SL-07	5/7/1997	Selenium	4.3	J	NA	5,110
SF-SL-07	5/7/1997	Silver	2.9	J	NA	5,110
SF-SL-07	5/7/1997	Sodium	202	J	NA	NA
SF-SL-07	5/7/1997	Thallium	1.3	UJ	NA	71.54
SF-SL-07	5/7/1997	Vanadium	163	J	NA	1,022
SF-SL-07	5/7/1997	Zinc	944	J	NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) **J** - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-07 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-14

**Summary of Analytical Results
SF-07 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-07	5/7/1997	Carbon Tetrachloride	10	U
SF-AQ-07	5/7/1997	Acetone	10	U
SF-AQ-07	5/7/1997	Chloroform	10	U
SF-AQ-07	5/7/1997	Benzene	10	U
SF-AQ-07	5/7/1997	1,1,1-Trichloroethane	10	U
SF-AQ-07	5/7/1997	Bromomethane	10	U
SF-AQ-07	5/7/1997	Chloroethane	10	U
SF-AQ-07	5/7/1997	Vinyl Chloride	10	U
SF-AQ-07	5/7/1997	Methylene Chloride	10	U
SF-AQ-07	5/7/1997	Bromoform	10	U
SF-AQ-07	5/7/1997	Bromodichloromethane	10	U
SF-AQ-07	5/7/1997	1,1-Dichloroethane	10	U
SF-AQ-07	5/7/1997	1,1-Dichloroethene	10	U
SF-AQ-07	5/7/1997	1,2-Dichloropropane	10	U
SF-AQ-07	5/7/1997	2-Butanone	10	U
SF-AQ-07	5/7/1997	1,1,2-Trichloroethane	10	U
SF-AQ-07	5/7/1997	TCE	10	U
SF-AQ-07	5/7/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-07	5/7/1997	Ethylbenzene	10	U
SF-AQ-07	5/7/1997	Styrene	10	U
SF-AQ-07	5/7/1997	1,2-Dichloroethane	10	U
SF-AQ-07	5/7/1997	4-Methyl-2-pentanone	10	U
SF-AQ-07	5/7/1997	Toluene	10	U
SF-AQ-07	5/7/1997	Chlorobenzene	10	U
SF-AQ-07	5/7/1997	Dibromochloromethane	10	U
SF-AQ-07	5/7/1997	Tetrachloroethene	10	U
SF-AQ-07	5/7/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-07	5/7/1997	2-Hexanone	10	U
SF-AQ-07	5/7/1997	Xylene (Total)	10	U
SF-AQ-07	5/7/1997	Chloromethane	10	U
SF-AQ-07	5/7/1997	c-1,3-Dichloropropene	10	U
SF-AQ-07	5/7/1997	t-1,3-Dichloropropene	10	U
SF-AQ-07	5/7/1997	Acenaphthene	0.1	J
SF-AQ-07	5/7/1997	Fluorene	0.1	J
SF-AQ-07	5/7/1997	Naphthalene	0.1	J
SF-AQ-07	5/7/1997	Dibenzofuran	0.1	J
SF-AQ-07	5/7/1997	3+4-Methylphenol	0.2	J
SF-AQ-07	5/7/1997	Dibenz(a,h)anthracene	0.4	J
SF-AQ-07	5/7/1997	Anthracene	0.4	J
SF-AQ-07	5/7/1997	Carbazole	0.5	J
SF-AQ-07	5/7/1997	Benzo(a)pyrene	2	J
SF-AQ-07	5/7/1997	Benzo(a)anthracene	2	J
SF-AQ-07	5/7/1997	Phenanthrene	2	J
SF-AQ-07	5/7/1997	bis(2-Ethylhexyl)phthalate	2	J
SF-AQ-07	5/7/1997	Benzo(g,h,i)perylene	2	J
SF-AQ-07	5/7/1997	Indeno(1,2,3-cd)pyrene	2	J

Table 4-14

**Summary of Analytical Results
SF-07 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-07	5/7/1997	Benzo(k)fluoranthene	2	J
SF-AQ-07	5/7/1997	Chrysene	3	J
SF-AQ-07	5/7/1997	Pyrene	4	J
SF-AQ-07	5/7/1997	Benzo(b)fluoranthene	4	J
SF-AQ-07	5/7/1997	Fluoranthene	5	J
SF-AQ-07	5/7/1997	4-Chloro-3-methylphenol	10	U
SF-AQ-07	5/7/1997	Hexachloroethane	10	U
SF-AQ-07	5/7/1997	Hexachlorocyclopentadiene	10	U
SF-AQ-07	5/7/1997	Isophorone	10	U
SF-AQ-07	5/7/1997	Diethyl phthalate	10	U
SF-AQ-07	5/7/1997	Di-n-butyl phthalate	10	U
SF-AQ-07	5/7/1997	N-Nitrosodiphenylamine	10	U
SF-AQ-07	5/7/1997	Hexachlorobutadiene	10	U
SF-AQ-07	5/7/1997	2,4,6-Trichlorophenol	10	U
SF-AQ-07	5/7/1997	Nitrobenzene	10	U
SF-AQ-07	5/7/1997	2-Nitrophenol	10	U
SF-AQ-07	5/7/1997	2-Methylnaphthalene	10	U
SF-AQ-07	5/7/1997	2-Chloronaphthalene	10	U
SF-AQ-07	5/7/1997	3,3'-Dichlorobenzidine	10	U
SF-AQ-07	5/7/1997	2-Methylphenol	10	U
SF-AQ-07	5/7/1997	1,2-Dichlorobenzene	10	U
SF-AQ-07	5/7/1997	2-Chlorophenol	10	U
SF-AQ-07	5/7/1997	1,2,4-Trimethylbenzene	10	U
SF-AQ-07	5/7/1997	4-Bromophenyl phenyl ether	10	U
SF-AQ-07	5/7/1997	2,4-Dimethylphenol	10	U
SF-AQ-07	5/7/1997	1,4-Dichlorobenzene	10	U
SF-AQ-07	5/7/1997	4-Chloroaniline	10	U
SF-AQ-07	5/7/1997	bis(2-Chloroisopropyl)ether	10	U
SF-AQ-07	5/7/1997	Phenol	10	U
SF-AQ-07	5/7/1997	bis(2-Chloroethyl)ether	10	U
SF-AQ-07	5/7/1997	bis(2-Chloroethoxy)methane	10	U
SF-AQ-07	5/7/1997	Di-n-octyl phthalate	10	U
SF-AQ-07	5/7/1997	Hexachlorobenzene	10	U
SF-AQ-07	5/7/1997	2,4-Dichlorophenol	10	U
SF-AQ-07	5/7/1997	2,4-Dinitrotoluene	10	U
SF-AQ-07	5/7/1997	Dimethyl phthalate	10	U
SF-AQ-07	5/7/1997	Acenaphthylene	10	U
SF-AQ-07	5/7/1997	1,3-Dichlorobenzene	10	U
SF-AQ-07	5/7/1997	2,6-Dinitrotoluene	10	U
SF-AQ-07	5/7/1997	N-Nitrosodi-n-propylamine	10	U
SF-AQ-07	5/7/1997	4-Chlorophenyl phenyl ether	10	U
SF-AQ-07	5/7/1997	2,4-Dinitrophenol	26	U
SF-AQ-07	5/7/1997	Pentachlorophenol	26	U
SF-AQ-07	5/7/1997	2-Nitroaniline	26	U
SF-AQ-07	5/7/1997	2,4,5-Trichlorophenol	26	U
SF-AQ-07	5/7/1997	3-Nitroaniline	26	U

Table 4-14

**Summary of Analytical Results
SF-07 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-07	5/7/1997	4-Nitroaniline	26	U
SF-AQ-07	5/7/1997	4-Nitrophenol	26	U
SF-AQ-07	5/7/1997	4,6-Dinitro-2-methylphenol	26	U
SF-AQ-07	5/7/1997	alpha-Chlordane	0.05	U
SF-AQ-07	5/7/1997	gamma-BHC (Lindane)	0.05	U
SF-AQ-07	5/7/1997	Heptachlor	0.05	U
SF-AQ-07	5/7/1997	Aldrin	0.05	U
SF-AQ-07	5/7/1997	alpha-BHC	0.05	U
SF-AQ-07	5/7/1997	beta-BHC	0.05	U
SF-AQ-07	5/7/1997	Endosulfan I	0.05	U
SF-AQ-07	5/7/1997	Heptachlor epoxide	0.05	U
SF-AQ-07	5/7/1997	gamma-Chlordane	0.05	U
SF-AQ-07	5/7/1997	Endrin	0.1	U
SF-AQ-07	5/7/1997	Endosulfan sulfate	0.1	U
SF-AQ-07	5/7/1997	Endosulfan II	0.1	U
SF-AQ-07	5/7/1997	delta-BHC	1.2	U
SF-AQ-07	5/7/1997	Dieldrin	2.5	U
SF-AQ-07	5/7/1997	Endrin Aldehyde	2.5	U
SF-AQ-07	5/7/1997	Endrin ketone	2.5	U
SF-AQ-07	5/7/1997	Toxaphene	5	U
SF-AQ-07	5/7/1997	4,4'-DDT	8.5	
SF-AQ-07	5/7/1997	4,4'-DDE	14	
SF-AQ-07	5/7/1997	Methoxychlor	16	J
SF-AQ-07	5/7/1997	4,4'-DDD	24	
SF-AQ-07	5/7/1997	Aroclor 1260	1	U
SF-AQ-07	5/7/1997	Aroclor 1254	1	U
SF-AQ-07	5/7/1997	Aroclor 1232	1	U
SF-AQ-07	5/7/1997	Aroclor 1248	1	U
SF-AQ-07	5/7/1997	Aroclor 1016	1	U
SF-AQ-07	5/7/1997	Aroclor 1242	1	U
SF-AQ-07	5/7/1997	PCBs(total)	2	U
SF-AQ-07	5/7/1997	Aroclor 1221	2	U
SF-AQ-07	5/7/1997	Mercury	0.1	U
SF-AQ-07	5/7/1997	Beryllium	0.3	
SF-AQ-07	5/7/1997	Cadmium	0.97	
SF-AQ-07	5/7/1997	Silver	1	U
SF-AQ-07	5/7/1997	Cobalt	1.1	U
SF-AQ-07	5/7/1997	Antimony	2.2	U
SF-AQ-07	5/7/1997	Thallium	3.1	U
SF-AQ-07	5/7/1997	Selenium	3.2	U
SF-AQ-07	5/7/1997	Arsenic	3.5	
SF-AQ-07	5/7/1997	Nickel	3.7	
SF-AQ-07	5/7/1997	Chromium	6.4	
SF-AQ-07	5/7/1997	Vanadium	7.1	
SF-AQ-07	5/7/1997	Cyanide	10	U
SF-AQ-07	5/7/1997	Barium	36	

Table 4-14

**Summary of Analytical Results
SF-07 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-07	5/7/1997	Manganese	40.2	
SF-AQ-07	5/7/1997	Lead	40.3	
SF-AQ-07	5/7/1997	Copper	105	
SF-AQ-07	5/7/1997	Zinc	193	J
SF-AQ-07	5/7/1997	Aluminum	274	
SF-AQ-07	5/7/1997	Potassium	467	
SF-AQ-07	5/7/1997	Magnesium	2090	
SF-AQ-07	5/7/1997	Iron	2570	
SF-AQ-07	5/7/1997	Sodium	2780	
SF-AQ-07	5/7/1997	Calcium	9480	

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) **J** - result is estimated due to minor quality control anomaly.
- 5) SF-07 liquid characterization sample was collected during the Continued Remedial Investigation.

Table 4-15

**Summary of Analytical Results
SF-07 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF07BNE01	4/7/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF07BNE01	4/7/2006	TCE	0.001	U	0.7	7.15
SF07BNE01	4/7/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF07BNW01	4/7/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF07BNW01	4/7/2006	TCE	0.001	U	0.7	7.15
SF07BNW01	4/7/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF07BSE01	4/7/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF07BSE01	4/7/2006	TCE	0.001	U	0.7	7.15
SF07BSE01	4/7/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF07BSW01	4/7/2006	c-1,2-Dichloroethene	0.0055	U	0.25	10,220
SF07BSW01	4/7/2006	TCE	0.0011	U	0.7	7.15
SF07BSW01	4/7/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF07CE01	4/7/2006	3+4-Methylphenol	0.34	U	NA	5,110
SF07CE01	4/7/2006	Benzo(a)anthracene	0.019	J	NA	3.92
SF07CE01	4/7/2006	Benzo(a)pyrene	0.017	J	0.29	0.39
SF07CE01	4/7/2006	Benzo(b)fluoranthene	0.016	J	NA	3.92
SF07CE01	4/7/2006	Benzo(k)fluoranthene	0.1		NA	39.2
SF07CE01	4/7/2006	Chrysene	0.024	J	NA	392
SF07CE01	4/7/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF07CE01	4/7/2006	Dibenzofuran	0.34	U	NA	1,022
SF07CE01	4/7/2006	Fluoranthene	0.033	J	NA	40,880
SF07CE01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF07CE01	4/7/2006	Phenanthrene	0.34	U	NA	NA
SF07CE01	4/7/2006	Phenol	0.34	U	NA	306,600
SF07CE01	4/7/2006	Pyrene	0.03	J	NA	30,660
SF07CE01	4/7/2006	4,4'-DDD	0.0069	U	NA	11.92
SF07CE01	4/7/2006	4,4'-DDE	0.0069	U	NA	8.42
SF07CE01	4/7/2006	4,4'-DDT	0.0069	U	NA	8.42
SF07CE01	4/7/2006	PCBs(total)	0.0690	U	10	1.43
SF07CE01	4/7/2006	Arsenic	1.1		NA	1.91
SF07CE01	4/7/2006	Cadmium	0.083	U	10	511
SF07CE01	4/7/2006	Chromium	3.6		143	3,066
SF07CE01	4/7/2006	Copper	4.6	B	NA	40,880
SF07CE01	4/7/2006	Lead	2.3		NA	NA
SF07CE01	4/7/2006	Mercury	0.015	U	NA	NA
SF07CE01	4/7/2006	Nickel	2	B	NA	20,440
SF07CE01	4/7/2006	Selenium	0.87	U	NA	5,110
SF07CE01	4/7/2006	Zinc	9.2		NA	306,600
SF07CE01	4/7/2006	Cyanide	0.5	U	35	20,440
SF07CN01	4/7/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF07CN01	4/7/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF07CN01	4/7/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF07CN01	4/7/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF07CN01	4/7/2006	Benzo(k)fluoranthene	0.035	U	NA	39.20
SF07CN01	4/7/2006	Chrysene	0.35	U	NA	392
SF07CN01	4/7/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39

Table 4-15

**Summary of Analytical Results
SF-07 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF07CN01	4/7/2006	Dibenzofuran	0.350	U	NA	1,022
SF07CN01	4/7/2006	Fluoranthene	0.350	U	NA	40,880
SF07CN01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
SF07CN01	4/7/2006	Phenanthrene	0.35	U	NA	NA
SF07CN01	4/7/2006	Phenol	0.35	U	NA	306,600
SF07CN01	4/7/2006	Pyrene	0.35	U	NA	30,660
SF07CN01	4/7/2006	4,4'-DDD	0.007	U	NA	11.92
SF07CN01	4/7/2006	4,4'-DDE	0.007	U	NA	8.42
SF07CN01	4/7/2006	4,4'-DDT	0.029		NA	8.42
SF07CN01	4/7/2006	PCBs(total)	0.07	U	10	1.43
SF07CN01	4/7/2006	Arsenic	0.67	U	NA	1.91
SF07CN01	4/7/2006	Cadmium	0.083	U	10	511
SF07CN01	4/7/2006	Chromium	3.9		143	3,066
SF07CN01	4/7/2006	Copper	10.2		NA	40,880
SF07CN01	4/7/2006	Lead	1.4		NA	NA
SF07CN01	4/7/2006	Mercury	0.015	U	NA	NA
SF07CN01	4/7/2006	Nickel	2.4	B	NA	20,440
SF07CN01	4/7/2006	Selenium	0.88	U	NA	5,110
SF07CN01	4/7/2006	Zinc	14.7		NA	306,600
SF07CN01	4/7/2006	Cyanide	0.5	U	35	20,440
SF07CS01	4/7/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF07CS01	4/7/2006	Benzo(a)anthracene	0.36		NA	3.92
SF07CS01	4/7/2006	Benzo(a)pyrene	0.34		0.29	0.39
SF07CS01	4/7/2006	Benzo(b)fluoranthene	0.29		NA	3.92
SF07CS01	4/7/2006	Benzo(k)fluoranthene	0.32		NA	39.20
SF07CS01	4/7/2006	Chrysene	0.38		NA	392.00
SF07CS01	4/7/2006	Dibenz(a,h)anthracene	0.065		0.29	0.39
SF07CS01	4/7/2006	Dibenzofuran	0.0088	J	NA	1,022
SF07CS01	4/7/2006	Fluoranthene	0.8		NA	40,880
SF07CS01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.19		NA	3.92
SF07CS01	4/7/2006	Phenanthrene	0.25	J	NA	NA
SF07CS01	4/7/2006	Phenol	0.35	U	NA	306,600
SF07CS01	4/7/2006	Pyrene	0.62		NA	30,660
SF07CS01	4/7/2006	4,4'-DDD	0.031		NA	11.92
SF07CS01	4/7/2006	4,4'-DDE	0.012		NA	8.42
SF07CS01	4/7/2006	4,4'-DDT	0.031		NA	8.42
SF07CS01	4/7/2006	PCBs(total)	0.07	U	10	1.43
SF07CS01	4/7/2006	Arsenic	0.84	B	NA	1.91
SF07CS01	4/7/2006	Cadmium	0.09	B	10	511
SF07CS01	4/7/2006	Chromium	6.4		143	3,066
SF07CS01	4/7/2006	Copper	7.4		NA	40,880
SF07CS01	4/7/2006	Lead	6		NA	NA
SF07CS01	4/7/2006	Mercury	0.018	U	NA	NA
SF07CS01	4/7/2006	Nickel	3.6	B	NA	20,440
SF07CS01	4/7/2006	Selenium	0.88	U	NA	5,110
SF07CS01	4/7/2006	Zinc	15.3		NA	306,600

Table 4-15

**Summary of Analytical Results
SF-07 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF07CS01	4/7/2006	Cyanide	0.5	U	35	20,440
SF07CW01	4/7/2006	3+4-Methylphenol	0.36	U	NA	5,110
SF07CW01	4/7/2006	Benzo(a)anthracene	0.029	J	NA	3.92
SF07CW01	4/7/2006	Benzo(a)pyrene	0.028	J	0.29	0.39
SF07CW01	4/7/2006	Benzo(b)fluoranthene	0.015	J	NA	3.92
SF07CW01	4/7/2006	Benzo(k)fluoranthene	0.12		NA	39.20
SF07CW01	4/7/2006	Chrysene	0.033	J	NA	392
SF07CW01	4/7/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.39
SF07CW01	4/7/2006	Dibenzofuran	0.36	U	NA	1,022
SF07CW01	4/7/2006	Fluoranthene	0.053	J	NA	40,880
SF07CW01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF07CW01	4/7/2006	Phenanthrene	0.017	J	NA	NA
SF07CW01	4/7/2006	Phenol	0.36	U	NA	306,600
SF07CW01	4/7/2006	Pyrene	0.042	J	NA	30,660
SF07CW01	4/7/2006	4,4'-DDD	0.0072	U	NA	11.92
SF07CW01	4/7/2006	4,4'-DDE	0.0072	U	NA	8.42
SF07CW01	4/7/2006	4,4'-DDT	0.0072	U	NA	8.42
SF07CW01	4/7/2006	PCBs(total)	0.072	U	10	1.43
SF07CW01	4/7/2006	Arsenic	1.5		NA	1.91
SF07CW01	4/7/2006	Cadmium	0.086	U	10	511
SF07CW01	4/7/2006	Chromium	7.7		143	3,066
SF07CW01	4/7/2006	Copper	4.9	B	NA	40,880
SF07CW01	4/7/2006	Lead	3.1		NA	NA
SF07CW01	4/7/2006	Mercury	0.018	U	NA	NA
SF07CW01	4/7/2006	Nickel	4.7	B	NA	20,440
SF07CW01	4/7/2006	Selenium	0.9	U	NA	5,110
SF07CW01	4/7/2006	Zinc	15.1		NA	306,600
SF07CW01	4/7/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, clean up goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-07 post-remediation confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Explanation:

Reported concentration exceeds the AOC *Cleanup Goal*.

Table 4-16

**Summary of Analytical Results
SF-08 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF-SL-08	5/8/1997	1,1,1-Trichloroethane	0.014	U	NA	286,160
SF-SL-08	5/8/1997	1,1,2,2-Tetrachloroethane	0.014	U	NA	14.31
SF-SL-08	5/8/1997	1,1,2-Trichloroethane	0.014	U	NA	50.20
SF-SL-08	5/8/1997	1,1-Dichloroethane	0.014	U	NA	204,400
SF-SL-08	5/8/1997	1,1-Dichloroethene	0.014	U	NA	51,100
SF-SL-08	5/8/1997	1,2-Dichloroethane	0.014	U	NA	31.45
SF-SL-08	5/8/1997	1,2-Dichloroethene (total)	0.001	J	0.25	9,198
SF-SL-08	5/8/1997	1,2-Dichloropropane	0.014	U	NA	42.08
SF-SL-08	5/8/1997	2-Butanone	0.014	U	NA	613,200
SF-SL-08	5/8/1997	2-Hexanone	0.014	U	NA	NA
SF-SL-08	5/8/1997	4-Methyl-2-pentanone	0.014	U	NA	NA
SF-SL-08	5/8/1997	Acetone	0.011	J	NA	919,800
SF-SL-08	5/8/1997	Benzene	0.014	U	NA	52.03
SF-SL-08	5/8/1997	Bromodichloromethane	0.014	U	NA	46.15
SF-SL-08	5/8/1997	Bromoform	0.014	U	NA	362.23
SF-SL-08	5/8/1997	Bromomethane	0.014	U	NA	1430.80
SF-SL-08	5/8/1997	c-1,3-Dichloropropene	0.014	U	NA	NA
SF-SL-08	5/8/1997	Carbon Tetrachloride	0.014	U	NA	22.01
SF-SL-08	5/8/1997	Chlorobenzene	0.014	U	NA	20,440
SF-SL-08	5/8/1997	Chloroethane	0.014	U	NA	986.76
SF-SL-08	5/8/1997	Chloroform	0.014	U	NA	10,220
SF-SL-08	5/8/1997	Chloromethane	0.014	U	NA	NA
SF-SL-08	5/8/1997	Dibromochloromethane	0.014	U	NA	34.07
SF-SL-08	5/8/1997	Ethylbenzene	0.014	U	NA	102,200
SF-SL-08	5/8/1997	Methylene Chloride	0.014	U	NA	381.55
SF-SL-08	5/8/1997	Styrene	0.014	U	NA	204,400
SF-SL-08	5/8/1997	t-1,3-Dichloropropene	0.014	U	NA	NA
SF-SL-08	5/8/1997	TCE	0.001	J	0.7	7.15
SF-SL-08	5/8/1997	Tetrachloroethene	0.014	U	1.4	5.30
SF-SL-08	5/8/1997	Toluene	0.014	U	NA	81,760
SF-SL-08	5/8/1997	Vinyl Chloride	0.014	U	NA	3.97
SF-SL-08	5/8/1997	Xylene (Total)	0.014	U	NA	204,400
SF-SL-08	5/8/1997	1,2,4-Trimethylbenzene	11	U	NA	NA
SF-SL-08	5/8/1997	1,2-Dichlorobenzene	11	U	NA	91,980
SF-SL-08	5/8/1997	1,3-Dichlorobenzene	11	U	NA	3,066
SF-SL-08	5/8/1997	1,4-Dichlorobenzene	11	U	NA	119.23
SF-SL-08	5/8/1997	2,4,5-Trichlorophenol	27	U	NA	102,200
SF-SL-08	5/8/1997	2,4,6-Trichlorophenol	11	U	NA	260.15
SF-SL-08	5/8/1997	2,4-Dichlorophenol	11	U	NA	3,066
SF-SL-08	5/8/1997	2,4-Dimethylphenol	11	U	NA	20,440
SF-SL-08	5/8/1997	2,4-Dinitrophenol	27	U	NA	2,044
SF-SL-08	5/8/1997	2,4-Dinitrotoluene	11	U	NA	2,044
SF-SL-08	5/8/1997	2,6-Dinitrotoluene	11	U	NA	1,022
SF-SL-08	5/8/1997	2-Chloronaphthalene	11	U	NA	81,760
SF-SL-08	5/8/1997	2-Chlorophenol	11	U	NA	5,110

Table 4-16

**Summary of Analytical Results
SF-08 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF-SL-08	5/8/1997	2-Methylnaphthalene	0.2	J	NA	4,088
SF-SL-08	5/8/1997	2-Methylphenol	11	U	NA	51,100
SF-SL-08	5/8/1997	2-Nitroaniline	27	U	NA	NA
SF-SL-08	5/8/1997	2-Nitrophenol	11	U	NA	NA
SF-SL-08	5/8/1997	3,3'-Dichlorobenzidine	11	U	NA	6.36
SF-SL-08	5/8/1997	3+4-Methylphenol	11	U	NA	5,110
SF-SL-08	5/8/1997	3-Nitroaniline	27	U	NA	NA
SF-SL-08	5/8/1997	4,6-Dinitro-2-methylphenol	27	U	NA	NA
SF-SL-08	5/8/1997	4-Bromophenyl phenyl ether	11	U	NA	NA
SF-SL-08	5/8/1997	4-Chloro-3-methylphenol	11	U	NA	NA
SF-SL-08	5/8/1997	4-Chloroaniline	11	U	NA	4,088
SF-SL-08	5/8/1997	4-Chlorophenyl phenyl ether	11	U	NA	NA
SF-SL-08	5/8/1997	4-Nitroaniline	27	U	NA	NA
SF-SL-08	5/8/1997	4-Nitrophenol	27	U	NA	NA
SF-SL-08	5/8/1997	Acenaphthene	0.47	J	NA	61,320
SF-SL-08	5/8/1997	Acenaphthylene	0.16	J	NA	NA
SF-SL-08	5/8/1997	Anthracene	0.92	J	NA	306,600
SF-SL-08	5/8/1997	Benzo(a)anthracene	5.9	J	NA	3.92
SF-SL-08	5/8/1997	Benzo(a)pyrene	5.7	J	0.29	0.39
SF-SL-08	5/8/1997	Benzo(b)fluoranthene	9.1	J	NA	3.92
SF-SL-08	5/8/1997	Benzo(g,h,i)perylene	2.9	J	NA	NA
SF-SL-08	5/8/1997	Benzo(k)fluoranthene	3.7	J	NA	39.20
SF-SL-08	5/8/1997	bis(2-Chloroethoxy)methane	11	U	NA	NA
SF-SL-08	5/8/1997	bis(2-Chloroethyl)ether	11	U	NA	2.60
SF-SL-08	5/8/1997	bis(2-Chloroisopropyl)ether	11	U	NA	40.88
SF-SL-08	5/8/1997	bis(2-Ethylhexyl)phthalate	2.4	J	NA	204.40
SF-SL-08	5/8/1997	Carbazole	1.1	J	NA	143.08
SF-SL-08	5/8/1997	Chrysene	7.8	J	NA	392
SF-SL-08	5/8/1997	Dibenz(a,h)anthracene	0.85	J	0.29	0.39
SF-SL-08	5/8/1997	Dibenzofuran	0.27	J	NA	1,022
SF-SL-08	5/8/1997	Diethyl phthalate	11	U	NA	817,600
SF-SL-08	5/8/1997	Dimethyl phthalate	11	U	NA	NA
SF-SL-08	5/8/1997	Di-n-butyl phthalate	11	U	NA	102,200
SF-SL-08	5/8/1997	Di-n-octyl phthalate	11	U	NA	NA
SF-SL-08	5/8/1997	Fluoranthene	13		NA	40,880
SF-SL-08	5/8/1997	Fluorene	0.45	J	NA	40,880
SF-SL-08	5/8/1997	Hexachlorobenzene	11	U	NA	1.79
SF-SL-08	5/8/1997	Hexachlorobutadiene	11	U	NA	36.69
SF-SL-08	5/8/1997	Hexachlorocyclopentadiene	11	U	NA	6,132
SF-SL-08	5/8/1997	Hexachloroethane	11	U	NA	204.40
SF-SL-08	5/8/1997	Indeno(1,2,3-cd)pyrene	3.1	J	NA	3.92
SF-SL-08	5/8/1997	Isophorone	11	U	NA	3012.21
SF-SL-08	5/8/1997	Naphthalene	0.25	J	NA	20,440
SF-SL-08	5/8/1997	Nitrobenzene	11	U	NA	511
SF-SL-08	5/8/1997	N-Nitrosodi-n-propylamine	11	U	NA	0.41

Table 4-16

**Summary of Analytical Results
SF-08 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF-SL-08	5/8/1997	N-Nitrosodiphenylamine	11	U	NA	584
SF-SL-08	5/8/1997	Pentachlorophenol	27	U	NA	23.85
SF-SL-08	5/8/1997	Phenanthrene	6.3	J	NA	NA
SF-SL-08	5/8/1997	Phenol	11	U	NA	306,600
SF-SL-08	5/8/1997	Pyrene	11	J	NA	30,660
SF-SL-08	5/8/1997	4,4'-DDD	0.82		NA	11.92
SF-SL-08	5/8/1997	4,4'-DDE	0.38	J	NA	8.42
SF-SL-08	5/8/1997	4,4'-DDT	2		NA	8.42
SF-SL-08	5/8/1997	Aldrin	0.0023	U	NA	0.17
SF-SL-08	5/8/1997	alpha-BHC	0.0023	U	NA	0.45
SF-SL-08	5/8/1997	alpha-Chlordane	0.011	J	NA	NA
SF-SL-08	5/8/1997	beta-BHC	0.0023	U	NA	1.59
SF-SL-08	5/8/1997	delta-BHC	0.0023	U	NA	NA
SF-SL-08	5/8/1997	Dieldrin	0.0045	U	NA	0.18
SF-SL-08	5/8/1997	Endosulfan I	0.0023	U	NA	6,132
SF-SL-08	5/8/1997	Endosulfan II	0.0045	U	NA	6,132
SF-SL-08	5/8/1997	Endosulfan sulfate	0.0045	U	NA	NA
SF-SL-08	5/8/1997	Endrin	0.0045	U	NA	307
SF-SL-08	5/8/1997	Endrin Aldehyde	0.22	U	NA	NA
SF-SL-08	5/8/1997	Endrin ketone	0.0045	U	NA	NA
SF-SL-08	5/8/1997	gamma-BHC (Lindane)	0.0023	U	NA	2.20
SF-SL-08	5/8/1997	gamma-Chlordane	0.12	U	NA	NA
SF-SL-08	5/8/1997	Heptachlor	0.0023	U	NA	0.64
SF-SL-08	5/8/1997	Heptachlor epoxide	0.0023	U	NA	0.31
SF-SL-08	5/8/1997	Methoxychlor	0.023	U	NA	5,110
SF-SL-08	5/8/1997	Toxaphene	0.23	U	NA	2.60
SF-SL-08	5/8/1997	Aroclor 1260	0.045	U	NA	40.88
SF-SL-08	5/8/1997	Aroclor 1254	0.045	U	NA	1.43
SF-SL-08	5/8/1997	Aroclor 1232	0.045	U	NA	1.43
SF-SL-08	5/8/1997	Aroclor 1248	0.045	U	NA	1.43
SF-SL-08	5/8/1997	Aroclor 1016	0.045	U	NA	1.43
SF-SL-08	5/8/1997	Aroclor 1242	0.045	U	NA	1.43
SF-SL-08	5/8/1997	PCBs(total)	0.091	U	NA	1.43
SF-SL-08	5/8/1997	Aroclor 1221	0.091	U	10	1.43
SF-SL-08	5/8/1997	Aluminum	3,990		NA	1,022,000
SF-SL-08	5/8/1997	Antimony	1.2	UJ	NA	408.8
SF-SL-08	5/8/1997	Arsenic	18.4		NA	1.91
SF-SL-08	5/8/1997	Barium	49.5		NA	204,400
SF-SL-08	5/8/1997	Beryllium	0.22		NA	2,044
SF-SL-08	5/8/1997	Cadmium	29.9	J	10	511
SF-SL-08	5/8/1997	Calcium	1,540		NA	NA
SF-SL-08	5/8/1997	Chromium	451		143	3,066
SF-SL-08	5/8/1997	Cobalt	6		NA	NA
SF-SL-08	5/8/1997	Copper	394		NA	40,880
SF-SL-08	5/8/1997	Cyanide	4	J	35	20,440

Table 4-16

**Summary of Analytical Results
SF-08 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF-SL-08	5/8/1997	Iron	73,100		NA	715,400
SF-SL-08	5/8/1997	Lead	1,670		NA	NA
SF-SL-08	5/8/1997	Magnesium	661		NA	NA
SF-SL-08	5/8/1997	Manganese	291		NA	20,440
SF-SL-08	5/8/1997	Mercury	0.28		NA	NA
SF-SL-08	5/8/1997	Nickel	86		NA	20,440
SF-SL-08	5/8/1997	Potassium	148		NA	NA
SF-SL-08	5/8/1997	Selenium	1.8		NA	5,110
SF-SL-08	5/8/1997	Silver	2.1		NA	5,110
SF-SL-08	5/8/1997	Sodium	97.4		NA	NA
SF-SL-08	5/8/1997	Thallium	2	U	NA	71.54
SF-SL-08	5/8/1997	Vanadium	95.4		NA	1,022
SF-SL-08	5/8/1997	Zinc	661		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) **J** - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-08 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-17

**Summary of Analytical Results
SF-08 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF8B01040	3/4/2008	1,1,1-Trichloroethane	0.00054	U	NA	286,160
SF8B01040	3/4/2008	1,1,2,2-Tetrachloroethane	0.00062	U	NA	14.31
SF8B01040	3/4/2008	1,1,2-Trichloroethane	0.00066	U	NA	50.20
SF8B01040	3/4/2008	1,1-Dichloroethane	0.00059	U	NA	204,400
SF8B01040	3/4/2008	1,1-Dichloroethene	0.00038	U	NA	51,100
SF8B01040	3/4/2008	1,2-Dichloroethane	0.00060	U	NA	31.45
SF8B01040	3/4/2008	1,2-Dichloroethene (total)	0.00048	U	0.25	9,198
SF8B01040	3/4/2008	1,2-Dichloropropane	0.00061	U	NA	42.08
SF8B01040	3/4/2008	2-Butanone	0.00231	U	NA	613,200
SF8B01040	3/4/2008	2-Hexanone	0.00206	U	NA	NA
SF8B01040	3/4/2008	4-Methyl-2-pentanone	0.00224	U	NA	NA
SF8B01040	3/4/2008	Acetone	0.0027	U	NA	919,800
SF8B01040	3/4/2008	Benzene	0.00055	U	NA	52.03
SF8B01040	3/4/2008	Bromodichloromethane	0.00049	U	NA	46.15
SF8B01040	3/4/2008	Bromoform	0.0005	U	NA	362.23
SF8B01040	3/4/2008	Bromomethane	0.00051	U	NA	1,430.8
SF8B01040	3/4/2008	c-1,2-Dichloroethene	0.00047	U	0.25	10,220
SF8B01040	3/4/2008	c-1,2-Dichloroethene	0.00047	U	0.25	10,220
SF8B01040	3/4/2008	c-1,3-Dichloropropene	0.00053	U	NA	NA
SF8B01040	3/4/2008	Carbon disulfide	0.00049	U	NA	102,200
SF8B01040	3/4/2008	Carbon Tetrachloride	0.00058	U	NA	22.01
SF8B01040	3/4/2008	Chlorobenzene	0.00063	U	NA	20,440
SF8B01040	3/4/2008	Chloroethane	0.00073	U	NA	986.76
SF8B01040	3/4/2008	Chloroform	0.00061	U	NA	10,220
SF8B01040	3/4/2008	Chloromethane	0.00052	U	NA	NA
SF8B01040	3/4/2008	Dibromochloromethane	0.00048	U	NA	34.07
SF8B01040	3/4/2008	Ethylbenzene	0.00054	U	NA	102,200
SF8B01040	3/4/2008	m,p-xylene	0.00094	U	NA	NA
SF8B01040	3/4/2008	Methylene Chloride	0.00098	U	NA	381.55
SF8B01040	3/4/2008	o-xylene	0.00041	U	NA	NA
SF8B01040	3/4/2008	Styrene	0.00045	U	NA	204,400
SF8B01040	3/4/2008	t-1,2-Dichloroethene	0.00048	U	NA	20,440
SF8B01040	3/4/2008	t-1,3-Dichloropropene	0.00044	U	NA	NA
SF8B01040	3/4/2008	TCE	0.00051	U	0.7	7.15
SF8B01040	3/4/2008	TCE	0.00051	U	0.7	7.15
SF8B01040	3/4/2008	Tetrachloroethene	0.00047	U	1.4	5.30
SF8B01040	3/4/2008	Tetrachloroethene	0.00047	U	1.4	5.30
SF8B01040	3/4/2008	Toluene	0.00050	U	NA	81,760
SF8B01040	3/4/2008	Vinyl Chloride	0.00071	U	NA	3.97
SF8B01040	3/4/2008	Xylene (Total)	0.00094	U	NA	204,400
SF8B01040	3/4/2008	Benzo(a)pyrene	0.0539	U	0.29	0.39
SF8B01040	3/4/2008	Dibenz(a,h)anthracene	0.0578	U	0.29	0.39
SF8B01040	3/4/2008	Aroclor 1016	0.00211	U	NA	40.88
SF8B01040	3/4/2008	Aroclor 1221	0.00994	U	NA	1.43
SF8B01040	3/4/2008	Aroclor 1232	0.0022	U	NA	1.43
SF8B01040	3/4/2008	Aroclor 1242	0.00166	U	NA	1.43

Table 4-17

**Summary of Analytical Results
SF-08 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF8B01040	3/4/2008	Aroclor 1248	0.00373	U	NA	1.43
SF8B01040	3/4/2008	Aroclor 1254	0.00564	U	NA	1.43
SF8B01040	3/4/2008	Aroclor 1260	0.00648	U	NA	1.43
SF8B01040	3/4/2008	PCBs(total)	0.00994	U	10	1.43
SF8B01040	3/4/2008	Cadmium	0.031	U	10	511
SF8B01040	3/4/2008	Chromium	2.7		143	3,066
SF8B01040	3/4/2008	Cyanide	0.18	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) SF-08 post-remediation confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-18

**Summary of Analytical Results
SF-13 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-13	5/8/1997	1,1,1-Trichloroethane	0.011	U	NA	286,160
SF-SL-13	5/8/1997	1,1,2,2-Tetrachloroethane	0.011	U	NA	14.31
SF-SL-13	5/8/1997	1,1,2-Trichloroethane	0.011	U	NA	50.20
SF-SL-13	5/8/1997	1,1-Dichloroethane	0.011	U	NA	204,400
SF-SL-13	5/8/1997	1,1-Dichloroethene	0.011	U	NA	51,100
SF-SL-13	5/8/1997	1,2-Dichloroethane	0.011	U	NA	31.45
SF-SL-13	5/8/1997	1,2-Dichloroethene (total)	0.011	U	0.25	9,198
SF-SL-13	5/8/1997	1,2-Dichloropropane	0.011	U	NA	42.08
SF-SL-13	5/8/1997	2-Butanone	0.011	U	NA	613,200
SF-SL-13	5/8/1997	2-Hexanone	0.011	U	NA	NA
SF-SL-13	5/8/1997	4-Methyl-2-pentanone	0.011	U	NA	NA
SF-SL-13	5/8/1997	Acetone	0.011	U	NA	919,800
SF-SL-13	5/8/1997	Benzene	0.011	U	NA	52.03
SF-SL-13	5/8/1997	Bromodichloromethane	0.011	U	NA	46.15
SF-SL-13	5/8/1997	Bromoform	0.011	U	NA	362.23
SF-SL-13	5/8/1997	Bromomethane	0.011	U	NA	1,430.8
SF-SL-13	5/8/1997	c-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-13	5/8/1997	Carbon Tetrachloride	0.011	U	NA	22.01
SF-SL-13	5/8/1997	Chlorobenzene	0.011	U	NA	20,440
SF-SL-13	5/8/1997	Chloroethane	0.011	U	NA	986.76
SF-SL-13	5/8/1997	Chloroform	0.011	U	NA	10,220
SF-SL-13	5/8/1997	Chloromethane	0.011	U	NA	NA
SF-SL-13	5/8/1997	Dibromochloromethane	0.011	U	NA	34.07
SF-SL-13	5/8/1997	Ethylbenzene	0.011	U	NA	102,200
SF-SL-13	5/8/1997	Methylene Chloride	0.011	U	NA	381.55
SF-SL-13	5/8/1997	Styrene	0.011	U	NA	204,400
SF-SL-13	5/8/1997	t-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-13	5/8/1997	TCE	0.011	U	0.7	7.15
SF-SL-13	5/8/1997	Tetrachloroethene	0.011	U	1.4	5.30
SF-SL-13	5/8/1997	Toluene	0.011	U	NA	81,760
SF-SL-13	5/8/1997	Vinyl Chloride	0.011	U	NA	3.97
SF-SL-13	5/8/1997	Xylene (Total)	0.011	U	NA	204,400
SF-SL-13	5/8/1997	1,2,4-Trimethylbenzene	0.75	U	NA	NA
SF-SL-13	5/8/1997	1,2-Dichlorobenzene	0.75	U	NA	91,980
SF-SL-13	5/8/1997	1,3-Dichlorobenzene	0.75	U	NA	3,066
SF-SL-13	5/8/1997	1,4-Dichlorobenzene	0.75	U	NA	119.23
SF-SL-13	5/8/1997	2,4,5-Trichlorophenol	1.8	U	NA	102,200
SF-SL-13	5/8/1997	2,4,6-Trichlorophenol	0.75	U	NA	260.15
SF-SL-13	5/8/1997	2,4-Dichlorophenol	0.75	U	NA	3,066
SF-SL-13	5/8/1997	2,4-Dimethylphenol	0.75	U	NA	20,440
SF-SL-13	5/8/1997	2,4-Dinitrophenol	1.8	U	NA	2,044
SF-SL-13	5/8/1997	2,4-Dinitrotoluene	0.75	U	NA	2,044
SF-SL-13	5/8/1997	2,6-Dinitrotoluene	0.75	U	NA	1,022
SF-SL-13	5/8/1997	2-Chloronaphthalene	0.75	U	NA	81,760
SF-SL-13	5/8/1997	2-Chlorophenol	0.75	U	NA	5,110
SF-SL-13	5/8/1997	2-Methylnaphthalene	0.03	J	NA	4,088
SF-SL-13	5/8/1997	2-Methylphenol	0.75	U	NA	51,100
SF-SL-13	5/8/1997	2-Nitroaniline	1.8	U	NA	NA
SF-SL-13	5/8/1997	2-Nitrophenol	0.75	U	NA	NA
SF-SL-13	5/8/1997	3,3'-Dichlorobenzidine	0.75	U	NA	6.36
SF-SL-13	5/8/1997	3+4-Methylphenol	0.75	U	NA	5,110
SF-SL-13	5/8/1997	3-Nitroaniline	1.8	U	NA	NA
SF-SL-13	5/8/1997	4,6-Dinitro-2-methylphenol	1.8	U	NA	NA
SF-SL-13	5/8/1997	4-Bromophenyl phenyl ether	0.75	U	NA	NA
SF-SL-13	5/8/1997	4-Chloro-3-methylphenol	0.75	U	NA	NA

Table 4-18

**Summary of Analytical Results
SF-13 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-13	5/8/1997	4-Chloroaniline	0.75	U	NA	4,088
SF-SL-13	5/8/1997	4-Chlorophenyl phenyl ether	0.75	U	NA	NA
SF-SL-13	5/8/1997	4-Nitroaniline	1.8	U	NA	NA
SF-SL-13	5/8/1997	4-Nitrophenol	1.8	U	NA	NA
SF-SL-13	5/8/1997	Acenaphthene	0.17	J	NA	61,320
SF-SL-13	5/8/1997	Acenaphthylene	0.022	J	NA	NA
SF-SL-13	5/8/1997	Anthracene	0.18	J	NA	306,600
SF-SL-13	5/8/1997	Benzo(a)anthracene	1.5		NA	3.92
SF-SL-13	5/8/1997	Benzo(a)pyrene	1.3		0.29	0.39
SF-SL-13	5/8/1997	Benzo(b)fluoranthene	2.2		NA	3.92
SF-SL-13	5/8/1997	Benzo(g,h,i)perylene	0.76		NA	NA
SF-SL-13	5/8/1997	Benzo(k)fluoranthene	0.8		NA	39.20
SF-SL-13	5/8/1997	bis(2-Chloroethoxy)methane	0.75	U	NA	NA
SF-SL-13	5/8/1997	bis(2-Chloroethyl)ether	0.75	U	NA	2.60
SF-SL-13	5/8/1997	bis(2-Chloroisopropyl)ether	0.75	U	NA	40.88
SF-SL-13	5/8/1997	bis(2-Ethylhexyl)phthalate	0.11	J	NA	204.40
SF-SL-13	5/8/1997	Carbazole	0.31	J	NA	143.08
SF-SL-13	5/8/1997	Chrysene	1.8		NA	392
SF-SL-13	5/8/1997	Dibenz(a,h)anthracene	0.23	J	0.29	0.39
SF-SL-13	5/8/1997	Dibenzofuran	0.096	J	NA	1,022
SF-SL-13	5/8/1997	Diethyl phthalate	0.75	U	NA	817,600
SF-SL-13	5/8/1997	Dimethyl phthalate	0.75	U	NA	NA
SF-SL-13	5/8/1997	Di-n-butyl phthalate	0.75	U	NA	102,200
SF-SL-13	5/8/1997	Di-n-octyl phthalate	0.75	U	NA	NA
SF-SL-13	5/8/1997	Fluoranthene	3.4		NA	40,880
SF-SL-13	5/8/1997	Fluorene	0.14	J	NA	40,880
SF-SL-13	5/8/1997	Hexachlorobenzene	0.75	U	NA	1.79
SF-SL-13	5/8/1997	Hexachlorobutadiene	0.75	U	NA	36.69
SF-SL-13	5/8/1997	Hexachlorocyclopentadiene	0.75	U	NA	6,132
SF-SL-13	5/8/1997	Hexachloroethane	0.75	U	NA	204.40
SF-SL-13	5/8/1997	Indeno(1,2,3-cd)pyrene	0.86		NA	3.92
SF-SL-13	5/8/1997	Isophorone	0.75	U	NA	3012.21
SF-SL-13	5/8/1997	Naphthalene	0.063	J	NA	20,440
SF-SL-13	5/8/1997	Nitrobenzene	0.75	U	NA	511
SF-SL-13	5/8/1997	N-Nitrosodi-n-propylamine	0.75	U	NA	0.41
SF-SL-13	5/8/1997	N-Nitrosodiphenylamine	0.75	U	NA	584
SF-SL-13	5/8/1997	Pentachlorophenol	1.8	U	NA	23.85
SF-SL-13	5/8/1997	Phenanthrene	1.9		NA	NA
SF-SL-13	5/8/1997	Phenol	0.75	U	NA	306,600
SF-SL-13	5/8/1997	Pyrene	2.7		NA	30,660
SF-SL-13	5/8/1997	4,4'-DDD	0.0057	J	NA	11.92
SF-SL-13	5/8/1997	4,4'-DDE	0.0038	U	NA	8.42
SF-SL-13	5/8/1997	4,4'-DDT	0.032		NA	8.42
SF-SL-13	5/8/1997	Aldrin	0.0019	U	NA	0.17
SF-SL-13	5/8/1997	alpha-BHC	0.0019	U	NA	0.45
SF-SL-13	5/8/1997	alpha-Chlordane	0.0019	U	NA	NA
SF-SL-13	5/8/1997	beta-BHC	0.0019	U	NA	1.59
SF-SL-13	5/8/1997	delta-BHC	0.0019	U	NA	NA
SF-SL-13	5/8/1997	Dieldrin	0.0038	U	NA	0.18
SF-SL-13	5/8/1997	Endosulfan I	0.0019	U	NA	6,132
SF-SL-13	5/8/1997	Endosulfan II	0.0038	U	NA	6,132
SF-SL-13	5/8/1997	Endosulfan sulfate	0.0038	U	NA	NA
SF-SL-13	5/8/1997	Endrin	0.0038	U	NA	307
SF-SL-13	5/8/1997	Endrin Aldehyde	0.0038	U	NA	NA
SF-SL-13	5/8/1997	Endrin ketone	0.0038	U	NA	NA

Table 4-18

**Summary of Analytical Results
SF-13 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-13	5/8/1997	gamma-BHC (Lindane)	0.0019	U	NA	2.20
SF-SL-13	5/8/1997	gamma-Chlordane	0.0021		NA	NA
SF-SL-13	5/8/1997	Heptachlor	0.0019	U	NA	0.64
SF-SL-13	5/8/1997	Heptachlor epoxide	0.0019	U	NA	0.31
SF-SL-13	5/8/1997	Methoxychlor	0.019	U	NA	5,110
SF-SL-13	5/8/1997	Toxaphene	0.190	U	NA	2.60
SF-SL-13	5/8/1997	Aroclor 1016	0.038	U	NA	40.88
SF-SL-13	5/8/1997	Aroclor 1221	0.076	U	NA	1.43
SF-SL-13	5/8/1997	Aroclor 1232	0.038	U	NA	1.43
SF-SL-13	5/8/1997	Aroclor 1242	0.038	U	NA	1.43
SF-SL-13	5/8/1997	Aroclor 1248	0.038	U	NA	1.43
SF-SL-13	5/8/1997	Aroclor 1254	0.038	U	NA	1.43
SF-SL-13	5/8/1997	Aroclor 1260	0.038	U	NA	1.43
SF-SL-13	5/8/1997	PCBs(total)	0.076	U	10	1.43
SF-SL-13	5/8/1997	Aluminum	2,810		NA	1,022,000
SF-SL-13	5/8/1997	Antimony	0.5	UJ	NA	408.8
SF-SL-13	5/8/1997	Arsenic	1.3		NA	1.91
SF-SL-13	5/8/1997	Barium	16.8		NA	204,400
SF-SL-13	5/8/1997	Beryllium	0.12		NA	2,044
SF-SL-13	5/8/1997	Cadmium	0.51	J	10	511
SF-SL-13	5/8/1997	Calcium	1,280		NA	NA
SF-SL-13	5/8/1997	Chromium	9		143	3,066
SF-SL-13	5/8/1997	Cobalt	1.8		NA	NA
SF-SL-13	5/8/1997	Copper	36.4		NA	40,880
SF-SL-13	5/8/1997	Cyanide	0.57	UJ	35	20,440
SF-SL-13	5/8/1997	Iron	5,190		NA	715,400
SF-SL-13	5/8/1997	Lead	25.3		NA	NA
SF-SL-13	5/8/1997	Magnesium	757		NA	NA
SF-SL-13	5/8/1997	Manganese	73		NA	20,440
SF-SL-13	5/8/1997	Mercury	0.06	U	NA	NA
SF-SL-13	5/8/1997	Nickel	3.1		NA	20,440
SF-SL-13	5/8/1997	Potassium	156		NA	NA
SF-SL-13	5/8/1997	Selenium	0.73	U	NA	5,110
SF-SL-13	5/8/1997	Silver	0.23	U	NA	5,110
SF-SL-13	5/8/1997	Sodium	78.2		NA	NA
SF-SL-13	5/8/1997	Thallium	0.71	U	NA	71.54
SF-SL-13	5/8/1997	Vanadium	7.1		NA	1,022
SF-SL-13	5/8/1997	Zinc	119		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) J - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-13 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-19

**Summary of Analytical Results
SF-13 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF13W01	4/4/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF13W01	4/4/2006	TCE	0.001	U	0.7	7.15
SF13W01	4/4/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF13W01	4/4/2006	Benzo(a)anthracene	0.054		NA	3.92
SF13W01	4/4/2006	Benzo(a)pyrene	0.065		0.29	0.39
SF13W01	4/4/2006	Benzo(b)fluoranthene	0.068		NA	3.92
SF13W01	4/4/2006	Chrysene	0.085	J	NA	392
SF13W01	4/4/2006	Dibenz(a,h)anthracene	0.018	J	0.29	0.39
SF13W01	4/4/2006	PCBs(total)	0.074	U	10	1.43
SF13W01	4/4/2006	Cadmium	0.39	B	10	511
SF13W01	4/4/2006	Chromium	7.2		143	3,066
SF13W01	4/4/2006	Zinc	111		NA	306,600
SF13W01	4/4/2006	Cyanide	0.5	U	35	20,440
SF13S01	4/4/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF13S01	4/4/2006	TCE	0.001	U	0.7	7.15
SF13S01	4/4/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF13S01	4/4/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF13S01	4/4/2006	Benzo(a)pyrene	0.036	U	0.29	0.39
SF13S01	4/4/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF13S01	4/4/2006	Chrysene	0.36	U	NA	392
SF13S01	4/4/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.39
SF13S01	4/4/2006	PCBs(total)	0.072	U	10	1.43
SF13S01	4/4/2006	Cadmium	0.13	U	10	511
SF13S01	4/4/2006	Chromium	6.1		143	3,066
SF13S01	4/4/2006	Zinc	20.8		NA	306,600
SF13S01	4/4/2006	Cyanide	0.5	U	35	20,440
SF13N01	4/4/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF13N01	4/4/2006	TCE	0.0011	U	0.7	7.15
SF13N01	4/4/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF13N01	4/4/2006	Benzo(a)anthracene	0.058		NA	3.92
SF13N01	4/4/2006	Benzo(a)pyrene	0.064		0.29	0.39
SF13N01	4/4/2006	Benzo(b)fluoranthene	0.09		NA	3.92
SF13N01	4/4/2006	Chrysene	0.093	J	NA	392
SF13N01	4/4/2006	Dibenz(a,h)anthracene	0.017	J	0.29	0.39
SF13N01	4/4/2006	PCBs(total)	0.072	U	10	1.43
SF13N01	4/4/2006	Cadmium	0.6	B	10	511
SF13N01	4/4/2006	Chromium	6.3		143	3,066
SF13N01	4/4/2006	Zinc	122		NA	306,600
SF13N01	4/4/2006	Cyanide	0.5	U	35	20,440
SF13E01	4/4/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF13E01	4/4/2006	TCE	0.0011	U	0.7	7.15
SF13E01	4/4/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF13E01	4/4/2006	Benzo(a)anthracene	0.037		NA	3.92
SF13E01	4/4/2006	Benzo(a)pyrene	0.042		0.29	0.39
SF13E01	4/4/2006	Benzo(b)fluoranthene	0.034	J	NA	3.92
SF13E01	4/4/2006	Chrysene	0.039	J	NA	392

Table 4-19

**Summary of Analytical Results
SF-13 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF13E01	4/4/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF13E01	4/4/2006	PCBs(total)	0.071	U	10	1.43
SF13E01	4/4/2006	Cadmium	0.12	U	10	511
SF13E01	4/4/2006	Chromium	6.4		143	3,066
SF13E01	4/4/2006	Zinc	20.5		NA	306,600
SF13E01	4/4/2006	Cyanide	0.5	U	35	20,440
SF13B01	4/4/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF13B01	4/4/2006	TCE	0.001	U	0.7	7.15
SF13B01	4/4/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF13B01	4/4/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF13B01	4/4/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF13B01	4/4/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF13B01	4/4/2006	Chrysene	0.35	U	NA	392
SF13B01	4/4/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF13B01	4/4/2006	PCBs(total)	0.071	U	10	1.43
SF13B01	4/4/2006	Cadmium	0.13	U	10	511
SF13B01	4/4/2006	Chromium	5.3		143	3,066
SF13B01	4/4/2006	Zinc	18.1		NA	306,600
SF13B01	4/4/2006	Cyanide	0.5	U	35	20,440
DUP05	4/4/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
DUP05	4/4/2006	TCE	0.001	U	0.7	7.15
DUP05	4/4/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP05	4/4/2006	Benzo(a)anthracene	0.018	J	NA	3.92
DUP05	4/4/2006	Benzo(a)pyrene	0.02	J	0.29	0.39
DUP05	4/4/2006	Benzo(b)fluoranthene	0.019	J	NA	3.92
DUP05	4/4/2006	Chrysene	0.024	J	NA	392
DUP05	4/4/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
DUP05	4/4/2006	PCBs(total)	0.071	U	10	1.43
DUP05	4/4/2006	Cadmium	0.13	U	10	511
DUP05	4/4/2006	Chromium	7.3		143	3,066
DUP05	4/4/2006	Zinc	21.8		NA	306,600
DUP05	4/4/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-13 post-remediation confirmation samples were collected by AMO during the 2006 Subsurface feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-20

**Summary of Analytical Results
SF-14 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF14SL01	3/29/2006	1,1,1-Trichloroethane	0.0053	U	NA	286,160
SF14SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.0011	U	NA	14.31
SF14SL01	3/29/2006	1,1,2-Trichloroethane	0.0032	U	NA	50.20
SF14SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.0053	U	NA	30,660,000
SF14SL01	3/29/2006	1,1-Dichloroethane	0.0053	U	NA	204,400
SF14SL01	3/29/2006	1,1-Dichloroethene	0.0021	U	NA	51,100
SF14SL01	3/29/2006	1,2,4-Trichlorobenzene	0.0053	U	NA	10,220
SF14SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.0053	U	NA	3.58
SF14SL01	3/29/2006	1,2-Dibromoethane	0.0053	U	NA	1.43
SF14SL01	3/29/2006	1,2-Dichlorobenzene	0.0053	U	NA	91,980
SF14SL01	3/29/2006	1,2-Dichloroethane	0.0021	U	NA	31.45
SF14SL01	3/29/2006	1,2-Dichloropropane	0.0011	U	NA	42.08
SF14SL01	3/29/2006	1,3-Dichlorobenzene	0.0053	U	NA	3,066
SF14SL01	3/29/2006	1,4-Dichlorobenzene	0.0053	U	NA	119.23
SF14SL01	3/29/2006	2-Butanone	0.0053	U	NA	613,200
SF14SL01	3/29/2006	2-Hexanone	0.0053	U	NA	NA
SF14SL01	3/29/2006	4-Methyl-2-pentanone	0.0053	U	NA	NA
SF14SL01	3/29/2006	Acetone	0.0053	U	NA	919,800
SF14SL01	3/29/2006	Benzene	0.0011	U	NA	52.03
SF14SL01	3/29/2006	Bromodichloromethane	0.0011	U	NA	46.15
SF14SL01	3/29/2006	Bromoform	0.0043	U	NA	362.23
SF14SL01	3/29/2006	Bromomethane	0.0053	U	NA	1,430.8
SF14SL01	3/29/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF14SL01	3/29/2006	c-1,3-Dichloropropene	0.0053	U	NA	NA
SF14SL01	3/29/2006	Carbon disulfide	0.0053	U	NA	102,200
SF14SL01	3/29/2006	Carbon Tetrachloride	0.0021	U	NA	22.01
SF14SL01	3/29/2006	Chlorobenzene	0.0053	U	NA	20,440
SF14SL01	3/29/2006	Chloroethane	0.0053	U	NA	986.76
SF14SL01	3/29/2006	Chloroform	0.0053	U	NA	10,220
SF14SL01	3/29/2006	Chloromethane	0.0053	U	NA	NA
SF14SL01	3/29/2006	Cyclohexane	0.0053	U	NA	NA
SF14SL01	3/29/2006	Dibromochloromethane	0.0053	U	NA	34.07
SF14SL01	3/29/2006	Dichlorodifluoromethane	0.0053	U	NA	204,400
SF14SL01	3/29/2006	Ethylbenzene	0.0043	U	NA	102,200
SF14SL01	3/29/2006	Isopropylbenzene	0.0053	U	NA	102,200
SF14SL01	3/29/2006	Methyl Acetate	0.0053	U	NA	1,022,000
SF14SL01	3/29/2006	Methyl Cyclohexane	0.0053	U	NA	NA
SF14SL01	3/29/2006	Methyl t-butyl ether	0.0053	U	NA	715.40
SF14SL01	3/29/2006	Methylene Chloride	0.0032	U	NA	381.55
SF14SL01	3/29/2006	Styrene	0.0053	U	NA	204,400
SF14SL01	3/29/2006	t-1,2-Dichloroethene	0.0053	U	NA	20,440
SF14SL01	3/29/2006	t-1,3-Dichloropropene	0.0053	U	NA	NA
SF14SL01	3/29/2006	TCE	0.0011	U	0.7	7.15
SF14SL01	3/29/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF14SL01	3/29/2006	Toluene	0.0053	U	NA	81,760
SF14SL01	3/29/2006	Trichlorofluoromethane	0.0053	U	NA	306,600
SF14SL01	3/29/2006	Vinyl Chloride	0.0053	U	NA	3.97

Table 4-20

**Summary of Analytical Results
SF-14 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF14SL01	3/29/2006	Xylene (Total)	0.0053	U	NA	204,400
SF14SL01	3/29/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
SF14SL01	3/29/2006	2,4,6-Trichlorophenol	0.36	U	NA	260.15
SF14SL01	3/29/2006	2,4-Dichlorophenol	0.36	U	NA	3,066
SF14SL01	3/29/2006	2,4-Dimethylphenol	0.36	U	NA	20,440
SF14SL01	3/29/2006	2,4-Dinitrophenol	1.4	U	NA	2,044
SF14SL01	3/29/2006	2,4-Dinitrotoluene	0.073	U	NA	2,044
SF14SL01	3/29/2006	2,6-Dinitrotoluene	0.073	U	NA	1,022
SF14SL01	3/29/2006	2-Chloronaphthalene	0.36	U	NA	81,760
SF14SL01	3/29/2006	2-Chlorophenol	0.36	U	NA	5,110
SF14SL01	3/29/2006	2-Methylnaphthalene	0.036	J	NA	4,088
SF14SL01	3/29/2006	2-Methylphenol	0.36	U	NA	51,100
SF14SL01	3/29/2006	2-Nitroaniline	0.73	U	NA	NA
SF14SL01	3/29/2006	2-Nitrophenol	0.36	U	NA	NA
SF14SL01	3/29/2006	3,3'-Dichlorobenzidine	0.73	U	NA	6.36
SF14SL01	3/29/2006	3+4-Methylphenol	0.36	U	NA	5,110
SF14SL01	3/29/2006	3-Nitroaniline	0.73	U	NA	NA
SF14SL01	3/29/2006	4,6-Dinitro-2-methylphenol	1.4	U	NA	NA
SF14SL01	3/29/2006	4-Bromophenyl phenyl ether	0.36	U	NA	NA
SF14SL01	3/29/2006	4-Chloro-3-methylphenol	0.36	U	NA	NA
SF14SL01	3/29/2006	4-Chloroaniline	0.36	U	NA	4,088
SF14SL01	3/29/2006	4-Chlorophenyl phenyl ether	0.36	U	NA	NA
SF14SL01	3/29/2006	4-Nitroaniline	0.73	U	NA	NA
SF14SL01	3/29/2006	4-Nitrophenol	1.4	U	NA	NA
SF14SL01	3/29/2006	Acenaphthene	0.077	J	NA	61,320
SF14SL01	3/29/2006	Acenaphthylene	0.035	J	NA	NA
SF14SL01	3/29/2006	Acetophenone	0.36	U	NA	102,200
SF14SL01	3/29/2006	Anthracene	0.26	J	NA	306,600
SF14SL01	3/29/2006	Atrazine	0.36	U	NA	13.01
SF14SL01	3/29/2006	Benzaldehyde	0.36	U	NA	102,200
SF14SL01	3/29/2006	Benzo(a)anthracene	1.4		NA	3.92
SF14SL01	3/29/2006	Benzo(a)pyrene	1.3		0.29	0.39
SF14SL01	3/29/2006	Benzo(b)fluoranthene	1.6		NA	3.92
SF14SL01	3/29/2006	Benzo(g,h,i)perylene	0.32	J	NA	NA
SF14SL01	3/29/2006	Benzo(k)fluoranthene	1.8		NA	39.20
SF14SL01	3/29/2006	bis(2-Chloroethoxy)methane	0.36	U	NA	NA
SF14SL01	3/29/2006	bis(2-Chloroethyl)ether	0.036	U	NA	2.60
SF14SL01	3/29/2006	bis(2-Chloroisopropyl)ether	0.36	U	NA	40.88
SF14SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	0.45		NA	204.40
SF14SL01	3/29/2006	Butyl benzyl phthalate	0.36	U	NA	204,400
SF14SL01	3/29/2006	Carbazole	0.25	J	NA	143.08
SF14SL01	3/29/2006	Chrysene	1.9		NA	392.00
SF14SL01	3/29/2006	Dibenz(a,h)anthracene	0.35		0.29	0.39
SF14SL01	3/29/2006	Dibenzofuran	0.052	J	NA	1,022
SF14SL01	3/29/2006	Diethyl phthalate	0.36	U	NA	817,600
SF14SL01	3/29/2006	Dimethyl phthalate	0.36	U	NA	NA
SF14SL01	3/29/2006	Di-n-butyl phthalate	0.38		NA	102,200

Table 4-20

**Summary of Analytical Results
SF-14 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF14SL01	3/29/2006	Di-n-octyl phthalate	0.36	U	NA	NA
SF14SL01	3/29/2006	Diphenyl	0.36	U	NA	NA
SF14SL01	3/29/2006	Fluoranthene	3.2		NA	40,880
SF14SL01	3/29/2006	Fluorene	0.1	J	NA	40,880
SF14SL01	3/29/2006	Hexachlorobenzene	0.036	U	NA	1.79
SF14SL01	3/29/2006	Hexachlorobutadiene	0.073	U	NA	36.69
SF14SL01	3/29/2006	Hexachlorocyclopentadiene	0.36	U	NA	6,132
SF14SL01	3/29/2006	Hexachloroethane	0.036	U	NA	204
SF14SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	0.51		NA	3.92
SF14SL01	3/29/2006	Isophorone	0.36	U	NA	3012.21
SF14SL01	3/29/2006	Naphthalene	0.027	J	NA	20,440
SF14SL01	3/29/2006	Nitrobenzene	0.036	U	NA	511
SF14SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.036	U	NA	0.41
SF14SL01	3/29/2006	N-Nitrosodiphenylamine	0.36	U	NA	584
SF14SL01	3/29/2006	Pentachlorophenol	1.4	U	NA	23.85
SF14SL01	3/29/2006	Phenanthrene	1.7		NA	NA
SF14SL01	3/29/2006	Phenol	0.36	U	NA	306,600
SF14SL01	3/29/2006	Pyrene	4.3		NA	30,660
SF14SL01	3/29/2006	4,4'-DDD	0.0073	U	NA	11.92
SF14SL01	3/29/2006	4,4'-DDE	0.0073	U	NA	8.42
SF14SL01	3/29/2006	4,4'-DDT	0.022		NA	8.42
SF14SL01	3/29/2006	Aldrin	0.02		NA	0.17
SF14SL01	3/29/2006	alpha-BHC	0.0073	U	NA	0.45
SF14SL01	3/29/2006	alpha-Chlordane	0.026	P*	NA	NA
SF14SL01	3/29/2006	beta-BHC	0.0073	U	NA	1.59
SF14SL01	3/29/2006	delta-BHC	0.0073	U	NA	NA
SF14SL01	3/29/2006	Dieldrin	0.012	P*	NA	0.18
SF14SL01	3/29/2006	Endosulfan I	0.0073	U	NA	6,132
SF14SL01	3/29/2006	Endosulfan II	0.0073	U	NA	6,132
SF14SL01	3/29/2006	Endosulfan sulfate	0.022	P*	NA	NA
SF14SL01	3/29/2006	Endrin	0.0073	U	NA	306.60
SF14SL01	3/29/2006	Endrin Aldehyde	0.0073	U	NA	NA
SF14SL01	3/29/2006	Endrin ketone	0.0073	U	NA	NA
SF14SL01	3/29/2006	gamma-BHC (Lindane)	0.0073	U	NA	2.20
SF14SL01	3/29/2006	gamma-Chlordane	0.025		NA	NA
SF14SL01	3/29/2006	Heptachlor	0.0073	U	NA	0.64
SF14SL01	3/29/2006	Heptachlor epoxide	0.0073	U	NA	0.31
SF14SL01	3/29/2006	Methoxychlor	0.008	P*	NA	5,110
SF14SL01	3/29/2006	Toxaphene	0.073	U	NA	2.60
SF14SL01	3/29/2006	Aroclor 1016	0.073	U	NA	40.88
SF14SL01	3/29/2006	Aroclor 1221	0.073	U	NA	1.43
SF14SL01	3/29/2006	Aroclor 1232	0.073	U	NA	1.43
SF14SL01	3/29/2006	Aroclor 1242	0.073	U	NA	1.43
SF14SL01	3/29/2006	Aroclor 1248	0.073	U	NA	1.43
SF14SL01	3/29/2006	Aroclor 1254	0.073	U	NA	1.43
SF14SL01	3/29/2006	Aroclor 1260	0.073	U	NA	1.43
SF14SL01	3/29/2006	PCBs(total)	0.073	U	10	1.43

Table 4-20

**Summary of Analytical Results
SF-14 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF14SL01	3/29/2006	Aluminum	4,570		NA	1,022,000
SF14SL01	3/29/2006	Antimony	1.3	U	NA	408.80
SF14SL01	3/29/2006	Arsenic	7.1		NA	1.91
SF14SL01	3/29/2006	Barium	35.2	B	NA	204,400
SF14SL01	3/29/2006	Beryllium	0.32	B	NA	2,044
SF14SL01	3/29/2006	Cadmium	0.23	B	10	511
SF14SL01	3/29/2006	Calcium	36,800		NA	NA
SF14SL01	3/29/2006	Chromium	45.4		143	3,066
SF14SL01	3/29/2006	Cobalt	2.5	B	NA	NA
SF14SL01	3/29/2006	Copper	26.3		NA	40,880
SF14SL01	3/29/2006	Iron	9,290		NA	715,400
SF14SL01	3/29/2006	Lead	39.1		NA	NA
SF14SL01	3/29/2006	Magnesium	3,340		NA	NA
SF14SL01	3/29/2006	Manganese	128		NA	20,440
SF14SL01	3/29/2006	Mercury	0.03	B	NA	NA
SF14SL01	3/29/2006	Nickel	7.2	B	NA	20,440
SF14SL01	3/29/2006	Potassium	434	B	NA	NA
SF14SL01	3/29/2006	Selenium	0.92	U	NA	5,110
SF14SL01	3/29/2006	Silver	0.31	U	NA	5,110
SF14SL01	3/29/2006	Sodium	145	B	NA	NA
SF14SL01	3/29/2006	Thallium	1	U	NA	72
SF14SL01	3/29/2006	Vanadium	20.7		NA	1,022
SF14SL01	3/29/2006	Zinc	80.6		NA	306,600
SF14SL01	3/29/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-14 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-21

**Summary of Analytical Results
SF-14 Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF14BS01	4/5/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF14BS01	4/5/2006	TCE	0.001	U	0.7	7.15
SF14BS01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF14BS01	4/5/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF14BS01	4/5/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF14BS01	4/5/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF14BS01	4/5/2006	Benzo(k)fluoranthene	0.035	U	NA	39.20
SF14BS01	4/5/2006	Chrysene	0.35	U	NA	392
SF14BS01	4/5/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF14BS01	4/5/2006	PCBs(total)	0.071	U	10	1.43
SF14BS01	4/5/2006	Cadmium	0.13	U	10	511
SF14BS01	4/5/2006	Chromium	4.6		143	3,066
SF14BS01	4/5/2006	Zinc	25.8		NA	306,600
SF14BS01	4/5/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) SF-14 confirmation sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-22

**Summary of Analytical Results
SF-15 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF15SL01	3/29/2006	1,1,1-Trichloroethane	0.0064	U	NA	286,160
SF15SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.0013	U	NA	14.31
SF15SL01	3/29/2006	1,1,2-Trichloroethane	0.0038	U	NA	50.20
SF15SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.0064	U	NA	30,660,000
SF15SL01	3/29/2006	1,1-Dichloroethane	0.0064	U	NA	204,400
SF15SL01	3/29/2006	1,1-Dichloroethene	0.0025	U	NA	51,100
SF15SL01	3/29/2006	1,2,4-Trichlorobenzene	0.0064	U	NA	10,220
SF15SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.0064	U	NA	3.58
SF15SL01	3/29/2006	1,2-Dibromoethane	0.0064	U	NA	1.43
SF15SL01	3/29/2006	1,2-Dichlorobenzene	0.0064	U	NA	91,980
SF15SL01	3/29/2006	1,2-Dichloroethane	0.0025	U	NA	31.45
SF15SL01	3/29/2006	1,2-Dichloropropane	0.0013	U	NA	42.08
SF15SL01	3/29/2006	1,3-Dichlorobenzene	0.0064	U	NA	3,066
SF15SL01	3/29/2006	1,4-Dichlorobenzene	0.0064	U	NA	119.23
SF15SL01	3/29/2006	2-Butanone	0.0064	U	NA	613,200
SF15SL01	3/29/2006	2-Hexanone	0.0064	U	NA	NA
SF15SL01	3/29/2006	4-Methyl-2-pentanone	0.0064	U	NA	NA
SF15SL01	3/29/2006	Acetone	0.12		NA	919,800
SF15SL01	3/29/2006	Benzene	0.0013	U	NA	52.03
SF15SL01	3/29/2006	Bromodichloromethane	0.0013	U	NA	46.15
SF15SL01	3/29/2006	Bromoform	0.0051	U	NA	362.23
SF15SL01	3/29/2006	Bromomethane	0.0064	U	NA	1,430.8
SF15SL01	3/29/2006	c-1,2-Dichloroethene	0.0064	U	0.25	10,220
SF15SL01	3/29/2006	c-1,3-Dichloropropene	0.0064	U	NA	NA
SF15SL01	3/29/2006	Carbon disulfide	0.0064	U	NA	102,200
SF15SL01	3/29/2006	Carbon Tetrachloride	0.0025	U	NA	22.01
SF15SL01	3/29/2006	Chlorobenzene	0.0064	U	NA	20,440
SF15SL01	3/29/2006	Chloroethane	0.0064	U	NA	986.76
SF15SL01	3/29/2006	Chloroform	0.0064	U	NA	10,220
SF15SL01	3/29/2006	Chloromethane	0.0064	U	NA	NA
SF15SL01	3/29/2006	Cyclohexane	0.0064	U	NA	NA
SF15SL01	3/29/2006	Dibromochloromethane	0.0064	U	NA	34.07
SF15SL01	3/29/2006	Dichlorodifluoromethane	0.0064	U	NA	204,400
SF15SL01	3/29/2006	Ethylbenzene	0.0051	U	NA	102,200
SF15SL01	3/29/2006	Isopropylbenzene	0.0064	U	NA	102,200
SF15SL01	3/29/2006	Methyl Acetate	0.0064	U	NA	1,022,000
SF15SL01	3/29/2006	Methyl Cyclohexane	0.0064	U	NA	NA
SF15SL01	3/29/2006	Methyl t-butyl ether	0.0064	U	NA	715.40
SF15SL01	3/29/2006	Methylene Chloride	0.0038	U	NA	381.55
SF15SL01	3/29/2006	Styrene	0.0064	U	NA	204,400
SF15SL01	3/29/2006	t-1,2-Dichloroethene	0.0064	U	NA	20,440
SF15SL01	3/29/2006	t-1,3-Dichloropropene	0.0064	U	NA	NA
SF15SL01	3/29/2006	TCE	0.0013	U	0.7	7.15
SF15SL01	3/29/2006	Tetrachloroethene	0.0013	U	1.4	5.30
SF15SL01	3/29/2006	Toluene	0.0064	U	NA	81,760
SF15SL01	3/29/2006	Trichlorofluoromethane	0.0064	U	NA	306,600

Table 4-22

**Summary of Analytical Results
SF-15 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF15SL01	3/29/2006	Vinyl Chloride	0.0064	U	NA	3.97
SF15SL01	3/29/2006	Xylene (Total)	0.0064	U	NA	204,400
SF15SL01	3/29/2006	2,4,5-Trichlorophenol	0.22	J	NA	102,200
SF15SL01	3/29/2006	2,4,6-Trichlorophenol	0.86	U	NA	260.15
SF15SL01	3/29/2006	2,4-Dichlorophenol	0.86	U	NA	3,066
SF15SL01	3/29/2006	2,4-Dimethylphenol	0.86	U	NA	20,440
SF15SL01	3/29/2006	2,4-Dinitrophenol	3.4	U	NA	2,044
SF15SL01	3/29/2006	2,4-Dinitrotoluene	0.17	U	NA	2,044
SF15SL01	3/29/2006	2,6-Dinitrotoluene	0.17	U	NA	1,022
SF15SL01	3/29/2006	2-Chloronaphthalene	0.86	U	NA	81,760
SF15SL01	3/29/2006	2-Chlorophenol	0.86	U	NA	5,110
SF15SL01	3/29/2006	2-Methylnaphthalene	0.022	J	NA	4,088
SF15SL01	3/29/2006	2-Methylphenol	0.86	U	NA	51,100
SF15SL01	3/29/2006	2-Nitroaniline	1.7	U	NA	NA
SF15SL01	3/29/2006	2-Nitrophenol	0.86	U	NA	NA
SF15SL01	3/29/2006	3,3'-Dichlorobenzidine	1.7	U	NA	6.36
SF15SL01	3/29/2006	3+4-Methylphenol	0.86	U	NA	5,110
SF15SL01	3/29/2006	3-Nitroaniline	1.7	U	NA	NA
SF15SL01	3/29/2006	4,6-Dinitro-2-methylphenol	3.4	U	NA	NA
SF15SL01	3/29/2006	4-Bromophenyl phenyl ether	0.86	U	NA	NA
SF15SL01	3/29/2006	4-Chloro-3-methylphenol	0.86	U	NA	NA
SF15SL01	3/29/2006	4-Chloroaniline	0.86	U	NA	4,088
SF15SL01	3/29/2006	4-Chlorophenyl phenyl ether	0.86	U	NA	NA
SF15SL01	3/29/2006	4-Nitroaniline	1.7	U	NA	NA
SF15SL01	3/29/2006	4-Nitrophenol	3.4	U	NA	NA
SF15SL01	3/29/2006	Acenaphthene	0.05	J	NA	61,320
SF15SL01	3/29/2006	Acenaphthylene	0.86	U	NA	NA
SF15SL01	3/29/2006	Acetophenone	0.1	J	NA	102,200
SF15SL01	3/29/2006	Anthracene	0.072	J	NA	306,600
SF15SL01	3/29/2006	Atrazine	0.86	U	NA	13.01
SF15SL01	3/29/2006	Benzaldehyde	0.86	U	NA	102,200
SF15SL01	3/29/2006	Benzo(a)anthracene	0.39		NA	3.92
SF15SL01	3/29/2006	Benzo(a)pyrene	0.44		0.29	0.39
SF15SL01	3/29/2006	Benzo(b)fluoranthene	1.1		NA	3.92
SF15SL01	3/29/2006	Benzo(g,h,i)perylene	0.86	U	NA	NA
SF15SL01	3/29/2006	Benzo(k)fluoranthene	0.71		NA	39.20
SF15SL01	3/29/2006	bis(2-Chloroethoxy)methane	0.86	U	NA	NA
SF15SL01	3/29/2006	bis(2-Chloroethyl)ether	0.086	U	NA	2.60
SF15SL01	3/29/2006	bis(2-Chloroisopropyl)ether	0.86	U	NA	40.88
SF15SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	0.91		NA	204.40
SF15SL01	3/29/2006	Butyl benzyl phthalate	0.86	U	NA	204,400
SF15SL01	3/29/2006	Carbazole	0.12	J	NA	143.08
SF15SL01	3/29/2006	Chrysene	0.67	J	NA	392
SF15SL01	3/29/2006	Dibenz(a,h)anthracene	0.086	U	0.29	0.39
SF15SL01	3/29/2006	Dibenzofuran	0.039	J	NA	1,022
SF15SL01	3/29/2006	Diethyl phthalate	0.86	U	NA	817,600

Table 4-22

**Summary of Analytical Results
SF-15 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF15SL01	3/29/2006	Dimethyl phthalate	0.86	U	NA	NA
SF15SL01	3/29/2006	Di-n-butyl phthalate	0.86	U	NA	102,200
SF15SL01	3/29/2006	Di-n-octyl phthalate	0.86	U	NA	NA
SF15SL01	3/29/2006	Diphenyl	0.86	U	NA	NA
SF15SL01	3/29/2006	Fluoranthene	1.1		NA	40,880
SF15SL01	3/29/2006	Fluorene	0.86	U	NA	40,880
SF15SL01	3/29/2006	Hexachlorobenzene	0.086	U	NA	1.79
SF15SL01	3/29/2006	Hexachlorobutadiene	0.17	U	NA	36.69
SF15SL01	3/29/2006	Hexachlorocyclopentadiene	0.86	U	NA	6,132
SF15SL01	3/29/2006	Hexachloroethane	0.086	U	NA	204
SF15SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	0.086	U	NA	3.92
SF15SL01	3/29/2006	Isophorone	0.86	U	NA	3012.21
SF15SL01	3/29/2006	Naphthalene	0.86	U	NA	20,440
SF15SL01	3/29/2006	Nitrobenzene	0.086	U	NA	511
SF15SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.086	U	NA	0.41
SF15SL01	3/29/2006	N-Nitrosodiphenylamine	0.86	U	NA	584
SF15SL01	3/29/2006	Pentachlorophenol	3.4	U	NA	23.85
SF15SL01	3/29/2006	Phenanthrene	0.72	J	NA	NA
SF15SL01	3/29/2006	Phenol	0.86	U	NA	306,600
SF15SL01	3/29/2006	Pyrene	0.99		NA	30,660
SF15SL01	3/29/2006	4,4'-DDD	0.091		NA	11.92
SF15SL01	3/29/2006	4,4'-DDE	0.1		NA	8.42
SF15SL01	3/29/2006	4,4'-DDT	0.084	P*	NA	8.42
SF15SL01	3/29/2006	Aldrin	0.0087	U	NA	0.17
SF15SL01	3/29/2006	alpha-BHC	0.0087	U	NA	0.45
SF15SL01	3/29/2006	alpha-Chlordane	0.016	P*	NA	NA
SF15SL01	3/29/2006	beta-BHC	0.0087	U	NA	1.59
SF15SL01	3/29/2006	delta-BHC	0.0087	U	NA	NA
SF15SL01	3/29/2006	Dieldrin	0.037		NA	0.18
SF15SL01	3/29/2006	Endosulfan I	0.0087	U	NA	6,132
SF15SL01	3/29/2006	Endosulfan II	0.0087	U	NA	6,132
SF15SL01	3/29/2006	Endosulfan sulfate	0.0087	U	NA	NA
SF15SL01	3/29/2006	Endrin	0.0087	U	NA	306.60
SF15SL01	3/29/2006	Endrin Aldehyde	0.011	P*	NA	NA
SF15SL01	3/29/2006	Endrin ketone	0.0087	U	NA	NA
SF15SL01	3/29/2006	gamma-BHC (Lindane)	0.0087	U	NA	2.20
SF15SL01	3/29/2006	gamma-Chlordane	0.025	P*	NA	NA
SF15SL01	3/29/2006	Heptachlor	0.0087	U	NA	0.64
SF15SL01	3/29/2006	Heptachlor epoxide	0.0087	U	NA	0.31
SF15SL01	3/29/2006	Methoxychlor	0.0087	U	NA	5,110
SF15SL01	3/29/2006	Toxaphene	0.087	U	NA	2.60
SF15SL01	3/29/2006	Aroclor 1016	0.087	U	NA	40.88
SF15SL01	3/29/2006	Aroclor 1221	0.087	U	NA	1.43
SF15SL01	3/29/2006	Aroclor 1232	0.087	U	NA	1.43
SF15SL01	3/29/2006	Aroclor 1242	0.087	U	NA	1.43
SF15SL01	3/29/2006	Aroclor 1248	0.087	U	NA	1.43

Table 4-22

**Summary of Analytical Results
SF-15 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF15SL01	3/29/2006	Aroclor 1254	0.88		NA	1.43
SF15SL01	3/29/2006	Aroclor 1260	0.087	U	NA	1.43
SF15SL01	3/29/2006	PCBs(total)	0.88		10	1.43
SF15SL01	3/29/2006	Aluminum	1,780		NA	1,022,000
SF15SL01	3/29/2006	Antimony	1.5	U	NA	408.80
SF15SL01	3/29/2006	Arsenic	6.7		NA	1.91
SF15SL01	3/29/2006	Barium	111		NA	204,400
SF15SL01	3/29/2006	Beryllium	0.21	B	NA	2,044
SF15SL01	3/29/2006	Cadmium	4		10	511
SF15SL01	3/29/2006	Calcium	3,470		NA	NA
SF15SL01	3/29/2006	Chromium	81.9		143	3,066
SF15SL01	3/29/2006	Cobalt	6.1	B	NA	NA
SF15SL01	3/29/2006	Copper	275		NA	40,880
SF15SL01	3/29/2006	Iron	63,500		NA	715,400
SF15SL01	3/29/2006	Lead	349		NA	NA
SF15SL01	3/29/2006	Magnesium	532	B	NA	NA
SF15SL01	3/29/2006	Manganese	222		NA	20,440
SF15SL01	3/29/2006	Mercury	1.4		NA	NA
SF15SL01	3/29/2006	Nickel	16.7		NA	20,440
SF15SL01	3/29/2006	Potassium	360	B	NA	NA
SF15SL01	3/29/2006	Selenium	3.4		NA	5,110
SF15SL01	3/29/2006	Silver	108		NA	5,110
SF15SL01	3/29/2006	Sodium	278	B	NA	NA
SF15SL01	3/29/2006	Thallium	1.2	U	NA	72
SF15SL01	3/29/2006	Vanadium	18.1		NA	1,022
SF15SL01	3/29/2006	Zinc	1,150		NA	306,600
SF15SL01	3/29/2006	Cyanide	0.68		35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-15 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-23

**Summary of Analytical Results
SF-15 Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF15BW01	4/5/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF15BW01	4/5/2006	TCE	0.001	U	0.7	7.15
SF15BW01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF15BW01	4/5/2006	2,4,5-Trichlorophenol	0.35	U	NA	102,200
SF15BW01	4/5/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF15BW01	4/5/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF15BW01	4/5/2006	Chrysene	0.013	J	NA	392
SF15BW01	4/5/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39
SF15BW01	4/5/2006	PCBs(total)	0.071	U	10	1.43
SF15BW01	4/5/2006	Cadmium	0.13	U	10	511
SF15BW01	4/5/2006	Chromium	7.5		143	3,066
SF15BW01	4/5/2006	Copper	5.7		NA	40,880
SF15BW01	4/5/2006	Iron	9,200		NA	715,400
SF15BW01	4/5/2006	Mercury	0.03	B	NA	NA
SF15BW01	4/5/2006	Zinc	13.4		NA	306,600
SF15BW01	4/5/2006	Cyanide	0.5	U	35	20,440
SF15BE01	4/5/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF15BE01	4/5/2006	TCE	0.001	U	0.7	7.15
SF15BE01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF15BE01	4/5/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
SF15BE01	4/5/2006	Benzo(a)anthracene	0.024	J	NA	3.92
SF15BE01	4/5/2006	Benzo(a)pyrene	0.032	J	0.29	0.39
SF15BE01	4/5/2006	Chrysene	0.056	J	NA	392
SF15BE01	4/5/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.39
SF15BE01	4/5/2006	PCBs(total)	0.072	U	10	1.43
SF15BE01	4/5/2006	Cadmium	0.13	U	10	511
SF15BE01	4/5/2006	Chromium	9.5		143	3,066
SF15BE01	4/5/2006	Copper	9.5		NA	40,880
SF15BE01	4/5/2006	Iron	6,960		NA	715,400
SF15BE01	4/5/2006	Mercury	0.02	B	NA	NA
SF15BE01	4/5/2006	Zinc	48.1		NA	306,600
SF15BE01	4/5/2006	Cyanide	0.5	U	35	20,440
DUP06	4/5/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
DUP06	4/5/2006	TCE	0.0011	U	0.7	7.15
DUP06	4/5/2006	Tetrachloroethene	0.0011	U	1.4	5.30
DUP06	4/5/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
DUP06	4/5/2006	Benzo(a)anthracene	0.019	J	NA	3.92
DUP06	4/5/2006	Benzo(a)pyrene	0.016	J	0.29	0.39
DUP06	4/5/2006	Chrysene	0.027	J	NA	392
DUP06	4/5/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.39
DUP06	4/5/2006	PCBs(total)	0.073	U	10	1.43
DUP06	4/5/2006	Cadmium	0.13	U	10	511
DUP06	4/5/2006	Chromium	9.1		143	3,066
DUP06	4/5/2006	Copper	8.5		NA	40,880
DUP06	4/5/2006	Iron	8,330		NA	715,400
DUP06	4/5/2006	Mercury	0.03	B	NA	NA

Table 4-23

**Summary of Analytical Results
SF-15 Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
DUP06	4/5/2006	Zinc	18.8		NA	306,600
DUP06	4/5/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-15 confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-16	5/5/1997	1,1,1-Trichloroethane	10	U
SF-AQ-16	5/5/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-16	5/5/1997	1,1,2-Trichloroethane	10	U
SF-AQ-16	5/5/1997	1,1-Dichloroethane	10	U
SF-AQ-16	5/5/1997	1,1-Dichloroethene	10	U
SF-AQ-16	5/5/1997	1,2-Dichloroethane	10	U
SF-AQ-16	5/5/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-16	5/5/1997	1,2-Dichloropropane	10	U
SF-AQ-16	5/5/1997	2-Butanone	10	U
SF-AQ-16	5/5/1997	2-Hexanone	10	U
SF-AQ-16	5/5/1997	4-Methyl-2-pentanone	10	U
SF-AQ-16	5/5/1997	Acetone	10	U
SF-AQ-16	5/5/1997	Benzene	10	U
SF-AQ-16	5/5/1997	Bromodichloromethane	10	U
SF-AQ-16	5/5/1997	Bromoform	10	U
SF-AQ-16	5/5/1997	Bromomethane	10	U
SF-AQ-16	5/5/1997	c-1,3-Dichloropropene	10	U
SF-AQ-16	5/5/1997	Carbon Tetrachloride	10	U
SF-AQ-16	5/5/1997	Chlorobenzene	2	J
SF-AQ-16	5/5/1997	Chloroethane	13	
SF-AQ-16	5/5/1997	Chloroform	10	U
SF-AQ-16	5/5/1997	Chloromethane	10	U
SF-AQ-16	5/5/1997	Dibromochloromethane	10	U
SF-AQ-16	5/5/1997	Ethylbenzene	10	U
SF-AQ-16	5/5/1997	Methylene Chloride	10	U
SF-AQ-16	5/5/1997	Styrene	10	U
SF-AQ-16	5/5/1997	t-1,3-Dichloropropene	10	U
SF-AQ-16	5/5/1997	TCE	10	U
SF-AQ-16	5/5/1997	Tetrachloroethene	10	U
SF-AQ-16	5/5/1997	Toluene	10	U
SF-AQ-16	5/5/1997	Vinyl Chloride	10	U
SF-AQ-16	5/5/1997	Xylene (Total)	10	U
SF-AQ-16	5/5/1997	1,2,4-Trimethylbenzene	10	U
SF-AQ-16	5/5/1997	1,2-Dichlorobenzene	0.4	J
SF-AQ-16	5/5/1997	1,3-Dichlorobenzene	0.4	J
SF-AQ-16	5/5/1997	1,4-Dichlorobenzene	1	J
SF-AQ-16	5/5/1997	2,4,5-Trichlorophenol	26	U
SF-AQ-16	5/5/1997	2,4,6-Trichlorophenol	10	U
SF-AQ-16	5/5/1997	2,4-Dichlorophenol	10	U
SF-AQ-16	5/5/1997	2,4-Dimethylphenol	10	U
SF-AQ-16	5/5/1997	2,4-Dinitrophenol	26	U
SF-AQ-16	5/5/1997	2,4-Dinitrotoluene	10	U
SF-AQ-16	5/5/1997	2,6-Dinitrotoluene	10	U
SF-AQ-16	5/5/1997	2-Chloronaphthalene	10	U
SF-AQ-16	5/5/1997	2-Chlorophenol	10	U
SF-AQ-16	5/5/1997	2-Methylnaphthalene	10	U
SF-AQ-16	5/5/1997	2-Methylphenol	10	U
SF-AQ-16	5/5/1997	2-Nitroaniline	26	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-16	5/5/1997	2-Nitrophenol	10	U
SF-AQ-16	5/5/1997	3,3'-Dichlorobenzidine	10	U
SF-AQ-16	5/5/1997	3+4-Methylphenol	10	U
SF-AQ-16	5/5/1997	3-Nitroaniline	26	U
SF-AQ-16	5/5/1997	4,6-Dinitro-2-methylphenol	26	U
SF-AQ-16	5/5/1997	4-Bromophenyl phenyl ether	10	U
SF-AQ-16	5/5/1997	4-Chloro-3-methylphenol	10	U
SF-AQ-16	5/5/1997	4-Chloroaniline	10	U
SF-AQ-16	5/5/1997	4-Chlorophenyl phenyl ether	10	U
SF-AQ-16	5/5/1997	4-Nitroaniline	26	U
SF-AQ-16	5/5/1997	4-Nitrophenol	26	U
SF-AQ-16	5/5/1997	Acenaphthene	10	U
SF-AQ-16	5/5/1997	Acenaphthylene	10	U
SF-AQ-16	5/5/1997	Anthracene	10	U
SF-AQ-16	5/5/1997	Benzo(a)anthracene	10	U
SF-AQ-16	5/5/1997	Benzo(a)pyrene	10	U
SF-AQ-16	5/5/1997	Benzo(b)fluoranthene	10	U
SF-AQ-16	5/5/1997	Benzo(g,h,i)perylene	10	U
SF-AQ-16	5/5/1997	Benzo(k)fluoranthene	10	U
SF-AQ-16	5/5/1997	bis(2-Chloroethoxy)methane	10	U
SF-AQ-16	5/5/1997	bis(2-Chloroethyl)ether	10	U
SF-AQ-16	5/5/1997	bis(2-Chloroisopropyl)ether	10	U
SF-AQ-16	5/5/1997	bis(2-Ethylhexyl)phthalate	10	U
SF-AQ-16	5/5/1997	Carbazole	10	U
SF-AQ-16	5/5/1997	Chrysene	10	U
SF-AQ-16	5/5/1997	Dibenz(a,h)anthracene	10	U
SF-AQ-16	5/5/1997	Dibenzofuran	10	U
SF-AQ-16	5/5/1997	Diethyl phthalate	10	U
SF-AQ-16	5/5/1997	Dimethyl phthalate	10	U
SF-AQ-16	5/5/1997	Di-n-butyl phthalate	10	U
SF-AQ-16	5/5/1997	Di-n-octyl phthalate	10	U
SF-AQ-16	5/5/1997	Fluoranthene	10	U
SF-AQ-16	5/5/1997	Fluorene	10	U
SF-AQ-16	5/5/1997	Hexachlorobenzene	10	U
SF-AQ-16	5/5/1997	Hexachlorobutadiene	10	U
SF-AQ-16	5/5/1997	Hexachlorocyclopentadiene	10	U
SF-AQ-16	5/5/1997	Hexachloroethane	10	U
SF-AQ-16	5/5/1997	Indeno(1,2,3-cd)pyrene	10	U
SF-AQ-16	5/5/1997	Isophorone	10	U
SF-AQ-16	5/5/1997	Naphthalene	10	U
SF-AQ-16	5/5/1997	Nitrobenzene	10	U
SF-AQ-16	5/5/1997	N-Nitrosodi-n-propylamine	10	U
SF-AQ-16	5/5/1997	N-Nitrosodiphenylamine	10	U
SF-AQ-16	5/5/1997	Pentachlorophenol	26	U
SF-AQ-16	5/5/1997	Phenanthrene	10	U
SF-AQ-16	5/5/1997	Phenol	10	U
SF-AQ-16	5/5/1997	Pyrene	10	U
SF-AQ-16	5/5/1997	4,4'-DDD	0.1	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-16	5/5/1997	4,4'-DDE	0.1	U
SF-AQ-16	5/5/1997	4,4'-DDT	0.1	U
SF-AQ-16	5/5/1997	Aldrin	0.05	U
SF-AQ-16	5/5/1997	alpha-BHC	0.05	U
SF-AQ-16	5/5/1997	alpha-Chlordane	0.05	U
SF-AQ-16	5/5/1997	beta-BHC	0.05	U
SF-AQ-16	5/5/1997	delta-BHC	0.05	U
SF-AQ-16	5/5/1997	Dieldrin	0.1	U
SF-AQ-16	5/5/1997	Endosulfan I	0.05	U
SF-AQ-16	5/5/1997	Endosulfan II	0.1	U
SF-AQ-16	5/5/1997	Endosulfan sulfate	0.1	U
SF-AQ-16	5/5/1997	Endrin	0.1	U
SF-AQ-16	5/5/1997	Endrin Aldehyde	0.1	U
SF-AQ-16	5/5/1997	Endrin ketone	0.1	U
SF-AQ-16	5/5/1997	gamma-BHC (Lindane)	0.05	U
SF-AQ-16	5/5/1997	gamma-Chlordane	0.05	U
SF-AQ-16	5/5/1997	Heptachlor	0.05	U
SF-AQ-16	5/5/1997	Heptachlor epoxide	0.05	U
SF-AQ-16	5/5/1997	Methoxychlor	0.5	U
SF-AQ-16	5/5/1997	Toxaphene	5	U
SF-AQ-16	5/5/1997	Aroclor 1016	1	U
SF-AQ-16	5/5/1997	Aroclor 1221	2	U
SF-AQ-16	5/5/1997	Aroclor 1232	1	U
SF-AQ-16	5/5/1997	Aroclor 1242	1	U
SF-AQ-16	5/5/1997	Aroclor 1248	1	U
SF-AQ-16	5/5/1997	Aroclor 1254	1	U
SF-AQ-16	5/5/1997	Aroclor 1260	1	U
SF-AQ-16	5/5/1997	PCBs(total)	2	U
SF-AQ-16	5/5/1997	Aluminum	48.5	U
SF-AQ-16	5/5/1997	Antimony	2.2	U
SF-AQ-16	5/5/1997	Arsenic	2.2	U
SF-AQ-16	5/5/1997	Barium	2.9	
SF-AQ-16	5/5/1997	Beryllium	0.2	U
SF-AQ-16	5/5/1997	Cadmium	0.3	U
SF-AQ-16	5/5/1997	Calcium	14,600	
SF-AQ-16	5/5/1997	Chromium	1.1	U
SF-AQ-16	5/5/1997	Cobalt	1.1	U
SF-AQ-16	5/5/1997	Copper	4	
SF-AQ-16	5/5/1997	Cyanide	10	U
SF-AQ-16	5/5/1997	Iron	584	
SF-AQ-16	5/5/1997	Lead	2	U
SF-AQ-16	5/5/1997	Magnesium	472	
SF-AQ-16	5/5/1997	Manganese	13.3	
SF-AQ-16	5/5/1997	Mercury	0.1	U
SF-AQ-16	5/5/1997	Nickel	1.4	U
SF-AQ-16	5/5/1997	Potassium	664	
SF-AQ-16	5/5/1997	Selenium	3.2	U
SF-AQ-16	5/5/1997	Silver	1	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-16	5/5/1997	Sodium	4,470	
SF-AQ-16	5/5/1997	Thallium	3.1	U
SF-AQ-16	5/5/1997	Vanadium	0.8	U
SF-AQ-16	5/5/1997	Zinc	20.7	J
SF-AQ-17	5/6/1997	1,1,1-Trichloroethane	10	U
SF-AQ-17	5/6/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-17	5/6/1997	1,1,2-Trichloroethane	10	U
SF-AQ-17	5/6/1997	1,1-Dichloroethane	10	U
SF-AQ-17	5/6/1997	1,1-Dichloroethene	10	U
SF-AQ-17	5/6/1997	1,2-Dichloroethane	10	U
SF-AQ-17	5/6/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-17	5/6/1997	1,2-Dichloropropane	10	U
SF-AQ-17	5/6/1997	2-Butanone	10	U
SF-AQ-17	5/6/1997	2-Hexanone	10	U
SF-AQ-17	5/6/1997	4-Methyl-2-pentanone	10	U
SF-AQ-17	5/6/1997	Acetone	10	U
SF-AQ-17	5/6/1997	Benzene	10	U
SF-AQ-17	5/6/1997	Bromodichloromethane	10	U
SF-AQ-17	5/6/1997	Bromoform	10	U
SF-AQ-17	5/6/1997	Bromomethane	10	U
SF-AQ-17	5/6/1997	c-1,3-Dichloropropene	10	U
SF-AQ-17	5/6/1997	Carbon Tetrachloride	10	U
SF-AQ-17	5/6/1997	Chlorobenzene	6	J
SF-AQ-17	5/6/1997	Chloroethane	40	J
SF-AQ-17	5/6/1997	Chloroform	10	U
SF-AQ-17	5/6/1997	Chloromethane	10	U
SF-AQ-17	5/6/1997	Dibromochloromethane	10	U
SF-AQ-17	5/6/1997	Ethylbenzene	10	U
SF-AQ-17	5/6/1997	Methylene Chloride	10	U
SF-AQ-17	5/6/1997	Styrene	10	U
SF-AQ-17	5/6/1997	t-1,3-Dichloropropene	10	U
SF-AQ-17	5/6/1997	TCE	10	U
SF-AQ-17	5/6/1997	Tetrachloroethene	10	U
SF-AQ-17	5/6/1997	Toluene	2	J
SF-AQ-17	5/6/1997	Vinyl Chloride	0.8	J
SF-AQ-17	5/6/1997	Xylene (Total)	10	U
SF-AQ-17	5/6/1997	1,2,4-Trimethylbenzene	10	U
SF-AQ-17	5/6/1997	1,2-Dichlorobenzene	0.6	J
SF-AQ-17	5/6/1997	1,3-Dichlorobenzene	0.5	J
SF-AQ-17	5/6/1997	1,4-Dichlorobenzene	2	J
SF-AQ-17	5/6/1997	2,4,5-Trichlorophenol	25	U
SF-AQ-17	5/6/1997	2,4,6-Trichlorophenol	10	U
SF-AQ-17	5/6/1997	2,4-Dichlorophenol	10	U
SF-AQ-17	5/6/1997	2,4-Dimethylphenol	10	U
SF-AQ-17	5/6/1997	2,4-Dinitrophenol	25	U
SF-AQ-17	5/6/1997	2,4-Dinitrotoluene	10	U
SF-AQ-17	5/6/1997	2,6-Dinitrotoluene	10	U
SF-AQ-17	5/6/1997	2-Chloronaphthalene	10	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-17	5/6/1997	2-Chlorophenol	10	U
SF-AQ-17	5/6/1997	2-Methylnaphthalene	0.2	J
SF-AQ-17	5/6/1997	2-Methylphenol	10	U
SF-AQ-17	5/6/1997	2-Nitroaniline	25	U
SF-AQ-17	5/6/1997	2-Nitrophenol	10	U
SF-AQ-17	5/6/1997	3,3'-Dichlorobenzidine	10	U
SF-AQ-17	5/6/1997	3+4-Methylphenol	10	U
SF-AQ-17	5/6/1997	3-Nitroaniline	25	U
SF-AQ-17	5/6/1997	4,6-Dinitro-2-methylphenol	25	U
SF-AQ-17	5/6/1997	4-Bromophenyl phenyl ether	10	U
SF-AQ-17	5/6/1997	4-Chloro-3-methylphenol	10	U
SF-AQ-17	5/6/1997	4-Chloroaniline	10	U
SF-AQ-17	5/6/1997	4-Chlorophenyl phenyl ether	10	U
SF-AQ-17	5/6/1997	4-Nitroaniline	25	U
SF-AQ-17	5/6/1997	4-Nitrophenol	25	U
SF-AQ-17	5/6/1997	Acenaphthene	10	U
SF-AQ-17	5/6/1997	Acenaphthylene	10	U
SF-AQ-17	5/6/1997	Anthracene	10	U
SF-AQ-17	5/6/1997	Benzo(a)anthracene	10	U
SF-AQ-17	5/6/1997	Benzo(a)pyrene	10	U
SF-AQ-17	5/6/1997	Benzo(b)fluoranthene	10	U
SF-AQ-17	5/6/1997	Benzo(g,h,i)perylene	10	U
SF-AQ-17	5/6/1997	Benzo(k)fluoranthene	10	U
SF-AQ-17	5/6/1997	bis(2-Chloroethoxy)methane	10	U
SF-AQ-17	5/6/1997	bis(2-Chloroethyl)ether	10	U
SF-AQ-17	5/6/1997	bis(2-Chloroisopropyl)ether	10	U
SF-AQ-17	5/6/1997	bis(2-Ethylhexyl)phthalate	10	U
SF-AQ-17	5/6/1997	Carbazole	10	U
SF-AQ-17	5/6/1997	Chrysene	10	U
SF-AQ-17	5/6/1997	Dibenz(a,h)anthracene	10	U
SF-AQ-17	5/6/1997	Dibenzofuran	10	U
SF-AQ-17	5/6/1997	Diethyl phthalate	10	U
SF-AQ-17	5/6/1997	Dimethyl phthalate	10	U
SF-AQ-17	5/6/1997	Di-n-butyl phthalate	10	U
SF-AQ-17	5/6/1997	Di-n-octyl phthalate	10	U
SF-AQ-17	5/6/1997	Fluoranthene	10	U
SF-AQ-17	5/6/1997	Fluorene	10	U
SF-AQ-17	5/6/1997	Hexachlorobenzene	10	U
SF-AQ-17	5/6/1997	Hexachlorobutadiene	10	U
SF-AQ-17	5/6/1997	Hexachlorocyclopentadiene	10	U
SF-AQ-17	5/6/1997	Hexachloroethane	10	U
SF-AQ-17	5/6/1997	Indeno(1,2,3-cd)pyrene	10	U
SF-AQ-17	5/6/1997	Isophorone	10	U
SF-AQ-17	5/6/1997	Naphthalene	0.2	J
SF-AQ-17	5/6/1997	Nitrobenzene	10	U
SF-AQ-17	5/6/1997	N-Nitrosodi-n-propylamine	10	U
SF-AQ-17	5/6/1997	N-Nitrosodiphenylamine	10	U
SF-AQ-17	5/6/1997	Pentachlorophenol	25	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-17	5/6/1997	Phenanthrene	10	U
SF-AQ-17	5/6/1997	Phenol	10	U
SF-AQ-17	5/6/1997	Pyrene	10	U
SF-AQ-17	5/6/1997	4,4'-DDD	0.1	U
SF-AQ-17	5/6/1997	4,4'-DDE	0.1	U
SF-AQ-17	5/6/1997	4,4'-DDT	0.1	U
SF-AQ-17	5/6/1997	Aldrin	0.052	U
SF-AQ-17	5/6/1997	alpha-BHC	0.052	U
SF-AQ-17	5/6/1997	alpha-Chlordane	0.052	U
SF-AQ-17	5/6/1997	beta-BHC	0.052	U
SF-AQ-17	5/6/1997	delta-BHC	0.052	U
SF-AQ-17	5/6/1997	Dieldrin	0.1	U
SF-AQ-17	5/6/1997	Endosulfan I	0.052	U
SF-AQ-17	5/6/1997	Endosulfan II	0.1	U
SF-AQ-17	5/6/1997	Endosulfan sulfate	0.1	U
SF-AQ-17	5/6/1997	Endrin	0.1	U
SF-AQ-17	5/6/1997	Endrin Aldehyde	1.2	J
SF-AQ-17	5/6/1997	Endrin ketone	0.1	U
SF-AQ-17	5/6/1997	gamma-BHC (Lindane)	0.052	U
SF-AQ-17	5/6/1997	gamma-Chlordane	0.052	U
SF-AQ-17	5/6/1997	Heptachlor	0.052	U
SF-AQ-17	5/6/1997	Heptachlor epoxide	0.052	U
SF-AQ-17	5/6/1997	Methoxychlor	0.520	U
SF-AQ-17	5/6/1997	Toxaphene	5.2	U
SF-AQ-17	5/6/1997	Aroclor 1016	1	U
SF-AQ-17	5/6/1997	Aroclor 1221	2.1	U
SF-AQ-17	5/6/1997	Aroclor 1232	1	U
SF-AQ-17	5/6/1997	Aroclor 1242	1	U
SF-AQ-17	5/6/1997	Aroclor 1248	1	U
SF-AQ-17	5/6/1997	Aroclor 1254	1	U
SF-AQ-17	5/6/1997	Aroclor 1260	33	J
SF-AQ-17	5/6/1997	PCBs(total)	33	J
SF-AQ-17	5/6/1997	Aluminum	48.5	U
SF-AQ-17	5/6/1997	Antimony	2.2	U
SF-AQ-17	5/6/1997	Arsenic	3.1	
SF-AQ-17	5/6/1997	Barium	4.4	
SF-AQ-17	5/6/1997	Beryllium	0.2	
SF-AQ-17	5/6/1997	Cadmium	0.3	U
SF-AQ-17	5/6/1997	Calcium	16,600	
SF-AQ-17	5/6/1997	Chromium	1.1	U
SF-AQ-17	5/6/1997	Cobalt	1.1	U
SF-AQ-17	5/6/1997	Copper	5.8	
SF-AQ-17	5/6/1997	Cyanide	10	U
SF-AQ-17	5/6/1997	Iron	1,310	
SF-AQ-17	5/6/1997	Lead	2.1	U
SF-AQ-17	5/6/1997	Magnesium	821	
SF-AQ-17	5/6/1997	Manganese	23.2	
SF-AQ-17	5/6/1997	Mercury	0.1	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-17	5/6/1997	Nickel	1.9	
SF-AQ-17	5/6/1997	Potassium	2,490	
SF-AQ-17	5/6/1997	Selenium	3.2	U
SF-AQ-17	5/6/1997	Silver	1	U
SF-AQ-17	5/6/1997	Sodium	7,280	J
SF-AQ-17	5/6/1997	Thallium	3.1	U
SF-AQ-17	5/6/1997	Vanadium	0.8	U
SF-AQ-17	5/6/1997	Zinc	19.9	
SF1617AQ01	4/7/2006	1,1,1-Trichloroethane	5	U
SF1617AQ01	4/7/2006	1,1,2,2-Tetrachloroethane	1	U
SF1617AQ01	4/7/2006	1,1,2-Trichloroethane	3	U
SF1617AQ01	4/7/2006	1,1,2-Trichlorotrifluoroethane	5	U
SF1617AQ01	4/7/2006	1,1-Dichloroethane	5	U
SF1617AQ01	4/7/2006	1,1-Dichloroethene	2	U
SF1617AQ01	4/7/2006	1,2,4-Trichlorobenzene	5	U
SF1617AQ01	4/7/2006	1,2-Dibromo-3-chloropropane	5	U
SF1617AQ01	4/7/2006	1,2-Dibromoethane	5	U
SF1617AQ01	4/7/2006	1,2-Dichlorobenzene	0.5	J
SF1617AQ01	4/7/2006	1,2-Dichloroethane	2	U
SF1617AQ01	4/7/2006	1,2-Dichloropropane	1	U
SF1617AQ01	4/7/2006	1,3-Dichlorobenzene	0.4	J
SF1617AQ01	4/7/2006	1,4-Dichlorobenzene	3.8	J
SF1617AQ01	4/7/2006	2-Butanone	5	U
SF1617AQ01	4/7/2006	2-Hexanone	5	U
SF1617AQ01	4/7/2006	4-Methyl-2-pentanone	5	U
SF1617AQ01	4/7/2006	Acetone	5	U
SF1617AQ01	4/7/2006	Benzene	1	U
SF1617AQ01	4/7/2006	Bromodichloromethane	1	U
SF1617AQ01	4/7/2006	Bromoform	4	U
SF1617AQ01	4/7/2006	Bromomethane	5	U
SF1617AQ01	4/7/2006	c-1,2-Dichloroethene	5	U
SF1617AQ01	4/7/2006	c-1,3-Dichloropropene	5	U
SF1617AQ01	4/7/2006	Carbon disulfide	5	U
SF1617AQ01	4/7/2006	Carbon Tetrachloride	2	U
SF1617AQ01	4/7/2006	Chlorobenzene	9.1	
SF1617AQ01	4/7/2006	Chloroethane	130	
SF1617AQ01	4/7/2006	Chloroform	5	U
SF1617AQ01	4/7/2006	Chloromethane	5	U
SF1617AQ01	4/7/2006	Cyclohexane	5	U
SF1617AQ01	4/7/2006	Dibromochloromethane	5	U
SF1617AQ01	4/7/2006	Dichlorodifluoromethane	5	U
SF1617AQ01	4/7/2006	Ethylbenzene	1.2	J
SF1617AQ01	4/7/2006	Isopropylbenzene	1.6	J
SF1617AQ01	4/7/2006	Methyl Acetate	5	U
SF1617AQ01	4/7/2006	Methyl Cyclohexane	5	U
SF1617AQ01	4/7/2006	Methyl t-butyl ether	5	U
SF1617AQ01	4/7/2006	Methylene Chloride	3	U
SF1617AQ01	4/7/2006	Styrene	5	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF1617AQ01	4/7/2006	t-1,2-Dichloroethene	5	U
SF1617AQ01	4/7/2006	t-1,3-Dichloropropene	5	U
SF1617AQ01	4/7/2006	TCE	1	U
SF1617AQ01	4/7/2006	Tetrachloroethene	1	U
SF1617AQ01	4/7/2006	Toluene	1.6	J
SF1617AQ01	4/7/2006	Trichlorofluoromethane	5	U
SF1617AQ01	4/7/2006	Vinyl Chloride	5	U
SF1617AQ01	4/7/2006	Xylene (Total)	6.9	
SF1617AQ01	4/7/2006	Aluminum	69.1	B
SF1617AQ01	4/7/2006	Antimony	5.8	U
SF1617AQ01	4/7/2006	Arsenic	3.2	U
SF1617AQ01	4/7/2006	Barium	15.5	B
SF1617AQ01	4/7/2006	Beryllium	0.3	U
SF1617AQ01	4/7/2006	Cadmium	2.1	B
SF1617AQ01	4/7/2006	Calcium	8,020	
SF1617AQ01	4/7/2006	Chromium	1.7	B
SF1617AQ01	4/7/2006	Cobalt	3.4	B
SF1617AQ01	4/7/2006	Copper	25.4	
SF1617AQ01	4/7/2006	Iron	4,230	
SF1617AQ01	4/7/2006	Lead	5.4	
SF1617AQ01	4/7/2006	Magnesium	1,820	B
SF1617AQ01	4/7/2006	Manganese	50.6	
SF1617AQ01	4/7/2006	Mercury	0.1	U
SF1617AQ01	4/7/2006	Nickel	8	B
SF1617AQ01	4/7/2006	Potassium	8,200	
SF1617AQ01	4/7/2006	Selenium	4.2	U
SF1617AQ01	4/7/2006	Silver	1.4	U
SF1617AQ01	4/7/2006	Sodium	53,800	
SF1617AQ01	4/7/2006	Thallium	4.7	U
SF1617AQ01	4/7/2006	Vanadium	4.7	U
SF1617AQ01	4/7/2006	Zinc	57.4	
SF1617AQ02	4/7/2006	1,1,1-Trichloroethane	5	U
SF1617AQ02	4/7/2006	1,1,2,2-Tetrachloroethane	1	U
SF1617AQ02	4/7/2006	1,1,2-Trichloroethane	3	U
SF1617AQ02	4/7/2006	1,1,2-Trichlorotrifluoroethane	5	U
SF1617AQ02	4/7/2006	1,1-Dichloroethane	5	U
SF1617AQ02	4/7/2006	1,1-Dichloroethene	2	U
SF1617AQ02	4/7/2006	1,2,4-Trichlorobenzene	2	J
SF1617AQ02	4/7/2006	1,2-Dibromo-3-chloropropane	5	U
SF1617AQ02	4/7/2006	1,2-Dibromoethane	5	U
SF1617AQ02	4/7/2006	1,2-Dichlorobenzene	2	J
SF1617AQ02	4/7/2006	1,2-Dichloroethane	2	U
SF1617AQ02	4/7/2006	1,2-Dichloropropane	1	U
SF1617AQ02	4/7/2006	1,3-Dichlorobenzene	1.2	J
SF1617AQ02	4/7/2006	1,4-Dichlorobenzene	4.6	J
SF1617AQ02	4/7/2006	2-Butanone	5	U
SF1617AQ02	4/7/2006	2-Hexanone	5	U
SF1617AQ02	4/7/2006	4-Methyl-2-pentanone	5	U

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF1617AQ02	4/7/2006	Acetone	5	U
SF1617AQ02	4/7/2006	Benzene	1	U
SF1617AQ02	4/7/2006	Bromodichloromethane	1	U
SF1617AQ02	4/7/2006	Bromoform	4	U
SF1617AQ02	4/7/2006	Bromomethane	5	U
SF1617AQ02	4/7/2006	c-1,2-Dichloroethene	5	U
SF1617AQ02	4/7/2006	c-1,3-Dichloropropene	5	U
SF1617AQ02	4/7/2006	Carbon disulfide	5	U
SF1617AQ02	4/7/2006	Carbon Tetrachloride	2	U
SF1617AQ02	4/7/2006	Chlorobenzene	10	
SF1617AQ02	4/7/2006	Chloroethane	57	
SF1617AQ02	4/7/2006	Chloroform	5	U
SF1617AQ02	4/7/2006	Chloromethane	5	U
SF1617AQ02	4/7/2006	Cyclohexane	1.2	J
SF1617AQ02	4/7/2006	Dibromochloromethane	5	U
SF1617AQ02	4/7/2006	Dichlorodifluoromethane	5	U
SF1617AQ02	4/7/2006	Ethylbenzene	1.7	J
SF1617AQ02	4/7/2006	Isopropylbenzene	2.6	J
SF1617AQ02	4/7/2006	Methyl Acetate	5	U
SF1617AQ02	4/7/2006	Methyl Cyclohexane	2.4	J
SF1617AQ02	4/7/2006	Methyl t-butyl ether	5	U
SF1617AQ02	4/7/2006	Methylene Chloride	3	U
SF1617AQ02	4/7/2006	Styrene	5	U
SF1617AQ02	4/7/2006	t-1,2-Dichloroethene	5	U
SF1617AQ02	4/7/2006	t-1,3-Dichloropropene	5	U
SF1617AQ02	4/7/2006	TCE	1	U
SF1617AQ02	4/7/2006	Tetrachloroethene	0.6	J
SF1617AQ02	4/7/2006	Toluene	2.1	J
SF1617AQ02	4/7/2006	Trichlorofluoromethane	5	U
SF1617AQ02	4/7/2006	Vinyl Chloride	0.6	J
SF1617AQ02	4/7/2006	Xylene (Total)	9.1	
SF1617AQ02	4/7/2006	Aluminum	73.2	B
SF1617AQ02	4/7/2006	Antimony	5.8	U
SF1617AQ02	4/7/2006	Arsenic	3.2	U
SF1617AQ02	4/7/2006	Barium	14.1	B
SF1617AQ02	4/7/2006	Beryllium	0.3	U
SF1617AQ02	4/7/2006	Cadmium	3	B
SF1617AQ02	4/7/2006	Calcium	9,030	
SF1617AQ02	4/7/2006	Chromium	1.6	U
SF1617AQ02	4/7/2006	Cobalt	3.4	B
SF1617AQ02	4/7/2006	Copper	25.5	
SF1617AQ02	4/7/2006	Iron	4,270	
SF1617AQ02	4/7/2006	Lead	3.9	
SF1617AQ02	4/7/2006	Magnesium	1,930	B
SF1617AQ02	4/7/2006	Manganese	51.7	
SF1617AQ02	4/7/2006	Mercury	0.1	B
SF1617AQ02	4/7/2006	Nickel	7.3	B
SF1617AQ02	4/7/2006	Potassium	8,980	

Table 4-24

**Summary of Analytical Results
SF-16 and SF-17 Liquid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF1617AQ02	4/7/2006	Selenium	4.2	U
SF1617AQ02	4/7/2006	Silver	1.4	U
SF1617AQ02	4/7/2006	Sodium	54,500	
SF1617AQ02	4/7/2006	Thallium	4.7	U
SF1617AQ02	4/7/2006	Vanadium	4.7	U
SF1617AQ02	4/7/2006	Zinc	63	

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) **J** - reported result is estimated due to a minor quality control anomaly.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) SF-AQ-16 and SF-AQ-17 liquid characterization samples were collected during the Continued Remedial Investigation.
- 7) SF-1617AQ01 and SF1617AQ02 liquid characterization samples were collected during the 2006 Subsurface Feature Removal Action.

Table 4-25

**Summary of Analytical Results
SF-16, SF-17 and SF-18 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF1618BNE01	5/1/2006	1,2,4-Trichlorobenzene	0.005	U	NA	10,220
SF1618BNE01	5/1/2006	1,2-Dichlorobenzene	0.005	U	NA	91,980
SF1618BNE01	5/1/2006	1,3-Dichlorobenzene	0.005	U	NA	3,066
SF1618BNE01	5/1/2006	1,4-Dichlorobenzene	0.005	U	NA	119.23
SF1618BNE01	5/1/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF1618BNE01	5/1/2006	Chlorobenzene	0.005	U	NA	20,440
SF1618BNE01	5/1/2006	Chloroethane	0.005	U	NA	986.76
SF1618BNE01	5/1/2006	Ethylbenzene	0.004	U	NA	102,200
SF1618BNE01	5/1/2006	Isopropylbenzene	0.005	U	NA	102,200
SF1618BNE01	5/1/2006	TCE	0.001	U	0.7	7.15
SF1618BNE01	5/1/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF1618BNE01	5/1/2006	Toluene	0.005	U	NA	81,760
SF1618BNE01	5/1/2006	Vinyl Chloride	0.005	U	NA	3.97
SF1618BNE01	5/1/2006	Xylene (Total)	0.005	U	NA	204,400
SF1618BNW01	5/1/2006	1,2,4-Trichlorobenzene	0.0058	U	NA	10,220
SF1618BNW01	5/1/2006	1,2-Dichlorobenzene	0.0058	U	NA	91,980
SF1618BNW01	5/1/2006	1,3-Dichlorobenzene	0.0058	U	NA	3,066
SF1618BNW01	5/1/2006	1,4-Dichlorobenzene	0.0058	U	NA	119.23
SF1618BNW01	5/1/2006	c-1,2-Dichloroethene	0.0058	U	0.25	10,220
SF1618BNW01	5/1/2006	Chlorobenzene	0.0058	U	NA	20,440
SF1618BNW01	5/1/2006	Chloroethane	0.0058	U	NA	986.76
SF1618BNW01	5/1/2006	Ethylbenzene	0.0047	U	NA	102,200
SF1618BNW01	5/1/2006	Isopropylbenzene	0.0058	U	NA	102,200
SF1618BNW01	5/1/2006	TCE	0.0012	U	0.7	7.15
SF1618BNW01	5/1/2006	Tetrachloroethene	0.0012	U	1.4	5.30
SF1618BNW01	5/1/2006	Toluene	0.0058	U	NA	81,760
SF1618BNW01	5/1/2006	Vinyl Chloride	0.0058	U	NA	3.97
SF1618BNW01	5/1/2006	Xylene (Total)	0.0058	U	NA	204,400
SF1618BSE01	5/1/2006	1,2,4-Trichlorobenzene	0.0049	U	NA	10,220
SF1618BSE01	5/1/2006	1,2-Dichlorobenzene	0.0049	U	NA	91,980
SF1618BSE01	5/1/2006	1,3-Dichlorobenzene	0.0049	U	NA	3,066
SF1618BSE01	5/1/2006	1,4-Dichlorobenzene	0.0049	U	NA	119.23
SF1618BSE01	5/1/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF1618BSE01	5/1/2006	Chlorobenzene	0.0049	U	NA	20,440
SF1618BSE01	5/1/2006	Chloroethane	0.0049	U	NA	986.76
SF1618BSE01	5/1/2006	Ethylbenzene	0.004	U	NA	102,200
SF1618BSE01	5/1/2006	Isopropylbenzene	0.0049	U	NA	102,200
SF1618BSE01	5/1/2006	TCE	0.001	U	0.7	7.15
SF1618BSE01	5/1/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF1618BSE01	5/1/2006	Toluene	0.0049	U	NA	81,760
SF1618BSE01	5/1/2006	Vinyl Chloride	0.0049	U	NA	3.97
SF1618BSE01	5/1/2006	Xylene (Total)	0.0049	U	NA	204,400
SF1618BSW01	5/1/2006	1,2,4-Trichlorobenzene	0.0057	U	NA	10,220
SF1618BSW01	5/1/2006	1,2-Dichlorobenzene	0.0057	U	NA	91,980
SF1618BSW01	5/1/2006	1,3-Dichlorobenzene	0.0057	U	NA	3,066
SF1618BSW01	5/1/2006	1,4-Dichlorobenzene	0.0057	U	NA	119.23
SF1618BSW01	5/1/2006	c-1,2-Dichloroethene	0.0057	U	0.25	10,220

Table 4-25

**Summary of Analytical Results
SF-16, SF-17 and SF-18 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF1618BSW01	5/1/2006	Chlorobenzene	0.0057	U	NA	20,440
SF1618BSW01	5/1/2006	Chloroethane	0.0057	U	NA	986.76
SF1618BSW01	5/1/2006	Ethylbenzene	0.0046	U	NA	102,200
SF1618BSW01	5/1/2006	Isopropylbenzene	0.0057	U	NA	102,200
SF1618BSW01	5/1/2006	TCE	0.0011	U	0.7	7.15
SF1618BSW01	5/1/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF1618BSW01	5/1/2006	Toluene	0.0057	U	NA	81,760
SF1618BSW01	5/1/2006	Vinyl Chloride	0.0057	U	NA	3.97
SF1618BSW01	5/1/2006	Xylene (Total)	0.0057	U	NA	204,400
DUP18	5/1/2006	1,2,4-Trichlorobenzene	0.0048	U	NA	10,220
DUP18	5/1/2006	1,2-Dichlorobenzene	0.0048	U	NA	91,980
DUP18	5/1/2006	1,3-Dichlorobenzene	0.0048	U	NA	3,066
DUP18	5/1/2006	1,4-Dichlorobenzene	0.0048	U	NA	119.23
DUP18	5/1/2006	c-1,2-Dichloroethene	0.0048	U	0.25	10,220
DUP18	5/1/2006	Chlorobenzene	0.0048	U	NA	20,440
DUP18	5/1/2006	Chloroethane	0.0048	U	NA	986.76
DUP18	5/1/2006	Ethylbenzene	0.0038	U	NA	102,200
DUP18	5/1/2006	Isopropylbenzene	0.0048	U	NA	102,200
DUP18	5/1/2006	TCE	0.001	U	0.7	7.15
DUP18	5/1/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP18	5/1/2006	Toluene	0.0048	U	NA	81,760
DUP18	5/1/2006	Vinyl Chloride	0.0048	U	NA	3.97
DUP18	5/1/2006	Xylene (Total)	0.0048	U	NA	204,400
SF1618CB01	5/1/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF1618CB01	5/1/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF1618CB01	5/1/2006	PCBs(total)	0.069	U	10	1.43
SF1618CB01	5/1/2006	Cadmium	0.25	B	10	511
SF1618CB01	5/1/2006	Chromium	13.7		143	3,066
SF1618CB01	5/1/2006	Copper	3	B	NA	40,880
SF1618CB01	5/1/2006	Lead	2.3		NA	NA
SF1618CB01	5/1/2006	Zinc	4.3	B	NA	306,600
SF1618CB01	5/1/2006	Cyanide	0.5	U	35	20,440
SF1618CN01	5/1/2006	Benzo(a)pyrene	0.042		0.29	0.392
SF1618CN01	5/1/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF1618CN01	5/1/2006	PCBs(total)	0.058	J	10	1.43
SF1618CN01	5/1/2006	Cadmium	0.1	U	10	511
SF1618CN01	5/1/2006	Chromium	3.2		143	3,066
SF1618CN01	5/1/2006	Copper	3.7	B	NA	40,880
SF1618CN01	5/1/2006	Lead	4		NA	NA
SF1618CN01	5/1/2006	Zinc	21.8		NA	306,600
SF1618CN01	5/1/2006	Cyanide	0.5	U	35	20,440
SF1618CS01	5/1/2006	Benzo(a)pyrene	0.042		0.29	0.392
SF1618CS01	5/1/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF1618CS01	5/1/2006	PCBs(total)	0.07	U	10	1.43
SF1618CS01	5/1/2006	Cadmium	0.14	B	10	511
SF1618CS01	5/1/2006	Chromium	3.5		143	3,066
SF1618CS01	5/1/2006	Copper	3.1	B	NA	40,880

Table 4-25

**Summary of Analytical Results
SF-16, SF-17 and SF-18 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF1618CS01	5/1/2006	Lead	2.6		NA	NA
SF1618CS01	5/1/2006	Zinc	8.5		NA	306,600
SF1618CS01	5/1/2006	Cyanide	0.5	U	35	20,440
SF1618CW01	5/1/2006	Benzo(a)pyrene	0.034	J	0.29	0.392
SF1618CW01	5/1/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF1618CW01	5/1/2006	PCBs(total)	0.068	U	10	1.43
SF1618CW01	5/1/2006	Cadmium	0.1	U	10	511
SF1618CW01	5/1/2006	Chromium	2.7		143	3,066
SF1618CW01	5/1/2006	Copper	2.9	B	NA	40,880
SF1618CW01	5/1/2006	Lead	2.7		NA	NA
SF1618CW01	5/1/2006	Zinc	22.9		NA	306,600
SF1618CW01	5/1/2006	Cyanide	0.5	U	35	20,440
DUP19	5/1/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
DUP19	5/1/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
DUP19	5/1/2006	PCBs(total)	0.068	U	10	1.43
DUP19	5/1/2006	Cadmium	0.27	B	10	511
DUP19	5/1/2006	Chromium	13.8		143	3,066
DUP19	5/1/2006	Copper	3.2	B	NA	40,880
DUP19	5/1/2006	Lead	2.6		NA	NA
DUP19	5/1/2006	Zinc	5.4	B	NA	306,600
DUP19	5/1/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-16, SF-17 and SF-18 post-removal confirmation samples (sample ID SF1618) were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-26

**Summary of Analytical Results
SF-19 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF-SL-19	1/26/1999	1,1,1-Trichloroethane	0.052	U	NA	286,160
SF-SL-19	1/26/1999	1,1,2,2-Tetrachloroethane	0.052	U	NA	14.31
SF-SL-19	1/26/1999	1,1,2-Trichloroethane	0.052	U	NA	50.20
SF-SL-19	1/26/1999	1,1-Dichloroethane	0.052	U	NA	204,400
SF-SL-19	1/26/1999	1,1-Dichloroethene	0.052	U	NA	51,100
SF-SL-19	1/26/1999	1,2-Dichloroethane	0.052	U	NA	31.45
SF-SL-19	1/26/1999	1,2-Dichloroethene (total)	0.052	U	0.25	9,198
SF-SL-19	1/26/1999	1,2-Dichloropropane	0.052	U	NA	42.08
SF-SL-19	1/26/1999	2-Butanone	0.052	U	NA	613,200
SF-SL-19	1/26/1999	2-Hexanone	0.052	U	NA	NA
SF-SL-19	1/26/1999	4-Methyl-2-pentanone	0.052	U	NA	NA
SF-SL-19	1/26/1999	Acetone	0.052	U	NA	919,800
SF-SL-19	1/26/1999	Benzene	0.052	U	NA	52.03
SF-SL-19	1/26/1999	Bromodichloromethane	0.052	U	NA	46.15
SF-SL-19	1/26/1999	Bromoform	0.052	U	NA	362.23
SF-SL-19	1/26/1999	Bromomethane	0.052	U	NA	1,430.8
SF-SL-19	1/26/1999	c-1,3-Dichloropropene	0.052	U	NA	NA
SF-SL-19	1/26/1999	Carbon Tetrachloride	0.052	U	NA	22.01
SF-SL-19	1/26/1999	Chlorobenzene	0.052	U	NA	20,440
SF-SL-19	1/26/1999	Chloroethane	0.052	U	NA	986.76
SF-SL-19	1/26/1999	Chloroform	0.052	U	NA	10,220
SF-SL-19	1/26/1999	Chloromethane	0.052	U	NA	NA
SF-SL-19	1/26/1999	Dibromochloromethane	0.052	U	NA	34.07
SF-SL-19	1/26/1999	Ethylbenzene	0.052	U	NA	102,200
SF-SL-19	1/26/1999	Methylene Chloride	0.052	U	NA	381.55
SF-SL-19	1/26/1999	Styrene	0.052	U	NA	204,400
SF-SL-19	1/26/1999	t-1,3-Dichloropropene	0.052	U	NA	NA
SF-SL-19	1/26/1999	TCE	0.052	U	0.7	7.15
SF-SL-19	1/26/1999	Tetrachloroethene	0.017	J	1.4	5.30
SF-SL-19	1/26/1999	Toluene	0.033	J	NA	81,760
SF-SL-19	1/26/1999	Vinyl Chloride	0.052	U	NA	3.97
SF-SL-19	1/26/1999	Xylene (Total)	0.034	J	NA	204,400
SF-SL-19	1/26/1999	1,2,4-Trimethylbenzene	21	U	NA	NA
SF-SL-19	1/26/1999	1,2-Dichlorobenzene	21	U	NA	91,980
SF-SL-19	1/26/1999	1,3-Dichlorobenzene	21	U	NA	3,066
SF-SL-19	1/26/1999	1,4-Dichlorobenzene	21	U	NA	119.23
SF-SL-19	1/26/1999	2,4,5-Trichlorophenol	52	U	NA	102,200
SF-SL-19	1/26/1999	2,4,6-Trichlorophenol	21	U	NA	260.15
SF-SL-19	1/26/1999	2,4-Dichlorophenol	21	U	NA	3,066
SF-SL-19	1/26/1999	2,4-Dimethylphenol	21	U	NA	20,440
SF-SL-19	1/26/1999	2,4-Dinitrophenol	52	U	NA	2,044
SF-SL-19	1/26/1999	2,4-Dinitrotoluene	21	U	NA	2,044
SF-SL-19	1/26/1999	2,6-Dinitrotoluene	21	U	NA	1,022
SF-SL-19	1/26/1999	2-Chloronaphthalene	21	U	NA	81,760
SF-SL-19	1/26/1999	2-Chlorophenol	21	U	NA	5,110
SF-SL-19	1/26/1999	2-Methylnaphthalene	23		NA	4,088
SF-SL-19	1/26/1999	2-Methylphenol	21	U	NA	51,100
SF-SL-19	1/26/1999	2-Nitroaniline	52	U	NA	NA
SF-SL-19	1/26/1999	2-Nitrophenol	21	U	NA	NA
SF-SL-19	1/26/1999	3,3'-Dichlorobenzidine	21	U	NA	6.36
SF-SL-19	1/26/1999	3+4-Methylphenol	21	U	NA	5,110
SF-SL-19	1/26/1999	3-Nitroaniline	52	U	NA	NA
SF-SL-19	1/26/1999	4,6-Dinitro-2-methylphenol	52	U	NA	NA
SF-SL-19	1/26/1999	4-Bromophenyl phenyl ether	21	U	NA	NA
SF-SL-19	1/26/1999	4-Chloro-3-methylphenol	21	U	NA	NA

Table 4-26

Summary of Analytical Results
SF-19 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup	USEPA Region III
					Goal	Risk-based Concentrations for Industrial Soil
SF-SL-19	1/26/1999	4-Chloroaniline	21	U	NA	4,088
SF-SL-19	1/26/1999	4-Chlorophenyl phenyl ether	21	U	NA	NA
SF-SL-19	1/26/1999	4-Nitroaniline	52	U	NA	NA
SF-SL-19	1/26/1999	4-Nitrophenol	52	U	NA	NA
SF-SL-19	1/26/1999	Acenaphthene	0.86	J	NA	61,320
SF-SL-19	1/26/1999	Acenaphthylene	21	U	NA	NA
SF-SL-19	1/26/1999	Anthracene	0.6	J	NA	306,600
SF-SL-19	1/26/1999	Benzo(a)anthracene	1.3	J	NA	3.92
SF-SL-19	1/26/1999	Benzo(a)pyrene	0.72	J	0.29	0.39
SF-SL-19	1/26/1999	Benzo(b)fluoranthene	1.7	J	NA	3.92
SF-SL-19	1/26/1999	Benzo(g,h,i)perylene	0.93	J	NA	NA
SF-SL-19	1/26/1999	Benzo(k)fluoranthene	0.8	J	NA	39.20
SF-SL-19	1/26/1999	bis(2-Chloroethoxy)methane	21	U	NA	NA
SF-SL-19	1/26/1999	bis(2-Chloroethyl)ether	21	U	NA	2.60
SF-SL-19	1/26/1999	bis(2-Chloroisopropyl)ether	21	U	NA	40.88
SF-SL-19	1/26/1999	bis(2-Ethylhexyl)phthalate	21	U	NA	204.40
SF-SL-19	1/26/1999	Carbazole	1.1	J	NA	143.08
SF-SL-19	1/26/1999	Chrysene	2	J	NA	392
SF-SL-19	1/26/1999	Dibenz(a,h)anthracene	21	U	0.29	0.39
SF-SL-19	1/26/1999	Dibenzofuran	0.26	J	NA	1,022
SF-SL-19	1/26/1999	Diethyl phthalate	21	U	NA	817,600
SF-SL-19	1/26/1999	Dimethyl phthalate	21	U	NA	NA
SF-SL-19	1/26/1999	Di-n-butyl phthalate	21	U	NA	102,200
SF-SL-19	1/26/1999	Di-n-octyl phthalate	21	U	NA	NA
SF-SL-19	1/26/1999	Fluoranthene	4.4	J	NA	40,880
SF-SL-19	1/26/1999	Fluorene	1.3	J	NA	40,880
SF-SL-19	1/26/1999	Hexachlorobenzene	21	U	NA	1.79
SF-SL-19	1/26/1999	Hexachlorobutadiene	21	U	NA	36.69
SF-SL-19	1/26/1999	Hexachlorocyclopentadiene	21	U	NA	6,132
SF-SL-19	1/26/1999	Hexachloroethane	21	U	NA	204.40
SF-SL-19	1/26/1999	Indeno(1,2,3-cd)pyrene	0.94	J	NA	3.92
SF-SL-19	1/26/1999	Isophorone	21	U	NA	3012.21
SF-SL-19	1/26/1999	Naphthalene	4	J	NA	20,440
SF-SL-19	1/26/1999	Nitrobenzene	21	U	NA	511
SF-SL-19	1/26/1999	N-Nitrosodi-n-propylamine	21	U	NA	0.41
SF-SL-19	1/26/1999	N-Nitrosodiphenylamine	21	U	NA	584
SF-SL-19	1/26/1999	Pentachlorophenol	52	U	NA	23.85
SF-SL-19	1/26/1999	Phenanthrene	5.2	J	NA	NA
SF-SL-19	1/26/1999	Phenol	21	U	NA	306,600
SF-SL-19	1/26/1999	Pyrene	3.1	J	NA	30,660
SF-SL-19	1/26/1999	4,4'-DDD	0.13	J	NA	11.92
SF-SL-19	1/26/1999	4,4'-DDE	0.29		NA	8.42
SF-SL-19	1/26/1999	4,4'-DDT	0.36		NA	8.42
SF-SL-19	1/26/1999	Aldrin	0.0220		NA	0.17
SF-SL-19	1/26/1999	alpha-BHC	0.0018	U	NA	0.45
SF-SL-19	1/26/1999	alpha-Chlordane	0.02	J	NA	NA
SF-SL-19	1/26/1999	beta-BHC	0.0018	U	NA	1.59
SF-SL-19	1/26/1999	delta-BHC	0.0018	U	NA	NA
SF-SL-19	1/26/1999	Dieldrin	0.061	J	NA	0.18
SF-SL-19	1/26/1999	Endosulfan I	0.026	J	NA	6,132
SF-SL-19	1/26/1999	Endosulfan II	0.041		NA	6,132
SF-SL-19	1/26/1999	Endosulfan sulfate	0.0036	U	NA	NA
SF-SL-19	1/26/1999	Endrin	0.038		NA	307
SF-SL-19	1/26/1999	Endrin Aldehyde	0.0036	U	NA	NA
SF-SL-19	1/26/1999	Endrin ketone	0.0036	U	NA	NA

Table 4-26

**Summary of Analytical Results
SF-19 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF-SL-19	1/26/1999	gamma-BHC (Lindane)	0.0096		NA	2.20
SF-SL-19	1/26/1999	gamma-Chlordane	0.082	J	NA	NA
SF-SL-19	1/26/1999	Heptachlor	0.082	J	NA	0.64
SF-SL-19	1/26/1999	Heptachlor epoxide	0.0018	U	NA	0.31
SF-SL-19	1/26/1999	Methoxychlor	0.27	J	NA	5,110
SF-SL-19	1/26/1999	Toxaphene	0.18	U	NA	2.60
SF-SL-19	1/26/1999	Aroclor 1016	0.36	U	NA	40.88
SF-SL-19	1/26/1999	Aroclor 1221	0.72	U	NA	1.43
SF-SL-19	1/26/1999	Aroclor 1232	0.36	U	NA	1.43
SF-SL-19	1/26/1999	Aroclor 1242	0.36	U	NA	1.43
SF-SL-19	1/26/1999	Aroclor 1248	0.36	U	NA	1.43
SF-SL-19	1/26/1999	Aroclor 1254	0.36	U	NA	1.43
SF-SL-19	1/26/1999	Aroclor 1260	0.36	U	NA	1.43
SF-SL-19	1/26/1999	PCBs(total)	0.72	U	10	1.43
SF-SL-19	1/26/1999	Aluminum	6,730		NA	1,022,000
SF-SL-19	1/26/1999	Antimony	2.5	UJ	NA	408.8
SF-SL-19	1/26/1999	Arsenic	10.1		NA	1.91
SF-SL-19	1/26/1999	Barium	192		NA	204,400
SF-SL-19	1/26/1999	Beryllium	0.36		NA	2,044
SF-SL-19	1/26/1999	Cadmium	7.9		10	511
SF-SL-19	1/26/1999	Calcium	20,700	J	NA	NA
SF-SL-19	1/26/1999	Chromium	115	J	143	3,066
SF-SL-19	1/26/1999	Cobalt	13.4		NA	NA
SF-SL-19	1/26/1999	Copper	375		NA	40,880
SF-SL-19	1/26/1999	Cyanide	0.54	UJ	35	20,440
SF-SL-19	1/26/1999	Iron	72,200		NA	715,400
SF-SL-19	1/26/1999	Lead	285		NA	NA
SF-SL-19	1/26/1999	Magnesium	2,810		NA	NA
SF-SL-19	1/26/1999	Manganese	509	J	NA	20,440
SF-SL-19	1/26/1999	Mercury	0.32		NA	NA
SF-SL-19	1/26/1999	Nickel	79.9		NA	20,440
SF-SL-19	1/26/1999	Potassium	940		NA	NA
SF-SL-19	1/26/1999	Selenium	0.33	U	NA	5,110
SF-SL-19	1/26/1999	Silver	4.2	J	NA	5,110
SF-SL-19	1/26/1999	Sodium	85	U	NA	NA
SF-SL-19	1/26/1999	Thallium	2	U	NA	71.54
SF-SL-19	1/26/1999	Vanadium	16.5		NA	1,022
SF-SL-19	1/26/1999	Zinc	745		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) J - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-19 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-27

**Summary of Analytical Results
SF-19 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF19BNE01	4/12/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF19BNE01	4/12/2006	TCE	0.001	U	0.7	7.15
SF19BNE01	4/12/2006	Tetrachloroethene	0.001	J	1.4	5.30
SF19BNW01	4/12/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF19BNW01	4/12/2006	TCE	0.0011	U	0.7	7.15
SF19BNW01	4/12/2006	Tetrachloroethene	0.0007	J	1.4	5.30
SF19BSE01	4/12/2006	c-1,2-Dichloroethene	0.0056	U	0.25	10,220
SF19BSE01	4/12/2006	TCE	0.0011	U	0.7	7.15
SF19BSE01	4/12/2006	Tetrachloroethene	0.0053		1.4	5.30
SF19BSW01	4/12/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF19BSW01	4/12/2006	TCE	0.0011	U	0.7	7.15
SF19BSW01	4/12/2006	Tetrachloroethene	0.0047		1.4	5.30
SF19CNE01	4/12/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF19CNE01	4/12/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF19CNE01	4/12/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF19CNE01	4/12/2006	Chrysene	0.36	U	NA	392
SF19CNE01	4/12/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF19CNE01	4/12/2006	Dieldrin	0.0072	U	NA	0.179
SF19CNE01	4/12/2006	PCBs(total)	0.072	U	10	1.43
SF19CNE01	4/12/2006	Cadmium	0.087	U	10	511
SF19CNE01	4/12/2006	Chromium	7.6		143	3066
SF19CNE01	4/12/2006	Copper	2.6	B	NA	40880
SF19CNE01	4/12/2006	Mercury	0.03		NA	NA
SF19CNE01	4/12/2006	Nickel	4	B	NA	20440
SF19CNE01	4/12/2006	Zinc	11.6		NA	306600
SF19CNE01	4/12/2006	Cyanide	0.5	U	35	20440
SF19CNW01	4/12/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF19CNW01	4/12/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF19CNW01	4/12/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92
SF19CNW01	4/12/2006	Chrysene	0.36	U	NA	392
SF19CNW01	4/12/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF19CNW01	4/12/2006	Dieldrin	0.0073	U	NA	0.179
SF19CNW01	4/12/2006	PCBs(total)	0.073	U	10	1.43
SF19CNW01	4/12/2006	Cadmium	0.087	U	10	511
SF19CNW01	4/12/2006	Chromium	7.8		143	3066
SF19CNW01	4/12/2006	Copper	2.2	B	NA	40880
SF19CNW01	4/12/2006	Mercury	0.02	B	NA	NA
SF19CNW01	4/12/2006	Nickel	3.8	B	NA	20440
SF19CNW01	4/12/2006	Zinc	9.4		NA	306600
SF19CNW01	4/12/2006	Cyanide	0.5	U	35	20440
SF19CSE01	4/12/2006	Benzo(a)anthracene	0.014	J	NA	3.92
SF19CSE01	4/12/2006	Benzo(a)pyrene	0.014	J	0.29	0.392
SF19CSE01	4/12/2006	Benzo(b)fluoranthene	0.017	J	NA	3.92
SF19CSE01	4/12/2006	Chrysene	0.022	J	NA	392
SF19CSE01	4/12/2006	Dibenz(a,h)anthracene	0.038	U	0.29	0.392
SF19CSE01	4/12/2006	Dieldrin	0.0077	U	NA	0.179

Table 4-27

**Summary of Analytical Results
SF-19 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
SF19CSE01	4/12/2006	PCBs(total)	0.077	U	10	1.43
SF19CSE01	4/12/2006	Cadmium	0.092	U	10	511
SF19CSE01	4/12/2006	Chromium	9		143	3066
SF19CSE01	4/12/2006	Copper	7.2		NA	40880
SF19CSE01	4/12/2006	Mercury	0.09		NA	NA
SF19CSE01	4/12/2006	Nickel	3.6	B	NA	20440
SF19CSE01	4/12/2006	Zinc	50.7		NA	306600
SF19CSE01	4/12/2006	Cyanide	0.5	U	35	20440
SF19CSW01	4/12/2006	Benzo(a)anthracene	0.19	U	NA	3.92
SF19CSW01	4/12/2006	Benzo(a)pyrene	0.19	U	0.29	0.392
SF19CSW01	4/12/2006	Benzo(b)fluoranthene	0.19	U	NA	3.92
SF19CSW01	4/12/2006	Chrysene	0.3	J	NA	392
SF19CSW01	4/12/2006	Dibenz(a,h)anthracene	0.19	U	0.29	0.392
SF19CSW01	4/12/2006	Dieldrin	0.0076	U	NA	0.179
SF19CSW01	4/12/2006	PCBs(total)	0.076	U	10	1.43
SF19CSW01	4/12/2006	Cadmium	0.091	U	10	511
SF19CSW01	4/12/2006	Chromium	7.3		143	3066
SF19CSW01	4/12/2006	Copper	5	B	NA	40880
SF19CSW01	4/12/2006	Mercury	0.05		NA	NA
SF19CSW01	4/12/2006	Nickel	3.8	B	NA	20440
SF19CSW01	4/12/2006	Zinc	21.6		NA	306600
SF19CSW01	4/12/2006	Cyanide	0.5	U	35	20440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-19 post-remediation confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-28

**Summary of Analytical Results
SF-20 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF20SL01	4/13/2006	1,1,1-Trichloroethane	0.0054	U	NA	286,160
SF20SL01	4/13/2006	1,1,2,2-Tetrachloroethane	0.0011	U	NA	14.31
SF20SL01	4/13/2006	1,1,2-Trichloroethane	0.0033	U	NA	50.20
SF20SL01	4/13/2006	1,1,2-Trichlorotrifluoroethane	0.0054	U	NA	30,660,000
SF20SL01	4/13/2006	1,1-Dichloroethane	0.0054	U	NA	204,400
SF20SL01	4/13/2006	1,1-Dichloroethene	0.0022	U	NA	51,100
SF20SL01	4/13/2006	1,2,4-Trichlorobenzene	0.0054	U	NA	10,220
SF20SL01	4/13/2006	1,2-Dibromo-3-chloropropane	0.0054	U	NA	3.577
SF20SL01	4/13/2006	1,2-Dibromoethane	0.0054	U	NA	1.431
SF20SL01	4/13/2006	1,2-Dichlorobenzene	0.09		NA	91,980
SF20SL01	4/13/2006	1,2-Dichloroethane	0.0022	U	NA	31.45
SF20SL01	4/13/2006	1,2-Dichloropropane	0.0011	U	NA	42.08
SF20SL01	4/13/2006	1,3-Dichlorobenzene	0.0054	U	NA	3,066
SF20SL01	4/13/2006	1,4-Dichlorobenzene	0.016		NA	119,233
SF20SL01	4/13/2006	2-Butanone	0.0054	U	NA	613,200
SF20SL01	4/13/2006	2-Hexanone	0.0054	U	NA	NA
SF20SL01	4/13/2006	4-Methyl-2-pentanone	0.0054	U	NA	NA
SF20SL01	4/13/2006	Acetone	0.084		NA	919,800
SF20SL01	4/13/2006	Benzene	0.0011	U	NA	52.03
SF20SL01	4/13/2006	Bromodichloromethane	0.0011	U	NA	46.15
SF20SL01	4/13/2006	Bromoform	0.0044	U	NA	362.23
SF20SL01	4/13/2006	Bromomethane	0.0054	U	NA	1,430.8
SF20SL01	4/13/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF20SL01	4/13/2006	c-1,3-Dichloropropene	0.0054	U	NA	NA
SF20SL01	4/13/2006	Carbon disulfide	0.003	J	NA	102,200
SF20SL01	4/13/2006	Carbon Tetrachloride	0.0022	U	NA	22.012
SF20SL01	4/13/2006	Chlorobenzene	0.0054	U	NA	20,440
SF20SL01	4/13/2006	Chloroethane	0.0054	U	NA	986.76
SF20SL01	4/13/2006	Chloroform	0.0054	U	NA	10,220
SF20SL01	4/13/2006	Chloromethane	0.0054	U	NA	NA
SF20SL01	4/13/2006	Cyclohexane	0.0054	U	NA	NA
SF20SL01	4/13/2006	Dibromochloromethane	0.0054	U	NA	34.07
SF20SL01	4/13/2006	Dichlorodifluoromethane	0.0054	U	NA	204,400
SF20SL01	4/13/2006	Ethylbenzene	0.0044	U	NA	102,200
SF20SL01	4/13/2006	Isopropylbenzene	0.0054	U	NA	102,200
SF20SL01	4/13/2006	Methyl Acetate	0.0054	U	NA	1,022,000
SF20SL01	4/13/2006	Methyl Cyclohexane	0.0054	U	NA	NA
SF20SL01	4/13/2006	Methyl t-butyl ether	0.0039	J	NA	715.40
SF20SL01	4/13/2006	Methylene Chloride	0.0033	U	NA	381.547
SF20SL01	4/13/2006	Styrene	0.0054	U	NA	204,400
SF20SL01	4/13/2006	t-1,2-Dichloroethene	0.0054	U	NA	20,440
SF20SL01	4/13/2006	t-1,3-Dichloropropene	0.0054	U	NA	NA
SF20SL01	4/13/2006	TCE	0.0011	U	0.7	7.15
SF20SL01	4/13/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF20SL01	4/13/2006	Toluene	0.0020	J	NA	81,760
SF20SL01	4/13/2006	Trichlorofluoromethane	0.0054	U	NA	306,600
SF20SL01	4/13/2006	Vinyl Chloride	0.0054	U	NA	3.97

Table 4-28

**Summary of Analytical Results
SF-20 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF20SL01	4/13/2006	Xylene (Total)	0.0054	U	NA	204,400
SF20SL01	4/13/2006	2,4,5-Trichlorophenol	9.2	U	NA	102,200
SF20SL01	4/13/2006	2,4,6-Trichlorophenol	9.2	U	NA	260,145
SF20SL01	4/13/2006	2,4-Dichlorophenol	9.2	U	NA	3,066
SF20SL01	4/13/2006	2,4-Dimethylphenol	9.2	U	NA	20,440
SF20SL01	4/13/2006	2,4-Dinitrophenol	28	U	NA	2,044
SF20SL01	4/13/2006	2,4-Dinitrotoluene	1.8	U	NA	2,044
SF20SL01	4/13/2006	2,6-Dinitrotoluene	1.8	U	NA	1,022
SF20SL01	4/13/2006	2-Chloronaphthalene	9.2	U	NA	81,760
SF20SL01	4/13/2006	2-Chlorophenol	9.2	U	NA	5,110
SF20SL01	4/13/2006	2-Methylnaphthalene	9.2	U	NA	4,088
SF20SL01	4/13/2006	2-Methylphenol	9.2	U	NA	51,100
SF20SL01	4/13/2006	2-Nitroaniline	18	U	NA	NA
SF20SL01	4/13/2006	2-Nitrophenol	9.2	U	NA	NA
SF20SL01	4/13/2006	3,3'-Dichlorobenzidine	18	U	NA	6.36
SF20SL01	4/13/2006	3+4-Methylphenol	9.2	U	NA	5,110
SF20SL01	4/13/2006	3-Nitroaniline	18	U	NA	NA
SF20SL01	4/13/2006	4,6-Dinitro-2-methylphenol	28	U	NA	NA
SF20SL01	4/13/2006	4-Bromophenyl phenyl ether	9.2	U	NA	NA
SF20SL01	4/13/2006	4-Chloro-3-methylphenol	9.2	U	NA	NA
SF20SL01	4/13/2006	4-Chloroaniline	9.2	U	NA	4,088
SF20SL01	4/13/2006	4-Chlorophenyl phenyl ether	9.2	U	NA	NA
SF20SL01	4/13/2006	4-Nitroaniline	18	U	NA	NA
SF20SL01	4/13/2006	4-Nitrophenol	28	U	NA	NA
SF20SL01	4/13/2006	Acenaphthene	9.2	U	NA	61,320
SF20SL01	4/13/2006	Acenaphthylene	9.2	U	NA	NA
SF20SL01	4/13/2006	Acetophenone	9.2	U	NA	102,200
SF20SL01	4/13/2006	Anthracene	9.2	U	NA	306,600
SF20SL01	4/13/2006	Atrazine	9.2	U	NA	13.01
SF20SL01	4/13/2006	Benzaldehyde	9.2	U	NA	102,200
SF20SL01	4/13/2006	Benzo(a)anthracene	0.92	U	NA	3.92
SF20SL01	4/13/2006	Benzo(a)pyrene	0.92	U	0.29	0.39
SF20SL01	4/13/2006	Benzo(b)fluoranthene	0.92	U	NA	3.92
SF20SL01	4/13/2006	Benzo(g,h,i)perylene	9.2	U	NA	NA
SF20SL01	4/13/2006	Benzo(k)fluoranthene	0.92	U	NA	39.20
SF20SL01	4/13/2006	bis(2-Chloroethoxy)methane	9.2	U	NA	NA
SF20SL01	4/13/2006	bis(2-Chloroethyl)ether	0.92	U	NA	2.60
SF20SL01	4/13/2006	bis(2-Chloroisopropyl)ether	9.2	U	NA	40.88
SF20SL01	4/13/2006	bis(2-Ethylhexyl)phthalate	9.2	U	NA	204.40
SF20SL01	4/13/2006	Butyl benzyl phthalate	9.2	U	NA	204,400
SF20SL01	4/13/2006	Caprolactam	9.2	U	NA	511,000
SF20SL01	4/13/2006	Carbazole	9.2	U	NA	143.08
SF20SL01	4/13/2006	Chrysene	9.2	U	NA	392
SF20SL01	4/13/2006	Dibenz(a,h)anthracene	0.92	U	0.29	0.392
SF20SL01	4/13/2006	Dibenzofuran	9.2	U	NA	1,022
SF20SL01	4/13/2006	Diethyl phthalate	9.2	U	NA	817,600
SF20SL01	4/13/2006	Dimethyl phthalate	9.2	U	NA	NA

Table 4-28

**Summary of Analytical Results
SF-20 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF20SL01	4/13/2006	Di-n-butyl phthalate	9.2	U	NA	102,200
SF20SL01	4/13/2006	Di-n-octyl phthalate	9.2	U	NA	NA
SF20SL01	4/13/2006	Diphenyl	9.2	U	NA	NA
SF20SL01	4/13/2006	Fluoranthene	0.31	J	NA	40,880
SF20SL01	4/13/2006	Fluorene	9.2	U	NA	40,880
SF20SL01	4/13/2006	Hexachlorobenzene	0.92	U	NA	1.789
SF20SL01	4/13/2006	Hexachlorobutadiene	1.8	U	NA	36.687
SF20SL01	4/13/2006	Hexachlorocyclopentadiene	9.2	U	NA	6,132
SF20SL01	4/13/2006	Hexachloroethane	0.92	U	NA	204.400
SF20SL01	4/13/2006	Indeno(1,2,3-cd)pyrene	0.92	U	NA	3.92
SF20SL01	4/13/2006	Isophorone	9.2	U	NA	3,012.211
SF20SL01	4/13/2006	Naphthalene	9.2	U	NA	20,440
SF20SL01	4/13/2006	Nitrobenzene	0.92	U	NA	511
SF20SL01	4/13/2006	N-Nitrosodi-n-propylamine	0.92	U	NA	0.409
SF20SL01	4/13/2006	N-Nitrosodiphenylamine	9.2	U	NA	584
SF20SL01	4/13/2006	Pentachlorophenol	28	U	NA	23.847
SF20SL01	4/13/2006	Phenanthrene	9.2	U	NA	NA
SF20SL01	4/13/2006	Phenol	9.2	U	NA	306,600
SF20SL01	4/13/2006	Pyrene	0.48	J	NA	30,660
SF20SL01	4/13/2006	4,4'-DDD	0.022		NA	11.92
SF20SL01	4/13/2006	4,4'-DDE	0.042		NA	8.42
SF20SL01	4/13/2006	4,4'-DDT	0.023		NA	8.42
SF20SL01	4/13/2006	Aldrin	0.0074	U	NA	0.17
SF20SL01	4/13/2006	alpha-BHC	0.0074	U	NA	0.45
SF20SL01	4/13/2006	alpha-Chlordane	0.0074	U	NA	NA
SF20SL01	4/13/2006	beta-BHC	0.0074	U	NA	1.59
SF20SL01	4/13/2006	delta-BHC	0.0074	U	NA	NA
SF20SL01	4/13/2006	Dieldrin	0.0074	U	NA	0.18
SF20SL01	4/13/2006	Endosulfan I	0.0074	U	NA	6,132
SF20SL01	4/13/2006	Endosulfan II	0.0074	U	NA	6,132
SF20SL01	4/13/2006	Endosulfan sulfate	0.0074	U	NA	NA
SF20SL01	4/13/2006	Endrin	0.0074	U	NA	306.60
SF20SL01	4/13/2006	Endrin Aldehyde	0.0074	U	NA	NA
SF20SL01	4/13/2006	Endrin ketone	0.0074	U	NA	NA
SF20SL01	4/13/2006	gamma-BHC (Lindane)	0.0074	U	NA	2.20
SF20SL01	4/13/2006	gamma-Chlordane	0.0074	U	NA	NA
SF20SL01	4/13/2006	Heptachlor	0.0074	U	NA	0.64
SF20SL01	4/13/2006	Heptachlor epoxide	0.0074	U	NA	0.31
SF20SL01	4/13/2006	Methoxychlor	0.0074	U	NA	5,110
SF20SL01	4/13/2006	Toxaphene	0.0740	U	NA	2.601
SF20SL01	4/13/2006	Aroclor 1016	0.0740	U	NA	40.880
SF20SL01	4/13/2006	Aroclor 1221	0.0740	U	NA	1.431
SF20SL01	4/13/2006	Aroclor 1232	0.0740	U	NA	1.431
SF20SL01	4/13/2006	Aroclor 1242	0.0740	U	NA	1.431
SF20SL01	4/13/2006	Aroclor 1248	0.0740	U	NA	1.431
SF20SL01	4/13/2006	Aroclor 1254	0.0740	U	NA	1.431
SF20SL01	4/13/2006	Aroclor 1260	0.0740	U	NA	1.431

Table 4-28

**Summary of Analytical Results
SF-20 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF20SL01	4/13/2006	Aroclor 1262	0.0740	U	NA	NA
SF20SL01	4/13/2006	Aroclor 1268	0.0740	U	NA	NA
SF20SL01	4/13/2006	PCBs(total)	0.0740	U	10	1,431
SF20SL01	4/13/2006	Aluminum	3,570		NA	1,022,000
SF20SL01	4/13/2006	Antimony	1.1	U	NA	408.80
SF20SL01	4/13/2006	Arsenic	2.5		NA	1.91
SF20SL01	4/13/2006	Barium	81.5		NA	204,400
SF20SL01	4/13/2006	Beryllium	0.17	B	NA	2,044
SF20SL01	4/13/2006	Cadmium	1.4		10	511
SF20SL01	4/13/2006	Calcium	46,700		NA	NA
SF20SL01	4/13/2006	Chromium	15.5		143	3,066
SF20SL01	4/13/2006	Cobalt	3.2	B	NA	NA
SF20SL01	4/13/2006	Copper	19.6		NA	40,880
SF20SL01	4/13/2006	Iron	6,530		NA	715,400
SF20SL01	4/13/2006	Lead	45.9		NA	NA
SF20SL01	4/13/2006	Magnesium	1,920		NA	NA
SF20SL01	4/13/2006	Manganese	126		NA	20,440
SF20SL01	4/13/2006	Mercury	0.06		NA	NA
SF20SL01	4/13/2006	Nickel	7.3	B	NA	20,440
SF20SL01	4/13/2006	Potassium	894	B	NA	NA
SF20SL01	4/13/2006	Selenium	1.1	U	NA	5,110
SF20SL01	4/13/2006	Silver	0.26	U	NA	5,110
SF20SL01	4/13/2006	Sodium	381	B	NA	NA
SF20SL01	4/13/2006	Thallium	1.1	U	NA	71,540
SF20SL01	4/13/2006	Vanadium	9.3	B	NA	1,022
SF20SL01	4/13/2006	Zinc	109		NA	306,600
SF20SL01	4/13/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) SF-20 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-29

**Summary of Analytical Results
SF-20 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF20BNE01	4/17/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF20BNE01	4/17/2006	TCE	0.001	U	0.7	7.15
SF20BNE01	4/17/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF20BNE01	4/17/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF20BNE01	4/17/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF20BNE01	4/17/2006	PCBs(total)	0.069	U	10	1.43
SF20BNE01	4/17/2006	Cadmium	0.12	U	10	511
SF20BNE01	4/17/2006	Calcium	51	B	NA	NA
SF20BNE01	4/17/2006	Chromium	2.6		143	3,066
SF20BNE01	4/17/2006	Zinc	3.4	B	NA	306,600
SF20BNE01	4/17/2006	Cyanide	0.5	U	35	20,440
SF20BNW01	4/17/2006	c-1,2-Dichloroethene	0.0	U	0.25	10,220
SF20BNW01	4/17/2006	TCE	0.001	U	0.7	7.15
SF20BNW01	4/17/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF20BNW01	4/17/2006	Benzo(a)pyrene	0.0074	J	0.29	0.392
SF20BNW01	4/17/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF20BNW01	4/17/2006	PCBs(total)	0.069	U	10	1.43
SF20BNW01	4/17/2006	Cadmium	0.083	U	10	511
SF20BNW01	4/17/2006	Calcium	40.4	B	NA	NA
SF20BNW01	4/17/2006	Chromium	3.3		143	3,066
SF20BNW01	4/17/2006	Zinc	4.5	B	NA	306,600
SF20BNW01	4/17/2006	Cyanide	0.5	U	35	20,440
SF20BSE01	4/17/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF20BSE01	4/17/2006	TCE	0.001	U	0.7	7.15
SF20BSE01	4/17/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF20BSE01	4/17/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF20BSE01	4/17/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF20BSE01	4/17/2006	PCBs(total)	0.072	U	10	1.43
SF20BSE01	4/17/2006	Cadmium	0.078	U	10	511
SF20BSE01	4/17/2006	Calcium	44.4	B	NA	NA
SF20BSE01	4/17/2006	Chromium	3.4		143	3,066
SF20BSE01	4/17/2006	Zinc	3.6	B	NA	306,600
SF20BSE01	4/17/2006	Cyanide	0.5	U	35	20,440
SF20BSW01	4/17/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF20BSW01	4/17/2006	TCE	0.0011	U	0.7	7.15
SF20BSW01	4/17/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF20BSW01	4/17/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF20BSW01	4/17/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF20BSW01	4/17/2006	PCBs(total)	0.073	U	10	1.43
SF20BSW01	4/17/2006	Cadmium	0.1	U	10	511
SF20BSW01	4/17/2006	Calcium	53	B	NA	NA
SF20BSW01	4/17/2006	Chromium	7.2		143	3,066
SF20BSW01	4/17/2006	Zinc	8.5		NA	306,600
SF20BSW01	4/17/2006	Cyanide	0.5	U	35	20,440
DUP13	4/17/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
DUP13	4/17/2006	TCE	0.001	U	0.7	7.15

Table 4-29

**Summary of Analytical Results
SF-20 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
DUP13	4/17/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP13	4/17/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
DUP13	4/17/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
DUP13	4/17/2006	PCBs(total)	0.069	U	10	1.43
DUP13	4/17/2006	Cadmium	0.083	U	10	511
DUP13	4/17/2006	Calcium	43.7	B	NA	NA
DUP13	4/17/2006	Chromium	2.7		143	3,066
DUP13	4/17/2006	Zinc	5	B	NA	306,600
DUP13	4/17/2006	Cyanide	0.5	U	35	20,440
SF20CE01	4/17/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF20CE01	4/17/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF20CE01	4/17/2006	PCBs(total)	0.07	U	10	1.43
SF20CE01	4/17/2006	Cadmium	0.083	U	10	511
SF20CE01	4/17/2006	Calcium	385	B	NA	NA
SF20CE01	4/17/2006	Chromium	3.9		143	3,066
SF20CE01	4/17/2006	Zinc	8.1		NA	306,600
SF20CE01	4/17/2006	Cyanide	0.5	U	35	20,440
SF20CW01	4/17/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF20CW01	4/17/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF20CW01	4/17/2006	PCBs(total)	0.071	U	10	1.43
SF20CW01	4/17/2006	Cadmium	0.077	U	10	511
SF20CW01	4/17/2006	Calcium	61.7	B	NA	NA
SF20CW01	4/17/2006	Chromium	2.8		143	3,066
SF20CW01	4/17/2006	Zinc	3.9	B	NA	306,600
SF20CW01	4/17/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-20 post-removal confirmation sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-30

**Summary of Analytical Results
SF-21 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-21	5/8/1997	1,1,1-Trichloroethane	0.011	U	NA	286,160
SF-SL-21	5/8/1997	1,1,2,2-Tetrachloroethane	0.011	U	NA	14.31
SF-SL-21	5/8/1997	1,1,2-Trichloroethane	0.011	U	NA	50.20
SF-SL-21	5/8/1997	1,1-Dichloroethane	0.011	U	NA	204,400
SF-SL-21	5/8/1997	1,1-Dichloroethene	0.011	U	NA	51,100
SF-SL-21	5/8/1997	1,2-Dichloroethane	0.011	U	NA	31.45
SF-SL-21	5/8/1997	1,2-Dichloroethene (total)	0.011	U	0.25	9,198
SF-SL-21	5/8/1997	1,2-Dichloropropane	0.011	U	NA	42.08
SF-SL-21	5/8/1997	2-Butanone	0.011	U	NA	613,200
SF-SL-21	5/8/1997	2-Hexanone	0.011	U	NA	NA
SF-SL-21	5/8/1997	4-Methyl-2-pentanone	0.011	U	NA	NA
SF-SL-21	5/8/1997	Acetone	0.011	U	NA	919,800
SF-SL-21	5/8/1997	Benzene	0.011	U	NA	52.03
SF-SL-21	5/8/1997	Bromodichloromethane	0.011	U	NA	46.15
SF-SL-21	5/8/1997	Bromoform	0.011	U	NA	362.23
SF-SL-21	5/8/1997	Bromomethane	0.011	U	NA	1,430.8
SF-SL-21	5/8/1997	c-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-21	5/8/1997	Carbon Tetrachloride	0.011	U	NA	22.01
SF-SL-21	5/8/1997	Chlorobenzene	0.011	U	NA	20,440
SF-SL-21	5/8/1997	Chloroethane	0.011	U	NA	986.76
SF-SL-21	5/8/1997	Chloroform	0.011	U	NA	10,220
SF-SL-21	5/8/1997	Chloromethane	0.011	U	NA	NA
SF-SL-21	5/8/1997	Dibromochloromethane	0.011	U	NA	34.07
SF-SL-21	5/8/1997	Ethylbenzene	0.011	U	NA	102,200
SF-SL-21	5/8/1997	Methylene Chloride	0.011	U	NA	381.55
SF-SL-21	5/8/1997	Styrene	0.011	U	NA	204,400
SF-SL-21	5/8/1997	t-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-21	5/8/1997	TCE	0.011	U	0.7	7.15
SF-SL-21	5/8/1997	Tetrachloroethene	0.011	U	1.4	5.30
SF-SL-21	5/8/1997	Toluene	0.005	J	NA	81,760
SF-SL-21	5/8/1997	Vinyl Chloride	0.011	U	NA	3.97
SF-SL-21	5/8/1997	Xylene (Total)	0.011	U	NA	204,400
SF-SL-21	5/8/1997	1,2,4-Trimethylbenzene	0.35	U	NA	NA
SF-SL-21	5/8/1997	1,2-Dichlorobenzene	0.008	J	NA	91,980
SF-SL-21	5/8/1997	1,3-Dichlorobenzene	0.35	U	NA	3,066
SF-SL-21	5/8/1997	1,4-Dichlorobenzene	0.35	U	NA	119.23
SF-SL-21	5/8/1997	2,4,5-Trichlorophenol	0.85	U	NA	102,200
SF-SL-21	5/8/1997	2,4,6-Trichlorophenol	0.35	U	NA	260.15
SF-SL-21	5/8/1997	2,4-Dichlorophenol	0.35	U	NA	3,066
SF-SL-21	5/8/1997	2,4-Dimethylphenol	0.35	U	NA	20,440
SF-SL-21	5/8/1997	2,4-Dinitrophenol	0.85	U	NA	2,044
SF-SL-21	5/8/1997	2,4-Dinitrotoluene	0.35	U	NA	2,044
SF-SL-21	5/8/1997	2,6-Dinitrotoluene	0.35	U	NA	1,022
SF-SL-21	5/8/1997	2-Chloronaphthalene	0.35	U	NA	81,760
SF-SL-21	5/8/1997	2-Chlorophenol	0.35	U	NA	5,110

Table 4-30

**Summary of Analytical Results
SF-21 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-21	5/8/1997	2-Methylnaphthalene	0.35	U	NA	4,088
SF-SL-21	5/8/1997	2-Methylphenol	0.35	U	NA	51,100
SF-SL-21	5/8/1997	2-Nitroaniline	0.85	U	NA	NA
SF-SL-21	5/8/1997	2-Nitrophenol	0.35	U	NA	NA
SF-SL-21	5/8/1997	3,3'-Dichlorobenzidine	0.35	U	NA	6.36
SF-SL-21	5/8/1997	3+4-Methylphenol	0.35	U	NA	5,110
SF-SL-21	5/8/1997	3-Nitroaniline	0.85	U	NA	NA
SF-SL-21	5/8/1997	4,6-Dinitro-2-methylphenol	0.85	U	NA	NA
SF-SL-21	5/8/1997	4-Bromophenyl phenyl ether	0.35	U	NA	NA
SF-SL-21	5/8/1997	4-Chloro-3-methylphenol	0.35	U	NA	NA
SF-SL-21	5/8/1997	4-Chloroaniline	0.35	U	NA	4,088
SF-SL-21	5/8/1997	4-Chlorophenyl phenyl ether	0.35	U	NA	NA
SF-SL-21	5/8/1997	4-Nitroaniline	0.85	U	NA	NA
SF-SL-21	5/8/1997	4-Nitrophenol	0.85	U	NA	NA
SF-SL-21	5/8/1997	Acenaphthene	0.35	U	NA	61,320
SF-SL-21	5/8/1997	Acenaphthylene	0.008	J	NA	NA
SF-SL-21	5/8/1997	Anthracene	0.011	J	NA	306,600
SF-SL-21	5/8/1997	Benzo(a)anthracene	0.11	J	NA	3.92
SF-SL-21	5/8/1997	Benzo(a)pyrene	0.12	J	0.29	0.39
SF-SL-21	5/8/1997	Benzo(b)fluoranthene	0.18	J	NA	3.92
SF-SL-21	5/8/1997	Benzo(g,h,i)perylene	0.09	J	NA	NA
SF-SL-21	5/8/1997	Benzo(k)fluoranthene	0.069	J	NA	39.20
SF-SL-21	5/8/1997	bis(2-Chloroethoxy)methane	0.35	U	NA	NA
SF-SL-21	5/8/1997	bis(2-Chloroethyl)ether	0.35	U	NA	2.60
SF-SL-21	5/8/1997	bis(2-Chloroisopropyl)ether	0.35	U	NA	40.88
SF-SL-21	5/8/1997	bis(2-Ethylhexyl)phthalate	0.35	U	NA	204.40
SF-SL-21	5/8/1997	Carbazole	0.007	J	NA	143.08
SF-SL-21	5/8/1997	Chrysene	0.13	J	NA	392
SF-SL-21	5/8/1997	Dibenz(a,h)anthracene	0.022	J	0.29	0.39
SF-SL-21	5/8/1997	Dibenzofuran	0.35	U	NA	1,022
SF-SL-21	5/8/1997	Diethyl phthalate	0.35	U	NA	817,600
SF-SL-21	5/8/1997	Dimethyl phthalate	0.35	U	NA	NA
SF-SL-21	5/8/1997	Di-n-butyl phthalate	0.35	U	NA	102,200
SF-SL-21	5/8/1997	Di-n-octyl phthalate	0.35	U	NA	NA
SF-SL-21	5/8/1997	Fluoranthene	0.15	J	NA	40,880
SF-SL-21	5/8/1997	Fluorene	0.35	U	NA	40,880
SF-SL-21	5/8/1997	Hexachlorobenzene	0.35	U	NA	1.79
SF-SL-21	5/8/1997	Hexachlorobutadiene	0.35	U	NA	36.69
SF-SL-21	5/8/1997	Hexachlorocyclopentadiene	0.35	U	NA	6,132
SF-SL-21	5/8/1997	Hexachloroethane	0.35	U	NA	204.40
SF-SL-21	5/8/1997	Indeno(1,2,3-cd)pyrene	0.089	J	NA	3.92
SF-SL-21	5/8/1997	Isophorone	0.35	U	NA	3012.21
SF-SL-21	5/8/1997	Naphthalene	0.35	U	NA	20,440
SF-SL-21	5/8/1997	Nitrobenzene	0.35	U	NA	511
SF-SL-21	5/8/1997	N-Nitrosodi-n-propylamine	0.35	U	NA	0.41

Table 4-30

**Summary of Analytical Results
SF-21 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-21	5/8/1997	N-Nitrosodiphenylamine	0.35	U	NA	584
SF-SL-21	5/8/1997	Pentachlorophenol	0.85	U	NA	23.85
SF-SL-21	5/8/1997	Phenanthrene	0.03	J	NA	NA
SF-SL-21	5/8/1997	Phenol	0.35	U	NA	306,600
SF-SL-21	5/8/1997	Pyrene	0.16	J	NA	30,660
SF-SL-21	5/8/1997	4,4'-DDD	0.0035	U	NA	11.92
SF-SL-21	5/8/1997	4,4'-DDE	0.0035	U	NA	8.42
SF-SL-21	5/8/1997	4,4'-DDT	0.0035	U	NA	8.42
SF-SL-21	5/8/1997	Aldrin	0.0018	U	NA	0.17
SF-SL-21	5/8/1997	alpha-BHC	0.0018	U	NA	0.45
SF-SL-21	5/8/1997	alpha-Chlordane	0.0018	U	NA	NA
SF-SL-21	5/8/1997	beta-BHC	0.0018	U	NA	1.59
SF-SL-21	5/8/1997	delta-BHC	0.0018	U	NA	NA
SF-SL-21	5/8/1997	Dieldrin	0.0035	U	NA	0.18
SF-SL-21	5/8/1997	Endosulfan I	0.0018	U	NA	6,132
SF-SL-21	5/8/1997	Endosulfan II	0.0035	U	NA	6,132
SF-SL-21	5/8/1997	Endosulfan sulfate	0.0035	U	NA	NA
SF-SL-21	5/8/1997	Endrin	0.0035	U	NA	307
SF-SL-21	5/8/1997	Endrin Aldehyde	0.0035	U	NA	NA
SF-SL-21	5/8/1997	Endrin ketone	0.0035	U	NA	NA
SF-SL-21	5/8/1997	gamma-BHC (Lindane)	0.0018	U	NA	2.20
SF-SL-21	5/8/1997	gamma-Chlordane	0.0018	U	NA	NA
SF-SL-21	5/8/1997	Heptachlor	0.0018	U	NA	0.64
SF-SL-21	5/8/1997	Heptachlor epoxide	0.0018	U	NA	0.31
SF-SL-21	5/8/1997	Methoxychlor	0.018	U	NA	5,110
SF-SL-21	5/8/1997	Toxaphene	0.18	U	NA	2.60
SF-SL-21	5/8/1997	Aroclor 1016	0.035	U	NA	40.88
SF-SL-21	5/8/1997	Aroclor 1221	0.071	U	NA	1.43
SF-SL-21	5/8/1997	Aroclor 1232	0.035	U	NA	1.43
SF-SL-21	5/8/1997	Aroclor 1242	0.035	U	NA	1.43
SF-SL-21	5/8/1997	Aroclor 1248	0.035	U	NA	1.43
SF-SL-21	5/8/1997	Aroclor 1254	0.035	U	NA	1.43
SF-SL-21	5/8/1997	Aroclor 1260	0.035	U	NA	1.43
SF-SL-21	5/8/1997	PCBs(total)	0.071	U	10	1.43
SF-SL-21	5/8/1997	Aluminum	3,380		NA	1,022,000
SF-SL-21	5/8/1997	Antimony	0.6	J	NA	408.8
SF-SL-21	5/8/1997	Arsenic	1.5		NA	1.91
SF-SL-21	5/8/1997	Barium	15.2		NA	204,400
SF-SL-21	5/8/1997	Beryllium	0.12		NA	2,044
SF-SL-21	5/8/1997	Cadmium	0.29	J	10	511
SF-SL-21	5/8/1997	Calcium	426		NA	NA
SF-SL-21	5/8/1997	Chromium	15.9		143	3,066
SF-SL-21	5/8/1997	Cobalt	1		NA	NA
SF-SL-21	5/8/1997	Copper	10.9		NA	40,880
SF-SL-21	5/8/1997	Cyanide	0.53	UJ	35	20,440

Table 4-30

**Summary of Analytical Results
SF-21 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-21	5/8/1997	Iron	4,600		NA	715,400
SF-SL-21	5/8/1997	Lead	4,280		NA	NA
SF-SL-21	5/8/1997	Magnesium	339		NA	NA
SF-SL-21	5/8/1997	Manganese	45.1		NA	20,440
SF-SL-21	5/8/1997	Mercury	0.21		NA	NA
SF-SL-21	5/8/1997	Nickel	2.7		NA	20,440
SF-SL-21	5/8/1997	Potassium	106		NA	NA
SF-SL-21	5/8/1997	Selenium	0.68	U	NA	5,110
SF-SL-21	5/8/1997	Silver	0.21	U	NA	5,110
SF-SL-21	5/8/1997	Sodium	66.6		NA	NA
SF-SL-21	5/8/1997	Thallium	0.66	U	NA	71.54
SF-SL-21	5/8/1997	Vanadium	5.3		NA	1,022
SF-SL-21	5/8/1997	Zinc	37.1		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) **J** - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-21 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-31

**Summary of Analytical Results
SF-21 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF21B01	4/21/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF21B01	4/21/2006	TCE	0.001	U	0.7	7.15
SF21B01	4/21/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF21B01	4/21/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF21B01	4/21/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF21B01	4/21/2006	PCBs(total)	0.068	U	10	1.43
SF21B01	4/21/2006	Cadmium	0.082	U	10	511
SF21B01	4/21/2006	Chromium	1.6	B	143	3,066
SF21B01	4/21/2006	Lead	2.4		NA	NA
SF21B01	4/21/2006	Mercury	0.017	U	NA	NA
SF21B01	4/21/2006	Cyanide	0.5	U	35	20,440
SF21E01	4/21/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF21E01	4/21/2006	TCE	0.001	U	0.7	7.15
SF21E01	4/21/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF21E01	4/21/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF21E01	4/21/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF21E01	4/21/2006	PCBs(total)	0.071	U	10	1.43
SF21E01	4/21/2006	Cadmium	0.085	U	10	511
SF21E01	4/21/2006	Chromium	5.8		143	3,066
SF21E01	4/21/2006	Lead	4.9		NA	NA
SF21E01	4/21/2006	Mercury	0.03	B	NA	NA
SF21E01	4/21/2006	Cyanide	0.5	U	35	20,440
SF21S01	4/21/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF21S01	4/21/2006	TCE	0.001	U	0.7	7.15
SF21S01	4/21/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF21S01	4/21/2006	Benzo(a)pyrene	0.064		0.29	0.392
SF21S01	4/21/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF21S01	4/21/2006	PCBs(total)	0.074	U	10	1.43
SF21S01	4/21/2006	Cadmium	0.088	U	10	511
SF21S01	4/21/2006	Chromium	7.1		143	3,066
SF21S01	4/21/2006	Lead	8.8		NA	NA
SF21S01	4/21/2006	Mercury	0.018	U	NA	NA
SF21S01	4/21/2006	Cyanide	0.5	U	35	20,440
SF21W01	4/21/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF21W01	4/21/2006	TCE	0.001	U	0.7	7.15
SF21W01	4/21/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF21W01	4/21/2006	Benzo(a)pyrene	0.071		0.29	0.392
SF21W01	4/21/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF21W01	4/21/2006	PCBs(total)	0.072	U	10	1.43
SF21W01	4/21/2006	Cadmium	0.14	B	10	511
SF21W01	4/21/2006	Chromium	5.7		143	3,066
SF21W01	4/21/2006	Lead	50.5		NA	NA
SF21W01	4/21/2006	Mercury	0.03		NA	NA
SF21W01	4/21/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-21 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-32

**Summary of Analytical Results
SF-25 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-25	5/7/1997	1,1,1-Trichloroethane	0.02	U	NA	286,160
SF-SL-25	5/7/1997	1,1,2,2-Tetrachloroethane	0.02	U	NA	14.31
SF-SL-25	5/7/1997	1,1,2-Trichloroethane	0.02	U	NA	50.20
SF-SL-25	5/7/1997	1,1-Dichloroethane	0.02	U	NA	204,400
SF-SL-25	5/7/1997	1,1-Dichloroethene	0.02	U	NA	51,100
SF-SL-25	5/7/1997	1,2-Dichloroethane	0.02	U	NA	31.45
SF-SL-25	5/7/1997	1,2-Dichloroethene (total)	0.02	U	0.25	9,198
SF-SL-25	5/7/1997	1,2-Dichloropropane	0.02	U	NA	42.08
SF-SL-25	5/7/1997	2-Butanone	0.02	U	NA	613,200
SF-SL-25	5/7/1997	2-Hexanone	0.02	U	NA	NA
SF-SL-25	5/7/1997	4-Methyl-2-pentanone	0.02	U	NA	NA
SF-SL-25	5/7/1997	Acetone	0.02	U	NA	919,800
SF-SL-25	5/7/1997	Benzene	0.02	U	NA	52.03
SF-SL-25	5/7/1997	Bromodichloromethane	0.02	U	NA	46.15
SF-SL-25	5/7/1997	Bromoform	0.02	U	NA	362.23
SF-SL-25	5/7/1997	Bromomethane	0.02	U	NA	1,430.8
SF-SL-25	5/7/1997	c-1,3-Dichloropropene	0.02	U	NA	NA
SF-SL-25	5/7/1997	Carbon Tetrachloride	0.02	U	NA	22.01
SF-SL-25	5/7/1997	Chlorobenzene	0.02	U	NA	20,440
SF-SL-25	5/7/1997	Chloroethane	0.02	U	NA	986.76
SF-SL-25	5/7/1997	Chloroform	0.02	U	NA	10,220
SF-SL-25	5/7/1997	Chloromethane	0.02	U	NA	NA
SF-SL-25	5/7/1997	Dibromochloromethane	0.02	U	NA	34.07
SF-SL-25	5/7/1997	Ethylbenzene	0.02	U	NA	102,200
SF-SL-25	5/7/1997	Methylene Chloride	0.02	U	NA	381.55
SF-SL-25	5/7/1997	Styrene	0.02	U	NA	204,400
SF-SL-25	5/7/1997	t-1,3-Dichloropropene	0.02	U	NA	NA
SF-SL-25	5/7/1997	TCE	0.004	J	0.7	7.15
SF-SL-25	5/7/1997	Tetrachloroethene	0.02	U	1.4	5.30
SF-SL-25	5/7/1997	Toluene	0.02	U	NA	81,760
SF-SL-25	5/7/1997	Vinyl Chloride	0.02	U	NA	3.97
SF-SL-25	5/7/1997	Xylene (Total)	0.02	U	NA	204,400
SF-SL-25	5/7/1997	1,2,4-Trimethylbenzene	33	U	NA	NA
SF-SL-25	5/7/1997	1,2-Dichlorobenzene	33	U	NA	91,980
SF-SL-25	5/7/1997	1,3-Dichlorobenzene	33	U	NA	3,066
SF-SL-25	5/7/1997	1,4-Dichlorobenzene	33	U	NA	119.23
SF-SL-25	5/7/1997	2,4,5-Trichlorophenol	80	U	NA	102,200
SF-SL-25	5/7/1997	2,4,6-Trichlorophenol	33	U	NA	260.15
SF-SL-25	5/7/1997	2,4-Dichlorophenol	33	U	NA	3,066
SF-SL-25	5/7/1997	2,4-Dimethylphenol	33	U	NA	20,440
SF-SL-25	5/7/1997	2,4-Dinitrophenol	80	U	NA	2,044
SF-SL-25	5/7/1997	2,4-Dinitrotoluene	33	U	NA	2,044
SF-SL-25	5/7/1997	2,6-Dinitrotoluene	33	U	NA	1,022
SF-SL-25	5/7/1997	2-Chloronaphthalene	33	U	NA	81,760

Table 4-32

**Summary of Analytical Results
SF-25 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-25	5/7/1997	2-Chlorophenol	33	U	NA	5,110
SF-SL-25	5/7/1997	2-Methylnaphthalene	0.66	J	NA	4,088
SF-SL-25	5/7/1997	2-Methylphenol	33	U	NA	51,100
SF-SL-25	5/7/1997	2-Nitroaniline	80	U	NA	NA
SF-SL-25	5/7/1997	2-Nitrophenol	33	U	NA	NA
SF-SL-25	5/7/1997	3,3'-Dichlorobenzidine	33	U	NA	6.36
SF-SL-25	5/7/1997	3+4-Methylphenol	33	U	NA	5,110
SF-SL-25	5/7/1997	3-Nitroaniline	80	U	NA	NA
SF-SL-25	5/7/1997	4,6-Dinitro-2-methylphenol	80	U	NA	NA
SF-SL-25	5/7/1997	4-Bromophenyl phenyl ether	33	U	NA	NA
SF-SL-25	5/7/1997	4-Chloro-3-methylphenol	33	U	NA	NA
SF-SL-25	5/7/1997	4-Chloroaniline	33	U	NA	4,088
SF-SL-25	5/7/1997	4-Chlorophenyl phenyl ether	33	U	NA	NA
SF-SL-25	5/7/1997	4-Nitroaniline	80	U	NA	NA
SF-SL-25	5/7/1997	4-Nitrophenol	80	U	NA	NA
SF-SL-25	5/7/1997	Acenaphthene	33	U	NA	61,320
SF-SL-25	5/7/1997	Acenaphthylene	33	U	NA	NA
SF-SL-25	5/7/1997	Anthracene	33	U	NA	306,600
SF-SL-25	5/7/1997	Benzo(a)anthracene	33	U	NA	3.92
SF-SL-25	5/7/1997	Benzo(a)pyrene	2.1	J	0.29	0.39
SF-SL-25	5/7/1997	Benzo(b)fluoranthene	3.4	J	NA	3.92
SF-SL-25	5/7/1997	Benzo(g,h,i)perylene	1.7	J	NA	NA
SF-SL-25	5/7/1997	Benzo(k)fluoranthene	1.4	J	NA	39.20
SF-SL-25	5/7/1997	bis(2-Chloroethoxy)methane	33	U	NA	NA
SF-SL-25	5/7/1997	bis(2-Chloroethyl)ether	33	U	NA	2.60
SF-SL-25	5/7/1997	bis(2-Chloroisopropyl)ether	33	U	NA	40.88
SF-SL-25	5/7/1997	bis(2-Ethylhexyl)phthalate	12	J	NA	204.40
SF-SL-25	5/7/1997	Carbazole	33	U	NA	143.08
SF-SL-25	5/7/1997	Chrysene	33	U	NA	392
SF-SL-25	5/7/1997	Dibenz(a,h)anthracene	33	U	0.29	0.39
SF-SL-25	5/7/1997	Dibenzofuran	0.26	J	NA	1,022
SF-SL-25	5/7/1997	Diethyl phthalate	33	U	NA	817,600
SF-SL-25	5/7/1997	Dimethyl phthalate	33	U	NA	NA
SF-SL-25	5/7/1997	Di-n-butyl phthalate	33	U	NA	102,200
SF-SL-25	5/7/1997	Di-n-octyl phthalate	5	J	NA	NA
SF-SL-25	5/7/1997	Fluoranthene	3.7	J	NA	40,880
SF-SL-25	5/7/1997	Fluorene	33	U	NA	40,880
SF-SL-25	5/7/1997	Hexachlorobenzene	33	U	NA	1.79
SF-SL-25	5/7/1997	Hexachlorobutadiene	33	U	NA	36.69
SF-SL-25	5/7/1997	Hexachlorocyclopentadiene	33	U	NA	6,132
SF-SL-25	5/7/1997	Hexachloroethane	33	U	NA	204.40
SF-SL-25	5/7/1997	Indeno(1,2,3-cd)pyrene	1.6	J	NA	3.92
SF-SL-25	5/7/1997	Isophorone	33	U	NA	3012.21
SF-SL-25	5/7/1997	Naphthalene	0.55	J	NA	20,440

Table 4-32

**Summary of Analytical Results
SF-25 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-25	5/7/1997	Nitrobenzene	33	U	NA	511
SF-SL-25	5/7/1997	N-Nitrosodi-n-propylamine	33	U	NA	0.41
SF-SL-25	5/7/1997	N-Nitrosodiphenylamine	33	U	NA	584
SF-SL-25	5/7/1997	Pentachlorophenol	80	U	NA	23.85
SF-SL-25	5/7/1997	Phenanthrene	2.4	J	NA	NA
SF-SL-25	5/7/1997	Phenol	0.79	J	NA	306,600
SF-SL-25	5/7/1997	Pyrene	33	U	NA	30,660
SF-SL-25	5/7/1997	4,4'-DDD	0.54		NA	11.92
SF-SL-25	5/7/1997	4,4'-DDE	0.098		NA	8.42
SF-SL-25	5/7/1997	4,4'-DDT	0.32	J	NA	8.42
SF-SL-25	5/7/1997	Aldrin	0.0034	U	NA	0.17
SF-SL-25	5/7/1997	alpha-BHC	0.0034	U	NA	0.45
SF-SL-25	5/7/1997	alpha-Chlordane	0.0034	U	NA	NA
SF-SL-25	5/7/1997	beta-BHC	0.0034	U	NA	1.59
SF-SL-25	5/7/1997	delta-BHC	0.0034	U	NA	NA
SF-SL-25	5/7/1997	Dieldrin	0.0066	U	NA	0.18
SF-SL-25	5/7/1997	Endosulfan I	0.0034	U	NA	6,132
SF-SL-25	5/7/1997	Endosulfan II	0.0066	U	NA	6,132
SF-SL-25	5/7/1997	Endosulfan sulfate	0.0066	U	NA	NA
SF-SL-25	5/7/1997	Endrin	0.0066	U	NA	307
SF-SL-25	5/7/1997	Endrin Aldehyde	0.072	J	NA	NA
SF-SL-25	5/7/1997	Endrin ketone	0.035	J	NA	NA
SF-SL-25	5/7/1997	gamma-BHC (Lindane)	0.0034	U	NA	2.20
SF-SL-25	5/7/1997	gamma-Chlordane	0.0034	U	NA	NA
SF-SL-25	5/7/1997	Heptachlor	0.0034	U	NA	0.64
SF-SL-25	5/7/1997	Heptachlor epoxide	0.0034	U	NA	0.31
SF-SL-25	5/7/1997	Methoxychlor	0.034	U	NA	5,110
SF-SL-25	5/7/1997	Toxaphene	0.34	U	NA	2.60
SF-SL-25	5/7/1997	Aroclor 1016	0.066	U	NA	40.88
SF-SL-25	5/7/1997	Aroclor 1221	0.13	U	NA	1.43
SF-SL-25	5/7/1997	Aroclor 1232	0.066	U	NA	1.43
SF-SL-25	5/7/1997	Aroclor 1242	0.066	U	NA	1.43
SF-SL-25	5/7/1997	Aroclor 1248	0.066	U	NA	1.43
SF-SL-25	5/7/1997	Aroclor 1254	0.066	U	NA	1.43
SF-SL-25	5/7/1997	Aroclor 1260	0.066	U	NA	1.43
SF-SL-25	5/7/1997	PCBs(total)	0.13	U	10	1.43
SF-SL-25	5/7/1997	Aluminum	7,870		NA	1,022,000
SF-SL-25	5/7/1997	Antimony	3.1	J	NA	408.8
SF-SL-25	5/7/1997	Arsenic	19.2		NA	1.91
SF-SL-25	5/7/1997	Barium	183		NA	204,400
SF-SL-25	5/7/1997	Beryllium	0.5		NA	2,044
SF-SL-25	5/7/1997	Cadmium	25.6	J	10	511
SF-SL-25	5/7/1997	Calcium	2,980		NA	NA
SF-SL-25	5/7/1997	Chromium	139		143	3,066

Table 4-32

**Summary of Analytical Results
SF-25 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-25	5/7/1997	Cobalt	7.2		NA	NA
SF-SL-25	5/7/1997	Copper	5,440		NA	40,880
SF-SL-25	5/7/1997	Cyanide	1.4	J	35	20,440
SF-SL-25	5/7/1997	Iron	42,100		NA	715,400
SF-SL-25	5/7/1997	Lead	780		NA	NA
SF-SL-25	5/7/1997	Magnesium	1,300		NA	NA
SF-SL-25	5/7/1997	Manganese	294		NA	20,440
SF-SL-25	5/7/1997	Mercury	1.2		NA	NA
SF-SL-25	5/7/1997	Nickel	61.7		NA	20,440
SF-SL-25	5/7/1997	Potassium	265		NA	NA
SF-SL-25	5/7/1997	Selenium	2.4		NA	5,110
SF-SL-25	5/7/1997	Silver	1.5		NA	5,110
SF-SL-25	5/7/1997	Sodium	579		NA	NA
SF-SL-25	5/7/1997	Thallium	1.2	U	NA	71.54
SF-SL-25	5/7/1997	Vanadium	166		NA	1,022
SF-SL-25	5/7/1997	Zinc	1,520		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) **J** - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-25 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-33

**Summary of Analytical Results
SF-25 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-25	5/7/1997	1,1,1-Trichloroethane	10	U
SF-AQ-25	5/7/1997	1,1,2,2-Tetrachloroethane	10	U
SF-AQ-25	5/7/1997	1,1,2-Trichloroethane	10	U
SF-AQ-25	5/7/1997	1,1-Dichloroethane	10	U
SF-AQ-25	5/7/1997	1,1-Dichloroethene	10	U
SF-AQ-25	5/7/1997	1,2-Dichloroethane	10	U
SF-AQ-25	5/7/1997	1,2-Dichloroethene (total)	10	U
SF-AQ-25	5/7/1997	1,2-Dichloropropane	10	U
SF-AQ-25	5/7/1997	2-Butanone	10	U
SF-AQ-25	5/7/1997	2-Hexanone	10	U
SF-AQ-25	5/7/1997	4-Methyl-2-pentanone	10	U
SF-AQ-25	5/7/1997	Acetone	10	U
SF-AQ-25	5/7/1997	Benzene	10	U
SF-AQ-25	5/7/1997	Bromodichloromethane	10	U
SF-AQ-25	5/7/1997	Bromoform	10	U
SF-AQ-25	5/7/1997	Bromomethane	10	U
SF-AQ-25	5/7/1997	c-1,3-Dichloropropene	10	U
SF-AQ-25	5/7/1997	Carbon Tetrachloride	10	U
SF-AQ-25	5/7/1997	Chlorobenzene	10	U
SF-AQ-25	5/7/1997	Chloroethane	10	U
SF-AQ-25	5/7/1997	Chloroform	10	U
SF-AQ-25	5/7/1997	Chloromethane	10	U
SF-AQ-25	5/7/1997	Dibromochloromethane	10	U
SF-AQ-25	5/7/1997	Ethylbenzene	10	U
SF-AQ-25	5/7/1997	Methylene Chloride	10	U
SF-AQ-25	5/7/1997	Styrene	10	U
SF-AQ-25	5/7/1997	t-1,3-Dichloropropene	10	U
SF-AQ-25	5/7/1997	TCE	10	U
SF-AQ-25	5/7/1997	Tetrachloroethene	10	U
SF-AQ-25	5/7/1997	Toluene	10	U
SF-AQ-25	5/7/1997	Vinyl Chloride	10	U
SF-AQ-25	5/7/1997	Xylene (Total)	10	U
SF-AQ-25	5/7/1997	1,2,4-Trimethylbenzene	100	U
SF-AQ-25	5/7/1997	1,2-Dichlorobenzene	100	U
SF-AQ-25	5/7/1997	1,3-Dichlorobenzene	100	U
SF-AQ-25	5/7/1997	1,4-Dichlorobenzene	100	U
SF-AQ-25	5/7/1997	2,4,5-Trichlorophenol	260	U
SF-AQ-25	5/7/1997	2,4,6-Trichlorophenol	100	U
SF-AQ-25	5/7/1997	2,4-Dichlorophenol	100	U
SF-AQ-25	5/7/1997	2,4-Dimethylphenol	100	U
SF-AQ-25	5/7/1997	2,4-Dinitrophenol	260	U
SF-AQ-25	5/7/1997	2,4-Dinitrotoluene	100	U
SF-AQ-25	5/7/1997	2,6-Dinitrotoluene	100	U
SF-AQ-25	5/7/1997	2-Chloronaphthalene	100	U
SF-AQ-25	5/7/1997	2-Chlorophenol	100	U
SF-AQ-25	5/7/1997	2-Methylnaphthalene	4	J

Table 4-33

**Summary of Analytical Results
SF-25 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-25	5/7/1997	2-Methylphenol	100	U
SF-AQ-25	5/7/1997	2-Nitroaniline	260	U
SF-AQ-25	5/7/1997	2-Nitrophenol	100	U
SF-AQ-25	5/7/1997	3,3'-Dichlorobenzidine	100	U
SF-AQ-25	5/7/1997	3+4-Methylphenol	100	U
SF-AQ-25	5/7/1997	3-Nitroaniline	260	U
SF-AQ-25	5/7/1997	4,6-Dinitro-2-methylphenol	260	U
SF-AQ-25	5/7/1997	4-Bromophenyl phenyl ether	100	U
SF-AQ-25	5/7/1997	4-Chloro-3-methylphenol	100	U
SF-AQ-25	5/7/1997	4-Chloroaniline	100	U
SF-AQ-25	5/7/1997	4-Chlorophenyl phenyl ether	100	U
SF-AQ-25	5/7/1997	4-Nitroaniline	260	U
SF-AQ-25	5/7/1997	4-Nitrophenol	260	U
SF-AQ-25	5/7/1997	Acenaphthene	4	J
SF-AQ-25	5/7/1997	Acenaphthylene	3	J
SF-AQ-25	5/7/1997	Anthracene	13	J
SF-AQ-25	5/7/1997	Benzo(a)anthracene	45	J
SF-AQ-25	5/7/1997	Benzo(a)pyrene	41	J
SF-AQ-25	5/7/1997	Benzo(b)fluoranthene	66	J
SF-AQ-25	5/7/1997	Benzo(g,h,i)perylene	21	J
SF-AQ-25	5/7/1997	Benzo(k)fluoranthene	28	J
SF-AQ-25	5/7/1997	bis(2-Chloroethoxy)methane	100	U
SF-AQ-25	5/7/1997	bis(2-Chloroethyl)ether	100	U
SF-AQ-25	5/7/1997	bis(2-Chloroisopropyl)ether	100	U
SF-AQ-25	5/7/1997	bis(2-Ethylhexyl)phthalate	300	
SF-AQ-25	5/7/1997	Carbazole	11	J
SF-AQ-25	5/7/1997	Chrysene	54	J
SF-AQ-25	5/7/1997	Dibenz(a,h)anthracene	7	J
SF-AQ-25	5/7/1997	Dibenzofuran	4	J
SF-AQ-25	5/7/1997	Diethyl phthalate	100	U
SF-AQ-25	5/7/1997	Dimethyl phthalate	100	U
SF-AQ-25	5/7/1997	Di-n-butyl phthalate	100	U
SF-AQ-25	5/7/1997	Di-n-octyl phthalate	36	J
SF-AQ-25	5/7/1997	Fluoranthene	91	J
SF-AQ-25	5/7/1997	Fluorene	5	J
SF-AQ-25	5/7/1997	Hexachlorobenzene	100	U
SF-AQ-25	5/7/1997	Hexachlorobutadiene	100	U
SF-AQ-25	5/7/1997	Hexachlorocyclopentadiene	100	U
SF-AQ-25	5/7/1997	Hexachloroethane	100	U
SF-AQ-25	5/7/1997	Indeno(1,2,3-cd)pyrene	24	J
SF-AQ-25	5/7/1997	Isophorone	100	U
SF-AQ-25	5/7/1997	Naphthalene	6	J
SF-AQ-25	5/7/1997	Nitrobenzene	100	U
SF-AQ-25	5/7/1997	N-Nitrosodi-n-propylamine	100	U
SF-AQ-25	5/7/1997	N-Nitrosodiphenylamine	100	U
SF-AQ-25	5/7/1997	Pentachlorophenol	13	J

Table 4-33

**Summary of Analytical Results
SF-25 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-25	5/7/1997	Phenanthrene	57	J
SF-AQ-25	5/7/1997	Phenol	100	U
SF-AQ-25	5/7/1997	Pyrene	80	J
SF-AQ-25	5/7/1997	4,4'-DDD	0.49	J
SF-AQ-25	5/7/1997	4,4'-DDE	0.51	
SF-AQ-25	5/7/1997	4,4'-DDT	1.3	J
SF-AQ-25	5/7/1997	Aldrin	0.052	U
SF-AQ-25	5/7/1997	alpha-BHC	0.052	U
SF-AQ-25	5/7/1997	alpha-Chlordane	0.052	U
SF-AQ-25	5/7/1997	beta-BHC	0.052	U
SF-AQ-25	5/7/1997	delta-BHC	0.052	U
SF-AQ-25	5/7/1997	Dieldrin	0.1	U
SF-AQ-25	5/7/1997	Endosulfan I	0.052	U
SF-AQ-25	5/7/1997	Endosulfan II	0.1	U
SF-AQ-25	5/7/1997	Endosulfan sulfate	0.1	U
SF-AQ-25	5/7/1997	Endrin	0.1	U
SF-AQ-25	5/7/1997	Endrin Aldehyde	0.48	J
SF-AQ-25	5/7/1997	Endrin ketone	0.4	J
SF-AQ-25	5/7/1997	gamma-BHC (Lindane)	0.052	U
SF-AQ-25	5/7/1997	gamma-Chlordane	0.11	J
SF-AQ-25	5/7/1997	Heptachlor	0.052	U
SF-AQ-25	5/7/1997	Heptachlor epoxide	0.079	J
SF-AQ-25	5/7/1997	Methoxychlor	0.71	J
SF-AQ-25	5/7/1997	Toxaphene	5.2	U
SF-AQ-25	5/7/1997	Aroclor 1016	1	U
SF-AQ-25	5/7/1997	Aroclor 1221	2.1	U
SF-AQ-25	5/7/1997	Aroclor 1232	1	U
SF-AQ-25	5/7/1997	Aroclor 1242	1	U
SF-AQ-25	5/7/1997	Aroclor 1248	1	U
SF-AQ-25	5/7/1997	Aroclor 1254	1	U
SF-AQ-25	5/7/1997	Aroclor 1260	16	
SF-AQ-25	5/7/1997	PCBs(total)	16	
SF-AQ-25	5/7/1997	Aluminum	475	
SF-AQ-25	5/7/1997	Antimony	2.2	U
SF-AQ-25	5/7/1997	Arsenic	2.6	
SF-AQ-25	5/7/1997	Barium	41.6	
SF-AQ-25	5/7/1997	Beryllium	0.27	
SF-AQ-25	5/7/1997	Cadmium	2.7	
SF-AQ-25	5/7/1997	Calcium	6,600	
SF-AQ-25	5/7/1997	Chromium	58.4	
SF-AQ-25	5/7/1997	Cobalt	1.4	
SF-AQ-25	5/7/1997	Copper	94.7	
SF-AQ-25	5/7/1997	Cyanide	10	U
SF-AQ-25	5/7/1997	Iron	1,720	
SF-AQ-25	5/7/1997	Lead	100	
SF-AQ-25	5/7/1997	Magnesium	1,700	

Table 4-33

**Summary of Analytical Results
SF-25 Liquid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF-AQ-25	5/7/1997	Manganese	56.2	
SF-AQ-25	5/7/1997	Mercury	0.88	
SF-AQ-25	5/7/1997	Nickel	5.8	
SF-AQ-25	5/7/1997	Potassium	340	
SF-AQ-25	5/7/1997	Selenium	3.2	U
SF-AQ-25	5/7/1997	Silver	1	U
SF-AQ-25	5/7/1997	Sodium	1,730	
SF-AQ-25	5/7/1997	Thallium	3.1	U
SF-AQ-25	5/7/1997	Vanadium	13.4	
SF-AQ-25	5/7/1997	Zinc	264	J

Notes:

- 1) All analytical results are presented in micrograms per liter.
- 2) U - not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) **J** - reported result is estimated due to a minor quality control anomaly.
- 5) SF-25 liquid characterization sample was collected during the Continued Remedial Investigation.

Table 4-34

**Summary of Analytical Results
SF-25 Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF25B01	4/26/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF25B01	4/26/2006	TCE	0.0009	J	0.7	7.15
SF25B01	4/26/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF25B01	4/26/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF25B01	4/26/2006	Benzo(a)pyrene	0.035	U	0.29	0.392000
SF25B01	4/26/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF25B01	4/26/2006	Benzo(g,h,i)perylene	0.35	U	NA	NA
SF25B01	4/26/2006	Benzo(k)fluoranthene	0.035	U	NA	39.20
SF25B01	4/26/2006	bis(2-Ethylhexyl)phthalate	0.35	U	NA	204.40
SF25B01	4/26/2006	Chrysene	0.35	U	NA	392
SF25B01	4/26/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392000
SF25B01	4/26/2006	Fluoranthene	0.35	U	NA	40,880
SF25B01	4/26/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
SF25B01	4/26/2006	Pentachlorophenol	1	U	NA	23.85
SF25B01	4/26/2006	Phenanthrene	0.35	U	NA	NA
SF25B01	4/26/2006	Phenol	0.35	U	NA	306,600
SF25B01	4/26/2006	Pyrene	0.35	U	NA	30,660
SF25B01	4/26/2006	4,4'-DDD	0.007	U	NA	11.92
SF25B01	4/26/2006	4,4'-DDE	0.007	U	NA	8.42
SF25B01	4/26/2006	4,4'-DDT	0.007	U	NA	8.42
SF25B01	4/26/2006	Heptachlor epoxide	0.007	U	NA	0.31
SF25B01	4/26/2006	PCBs(total)	0.07	U	10	1.43
SF25B01	4/26/2006	Arsenic	0.67	U	NA	1.91
SF25B01	4/26/2006	Cadmium	0.083	U	10	511
SF25B01	4/26/2006	Chromium	1.1	B	143	3,066
SF25B01	4/26/2006	Copper	3	B	NA	40,880
SF25B01	4/26/2006	Lead	1.4		NA	NA
SF25B01	4/26/2006	Mercury	0.017	U	NA	NA
SF25B01	4/26/2006	Nickel	0.64	B	NA	20,440
SF25B01	4/26/2006	Zinc	9.5		NA	306,600
SF25B01	4/26/2006	Cyanide	0.5	U	35	20,440
SF25BNE01	4/5/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF25BNE01	4/5/2006	TCE	0.001	U	0.7	7.15
SF25BNE01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF25BNE01	4/5/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF25BNE01	4/5/2006	Benzo(a)pyrene	0.034	U	0.29	0.392000
SF25BNE01	4/5/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF25BNE01	4/5/2006	Benzo(g,h,i)perylene	0.34	U	NA	NA
SF25BNE01	4/5/2006	Benzo(k)fluoranthene	0.034	U	NA	39.20
SF25BNE01	4/5/2006	bis(2-Ethylhexyl)phthalate	0.34	U	NA	204.40
SF25BNE01	4/5/2006	Chrysene	0.34	U	NA	392
SF25BNE01	4/5/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392000
SF25BNE01	4/5/2006	Fluoranthene	0.34	U	NA	40,880

Table 4-34

**Summary of Analytical Results
SF-25 Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF25BNE01	4/5/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF25BNE01	4/5/2006	Pentachlorophenol	0.02	J	NA	23.85
SF25BNE01	4/5/2006	Phenanthrene	0.34	U	NA	NA
SF25BNE01	4/5/2006	Phenol	0.34	U	NA	306,600
SF25BNE01	4/5/2006	Pyrene	0.34	U	NA	30,660
SF25BNE01	4/5/2006	4,4'-DDD	0.0069	U	NA	11.92
SF25BNE01	4/5/2006	4,4'-DDE	0.0069	U	NA	8.42
SF25BNE01	4/5/2006	4,4'-DDT	0.0069	U	NA	8.42
SF25BNE01	4/5/2006	Heptachlor epoxide	0.0069	U	NA	0.31
SF25BNE01	4/5/2006	PCBs(total)	0.069	U	10	1.43
SF25BNE01	4/5/2006	Arsenic	2.9		NA	1.91
SF25BNE01	4/5/2006	Cadmium	0.082	U	10	511
SF25BNE01	4/5/2006	Chromium	3.5		143	3,066
SF25BNE01	4/5/2006	Copper	4	B	NA	40,880
SF25BNE01	4/5/2006	Lead	1.1		NA	NA
SF25BNE01	4/5/2006	Mercury	0.017	U	NA	NA
SF25BNE01	4/5/2006	Nickel	2.4	B	NA	20,440
SF25BNE01	4/5/2006	Zinc	10		NA	306,600
SF25BNE01	4/5/2006	Cyanide	0.5	U	35	20,440
SF25BNW01	4/5/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF25BNW01	4/5/2006	TCE	0.001	U	0.7	7.15
SF25BNW01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF25BNW01	4/5/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF25BNW01	4/5/2006	Benzo(a)pyrene	0.034	U	0.29	0.392000
SF25BNW01	4/5/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF25BNW01	4/5/2006	Benzo(g,h,i)perylene	0.34	U	NA	NA
SF25BNW01	4/5/2006	Benzo(k)fluoranthene	0.034	U	NA	39.20
SF25BNW01	4/5/2006	bis(2-Ethylhexyl)phthalate	0.34	U	NA	204.40
SF25BNW01	4/5/2006	Chrysene	0.34	U	NA	392
SF25BNW01	4/5/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392000
SF25BNW01	4/5/2006	Fluoranthene	0.34	U	NA	40,880
SF25BNW01	4/5/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF25BNW01	4/5/2006	Pentachlorophenol	1	U	NA	23.85
SF25BNW01	4/5/2006	Phenanthrene	0.34	U	NA	NA
SF25BNW01	4/5/2006	Phenol	0.34	U	NA	306,600
SF25BNW01	4/5/2006	Pyrene	0.34	U	NA	30,660
SF25BNW01	4/5/2006	4,4'-DDD	0.0069	U	NA	11.92
SF25BNW01	4/5/2006	4,4'-DDE	0.0069	U	NA	8.42
SF25BNW01	4/5/2006	4,4'-DDT	0.0069	U	NA	8.42
SF25BNW01	4/5/2006	Heptachlor epoxide	0.0069	U	NA	0.31
SF25BNW01	4/5/2006	PCBs(total)	0.069	U	10	1.43
SF25BNW01	4/5/2006	Arsenic	2.8		NA	1.91
SF25BNW01	4/5/2006	Cadmium	0.082	U	10	511

Table 4-34

**Summary of Analytical Results
SF-25 Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF25BNW01	4/5/2006	Chromium	5.1		143	3,066
SF25BNW01	4/5/2006	Copper	9		NA	40,880
SF25BNW01	4/5/2006	Lead	1.8		NA	NA
SF25BNW01	4/5/2006	Mercury	0.017	U	NA	NA
SF25BNW01	4/5/2006	Nickel	2.7	B	NA	20,440
SF25BNW01	4/5/2006	Zinc	12.5		NA	306,600
SF25BNW01	4/5/2006	Cyanide	0.5	U	35	20,440
SF25BSE01	4/5/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF25BSE01	4/5/2006	TCE	0.001	U	0.7	7.15
SF25BSE01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF25BSE01	4/5/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF25BSE01	4/5/2006	Benzo(a)pyrene	0.034	U	0.29	0.392000
SF25BSE01	4/5/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF25BSE01	4/5/2006	Benzo(g,h,i)perylene	0.34	U	NA	NA
SF25BSE01	4/5/2006	Benzo(k)fluoranthene	0.034	U	NA	39.20
SF25BSE01	4/5/2006	bis(2-Ethylhexyl)phthalate	0.34	U	NA	204.40
SF25BSE01	4/5/2006	Chrysene	0.34	U	NA	392
SF25BSE01	4/5/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392000
SF25BSE01	4/5/2006	Fluoranthene	0.34	U	NA	40,880
SF25BSE01	4/5/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF25BSE01	4/5/2006	Pentachlorophenol	1	U	NA	23.85
SF25BSE01	4/5/2006	Phenanthrene	0.0068	J	NA	NA
SF25BSE01	4/5/2006	Phenol	0.34	U	NA	306,600
SF25BSE01	4/5/2006	Pyrene	0.34	U	NA	30,660
SF25BSE01	4/5/2006	4,4'-DDD	0.0069	U	NA	11.92
SF25BSE01	4/5/2006	4,4'-DDE	0.0069	U	NA	8.42
SF25BSE01	4/5/2006	4,4'-DDT	0.0069	U	NA	8.42
SF25BSE01	4/5/2006	Heptachlor epoxide	0.0069	U	NA	0.31
SF25BSE01	4/5/2006	PCBs(total)	0.069	U	10	1.43
SF25BSE01	4/5/2006	Arsenic	0.66	U	NA	1.91
SF25BSE01	4/5/2006	Cadmium	0.082	U	10	511
SF25BSE01	4/5/2006	Chromium	1.4	B	143	3,066
SF25BSE01	4/5/2006	Copper	1.7	B	NA	40,880
SF25BSE01	4/5/2006	Lead	0.72	B	NA	NA
SF25BSE01	4/5/2006	Mercury	0.015	U	NA	NA
SF25BSE01	4/5/2006	Nickel	1.2	B	NA	20,440
SF25BSE01	4/5/2006	Zinc	3	B	NA	306,600
SF25BSE01	4/5/2006	Cyanide	0.5	U	35	20,440
SF25BSW01	4/5/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF25BSW01	4/5/2006	TCE	0.0007	J	0.7	7.15
SF25BSW01	4/5/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF25BSW01	4/5/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF25BSW01	4/5/2006	Benzo(a)pyrene	0.034	U	0.29	0.392000

Table 4-34

**Summary of Analytical Results
SF-25 Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF25BSW01	4/5/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF25BSW01	4/5/2006	Benzo(g,h,i)perylene	0.34	U	NA	NA
SF25BSW01	4/5/2006	Benzo(k)fluoranthene	0.034	U	NA	39.20
SF25BSW01	4/5/2006	bis(2-Ethylhexyl)phthalate	0.34	U	NA	204.40
SF25BSW01	4/5/2006	Chrysene	0.34	U	NA	392
SF25BSW01	4/5/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392000
SF25BSW01	4/5/2006	Fluoranthene	0.34	U	NA	40,880
SF25BSW01	4/5/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF25BSW01	4/5/2006	Pentachlorophenol	1	U	NA	23.85
SF25BSW01	4/5/2006	Phenanthrene	0.34	U	NA	NA
SF25BSW01	4/5/2006	Phenol	0.34	U	NA	306,600
SF25BSW01	4/5/2006	Pyrene	0.34	U	NA	30,660
SF25BSW01	4/5/2006	4,4'-DDD	0.0069	U	NA	11.92
SF25BSW01	4/5/2006	4,4'-DDE	0.0069	U	NA	8.42
SF25BSW01	4/5/2006	4,4'-DDT	0.0069	U	NA	8.42
SF25BSW01	4/5/2006	Heptachlor epoxide	0.0069	U	NA	0.31
SF25BSW01	4/5/2006	PCBs(total)	0.069	U	10	1.43
SF25BSW01	4/5/2006	Arsenic	0.83	B	NA	1.91
SF25BSW01	4/5/2006	Cadmium	0.082	U	10	511
SF25BSW01	4/5/2006	Chromium	4.7		143	3,066
SF25BSW01	4/5/2006	Copper	2.7	B	NA	40,880
SF25BSW01	4/5/2006	Lead	1.2		NA	NA
SF25BSW01	4/5/2006	Mercury	0.017	U	NA	NA
SF25BSW01	4/5/2006	Nickel	3	B	NA	20,440
SF25BSW01	4/5/2006	Zinc	6.1		NA	306,600
SF25BSW01	4/5/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-25 confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-35

Summary of Analytical Results
SF-27 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	USEPA Region III Risk-based Concentration for Industrial Soil	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-27	1/26/1999	1,1,1-Trichloroethane	0.015	U	NA	286,160
SF-SL-27	1/26/1999	1,1,2,2-Tetrachloroethane	0.015	U	NA	14.31
SF-SL-27	1/26/1999	1,1,2-Trichloroethane	0.015	U	NA	50.20
SF-SL-27	1/26/1999	1,1-Dichloroethane	0.015	U	NA	204,400
SF-SL-27	1/26/1999	1,1-Dichloroethene	0.015	U	NA	51,100
SF-SL-27	1/26/1999	1,2-Dichloroethane	0.015	U	NA	31.45
SF-SL-27	1/26/1999	1,2-Dichloroethene (total)	0.015	U	0.25	9,198
SF-SL-27	1/26/1999	1,2-Dichloropropane	0.015	U	NA	42.08
SF-SL-27	1/26/1999	2-Butanone	0.015	U	NA	613,200
SF-SL-27	1/26/1999	2-Hexanone	0.015	U	NA	NA
SF-SL-27	1/26/1999	4-Methyl-2-pentanone	0.015	U	NA	NA
SF-SL-27	1/26/1999	Acetone	0.015	U	NA	919,800
SF-SL-27	1/26/1999	Benzene	0.015	U	NA	52.03
SF-SL-27	1/26/1999	Bromodichloromethane	0.015	U	NA	46.15
SF-SL-27	1/26/1999	Bromoform	0.015	U	NA	362.23
SF-SL-27	1/26/1999	Bromomethane	0.015	U	NA	1,430.8
SF-SL-27	1/26/1999	c-1,3-Dichloropropene	0.015	U	NA	NA
SF-SL-27	1/26/1999	Carbon Tetrachloride	0.015	U	NA	22.01
SF-SL-27	1/26/1999	Chlorobenzene	0.015	U	NA	20,440
SF-SL-27	1/26/1999	Chloroethane	0.015	U	NA	986.76
SF-SL-27	1/26/1999	Chloroform	0.015	U	NA	10,220
SF-SL-27	1/26/1999	Chloromethane	0.015	U	NA	NA
SF-SL-27	1/26/1999	Dibromochloromethane	0.015	U	NA	34.07
SF-SL-27	1/26/1999	Ethylbenzene	0.015	U	NA	102,200
SF-SL-27	1/26/1999	Methylene Chloride	0.015	U	NA	381.55
SF-SL-27	1/26/1999	Styrene	0.015	U	NA	204,400
SF-SL-27	1/26/1999	t-1,3-Dichloropropene	0.015	U	NA	NA
SF-SL-27	1/26/1999	TCE	0.003	J	0.7	7.15
SF-SL-27	1/26/1999	Tetrachloroethene	0.015	U	1.4	5.30
SF-SL-27	1/26/1999	Toluene	0.002	J	NA	81,760
SF-SL-27	1/26/1999	Vinyl Chloride	0.015	U	NA	3.97
SF-SL-27	1/26/1999	Xylene (Total)	0.015	U	NA	204,400
SF-SL-27	1/26/1999	1,2,4-Trimethylbenzene	15	U	NA	NA
SF-SL-27	1/26/1999	1,2-Dichlorobenzene	15	U	NA	91,980
SF-SL-27	1/26/1999	1,3-Dichlorobenzene	15	U	NA	3,066
SF-SL-27	1/26/1999	1,4-Dichlorobenzene	15	U	NA	119.23
SF-SL-27	1/26/1999	2,4,5-Trichlorophenol	37	U	NA	102,200
SF-SL-27	1/26/1999	2,4,6-Trichlorophenol	15	U	NA	260.15
SF-SL-27	1/26/1999	2,4-Dichlorophenol	15	U	NA	3,066
SF-SL-27	1/26/1999	2,4-Dimethylphenol	15	U	NA	20,440
SF-SL-27	1/26/1999	2,4-Dinitrophenol	37	U	NA	2,044
SF-SL-27	1/26/1999	2,4-Dinitrotoluene	15	U	NA	2,044
SF-SL-27	1/26/1999	2,6-Dinitrotoluene	15	U	NA	1,022
SF-SL-27	1/26/1999	2-Chloronaphthalene	15	U	NA	81,760
SF-SL-27	1/26/1999	2-Chlorophenol	15	U	NA	5,110
SF-SL-27	1/26/1999	2-Methylnaphthalene	0.27	J	NA	4,088
SF-SL-27	1/26/1999	2-Methylphenol	15	U	NA	51,100
SF-SL-27	1/26/1999	2-Nitroaniline	37	U	NA	NA
SF-SL-27	1/26/1999	2-Nitrophenol	15	U	NA	NA
SF-SL-27	1/26/1999	3,3'-Dichlorobenzidine	15	U	NA	6.36
SF-SL-27	1/26/1999	3+4-Methylphenol	15	U	NA	5,110
SF-SL-27	1/26/1999	3-Nitroaniline	37	U	NA	NA
SF-SL-27	1/26/1999	4,6-Dinitro-2-methylphenol	37	U	NA	NA
SF-SL-27	1/26/1999	4-Bromophenyl phenyl ether	15	U	NA	NA
SF-SL-27	1/26/1999	4-Chloro-3-methylphenol	15	U	NA	NA

Table 4-35

Summary of Analytical Results
SF-27 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	USEPA Region III Risk-based Concentration for Industrial Soil	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-27	1/26/1999	4-Chloroaniline	15	U	NA	4,088
SF-SL-27	1/26/1999	4-Chlorophenyl phenyl ether	15	U	NA	NA
SF-SL-27	1/26/1999	4-Nitroaniline	37	U	NA	NA
SF-SL-27	1/26/1999	4-Nitrophenol	37	U	NA	NA
SF-SL-27	1/26/1999	Acenaphthene	15	U	NA	61,320
SF-SL-27	1/26/1999	Acenaphthylene	15	U	NA	NA
SF-SL-27	1/26/1999	Anthracene	0.3	J	NA	306,600
SF-SL-27	1/26/1999	Benzo(a)anthracene	0.81	J	NA	3.92
SF-SL-27	1/26/1999	Benzo(a)pyrene	0.84	J	0.29	0.39
SF-SL-27	1/26/1999	Benzo(b)fluoranthene	1.3	J	NA	3.92
SF-SL-27	1/26/1999	Benzo(g,h,i)perylene	0.99	J	NA	NA
SF-SL-27	1/26/1999	Benzo(k)fluoranthene	0.59	J	NA	39.20
SF-SL-27	1/26/1999	bis(2-Chloroethoxy)methane	15	U	NA	NA
SF-SL-27	1/26/1999	bis(2-Chloroethyl)ether	15	U	NA	2.60
SF-SL-27	1/26/1999	bis(2-Chloroisopropyl)ether	15	U	NA	40.88
SF-SL-27	1/26/1999	bis(2-Ethylhexyl)phthalate	15	U	NA	204.40
SF-SL-27	1/26/1999	Carbazole	0.22	J	NA	143.08
SF-SL-27	1/26/1999	Chrysene	1.1	J	NA	392
SF-SL-27	1/26/1999	Dibenz(a,h)anthracene	0.21	J	0.29	0.39
SF-SL-27	1/26/1999	Dibenzofuran	15	U	NA	1,022
SF-SL-27	1/26/1999	Diethyl phthalate	15	U	NA	817,600
SF-SL-27	1/26/1999	Dimethyl phthalate	15	U	NA	NA
SF-SL-27	1/26/1999	Di-n-butyl phthalate	15	U	NA	102,200
SF-SL-27	1/26/1999	Di-n-octyl phthalate	15	U	NA	NA
SF-SL-27	1/26/1999	Fluoranthene	1.7	J	NA	40,880
SF-SL-27	1/26/1999	Fluorene	15	U	NA	40,880
SF-SL-27	1/26/1999	Hexachlorobenzene	15	U	NA	1.79
SF-SL-27	1/26/1999	Hexachlorobutadiene	15	U	NA	36.69
SF-SL-27	1/26/1999	Hexachlorocyclopentadiene	15	U	NA	6,132
SF-SL-27	1/26/1999	Hexachloroethane	15	U	NA	204.40
SF-SL-27	1/26/1999	Indeno(1,2,3-cd)pyrene	0.86	J	NA	3.92
SF-SL-27	1/26/1999	Isophorone	15	U	NA	3012.21
SF-SL-27	1/26/1999	Naphthalene	15	U	NA	20,440
SF-SL-27	1/26/1999	Nitrobenzene	15	U	NA	511
SF-SL-27	1/26/1999	N-Nitrosodi-n-propylamine	15	U	NA	0.41
SF-SL-27	1/26/1999	N-Nitrosodiphenylamine	15	U	NA	584
SF-SL-27	1/26/1999	Pentachlorophenol	37	U	NA	23.85
SF-SL-27	1/26/1999	Phenanthrene	15	U	NA	NA
SF-SL-27	1/26/1999	Phenol	15	U	NA	306,600
SF-SL-27	1/26/1999	Pyrene	1.5	J	NA	30,660
SF-SL-27	1/26/1999	4,4'-DDD	0.051	U	NA	11.92
SF-SL-27	1/26/1999	4,4'-DDE	0.32	J	NA	8.42
SF-SL-27	1/26/1999	4,4'-DDT	0.051	U	NA	8.42
SF-SL-27	1/26/1999	Aldrin	0.026	U	NA	0.17
SF-SL-27	1/26/1999	alpha-BHC	0.026	U	NA	0.45
SF-SL-27	1/26/1999	alpha-Chlordane	0.026	U	NA	NA
SF-SL-27	1/26/1999	beta-BHC	0.026	U	NA	1.59
SF-SL-27	1/26/1999	delta-BHC	0.026	U	NA	NA
SF-SL-27	1/26/1999	Dieldrin	0.35	J	NA	0.18
SF-SL-27	1/26/1999	Endosulfan I	0.026	U	NA	6,132
SF-SL-27	1/26/1999	Endosulfan II	0.062	J	NA	6,132
SF-SL-27	1/26/1999	Endosulfan sulfate	0.051	U	NA	NA
SF-SL-27	1/26/1999	Endrin	0.051	U	NA	307
SF-SL-27	1/26/1999	Endrin Aldehyde	2.3	J	NA	NA
SF-SL-27	1/26/1999	Endrin ketone	0.051	U	NA	NA

Table 4-35

**Summary of Analytical Results
SF-27 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	USEPA Region III Risk-based Concentration for Industrial Soil	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-27	1/26/1999	gamma-BHC (Lindane)	0.026	U	NA	2.20
SF-SL-27	1/26/1999	gamma-Chlordane	0.026	U	NA	NA
SF-SL-27	1/26/1999	Heptachlor	0.026	U	NA	0.64
SF-SL-27	1/26/1999	Heptachlor epoxide	0.026	U	NA	0.31
SF-SL-27	1/26/1999	Methoxychlor	0.26	U	NA	5,110
SF-SL-27	1/26/1999	Toxaphene	2.6	U	NA	2.60
SF-SL-27	1/26/1999	Aroclor 1016	0.51	U	NA	40.88
SF-SL-27	1/26/1999	Aroclor 1221	1	U	NA	1.43
SF-SL-27	1/26/1999	Aroclor 1232	0.51	U	NA	1.43
SF-SL-27	1/26/1999	Aroclor 1242	0.51	U	NA	1.43
SF-SL-27	1/26/1999	Aroclor 1248	0.51	U	NA	1.43
SF-SL-27	1/26/1999	Aroclor 1254	0.51	U	NA	1.43
SF-SL-27	1/26/1999	Aroclor 1260	0.51	U	NA	1.43
SF-SL-27	1/26/1999	PCBs(total)	1	U	10	1.43
SF-SL-27	1/26/1999	Aluminum	7,360		NA	1,022,000
SF-SL-27	1/26/1999	Antimony	12.4	J	NA	408.8
SF-SL-27	1/26/1999	Arsenic	14.6		NA	1.91
SF-SL-27	1/26/1999	Barium	115		NA	204,400
SF-SL-27	1/26/1999	Beryllium	0.19		NA	2,044
SF-SL-27	1/26/1999	Cadmium	13.7		10	511
SF-SL-27	1/26/1999	Calcium	3,340	J	NA	NA
SF-SL-27	1/26/1999	Chromium	53.3	J	143	3,066
SF-SL-27	1/26/1999	Cobalt	4.6		NA	NA
SF-SL-27	1/26/1999	Copper	256		NA	40,880
SF-SL-27	1/26/1999	Cyanide	0.77	UJ	35	20,440
SF-SL-27	1/26/1999	Iron	23,600		NA	715,400
SF-SL-27	1/26/1999	Lead	688		NA	NA
SF-SL-27	1/26/1999	Magnesium	1,080		NA	NA
SF-SL-27	1/26/1999	Manganese	187	J	NA	20,440
SF-SL-27	1/26/1999	Mercury	0.95		NA	NA
SF-SL-27	1/26/1999	Nickel	29.1		NA	20,440
SF-SL-27	1/26/1999	Potassium	119		NA	NA
SF-SL-27	1/26/1999	Selenium	0.57		NA	5,110
SF-SL-27	1/26/1999	Silver	0.46	J	NA	5,110
SF-SL-27	1/26/1999	Sodium	121	U	NA	NA
SF-SL-27	1/26/1999	Thallium	1.4	U	NA	71.54
SF-SL-27	1/26/1999	Vanadium	42.6		NA	1,022
SF-SL-27	1/26/1999	Zinc	903		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) J - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-27 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-36

**Summary of Analytical Results
SF-27 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF07BNE01	4/7/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF07BNE01	4/7/2006	TCE	0.001	U	0.7	7.15
SF07BNE01	4/7/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF07BNW01	4/7/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF07BNW01	4/7/2006	TCE	0.001	U	0.7	7.15
SF07BNW01	4/7/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF07BSE01	4/7/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF07BSE01	4/7/2006	TCE	0.001	U	0.7	7.15
SF07BSE01	4/7/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF07BSW01	4/7/2006	c-1,2-Dichloroethene	0.0055	U	0.25	10,220
SF07BSW01	4/7/2006	TCE	0.0011	U	0.7	7.15
SF07BSW01	4/7/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF07CE01	4/7/2006	3+4-Methylphenol	0.34	U	NA	5,110
SF07CE01	4/7/2006	Benzo(a)anthracene	0.019	J	NA	3.92
SF07CE01	4/7/2006	Benzo(a)pyrene	0.017	J	0.29	0.39
SF07CE01	4/7/2006	Benzo(b)fluoranthene	0.016	J	NA	3.92
SF07CE01	4/7/2006	Benzo(k)fluoranthene	0.1		NA	39.2
SF07CE01	4/7/2006	Chrysene	0.024	J	NA	392
SF07CE01	4/7/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF07CE01	4/7/2006	Dibenzofuran	0.34	U	NA	1,022
SF07CE01	4/7/2006	Fluoranthene	0.033	J	NA	40,880
SF07CE01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF07CE01	4/7/2006	Phenanthrene	0.34	U	NA	NA
SF07CE01	4/7/2006	Phenol	0.34	U	NA	306,600
SF07CE01	4/7/2006	Pyrene	0.03	J	NA	30,660
SF07CE01	4/7/2006	4,4'-DDD	0.0069	U	NA	11.92
SF07CE01	4/7/2006	4,4'-DDE	0.0069	U	NA	8.42
SF07CE01	4/7/2006	4,4'-DDT	0.0069	U	NA	8.42
SF07CE01	4/7/2006	PCBs(total)	0.0690	U	10	1.43
SF07CE01	4/7/2006	Arsenic	1.1		NA	1.91
SF07CE01	4/7/2006	Cadmium	0.083	U	10	511
SF07CE01	4/7/2006	Chromium	3.6		143	3,066
SF07CE01	4/7/2006	Copper	4.6	B	NA	40,880
SF07CE01	4/7/2006	Lead	2.3		NA	NA
SF07CE01	4/7/2006	Mercury	0.015	U	NA	NA
SF07CE01	4/7/2006	Nickel	2	B	NA	20,440
SF07CE01	4/7/2006	Selenium	0.87	U	NA	5,110
SF07CE01	4/7/2006	Zinc	9.2		NA	306,600
SF07CE01	4/7/2006	Cyanide	0.5	U	35	20,440
SF07CN01	4/7/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF07CN01	4/7/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF07CN01	4/7/2006	Benzo(a)pyrene	0.035	U	0.29	0.39
SF07CN01	4/7/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF07CN01	4/7/2006	Benzo(k)fluoranthene	0.035	U	NA	39.20
SF07CN01	4/7/2006	Chrysene	0.35	U	NA	392
SF07CN01	4/7/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.39

Table 4-36

**Summary of Analytical Results
SF-27 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF07CN01	4/7/2006	Dibenzofuran	0.350	U	NA	1,022
SF07CN01	4/7/2006	Fluoranthene	0.350	U	NA	40,880
SF07CN01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
SF07CN01	4/7/2006	Phenanthrene	0.35	U	NA	NA
SF07CN01	4/7/2006	Phenol	0.35	U	NA	306,600
SF07CN01	4/7/2006	Pyrene	0.35	U	NA	30,660
SF07CN01	4/7/2006	4,4'-DDD	0.007	U	NA	11.92
SF07CN01	4/7/2006	4,4'-DDE	0.007	U	NA	8.42
SF07CN01	4/7/2006	4,4'-DDT	0.029		NA	8.42
SF07CN01	4/7/2006	PCBs(total)	0.07	U	10	1.43
SF07CN01	4/7/2006	Arsenic	0.67	U	NA	1.91
SF07CN01	4/7/2006	Cadmium	0.083	U	10	511
SF07CN01	4/7/2006	Chromium	3.9		143	3,066
SF07CN01	4/7/2006	Copper	10.2		NA	40,880
SF07CN01	4/7/2006	Lead	1.4		NA	NA
SF07CN01	4/7/2006	Mercury	0.015	U	NA	NA
SF07CN01	4/7/2006	Nickel	2.4	B	NA	20,440
SF07CN01	4/7/2006	Selenium	0.88	U	NA	5,110
SF07CN01	4/7/2006	Zinc	14.7		NA	306,600
SF07CN01	4/7/2006	Cyanide	0.5	U	35	20,440
SF07CS01	4/7/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF07CS01	4/7/2006	Benzo(a)anthracene	0.36		NA	3.92
SF07CS01	4/7/2006	Benzo(a)pyrene	0.34		0.29	0.39
SF07CS01	4/7/2006	Benzo(b)fluoranthene	0.29		NA	3.92
SF07CS01	4/7/2006	Benzo(k)fluoranthene	0.32		NA	39.20
SF07CS01	4/7/2006	Chrysene	0.38		NA	392.00
SF07CS01	4/7/2006	Dibenz(a,h)anthracene	0.065		0.29	0.39
SF07CS01	4/7/2006	Dibenzofuran	0.0088	J	NA	1,022
SF07CS01	4/7/2006	Fluoranthene	0.8		NA	40,880
SF07CS01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.19		NA	3.92
SF07CS01	4/7/2006	Phenanthrene	0.25	J	NA	NA
SF07CS01	4/7/2006	Phenol	0.35	U	NA	306,600
SF07CS01	4/7/2006	Pyrene	0.62		NA	30,660
SF07CS01	4/7/2006	4,4'-DDD	0.031		NA	11.92
SF07CS01	4/7/2006	4,4'-DDE	0.012		NA	8.42
SF07CS01	4/7/2006	4,4'-DDT	0.031		NA	8.42
SF07CS01	4/7/2006	PCBs(total)	0.07	U	10	1.43
SF07CS01	4/7/2006	Arsenic	0.84	B	NA	1.91
SF07CS01	4/7/2006	Cadmium	0.09	B	10	511
SF07CS01	4/7/2006	Chromium	6.4		143	3,066
SF07CS01	4/7/2006	Copper	7.4		NA	40,880
SF07CS01	4/7/2006	Lead	6		NA	NA
SF07CS01	4/7/2006	Mercury	0.018	U	NA	NA
SF07CS01	4/7/2006	Nickel	3.6	B	NA	20,440
SF07CS01	4/7/2006	Selenium	0.88	U	NA	5,110
SF07CS01	4/7/2006	Zinc	15.3		NA	306,600

Table 4-36

**Summary of Analytical Results
SF-27 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF07CS01	4/7/2006	Cyanide	0.5	U	35	20,440
SF07CW01	4/7/2006	3+4-Methylphenol	0.36	U	NA	5,110
SF07CW01	4/7/2006	Benzo(a)anthracene	0.029	J	NA	3.92
SF07CW01	4/7/2006	Benzo(a)pyrene	0.028	J	0.29	0.39
SF07CW01	4/7/2006	Benzo(b)fluoranthene	0.015	J	NA	3.92
SF07CW01	4/7/2006	Benzo(k)fluoranthene	0.12		NA	39.20
SF07CW01	4/7/2006	Chrysene	0.033	J	NA	392
SF07CW01	4/7/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.39
SF07CW01	4/7/2006	Dibenzofuran	0.36	U	NA	1,022
SF07CW01	4/7/2006	Fluoranthene	0.053	J	NA	40,880
SF07CW01	4/7/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF07CW01	4/7/2006	Phenanthrene	0.017	J	NA	NA
SF07CW01	4/7/2006	Phenol	0.36	U	NA	306,600
SF07CW01	4/7/2006	Pyrene	0.042	J	NA	30,660
SF07CW01	4/7/2006	4,4'-DDD	0.0072	U	NA	11.92
SF07CW01	4/7/2006	4,4'-DDE	0.0072	U	NA	8.42
SF07CW01	4/7/2006	4,4'-DDT	0.0072	U	NA	8.42
SF07CW01	4/7/2006	PCBs(total)	0.072	U	10	1.43
SF07CW01	4/7/2006	Arsenic	1.5		NA	1.91
SF07CW01	4/7/2006	Cadmium	0.086	U	10	511
SF07CW01	4/7/2006	Chromium	7.7		143	3,066
SF07CW01	4/7/2006	Copper	4.9	B	NA	40,880
SF07CW01	4/7/2006	Lead	3.1		NA	NA
SF07CW01	4/7/2006	Mercury	0.018	U	NA	NA
SF07CW01	4/7/2006	Nickel	4.7	B	NA	20,440
SF07CW01	4/7/2006	Selenium	0.9	U	NA	5,110
SF07CW01	4/7/2006	Zinc	15.1		NA	306,600
SF07CW01	4/7/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-27 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-37

**Summary of Analytical Results
SF-41 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-41	5/9/1997	1,1,1-Trichloroethane	0.011	U	NA	286,160
SF-SL-41	5/9/1997	1,1,2,2-Tetrachloroethane	0.011	U	NA	14.31
SF-SL-41	5/9/1997	1,1,2-Trichloroethane	0.011	U	NA	50.20
SF-SL-41	5/9/1997	1,1-Dichloroethane	0.011	U	NA	204,400
SF-SL-41	5/9/1997	1,1-Dichloroethene	0.011	U	NA	51,100
SF-SL-41	5/9/1997	1,2-Dichloroethane	0.011	U	NA	31.45
SF-SL-41	5/9/1997	1,2-Dichloroethene (total)	0.011	U	0.25	9,198
SF-SL-41	5/9/1997	1,2-Dichloropropane	0.011	U	NA	42.08
SF-SL-41	5/9/1997	2-Butanone	0.011	U	NA	613,200
SF-SL-41	5/9/1997	2-Hexanone	0.011	U	NA	NA
SF-SL-41	5/9/1997	4-Methyl-2-pentanone	0.011	U	NA	NA
SF-SL-41	5/9/1997	Acetone	0.009	J	NA	919,800
SF-SL-41	5/9/1997	Benzene	0.011	U	NA	52.03
SF-SL-41	5/9/1997	Bromodichloromethane	0.011	U	NA	46.15
SF-SL-41	5/9/1997	Bromoform	0.011	U	NA	362.23
SF-SL-41	5/9/1997	Bromomethane	0.011	U	NA	1,430.8
SF-SL-41	5/9/1997	c-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-41	5/9/1997	Carbon Tetrachloride	0.011	U	NA	22.01
SF-SL-41	5/9/1997	Chlorobenzene	0.011	U	NA	20,440
SF-SL-41	5/9/1997	Chloroethane	0.011	U	NA	986.76
SF-SL-41	5/9/1997	Chloroform	0.011	U	NA	10,220
SF-SL-41	5/9/1997	Chloromethane	0.011	U	NA	NA
SF-SL-41	5/9/1997	Dibromochloromethane	0.011	U	NA	34.07
SF-SL-41	5/9/1997	Ethylbenzene	0.011	U	NA	102,200
SF-SL-41	5/9/1997	Methylene Chloride	0.011	U	NA	381.55
SF-SL-41	5/9/1997	Styrene	0.011	U	NA	204,400
SF-SL-41	5/9/1997	t-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-41	5/9/1997	TCE	0.011	U	0.7	7.15
SF-SL-41	5/9/1997	Tetrachloroethene	0.011	U	1.4	5.30
SF-SL-41	5/9/1997	Toluene	0.011	U	NA	81,760
SF-SL-41	5/9/1997	Vinyl Chloride	0.011	U	NA	3.97
SF-SL-41	5/9/1997	Xylene (Total)	0.011	U	NA	204,400
SF-SL-41	5/9/1997	1,2,4-Trimethylbenzene	0.71	U	NA	NA
SF-SL-41	5/9/1997	1,2-Dichlorobenzene	0.71	U	NA	91,980
SF-SL-41	5/9/1997	1,3-Dichlorobenzene	0.71	U	NA	3,066
SF-SL-41	5/9/1997	1,4-Dichlorobenzene	0.71	U	NA	119.23
SF-SL-41	5/9/1997	2,4,5-Trichlorophenol	1.7	U	NA	102,200
SF-SL-41	5/9/1997	2,4,6-Trichlorophenol	0.71	U	NA	260.15
SF-SL-41	5/9/1997	2,4-Dichlorophenol	0.71	U	NA	3,066
SF-SL-41	5/9/1997	2,4-Dimethylphenol	0.71	U	NA	20,440
SF-SL-41	5/9/1997	2,4-Dinitrophenol	1.7	U	NA	2,044
SF-SL-41	5/9/1997	2,4-Dinitrotoluene	0.71	U	NA	2,044
SF-SL-41	5/9/1997	2,6-Dinitrotoluene	0.71	U	NA	1,022
SF-SL-41	5/9/1997	2-Chloronaphthalene	0.71	U	NA	81,760
SF-SL-41	5/9/1997	2-Chlorophenol	0.71	U	NA	5,110
SF-SL-41	5/9/1997	2-Methylnaphthalene	0.1	J	NA	4,088
SF-SL-41	5/9/1997	2-Methylphenol	0.71	U	NA	51,100
SF-SL-41	5/9/1997	2-Nitroaniline	1.7	U	NA	NA
SF-SL-41	5/9/1997	2-Nitrophenol	0.71	U	NA	NA
SF-SL-41	5/9/1997	3,3'-Dichlorobenzidine	0.71	U	NA	6.36
SF-SL-41	5/9/1997	3+4-Methylphenol	0.71	U	NA	5,110
SF-SL-41	5/9/1997	3-Nitroaniline	1.7	U	NA	NA
SF-SL-41	5/9/1997	4,6-Dinitro-2-methylphenol	1.7	U	NA	NA
SF-SL-41	5/9/1997	4-Bromophenyl phenyl ether	0.71	U	NA	NA
SF-SL-41	5/9/1997	4-Chloro-3-methylphenol	0.71	U	NA	NA

Table 4-37

Summary of Analytical Results
SF-41 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup	USEPA Region III
					Goal	Risk-based Concentration for Industrial Soil
SF-SL-41	5/9/1997	4-Chloroaniline	0.71	U	NA	4,088
SF-SL-41	5/9/1997	4-Chlorophenyl phenyl ether	0.71	U	NA	NA
SF-SL-41	5/9/1997	4-Nitroaniline	1.7	U	NA	NA
SF-SL-41	5/9/1997	4-Nitrophenol	1.7	U	NA	NA
SF-SL-41	5/9/1997	Acenaphthene	0.71	U	NA	61,320
SF-SL-41	5/9/1997	Acenaphthylene	0.71	U	NA	NA
SF-SL-41	5/9/1997	Anthracene	0.71	U	NA	306,600
SF-SL-41	5/9/1997	Benzo(a)anthracene	0.01	J	NA	3.92
SF-SL-41	5/9/1997	Benzo(a)pyrene	0.71	U	0.29	0.39
SF-SL-41	5/9/1997	Benzo(b)fluoranthene	0.71	U	NA	3.92
SF-SL-41	5/9/1997	Benzo(g,h,i)perylene	0.71	U	NA	NA
SF-SL-41	5/9/1997	Benzo(k)fluoranthene	0.71	U	NA	39.20
SF-SL-41	5/9/1997	bis(2-Chloroethoxy)methane	0.71	U	NA	NA
SF-SL-41	5/9/1997	bis(2-Chloroethyl)ether	0.71	U	NA	2.60
SF-SL-41	5/9/1997	bis(2-Chloroisopropyl)ether	0.71	U	NA	40.88
SF-SL-41	5/9/1997	bis(2-Ethylhexyl)phthalate	0.072	J	NA	204.40
SF-SL-41	5/9/1997	Carbazole	0.71	U	NA	143.08
SF-SL-41	5/9/1997	Chrysene	0.007	J	NA	392
SF-SL-41	5/9/1997	Dibenz(a,h)anthracene	0.71	U	0.29	0.39
SF-SL-41	5/9/1997	Dibenzofuran	0.71	U	NA	1,022
SF-SL-41	5/9/1997	Diethyl phthalate	0.71	U	NA	817,600
SF-SL-41	5/9/1997	Dimethyl phthalate	0.71	U	NA	NA
SF-SL-41	5/9/1997	Di-n-butyl phthalate	0.71	U	NA	102,200
SF-SL-41	5/9/1997	Di-n-octyl phthalate	0.71	U	NA	NA
SF-SL-41	5/9/1997	Fluoranthene	0.014	J	NA	40,880
SF-SL-41	5/9/1997	Fluorene	0.71	U	NA	40,880
SF-SL-41	5/9/1997	Hexachlorobenzene	0.71	U	NA	1.79
SF-SL-41	5/9/1997	Hexachlorobutadiene	0.71	U	NA	36.69
SF-SL-41	5/9/1997	Hexachlorocyclopentadiene	0.71	U	NA	6,132
SF-SL-41	5/9/1997	Hexachloroethane	0.71	U	NA	204.40
SF-SL-41	5/9/1997	Indeno(1,2,3-cd)pyrene	0.71	U	NA	3.92
SF-SL-41	5/9/1997	Isophorone	0.71	U	NA	3012.21
SF-SL-41	5/9/1997	Naphthalene	0.013	J	NA	20,440
SF-SL-41	5/9/1997	Nitrobenzene	0.71	U	NA	511
SF-SL-41	5/9/1997	N-Nitrosodi-n-propylamine	0.71	U	NA	0.41
SF-SL-41	5/9/1997	N-Nitrosodiphenylamine	0.71	U	NA	584
SF-SL-41	5/9/1997	Pentachlorophenol	1.7	U	NA	23.85
SF-SL-41	5/9/1997	Phenanthrene	0.02	J	NA	NA
SF-SL-41	5/9/1997	Phenol	0.71	U	NA	306,600
SF-SL-41	5/9/1997	Pyrene	0.012	J	NA	30,660
SF-SL-41	5/9/1997	4,4'-DDD	0.0035	U	NA	11.92
SF-SL-41	5/9/1997	4,4'-DDE	0.0035	U	NA	8.42
SF-SL-41	5/9/1997	4,4'-DDT	0.0035	U	NA	8.42
SF-SL-41	5/9/1997	Aldrin	0.0018	U	NA	0.17
SF-SL-41	5/9/1997	alpha-BHC	0.0018	U	NA	0.45
SF-SL-41	5/9/1997	alpha-Chlordane	0.0018	U	NA	NA
SF-SL-41	5/9/1997	beta-BHC	0.0018	U	NA	1.59
SF-SL-41	5/9/1997	delta-BHC	0.0018	U	NA	NA
SF-SL-41	5/9/1997	Dieldrin	0.0035	U	NA	0.18
SF-SL-41	5/9/1997	Endosulfan I	0.0018	U	NA	6,132
SF-SL-41	5/9/1997	Endosulfan II	0.0035	U	NA	6,132
SF-SL-41	5/9/1997	Endosulfan sulfate	0.0035	U	NA	NA
SF-SL-41	5/9/1997	Endrin	0.0035	U	NA	307
SF-SL-41	5/9/1997	Endrin Aldehyde	0.0035	U	NA	NA
SF-SL-41	5/9/1997	Endrin ketone	0.0035	U	NA	NA

Table 4-37

**Summary of Analytical Results
SF-41 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-41	5/9/1997	gamma-BHC (Lindane)	0.0018	U	NA	2.20
SF-SL-41	5/9/1997	gamma-Chlordane	0.0018	U	NA	NA
SF-SL-41	5/9/1997	Heptachlor	0.0018	U	NA	0.64
SF-SL-41	5/9/1997	Heptachlor epoxide	0.0018	U	NA	0.31
SF-SL-41	5/9/1997	Methoxychlor	0.018	U	NA	5,110
SF-SL-41	5/9/1997	Toxaphene	0.18	U	NA	2.60
SF-SL-41	5/9/1997	Aroclor 1016	0.035	U	NA	40.88
SF-SL-41	5/9/1997	Aroclor 1221	0.072	U	NA	1.43
SF-SL-41	5/9/1997	Aroclor 1232	0.035	U	NA	1.43
SF-SL-41	5/9/1997	Aroclor 1242	0.035	U	NA	1.43
SF-SL-41	5/9/1997	Aroclor 1248	0.035	U	NA	1.43
SF-SL-41	5/9/1997	Aroclor 1254	0.035	U	NA	1.43
SF-SL-41	5/9/1997	Aroclor 1260	0.035	U	NA	1.43
SF-SL-41	5/9/1997	PCBs(total)	0.072	U	10	1.43
SF-SL-41	5/9/1997	Aluminum	3,310		NA	1,022,000
SF-SL-41	5/9/1997	Antimony	0.47	UJ	NA	408.8
SF-SL-41	5/9/1997	Arsenic	1.4		NA	1.91
SF-SL-41	5/9/1997	Barium	25		NA	204,400
SF-SL-41	5/9/1997	Beryllium	0.17		NA	2,044
SF-SL-41	5/9/1997	Cadmium	0.76	J	10	511
SF-SL-41	5/9/1997	Calcium	12,000		NA	NA
SF-SL-41	5/9/1997	Chromium	9.9		143	3,066
SF-SL-41	5/9/1997	Cobalt	9.9		NA	NA
SF-SL-41	5/9/1997	Copper	15.9		NA	40,880
SF-SL-41	5/9/1997	Cyanide	0.54	UJ	35	20,440
SF-SL-41	5/9/1997	Iron	5,150		NA	715,400
SF-SL-41	5/9/1997	Lead	52.9		NA	NA
SF-SL-41	5/9/1997	Magnesium	914		NA	NA
SF-SL-41	5/9/1997	Manganese	242		NA	20,440
SF-SL-41	5/9/1997	Mercury	0.05	U	NA	NA
SF-SL-41	5/9/1997	Nickel	7.3		NA	20,440
SF-SL-41	5/9/1997	Potassium	280		NA	NA
SF-SL-41	5/9/1997	Selenium	0.69	U	NA	5,110
SF-SL-41	5/9/1997	Silver	0.22	U	NA	5,110
SF-SL-41	5/9/1997	Sodium	79.4		NA	NA
SF-SL-41	5/9/1997	Thallium	0.75		NA	71.54
SF-SL-41	5/9/1997	Vanadium	5.7		NA	1,022
SF-SL-41	5/9/1997	Zinc	36.4		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) J - result is estimated due to minor quality control anomaly.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-41 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-38

**Summary of Analytical Results
SF-41 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF41BNE01	4/8/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF41BNE01	4/8/2006	TCE	0.001	U	0.7	7.15
SF41BNE01	4/8/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF41BNW01	4/8/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF41BNW01	4/8/2006	TCE	0.001	U	0.7	7.15
SF41BNW01	4/8/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF41BSE01	4/8/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF41BSE01	4/8/2006	TCE	0.001	U	0.7	7.15
SF41BSE01	4/8/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF41BSW01	4/8/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF41BSW01	4/8/2006	TCE	0.001	U	0.7	7.15
SF41BSW01	4/8/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP10	4/8/2006	c-1,2-Dichloroethene	0.0056	U	0.25	10,220
DUP10	4/8/2006	TCE	0.0011	U	0.7	7.15
DUP10	4/8/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF41CE01	4/8/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF41CE01	4/8/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF41CE01	4/8/2006	PCBs(total)	0.071	U	10	1.43
SF41CE01	4/8/2006	Cadmium	0.11	U	10	511
SF41CE01	4/8/2006	Chromium	4.6		143	3,066
SF41CE01	4/8/2006	Cyanide	0.5	U	35	20,440
SF41CN01	4/8/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF41CN01	4/8/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF41CN01	4/8/2006	PCBs(total)	0.069	U	10	1.43
SF41CN01	4/8/2006	Cadmium	0.1	U	10	511
SF41CN01	4/8/2006	Chromium	3.7		143	3,066
SF41CN01	4/8/2006	Cyanide	0.5	U	35	20,440
SF41CS01	4/8/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF41CS01	4/8/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF41CS01	4/8/2006	PCBs(total)	0.072	U	10	1.43
SF41CS01	4/8/2006	Cadmium	0.11	U	10	511
SF41CS01	4/8/2006	Chromium	1.7	B	143	3,066
SF41CS01	4/8/2006	Cyanide	0.5	U	35	20,440
SF41CW01	4/8/2006	Benzo(a)pyrene	0.04		0.29	0.392
SF41CW01	4/8/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF41CW01	4/8/2006	PCBs(total)	0.071	U	10	1.43
SF41CW01	4/8/2006	Cadmium	6.9		10	511
SF41CW01	4/8/2006	Chromium	43		143	3,066
SF41CW01	4/8/2006	Cyanide	0.5	U	35	20,440
DUP11	4/8/2006	Benzo(a)pyrene	0.037	U	0.29	0.392
DUP11	4/8/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
DUP11	4/8/2006	PCBs(total)	0.075	U	10	1.43

Table 4-38

**Summary of Analytical Results
SF-41 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
DUP11	4/8/2006	Cadmium	0.11	U	10	511
DUP11	4/8/2006	Chromium	6.4		143	3,066
DUP11	4/8/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-41 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-39

**Summary of Analytical Results
SF-42 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-42	5/14/1997	1,1,1-Trichloroethane	0.011	U	NA	286,160
SF-SL-42	5/14/1997	1,1,2,2-Tetrachloroethane	0.011	U	NA	14.31
SF-SL-42	5/14/1997	1,1,2-Trichloroethane	0.011	U	NA	50.20
SF-SL-42	5/14/1997	1,1-Dichloroethane	0.011	U	NA	204,400
SF-SL-42	5/14/1997	1,1-Dichloroethene	0.011	U	NA	51,100
SF-SL-42	5/14/1997	1,2-Dichloroethane	0.011	U	NA	31.45
SF-SL-42	5/14/1997	1,2-Dichloroethene (total)	0.001	J	0.25	9,198
SF-SL-42	5/14/1997	1,2-Dichloropropane	0.011	U	NA	42.08
SF-SL-42	5/14/1997	2-Butanone	0.011	U	NA	613,200
SF-SL-42	5/14/1997	2-Hexanone	0.011	U	NA	NA
SF-SL-42	5/14/1997	4-Methyl-2-pentanone	0.011	U	NA	NA
SF-SL-42	5/14/1997	Acetone	0.009	J	NA	919,800
SF-SL-42	5/14/1997	Benzene	0.011	U	NA	52.03
SF-SL-42	5/14/1997	Bromodichloromethane	0.011	U	NA	46.15
SF-SL-42	5/14/1997	Bromoform	0.011	U	NA	362.23
SF-SL-42	5/14/1997	Bromomethane	0.011	U	NA	1,430.8
SF-SL-42	5/14/1997	c-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-42	5/14/1997	Carbon Tetrachloride	0.011	U	NA	22.01
SF-SL-42	5/14/1997	Chlorobenzene	0.011	U	NA	20,440
SF-SL-42	5/14/1997	Chloroethane	0.011	U	NA	986.76
SF-SL-42	5/14/1997	Chloroform	0.011	U	NA	10,220
SF-SL-42	5/14/1997	Chloromethane	0.011	U	NA	NA
SF-SL-42	5/14/1997	Dibromochloromethane	0.011	U	NA	34.07
SF-SL-42	5/14/1997	Ethylbenzene	0.011	U	NA	102,200
SF-SL-42	5/14/1997	Methylene Chloride	0.011	U	NA	381.55
SF-SL-42	5/14/1997	Styrene	0.011	U	NA	204,400
SF-SL-42	5/14/1997	t-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-42	5/14/1997	TCE	0.018		0.7	7.15
SF-SL-42	5/14/1997	Tetrachloroethene	0.0005	J	1.4	5.30
SF-SL-42	5/14/1997	Toluene	0.011	U	NA	81,760
SF-SL-42	5/14/1997	Vinyl Chloride	0.011	U	NA	3.97
SF-SL-42	5/14/1997	Xylene (Total)	0.011	U	NA	204,400
SF-SL-42	5/14/1997	1,2,4-Trimethylbenzene	0.71	U	NA	NA
SF-SL-42	5/14/1997	1,2-Dichlorobenzene	0.71	U	NA	91,980
SF-SL-42	5/14/1997	1,3-Dichlorobenzene	0.71	U	NA	3,066
SF-SL-42	5/14/1997	1,4-Dichlorobenzene	0.71	U	NA	119.23
SF-SL-42	5/14/1997	2,4,5-Trichlorophenol	1.7	U	NA	102,200
SF-SL-42	5/14/1997	2,4,6-Trichlorophenol	0.71	U	NA	260.15
SF-SL-42	5/14/1997	2,4-Dichlorophenol	0.71	U	NA	3,066
SF-SL-42	5/14/1997	2,4-Dimethylphenol	0.71	U	NA	20,440
SF-SL-42	5/14/1997	2,4-Dinitrophenol	1.7	U	NA	2,044
SF-SL-42	5/14/1997	2,4-Dinitrotoluene	0.71	U	NA	2,044
SF-SL-42	5/14/1997	2,6-Dinitrotoluene	0.71	U	NA	1,022
SF-SL-42	5/14/1997	2-Chloronaphthalene	0.71	U	NA	81,760
SF-SL-42	5/14/1997	2-Chlorophenol	0.71	U	NA	5,110

Table 4-39

**Summary of Analytical Results
SF-42 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-42	5/14/1997	2-Methylnaphthalene	0.008	J	NA	4,088
SF-SL-42	5/14/1997	2-Methylphenol	0.71	U	NA	51,100
SF-SL-42	5/14/1997	2-Nitroaniline	1.7	U	NA	NA
SF-SL-42	5/14/1997	2-Nitrophenol	0.71	U	NA	NA
SF-SL-42	5/14/1997	3,3'-Dichlorobenzidine	0.71	U	NA	6.36
SF-SL-42	5/14/1997	3+4-Methylphenol	0.71	U	NA	5,110
SF-SL-42	5/14/1997	3-Nitroaniline	1.7	U	NA	NA
SF-SL-42	5/14/1997	4,6-Dinitro-2-methylphenol	1.7	U	NA	NA
SF-SL-42	5/14/1997	4-Bromophenyl phenyl ether	0.71	U	NA	NA
SF-SL-42	5/14/1997	4-Chloro-3-methylphenol	0.71	U	NA	NA
SF-SL-42	5/14/1997	4-Chloroaniline	0.71	U	NA	4,088
SF-SL-42	5/14/1997	4-Chlorophenyl phenyl ether	0.71	U	NA	NA
SF-SL-42	5/14/1997	4-Nitroaniline	1.7	U	NA	NA
SF-SL-42	5/14/1997	4-Nitrophenol	1.7	U	NA	NA
SF-SL-42	5/14/1997	Acenaphthene	0.71	U	NA	61,320
SF-SL-42	5/14/1997	Acenaphthylene	0.71	U	NA	NA
SF-SL-42	5/14/1997	Anthracene	0.013	J	NA	306,600
SF-SL-42	5/14/1997	Benzo(a)anthracene	0.04	J	NA	3.92
SF-SL-42	5/14/1997	Benzo(a)pyrene	0.043	J	0.29	0.39
SF-SL-42	5/14/1997	Benzo(b)fluoranthene	0.065	J	NA	3.92
SF-SL-42	5/14/1997	Benzo(g,h,i)perylene	0.03	J	NA	NA
SF-SL-42	5/14/1997	Benzo(k)fluoranthene	0.023	J	NA	39.20
SF-SL-42	5/14/1997	bis(2-Chloroethoxy)methane	0.71	U	NA	NA
SF-SL-42	5/14/1997	bis(2-Chloroethyl)ether	0.71	U	NA	2.60
SF-SL-42	5/14/1997	bis(2-Chloroisopropyl)ether	0.71	U	NA	40.88
SF-SL-42	5/14/1997	bis(2-Ethylhexyl)phthalate	0.76		NA	204.40
SF-SL-42	5/14/1997	Carbazole	0.009	J	NA	143.08
SF-SL-42	5/14/1997	Chrysene	0.056	J	NA	392
SF-SL-42	5/14/1997	Dibenz(a,h)anthracene	0.71	U	0.29	0.39
SF-SL-42	5/14/1997	Dibenzofuran	0.71	U	NA	1,022
SF-SL-42	5/14/1997	Diethyl phthalate	0.71	U	NA	817,600
SF-SL-42	5/14/1997	Dimethyl phthalate	0.92		NA	NA
SF-SL-42	5/14/1997	Di-n-butyl phthalate	0.19	J	NA	102,200
SF-SL-42	5/14/1997	Di-n-octyl phthalate	0.71	U	NA	NA
SF-SL-42	5/14/1997	Fluoranthene	0.094	J	NA	40,880
SF-SL-42	5/14/1997	Fluorene	0.008	J	NA	40,880
SF-SL-42	5/14/1997	Hexachlorobenzene	0.71	U	NA	1.79
SF-SL-42	5/14/1997	Hexachlorobutadiene	0.71	U	NA	36.69
SF-SL-42	5/14/1997	Hexachlorocyclopentadiene	0.71	U	NA	6,132
SF-SL-42	5/14/1997	Hexachloroethane	0.71	U	NA	204.40
SF-SL-42	5/14/1997	Indeno(1,2,3-cd)pyrene	0.026	J	NA	3.92
SF-SL-42	5/14/1997	Isophorone	0.013	J	NA	3012.21
SF-SL-42	5/14/1997	Naphthalene	0.012	J	NA	20,440
SF-SL-42	5/14/1997	Nitrobenzene	0.71	U	NA	511
SF-SL-42	5/14/1997	N-Nitrosodi-n-propylamine	0.71	U	NA	0.41

Table 4-39

**Summary of Analytical Results
SF-42 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-42	5/14/1997	N-Nitrosodiphenylamine	0.71	U	NA	584
SF-SL-42	5/14/1997	Pentachlorophenol	1.7	UJ	NA	23.85
SF-SL-42	5/14/1997	Phenanthrene	0.065	J	NA	NA
SF-SL-42	5/14/1997	Phenol	0.71	U	NA	306,600
SF-SL-42	5/14/1997	Pyrene	0.074	J	NA	30,660
SF-SL-42	5/14/1997	4,4'-DDD	0.013	J	NA	11.92
SF-SL-42	5/14/1997	4,4'-DDE	0.012		NA	8.42
SF-SL-42	5/14/1997	4,4'-DDT	0.098	J	NA	8.42
SF-SL-42	5/14/1997	Aldrin	0.0018	U	NA	0.17
SF-SL-42	5/14/1997	alpha-BHC	0.0018	U	NA	0.45
SF-SL-42	5/14/1997	alpha-Chlordane	0.0018	U	NA	NA
SF-SL-42	5/14/1997	beta-BHC	0.0018	U	NA	1.59
SF-SL-42	5/14/1997	delta-BHC	0.0018	U	NA	NA
SF-SL-42	5/14/1997	Dieldrin	0.0036	U	NA	0.18
SF-SL-42	5/14/1997	Endosulfan I	0.0018	U	NA	6,132
SF-SL-42	5/14/1997	Endosulfan II	0.0036	U	NA	6,132
SF-SL-42	5/14/1997	Endosulfan sulfate	0.0036	U	NA	NA
SF-SL-42	5/14/1997	Endrin	0.0036	U	NA	307
SF-SL-42	5/14/1997	Endrin Aldehyde	0.0036	U	NA	NA
SF-SL-42	5/14/1997	Endrin ketone	0.0036	U	NA	NA
SF-SL-42	5/14/1997	gamma-BHC (Lindane)	0.0018	U	NA	2.20
SF-SL-42	5/14/1997	gamma-Chlordane	0.0018	U	NA	NA
SF-SL-42	5/14/1997	Heptachlor	0.0018	U	NA	0.64
SF-SL-42	5/14/1997	Heptachlor epoxide	0.0018	U	NA	0.31
SF-SL-42	5/14/1997	Methoxychlor	0.018	U	NA	5,110
SF-SL-42	5/14/1997	Toxaphene	0.18	U	NA	2.60
SF-SL-42	5/14/1997	Aroclor 1016	0.036	U	NA	40.88
SF-SL-42	5/14/1997	Aroclor 1221	0.072	U	NA	1.43
SF-SL-42	5/14/1997	Aroclor 1232	0.036	U	NA	1.43
SF-SL-42	5/14/1997	Aroclor 1242	0.036	U	NA	1.43
SF-SL-42	5/14/1997	Aroclor 1248	0.036	U	NA	1.43
SF-SL-42	5/14/1997	Aroclor 1254	0.066		NA	1.43
SF-SL-42	5/14/1997	Aroclor 1260	0.058		NA	1.43
SF-SL-42	5/14/1997	PCBs(total)	0.124		10	1.43
SF-SL-42	5/14/1997	Aluminum	5,260		NA	1,022,000
SF-SL-42	5/14/1997	Antimony	0.73		NA	408.8
SF-SL-42	5/14/1997	Arsenic	1.7		NA	1.91
SF-SL-42	5/14/1997	Barium	51.1		NA	204,400
SF-SL-42	5/14/1997	Beryllium	0.23		NA	2,044
SF-SL-42	5/14/1997	Cadmium	1.4		10	511
SF-SL-42	5/14/1997	Calcium	3,590		NA	NA
SF-SL-42	5/14/1997	Chromium	14.2		143	3,066
SF-SL-42	5/14/1997	Cobalt	5		NA	NA
SF-SL-42	5/14/1997	Copper	42.7		NA	40,880
SF-SL-42	5/14/1997	Cyanide	0.54	U	35	20,440

Table 4-39

**Summary of Analytical Results
SF-42 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-42	5/14/1997	Iron	7,920		NA	715,400
SF-SL-42	5/14/1997	Lead	37.2		NA	NA
SF-SL-42	5/14/1997	Magnesium	1,010		NA	NA
SF-SL-42	5/14/1997	Manganese	248		NA	20,440
SF-SL-42	5/14/1997	Mercury	0.12		NA	NA
SF-SL-42	5/14/1997	Nickel	12		NA	20,440
SF-SL-42	5/14/1997	Potassium	329		NA	NA
SF-SL-42	5/14/1997	Selenium	0.69	U	NA	5,110
SF-SL-42	5/14/1997	Silver	2.6		NA	5,110
SF-SL-42	5/14/1997	Sodium	356		NA	NA
SF-SL-42	5/14/1997	Thallium	0.67	U	NA	71.54
SF-SL-42	5/14/1997	Vanadium	8		NA	1,022
SF-SL-42	5/14/1997	Zinc	143		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) SF-42 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-40

**Summary of Analytical Results
SF-42 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF42BNE01	4/3/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF42BNE01	4/3/2006	TCE	0.001	U	0.7	7.15
SF42BNE01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF42BNW01	4/3/2006	c-1,2-Dichloroethene	0.0022	J	0.25	10,220
SF42BNW01	4/3/2006	TCE	0.0038		0.7	7.15
SF42BNW01	4/3/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF42BSE01	4/3/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF42BSE01	4/3/2006	TCE	0.001	U	0.7	7.15
SF42BSE01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF42BSW01	4/3/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF42BSW01	4/3/2006	TCE	0.0016		0.7	7.15
SF42BSW01	4/3/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF42CNE01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF42CNE01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF42CNE01	4/3/2006	PCBs(total)	0.07	U	10	1.43
SF42CNE01	4/3/2006	Cadmium	0.13	U	10	511
SF42CNE01	4/3/2006	Chromium	14.4		143	3,066
SF42CNE01	4/3/2006	Zinc	13.9		NA	306,600
SF42CNE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF42CNW01	4/3/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF42CNW01	4/3/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF42CNW01	4/3/2006	PCBs(total)	0.072	U	10	1.43
SF42CNW01	4/3/2006	Cadmium	0.13	U	10	511
SF42CNW01	4/3/2006	Chromium	6.1		143	3,066
SF42CNW01	4/3/2006	Zinc	24.6		NA	306,600
SF42CNW01	4/3/2006	Cyanide	0.5	U	35	20,440
SF42CSE01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF42CSE01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF42CSE01	4/3/2006	PCBs(total)	0.071	U	10	1.43
SF42CSE01	4/3/2006	Cadmium	0.13	U	10	511
SF42CSE01	4/3/2006	Chromium	6		143	3,066
SF42CSE01	4/3/2006	Zinc	9.4		NA	306,600
SF42CSE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF42CSW01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF42CSW01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF42CSW01	4/3/2006	PCBs(total)	0.071	U	10	1.43
SF42CSW01	4/3/2006	Cadmium	0.13	U	10	511
SF42CSW01	4/3/2006	Chromium	3.9		143	3,066
SF42CSW01	4/3/2006	Zinc	9.6		NA	306,600
SF42CSW01	4/3/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) SF-42 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-41

Summary of Analytical Results
SF-43 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-43	5/14/1997	1,1,1-Trichloroethane	0.015	J	NA	286,160
SF-SL-43	5/14/1997	1,1,2,2-Tetrachloroethane	0.061	U	NA	14.31
SF-SL-43	5/14/1997	1,1,2-Trichloroethane	0.061	U	NA	50.20
SF-SL-43	5/14/1997	1,1-Dichloroethane	0.061	U	NA	204,400
SF-SL-43	5/14/1997	1,1-Dichloroethene	0.061	U	NA	51,100
SF-SL-43	5/14/1997	1,2-Dichloroethane	0.061	U	NA	31.45
SF-SL-43	5/14/1997	1,2-Dichloroethene (total)	0.061	U	0.25	9,198
SF-SL-43	5/14/1997	1,2-Dichloropropane	0.061	U	NA	42.08
SF-SL-43	5/14/1997	2-Butanone	0.061	U	NA	613,200
SF-SL-43	5/14/1997	2-Hexanone	0.061	U	NA	NA
SF-SL-43	5/14/1997	4-Methyl-2-pentanone	0.061	U	NA	NA
SF-SL-43	5/14/1997	Acetone	0.061	U	NA	919,800
SF-SL-43	5/14/1997	Benzene	0.061	U	NA	52.03
SF-SL-43	5/14/1997	Bromodichloromethane	0.061	U	NA	46.15
SF-SL-43	5/14/1997	Bromoform	0.061	U	NA	362.23
SF-SL-43	5/14/1997	Bromomethane	0.061	U	NA	1,430.8
SF-SL-43	5/14/1997	c-1,3-Dichloropropene	0.061	U	NA	NA
SF-SL-43	5/14/1997	Carbon Tetrachloride	0.061	U	NA	22.01
SF-SL-43	5/14/1997	Chlorobenzene	0.061	U	NA	20,440
SF-SL-43	5/14/1997	Chloroethane	0.061	U	NA	986.76
SF-SL-43	5/14/1997	Chloroform	0.061	U	NA	10,220
SF-SL-43	5/14/1997	Chloromethane	0.061	U	NA	NA
SF-SL-43	5/14/1997	Dibromochloromethane	0.061	U	NA	34.07
SF-SL-43	5/14/1997	Ethylbenzene	0.061	U	NA	102,200
SF-SL-43	5/14/1997	Methylene Chloride	0.061	U	NA	381.55
SF-SL-43	5/14/1997	Styrene	0.061	U	NA	204,400
SF-SL-43	5/14/1997	t-1,3-Dichloropropene	0.061	U	NA	NA
SF-SL-43	5/14/1997	TCE	0.44		0.7	7.15
SF-SL-43	5/14/1997	Tetrachloroethene	0.098		1.4	5.30
SF-SL-43	5/14/1997	Toluene	0.061	U	NA	81,760
SF-SL-43	5/14/1997	Vinyl Chloride	0.061	U	NA	3.97
SF-SL-43	5/14/1997	Xylene (Total)	0.061	U	NA	204,400
SF-SL-43	5/14/1997	1,2,4-Trimethylbenzene	10	R	NA	NA
SF-SL-43	5/14/1997	1,2-Dichlorobenzene	10	R	NA	91,980
SF-SL-43	5/14/1997	1,3-Dichlorobenzene	10	R	NA	3,066
SF-SL-43	5/14/1997	1,4-Dichlorobenzene	10	R	NA	119.23
SF-SL-43	5/14/1997	2,4,5-Trichlorophenol	24	R	NA	102,200
SF-SL-43	5/14/1997	2,4,6-Trichlorophenol	10	R	NA	260.15
SF-SL-43	5/14/1997	2,4-Dichlorophenol	10	R	NA	3,066
SF-SL-43	5/14/1997	2,4-Dimethylphenol	10	R	NA	20,440
SF-SL-43	5/14/1997	2,4-Dinitrophenol	24	R	NA	2,044
SF-SL-43	5/14/1997	2,4-Dinitrotoluene	10	R	NA	2,044
SF-SL-43	5/14/1997	2,6-Dinitrotoluene	10	R	NA	1,022
SF-SL-43	5/14/1997	2-Chloronaphthalene	10	R	NA	81,760
SF-SL-43	5/14/1997	2-Chlorophenol	10	R	NA	5,110
SF-SL-43	5/14/1997	2-Methylnaphthalene	0.22	J	NA	4,088
SF-SL-43	5/14/1997	2-Methylphenol	10	R	NA	51,100
SF-SL-43	5/14/1997	2-Nitroaniline	0.25	J	NA	NA
SF-SL-43	5/14/1997	2-Nitrophenol	10	R	NA	NA
SF-SL-43	5/14/1997	3,3'-Dichlorobenzidine	10	R	NA	6.36
SF-SL-43	5/14/1997	3+4-Methylphenol	10	R	NA	5,110
SF-SL-43	5/14/1997	3-Nitroaniline	24	R	NA	NA
SF-SL-43	5/14/1997	4,6-Dinitro-2-methylphenol	24	R	NA	NA
SF-SL-43	5/14/1997	4-Bromophenyl phenyl ether	10	R	NA	NA
SF-SL-43	5/14/1997	4-Chloro-3-methylphenol	10	R	NA	NA

Table 4-41

**Summary of Analytical Results
SF-43 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-43	5/14/1997	4-Chloroaniline	10	R	NA	4,088
SF-SL-43	5/14/1997	4-Chlorophenyl phenyl ether	10	R	NA	NA
SF-SL-43	5/14/1997	4-Nitroaniline	24	R	NA	NA
SF-SL-43	5/14/1997	4-Nitrophenol	24	R	NA	NA
SF-SL-43	5/14/1997	Acenaphthene	10	R	NA	61,320
SF-SL-43	5/14/1997	Acenaphthylene	10	R	NA	NA
SF-SL-43	5/14/1997	Anthracene	10	R	NA	306,600
SF-SL-43	5/14/1997	Benzo(a)anthracene	10	R	NA	3.92
SF-SL-43	5/14/1997	Benzo(a)pyrene	10	R	0.29	0.39
SF-SL-43	5/14/1997	Benzo(b)fluoranthene	10	R	NA	3.92
SF-SL-43	5/14/1997	Benzo(g,h,i)perylene	10	R	NA	NA
SF-SL-43	5/14/1997	Benzo(k)fluoranthene	10	R	NA	39.20
SF-SL-43	5/14/1997	bis(2-Chloroethoxy)methane	10	R	NA	NA
SF-SL-43	5/14/1997	bis(2-Chloroethyl)ether	10	R	NA	2.60
SF-SL-43	5/14/1997	bis(2-Chloroisopropyl)ether	10	R	NA	40.88
SF-SL-43	5/14/1997	bis(2-Ethylhexyl)phthalate	3.8	J	NA	204.40
SF-SL-43	5/14/1997	Carbazole	10	R	NA	143.08
SF-SL-43	5/14/1997	Chrysene	10	R	NA	392
SF-SL-43	5/14/1997	Dibenz(a,h)anthracene	10	R	0.29	0.39
SF-SL-43	5/14/1997	Dibenzofuran	10	R	NA	1,022
SF-SL-43	5/14/1997	Diethyl phthalate	10	R	NA	817,600
SF-SL-43	5/14/1997	Dimethyl phthalate	10	R	NA	NA
SF-SL-43	5/14/1997	Di-n-butyl phthalate	1.3	J	NA	102,200
SF-SL-43	5/14/1997	Di-n-octyl phthalate	10	R	NA	NA
SF-SL-43	5/14/1997	Fluoranthene	10	R	NA	40,880
SF-SL-43	5/14/1997	Fluorene	10	R	NA	40,880
SF-SL-43	5/14/1997	Hexachlorobenzene	10	R	NA	1.79
SF-SL-43	5/14/1997	Hexachlorobutadiene	10	R	NA	36.69
SF-SL-43	5/14/1997	Hexachlorocyclopentadiene	10	R	NA	6,132
SF-SL-43	5/14/1997	Hexachloroethane	10	R	NA	204.40
SF-SL-43	5/14/1997	Indeno(1,2,3-cd)pyrene	10	R	NA	3.92
SF-SL-43	5/14/1997	Isophorone	10	R	NA	3012.21
SF-SL-43	5/14/1997	Naphthalene	0.25	J	NA	20,440
SF-SL-43	5/14/1997	Nitrobenzene	10	R	NA	511
SF-SL-43	5/14/1997	N-Nitrosodi-n-propylamine	10	R	NA	0.41
SF-SL-43	5/14/1997	N-Nitrosodiphenylamine	10	R	NA	584
SF-SL-43	5/14/1997	Pentachlorophenol	24	R	NA	23.85
SF-SL-43	5/14/1997	Phenanthrene	0.27	J	NA	NA
SF-SL-43	5/14/1997	Phenol	0.26	J	NA	306,600
SF-SL-43	5/14/1997	Pyrene	10	R	NA	30,660
SF-SL-43	5/14/1997	4,4'-DDD	0.025	J	NA	11.92
SF-SL-43	5/14/1997	4,4'-DDE	0.013	J	NA	8.42
SF-SL-43	5/14/1997	4,4'-DDT	0.004	U	NA	8.42
SF-SL-43	5/14/1997	Aldrin	0.0021	U	NA	0.17
SF-SL-43	5/14/1997	alpha-BHC	0.0021	U	NA	0.45
SF-SL-43	5/14/1997	alpha-Chlordane	0.0037	J	NA	NA
SF-SL-43	5/14/1997	beta-BHC	0.0021	U	NA	1.59
SF-SL-43	5/14/1997	delta-BHC	0.0021	U	NA	NA
SF-SL-43	5/14/1997	Dieldrin	0.004	U	NA	0.18
SF-SL-43	5/14/1997	Endosulfan I	0.0021	U	NA	6,132
SF-SL-43	5/14/1997	Endosulfan II	0.004	U	NA	6,132
SF-SL-43	5/14/1997	Endosulfan sulfate	0.004	U	NA	NA
SF-SL-43	5/14/1997	Endrin	0.0079	J	NA	307
SF-SL-43	5/14/1997	Endrin Aldehyde	0.004	U	NA	NA
SF-SL-43	5/14/1997	Endrin ketone	0.004	U	NA	NA

Table 4-41

**Summary of Analytical Results
SF-43 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-43	5/14/1997	gamma-BHC (Lindane)	0.0021	U	NA	2.20
SF-SL-43	5/14/1997	gamma-Chlordane	0.0021	U	NA	NA
SF-SL-43	5/14/1997	Heptachlor	0.0021	U	NA	0.64
SF-SL-43	5/14/1997	Heptachlor epoxide	0.0021	U	NA	0.31
SF-SL-43	5/14/1997	Methoxychlor	0.021	U	NA	5,110
SF-SL-43	5/14/1997	Toxaphene	0.21	U	NA	2.60
SF-SL-43	5/14/1997	Aroclor 1016	0.04	U	NA	40.88
SF-SL-43	5/14/1997	Aroclor 1221	0.081	U	NA	1.43
SF-SL-43	5/14/1997	Aroclor 1232	0.04	U	NA	1.43
SF-SL-43	5/14/1997	Aroclor 1242	0.04	U	NA	1.43
SF-SL-43	5/14/1997	Aroclor 1248	0.04	U	NA	1.43
SF-SL-43	5/14/1997	Aroclor 1254	1.4		NA	1.43
SF-SL-43	5/14/1997	Aroclor 1260	0.04	U	NA	1.43
SF-SL-43	5/14/1997	PCBs(total)	1.4		10	1.43
SF-SL-43	5/14/1997	Aluminum	20,400		NA	1,022,000
SF-SL-43	5/14/1997	Antimony	0.97		NA	408.8
SF-SL-43	5/14/1997	Arsenic	1.6		NA	1.91
SF-SL-43	5/14/1997	Barium	48.8		NA	204,400
SF-SL-43	5/14/1997	Beryllium	0.41		NA	2,044
SF-SL-43	5/14/1997	Cadmium	5.7		10	511
SF-SL-43	5/14/1997	Calcium	30,500		NA	NA
SF-SL-43	5/14/1997	Chromium	63.6		143	3,066
SF-SL-43	5/14/1997	Cobalt	4.6		NA	NA
SF-SL-43	5/14/1997	Copper	145		NA	40,880
SF-SL-43	5/14/1997	Cyanide	0.61	U	35	20,440
SF-SL-43	5/14/1997	Iron	12,200		NA	715,400
SF-SL-43	5/14/1997	Lead	126		NA	NA
SF-SL-43	5/14/1997	Magnesium	3,010		NA	NA
SF-SL-43	5/14/1997	Manganese	144		NA	20,440
SF-SL-43	5/14/1997	Mercury	0.24		NA	NA
SF-SL-43	5/14/1997	Nickel	13.2		NA	20,440
SF-SL-43	5/14/1997	Potassium	699		NA	NA
SF-SL-43	5/14/1997	Selenium	0.78	U	NA	5,110
SF-SL-43	5/14/1997	Silver	0.89		NA	5,110
SF-SL-43	5/14/1997	Sodium	935		NA	NA
SF-SL-43	5/14/1997	Thallium	0.77		NA	71.54
SF-SL-43	5/14/1997	Vanadium	24.5		NA	1,022
SF-SL-43	5/14/1997	Zinc	176		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) R - reported result is from a re-analysis.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) SF-43 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43BNE01	4/3/2006	c-1,2-Dichloroethene	0.0048	U	0.25	10,220
SF43BNE01	4/3/2006	TCE	0.001	U	0.7	7.15
SF43BNE01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF43BNE01	4/3/2006	1,2,4-Trichlorobenzene	0.034	U	NA	10,220
SF43BNE01	4/3/2006	1,2-Dichlorobenzene	0.34	U	NA	91,980
SF43BNE01	4/3/2006	1,3-Dichlorobenzene	0.34	U	NA	3,066
SF43BNE01	4/3/2006	1,4-Dichlorobenzene	0.34	U	NA	119.23
SF43BNE01	4/3/2006	2,4,5-Trichlorophenol	0.34	U	NA	102,200
SF43BNE01	4/3/2006	2,4-Dichlorophenol	0.34	U	NA	3,066
SF43BNE01	4/3/2006	2,4-Dinitrophenol	1	U	NA	2,044
SF43BNE01	4/3/2006	2,6-Dinitrotoluene	0.067	U	NA	1,022
SF43BNE01	4/3/2006	2-Chlorophenol	0.34	U	NA	5,110
SF43BNE01	4/3/2006	2-Methylphenol	0.34	U	NA	51,100
SF43BNE01	4/3/2006	2-Nitrophenol	0.34	U	NA	NA
SF43BNE01	4/3/2006	3+4-Methylphenol	0.34	U	NA	5,110
SF43BNE01	4/3/2006	3-Nitroaniline	0.67	U	NA	NA
SF43BNE01	4/3/2006	4-Chloroaniline	0.34	U	NA	4,088
SF43BNE01	4/3/2006	4-Nitrophenol	1	U	NA	NA
SF43BNE01	4/3/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF43BNE01	4/3/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF43BNE01	4/3/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF43BNE01	4/3/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF43BNE01	4/3/2006	Chrysene	0.34	U	NA	392
SF43BNE01	4/3/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF43BNE01	4/3/2006	Dibenzofuran	0.34	U	NA	1,022
SF43BNE01	4/3/2006	Diethyl phthalate	0.34	U	NA	817,600
SF43BNE01	4/3/2006	Dimethyl phthalate	0.34	U	NA	NA
SF43BNE01	4/3/2006	Hexachlorobenzene	0.034	U	NA	1.79
SF43BNE01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF43BNE01	4/3/2006	Isophorone	0.34	U	NA	3,012.21
SF43BNE01	4/3/2006	Pentachlorophenol	1	U	NA	23.85
SF43BNE01	4/3/2006	Phenol	0.34	U	NA	306,600
SF43BNE01	4/3/2006	PCBs(total)	0.068	U	10	1.43
SF43BNE01	4/3/2006	Cadmium	0.12	U	10	511
SF43BNE01	4/3/2006	Chromium	2.6		143	3,066
SF43BNE01	4/3/2006	Copper	2	B	NA	40,880
SF43BNE01	4/3/2006	Mercury	0.014	U	NA	NA
SF43BNE01	4/3/2006	Zinc	4.3	B	NA	306,600
SF43BNE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43BNW01	4/3/2006	c-1,2-Dichloroethene	0.0056	U	0.25	10,220
SF43BNW01	4/3/2006	TCE	0.0011	U	0.7	7.15
SF43BNW01	4/3/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF43BNW01	4/3/2006	1,2,4-Trichlorobenzene	0.038	U	NA	10,220
SF43BNW01	4/3/2006	1,2-Dichlorobenzene	0.38	U	NA	91,980
SF43BNW01	4/3/2006	1,3-Dichlorobenzene	0.38	U	NA	3,066
SF43BNW01	4/3/2006	1,4-Dichlorobenzene	0.38	U	NA	119.23
SF43BNW01	4/3/2006	2,4,5-Trichlorophenol	0.38	U	NA	102,200

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43BNW01	4/3/2006	2,4-Dichlorophenol	0.38	U	NA	3,066
SF43BNW01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF43BNW01	4/3/2006	2,6-Dinitrotoluene	0.075	U	NA	1,022
SF43BNW01	4/3/2006	2-Chlorophenol	0.38	U	NA	5,110
SF43BNW01	4/3/2006	2-Methylphenol	0.38	U	NA	51,100
SF43BNW01	4/3/2006	2-Nitrophenol	0.38	U	NA	NA
SF43BNW01	4/3/2006	3+4-Methylphenol	0.38	U	NA	5,110
SF43BNW01	4/3/2006	3-Nitroaniline	0.75	U	NA	NA
SF43BNW01	4/3/2006	4-Chloroaniline	0.38	U	NA	4,088
SF43BNW01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF43BNW01	4/3/2006	Benzo(a)anthracene	0.038	U	NA	3.92
SF43BNW01	4/3/2006	Benzo(a)pyrene	0.038	U	0.29	0.392
SF43BNW01	4/3/2006	Benzo(b)fluoranthene	0.038	U	NA	3.92
SF43BNW01	4/3/2006	Benzo(k)fluoranthene	0.038	U	NA	39.2
SF43BNW01	4/3/2006	Chrysene	0.38	U	NA	392
SF43BNW01	4/3/2006	Dibenz(a,h)anthracene	0.038	U	0.29	0.392
SF43BNW01	4/3/2006	Dibenzofuran	0.38	U	NA	1,022
SF43BNW01	4/3/2006	Diethyl phthalate	0.38	U	NA	817,600
SF43BNW01	4/3/2006	Dimethyl phthalate	0.38	U	NA	NA
SF43BNW01	4/3/2006	Hexachlorobenzene	0.038	U	NA	1.79
SF43BNW01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.038	U	NA	3.92
SF43BNW01	4/3/2006	Isophorone	0.38	U	NA	3,012.21
SF43BNW01	4/3/2006	Pentachlorophenol	1.1	U	NA	23.85
SF43BNW01	4/3/2006	Phenol	0.38	U	NA	306,600
SF43BNW01	4/3/2006	PCBs(total)	0.076	U	10	1.43
SF43BNW01	4/3/2006	Cadmium	0.14	U	10	511
SF43BNW01	4/3/2006	Chromium	9		143	3,066
SF43BNW01	4/3/2006	Copper	5.5	B	NA	40,880
SF43BNW01	4/3/2006	Mercury	0.019	U	NA	NA
SF43BNW01	4/3/2006	Zinc	13.6		NA	306,600
SF43BNW01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43BSE01	4/3/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF43BSE01	4/3/2006	TCE	0.001	U	0.7	7.15
SF43BSE01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF43BSE01	4/3/2006	1,2,4-Trichlorobenzene	0.034	U	NA	10,220
SF43BSE01	4/3/2006	1,2-Dichlorobenzene	0.34	U	NA	91,980
SF43BSE01	4/3/2006	1,3-Dichlorobenzene	0.34	U	NA	3,066
SF43BSE01	4/3/2006	1,4-Dichlorobenzene	0.34	U	NA	119.23
SF43BSE01	4/3/2006	2,4,5-Trichlorophenol	0.34	U	NA	102,200
SF43BSE01	4/3/2006	2,4-Dichlorophenol	0.34	U	NA	3,066
SF43BSE01	4/3/2006	2,4-Dinitrophenol	1	U	NA	2,044
SF43BSE01	4/3/2006	2,6-Dinitrotoluene	0.069	U	NA	1,022
SF43BSE01	4/3/2006	2-Chlorophenol	0.34	U	NA	5,110
SF43BSE01	4/3/2006	2-Methylphenol	0.34	U	NA	51,100
SF43BSE01	4/3/2006	2-Nitrophenol	0.34	U	NA	NA
SF43BSE01	4/3/2006	3+4-Methylphenol	0.34	U	NA	5,110
SF43BSE01	4/3/2006	3-Nitroaniline	0.69	U	NA	NA

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43BSE01	4/3/2006	4-Chloroaniline	0.34	U	NA	4,088
SF43BSE01	4/3/2006	4-Nitrophenol	1	U	NA	NA
SF43BSE01	4/3/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF43BSE01	4/3/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF43BSE01	4/3/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF43BSE01	4/3/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF43BSE01	4/3/2006	Chrysene	0.34	U	NA	392
SF43BSE01	4/3/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF43BSE01	4/3/2006	Dibenzofuran	0.34	U	NA	1,022
SF43BSE01	4/3/2006	Diethyl phthalate	0.34	U	NA	817,600
SF43BSE01	4/3/2006	Dimethyl phthalate	0.34	U	NA	NA
SF43BSE01	4/3/2006	Hexachlorobenzene	0.034	U	NA	1.79
SF43BSE01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.034	U	NA	3.92
SF43BSE01	4/3/2006	Isophorone	0.34	U	NA	3,012.21
SF43BSE01	4/3/2006	Pentachlorophenol	1	U	NA	23.85
SF43BSE01	4/3/2006	Phenol	0.34	U	NA	306,600
SF43BSE01	4/3/2006	PCBs(total)	0.069	U	10	1.43
SF43BSE01	4/3/2006	Cadmium	0.12	U	10	511
SF43BSE01	4/3/2006	Chromium	2.4		143	3,066
SF43BSE01	4/3/2006	Copper	2.3	B	NA	40,880
SF43BSE01	4/3/2006	Mercury	0.017	U	NA	NA
SF43BSE01	4/3/2006	Zinc	3.9	B	NA	306,600
SF43BSE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43BSW01	4/3/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF43BSW01	4/3/2006	TCE	0.001	U	0.7	7.15
SF43BSW01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF43BSW01	4/3/2006	1,2,4-Trichlorobenzene	0.037	U	NA	10,220
SF43BSW01	4/3/2006	1,2-Dichlorobenzene	0.37	U	NA	91,980
SF43BSW01	4/3/2006	1,3-Dichlorobenzene	0.37	U	NA	3,066
SF43BSW01	4/3/2006	1,4-Dichlorobenzene	0.37	U	NA	119.23
SF43BSW01	4/3/2006	2,4,5-Trichlorophenol	0.37	U	NA	102,200
SF43BSW01	4/3/2006	2,4-Dichlorophenol	0.37	U	NA	3,066
SF43BSW01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF43BSW01	4/3/2006	2,6-Dinitrotoluene	0.074	U	NA	1,022
SF43BSW01	4/3/2006	2-Chlorophenol	0.37	U	NA	5,110
SF43BSW01	4/3/2006	2-Methylphenol	0.37	U	NA	51,100
SF43BSW01	4/3/2006	2-Nitrophenol	0.37	U	NA	NA
SF43BSW01	4/3/2006	3+4-Methylphenol	0.37	U	NA	5,110
SF43BSW01	4/3/2006	3-Nitroaniline	0.74	U	NA	NA
SF43BSW01	4/3/2006	4-Chloroaniline	0.37	U	NA	4,088
SF43BSW01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF43BSW01	4/3/2006	Benzo(a)anthracene	0.037	U	NA	3.92
SF43BSW01	4/3/2006	Benzo(a)pyrene	0.037	U	0.29	0.392
SF43BSW01	4/3/2006	Benzo(b)fluoranthene	0.037	U	NA	3.92
SF43BSW01	4/3/2006	Benzo(k)fluoranthene	0.037	U	NA	39.2
SF43BSW01	4/3/2006	Chrysene	0.37	U	NA	392
SF43BSW01	4/3/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43BSW01	4/3/2006	Dibenzofuran	0.37	U	NA	1,022
SF43BSW01	4/3/2006	Diethyl phthalate	0.37	U	NA	817,600
SF43BSW01	4/3/2006	Dimethyl phthalate	0.37	U	NA	NA
SF43BSW01	4/3/2006	Hexachlorobenzene	0.037	U	NA	1.79
SF43BSW01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.037	U	NA	3.92
SF43BSW01	4/3/2006	Isophorone	0.37	U	NA	3,012.21
SF43BSW01	4/3/2006	Pentachlorophenol	1.1	U	NA	23.85
SF43BSW01	4/3/2006	Phenol	0.37	U	NA	306,600
SF43BSW01	4/3/2006	PCBs(total)	0.074	U	10	1.43
SF43BSW01	4/3/2006	Cadmium	0.13	U	10	511
SF43BSW01	4/3/2006	Chromium	8.6		143	3,066
SF43BSW01	4/3/2006	Copper	5.4		NA	40,880
SF43BSW01	4/3/2006	Mercury	0.018	U	NA	NA
SF43BSW01	4/3/2006	Zinc	13.3		NA	306,600
SF43BSW01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43CNE01	4/3/2006	1,2,4-Trichlorobenzene	0.077	U	NA	10,220
SF43CNE01	4/3/2006	1,2-Dichlorobenzene	0.77	U	NA	91,980
SF43CNE01	4/3/2006	1,3-Dichlorobenzene	0.77	U	NA	3,066
SF43CNE01	4/3/2006	1,4-Dichlorobenzene	0.77	U	NA	119.23
SF43CNE01	4/3/2006	2,4,5-Trichlorophenol	0.77	U	NA	102,200
SF43CNE01	4/3/2006	2,4-Dichlorophenol	0.77	U	NA	3,066
SF43CNE01	4/3/2006	2,4-Dinitrophenol	2.3	U	NA	2,044
SF43CNE01	4/3/2006	2,6-Dinitrotoluene	0.15	U	NA	1,022
SF43CNE01	4/3/2006	2-Chlorophenol	0.77	U	NA	5,110
SF43CNE01	4/3/2006	2-Methylphenol	0.77	U	NA	51,100
SF43CNE01	4/3/2006	2-Nitrophenol	0.77	U	NA	NA
SF43CNE01	4/3/2006	3+4-Methylphenol	0.77	U	NA	5,110
SF43CNE01	4/3/2006	3-Nitroaniline	1.5	U	NA	NA
SF43CNE01	4/3/2006	4-Chloroaniline	0.77	U	NA	4,088
SF43CNE01	4/3/2006	4-Nitrophenol	2.3	U	NA	NA
SF43CNE01	4/3/2006	Benzo(a)anthracene	0.077	U	NA	3.92
SF43CNE01	4/3/2006	Benzo(a)pyrene	0.077	U	0.29	0.392
SF43CNE01	4/3/2006	Benzo(b)fluoranthene	0.077	U	NA	3.92
SF43CNE01	4/3/2006	Benzo(k)fluoranthene	0.077	U	NA	39.2
SF43CNE01	4/3/2006	Chrysene	0.77	U	NA	392
SF43CNE01	4/3/2006	Dibenz(a,h)anthracene	0.077	U	0.29	0.392
SF43CNE01	4/3/2006	Dibenzofuran	0.77	U	NA	1,022
SF43CNE01	4/3/2006	Diethyl phthalate	0.77	U	NA	817,600
SF43CNE01	4/3/2006	Dimethyl phthalate	0.77	U	NA	NA
SF43CNE01	4/3/2006	Hexachlorobenzene	0.077	U	NA	1.79
SF43CNE01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.077	U	NA	3.92
SF43CNE01	4/3/2006	Isophorone	0.77	U	NA	3,012.21
SF43CNE01	4/3/2006	Pentachlorophenol	2.3	U	NA	23.85
SF43CNE01	4/3/2006	Phenol	0.77	U	NA	306,600
SF43CNE01	4/3/2006	PCBs(total)	0.077	U	10	1.43
SF43CNE01	4/3/2006	Cadmium	0.14	U	10	511
SF43CNE01	4/3/2006	Chromium	17.2		143	3,066

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43CNE01	4/3/2006	Copper	9.4		NA	40,880
SF43CNE01	4/3/2006	Mercury	0.03	B	NA	NA
SF43CNE01	4/3/2006	Zinc	24		NA	306,600
SF43CNE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43CNW01	4/3/2006	1,2,4-Trichlorobenzene	0.037	U	NA	10,220
SF43CNW01	4/3/2006	1,2-Dichlorobenzene	0.37	U	NA	91,980
SF43CNW01	4/3/2006	1,3-Dichlorobenzene	0.37	U	NA	3,066
SF43CNW01	4/3/2006	1,4-Dichlorobenzene	0.37	U	NA	119.23
SF43CNW01	4/3/2006	2,4,5-Trichlorophenol	0.37	U	NA	102,200
SF43CNW01	4/3/2006	2,4-Dichlorophenol	0.37	U	NA	3,066
SF43CNW01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF43CNW01	4/3/2006	2,6-Dinitrotoluene	0.074	U	NA	1,022
SF43CNW01	4/3/2006	2-Chlorophenol	0.37	U	NA	5,110
SF43CNW01	4/3/2006	2-Methylphenol	0.37	U	NA	51,100
SF43CNW01	4/3/2006	2-Nitrophenol	0.37	U	NA	NA
SF43CNW01	4/3/2006	3+4-Methylphenol	0.37	U	NA	5,110
SF43CNW01	4/3/2006	3-Nitroaniline	0.74	U	NA	NA
SF43CNW01	4/3/2006	4-Chloroaniline	0.37	U	NA	4,088
SF43CNW01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF43CNW01	4/3/2006	Benzo(a)anthracene	0.0098	J	NA	3.92
SF43CNW01	4/3/2006	Benzo(a)pyrene	0.0097	J	0.29	0.392
SF43CNW01	4/3/2006	Benzo(b)fluoranthene	0.011	J	NA	3.92
SF43CNW01	4/3/2006	Benzo(k)fluoranthene	0.16		NA	39.2
SF43CNW01	4/3/2006	Chrysene	0.012	J	NA	392
SF43CNW01	4/3/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF43CNW01	4/3/2006	Dibenzofuran	0.37	U	NA	1,022
SF43CNW01	4/3/2006	Diethyl phthalate	0.37	U	NA	817,600
SF43CNW01	4/3/2006	Dimethyl phthalate	0.37	U	NA	NA
SF43CNW01	4/3/2006	Hexachlorobenzene	0.037	U	NA	1.79
SF43CNW01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.037	U	NA	3.92
SF43CNW01	4/3/2006	Isophorone	0.37	U	NA	3,012.21
SF43CNW01	4/3/2006	Pentachlorophenol	1.1	U	NA	23.85
SF43CNW01	4/3/2006	Phenol	0.37	U	NA	306,600
SF43CNW01	4/3/2006	PCBs(total)	0.075	U	10	1.43
SF43CNW01	4/3/2006	Cadmium	0.13	U	10	511
SF43CNW01	4/3/2006	Chromium	10.2		143	3,066
SF43CNW01	4/3/2006	Copper	5.4	B	NA	40,880
SF43CNW01	4/3/2006	Mercury	0.02	B	NA	NA
SF43CNW01	4/3/2006	Zinc	28.1		NA	306,600
SF43CNW01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43CSE01	4/3/2006	1,2,4-Trichlorobenzene	0.038	U	NA	10,220
SF43CSE01	4/3/2006	1,2-Dichlorobenzene	0.38	U	NA	91,980
SF43CSE01	4/3/2006	1,3-Dichlorobenzene	0.38	U	NA	3,066
SF43CSE01	4/3/2006	1,4-Dichlorobenzene	0.38	U	NA	119.23
SF43CSE01	4/3/2006	2,4,5-Trichlorophenol	0.38	U	NA	102,200
SF43CSE01	4/3/2006	2,4-Dichlorophenol	0.38	U	NA	3,066
SF43CSE01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43CSE01	4/3/2006	2,6-Dinitrotoluene	0.076	U	NA	1,022
SF43CSE01	4/3/2006	2-Chlorophenol	0.38	U	NA	5,110
SF43CSE01	4/3/2006	2-Methylphenol	0.38	U	NA	51,100
SF43CSE01	4/3/2006	2-Nitrophenol	0.38	U	NA	NA
SF43CSE01	4/3/2006	3+4-Methylphenol	0.38	U	NA	5,110
SF43CSE01	4/3/2006	3-Nitroaniline	0.76	U	NA	NA
SF43CSE01	4/3/2006	4-Chloroaniline	0.38	U	NA	4,088
SF43CSE01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF43CSE01	4/3/2006	Benzo(a)anthracene	0.038	U	NA	3.92
SF43CSE01	4/3/2006	Benzo(a)pyrene	0.038	U	0.29	0.392
SF43CSE01	4/3/2006	Benzo(b)fluoranthene	0.038	U	NA	3.92
SF43CSE01	4/3/2006	Benzo(k)fluoranthene	0.038	U	NA	39.2
SF43CSE01	4/3/2006	Chrysene	0.38	U	NA	392
SF43CSE01	4/3/2006	Dibenz(a,h)anthracene	0.038	U	0.29	0.392
SF43CSE01	4/3/2006	Dibenzofuran	0.38	U	NA	1,022
SF43CSE01	4/3/2006	Diethyl phthalate	0.38	U	NA	817,600
SF43CSE01	4/3/2006	Dimethyl phthalate	0.38	U	NA	NA
SF43CSE01	4/3/2006	Hexachlorobenzene	0.038	U	NA	1.79
SF43CSE01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.038	U	NA	3.92
SF43CSE01	4/3/2006	Isophorone	0.38	U	NA	3,012.21
SF43CSE01	4/3/2006	Pentachlorophenol	1.1	U	NA	23.85
SF43CSE01	4/3/2006	Phenol	0.38	U	NA	306,600
SF43CSE01	4/3/2006	PCBs(total)	0.076	U	10	1.43
SF43CSE01	4/3/2006	Cadmium	0.14	U	10	511
SF43CSE01	4/3/2006	Chromium	9.6		143	3,066
SF43CSE01	4/3/2006	Copper	3.9	B	NA	40,880
SF43CSE01	4/3/2006	Mercury	0.02	B	NA	NA
SF43CSE01	4/3/2006	Zinc	14		NA	306,600
SF43CSE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF43CSW01	4/3/2006	1,2,4-Trichlorobenzene	0.036	U	NA	10,220
SF43CSW01	4/3/2006	1,2-Dichlorobenzene	0.36	U	NA	91,980
SF43CSW01	4/3/2006	1,3-Dichlorobenzene	0.36	U	NA	3,066
SF43CSW01	4/3/2006	1,4-Dichlorobenzene	0.36	U	NA	119.23
SF43CSW01	4/3/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
SF43CSW01	4/3/2006	2,4-Dichlorophenol	0.36	U	NA	3,066
SF43CSW01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF43CSW01	4/3/2006	2,6-Dinitrotoluene	0.072	U	NA	1,022
SF43CSW01	4/3/2006	2-Chlorophenol	0.36	U	NA	5,110
SF43CSW01	4/3/2006	2-Methylphenol	0.36	U	NA	51,100
SF43CSW01	4/3/2006	2-Nitrophenol	0.36	U	NA	NA
SF43CSW01	4/3/2006	3+4-Methylphenol	0.36	U	NA	5,110
SF43CSW01	4/3/2006	3-Nitroaniline	0.72	U	NA	NA
SF43CSW01	4/3/2006	4-Chloroaniline	0.36	U	NA	4,088
SF43CSW01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF43CSW01	4/3/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF43CSW01	4/3/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF43CSW01	4/3/2006	Benzo(b)fluoranthene	0.036	U	NA	3.92

Table 4-42

**Summary of Analytical Results
SF-43 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF43CSW01	4/3/2006	Benzo(k)fluoranthene	0.036	U	NA	39.2
SF43CSW01	4/3/2006	Chrysene	0.36	U	NA	392
SF43CSW01	4/3/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF43CSW01	4/3/2006	Dibenzofuran	0.36	U	NA	1,022
SF43CSW01	4/3/2006	Diethyl phthalate	0.36	U	NA	817,600
SF43CSW01	4/3/2006	Dimethyl phthalate	0.36	U	NA	NA
SF43CSW01	4/3/2006	Hexachlorobenzene	0.036	U	NA	1.79
SF43CSW01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.036	U	NA	3.92
SF43CSW01	4/3/2006	Isophorone	0.36	U	NA	3,012.21
SF43CSW01	4/3/2006	Pentachlorophenol	1.1	U	NA	23.85
SF43CSW01	4/3/2006	Phenol	0.36	U	NA	306,600
SF43CSW01	4/3/2006	PCBs(total)	0.072	U	10	1.43
SF43CSW01	4/3/2006	Cadmium	0.13	U	10	511
SF43CSW01	4/3/2006	Chromium	5		143	3,066
SF43CSW01	4/3/2006	Copper	2.1	B	NA	40,880
SF43CSW01	4/3/2006	Mercury	0.018	U	NA	NA
SF43CSW01	4/3/2006	Zinc	36.7		NA	306,600
SF43CSW01	4/3/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-43 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-43

Summary of Analytical Results
 SF-44 Solid Characterization Sample
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF44SL01	3/30/2006	1,1,1-Trichloroethane	0.0037	J	NA	286,160
SF44SL01	3/30/2006	1,1,2,2-Tetrachloroethane	0.0011	U	NA	14,308
SF44SL01	3/30/2006	1,1,2-Trichloroethane	0.0032	U	NA	50.20
SF44SL01	3/30/2006	1,1,2-Trichlorotrifluoroethane	0.0053	U	NA	30,660,000
SF44SL01	3/30/2006	1,1-Dichloroethane	0.0053	U	NA	204,400
SF44SL01	3/30/2006	1,1-Dichloroethene	0.0021	U	NA	51,100
SF44SL01	3/30/2006	1,2,4-Trichlorobenzene	0.0053	U	NA	10,220
SF44SL01	3/30/2006	1,2-Dibromo-3-chloropropane	0.0053	U	NA	3.58
SF44SL01	3/30/2006	1,2-Dibromoethane	0.0053	U	NA	1.43
SF44SL01	3/30/2006	1,2-Dichlorobenzene	0.0053	U	NA	91,980
SF44SL01	3/30/2006	1,2-Dichloroethane	0.0021	U	NA	31.45
SF44SL01	3/30/2006	1,2-Dichloropropane	0.0011	U	NA	42.08
SF44SL01	3/30/2006	1,3-Dichlorobenzene	0.0053	U	NA	3066
SF44SL01	3/30/2006	1,4-Dichlorobenzene	0.0053	U	NA	119.23
SF44SL01	3/30/2006	2-Butanone	0.0053	U	NA	613,200
SF44SL01	3/30/2006	2-Hexanone	0.0053	U	NA	NA
SF44SL01	3/30/2006	4-Methyl-2-pentanone	0.0053	U	NA	NA
SF44SL01	3/30/2006	Acetone	0.024		NA	919,800
SF44SL01	3/30/2006	Benzene	0.0011	U	NA	52.03
SF44SL01	3/30/2006	Bromodichloromethane	0.0011	U	NA	46.15
SF44SL01	3/30/2006	Bromoform	0.0042	U	NA	362.23
SF44SL01	3/30/2006	Bromomethane	0.0053	U	NA	1,431
SF44SL01	3/30/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF44SL01	3/30/2006	c-1,3-Dichloropropene	0.0053	U	NA	NA
SF44SL01	3/30/2006	Carbon disulfide	0.0053	U	NA	102,200
SF44SL01	3/30/2006	Carbon Tetrachloride	0.0021	U	NA	22.01
SF44SL01	3/30/2006	Chlorobenzene	0.0053	U	NA	20,440
SF44SL01	3/30/2006	Chloroethane	0.0053	U	NA	986.76
SF44SL01	3/30/2006	Chloroform	0.0053	U	NA	10,220
SF44SL01	3/30/2006	Chloromethane	0.0053	U	NA	NA
SF44SL01	3/30/2006	Cyclohexane	0.0053	U	NA	NA
SF44SL01	3/30/2006	Dibromochloromethane	0.0053	U	NA	34.07
SF44SL01	3/30/2006	Dichlorodifluoromethane	0.0053	U	NA	204,400
SF44SL01	3/30/2006	Ethylbenzene	0.0042	U	NA	102,200
SF44SL01	3/30/2006	Isopropylbenzene	0.0053	U	NA	102,200
SF44SL01	3/30/2006	Methyl Acetate	0.0053	U	NA	1,022,000
SF44SL01	3/30/2006	Methyl Cyclohexane	0.0053	U	NA	NA
SF44SL01	3/30/2006	Methyl t-butyl ether	0.0053	U	NA	715.4
SF44SL01	3/30/2006	Methylene Chloride	0.0032	U	NA	381.55
SF44SL01	3/30/2006	Styrene	0.0053	U	NA	204,400
SF44SL01	3/30/2006	t-1,2-Dichloroethene	0.0053	U	NA	20,440
SF44SL01	3/30/2006	t-1,3-Dichloropropene	0.0053	U	NA	NA
SF44SL01	3/30/2006	TCE	0.015		0.7	7.154
SF44SL01	3/30/2006	Tetrachloroethene	0.035		1.4	5.30
SF44SL01	3/30/2006	Toluene	0.0053	U	NA	81,760
SF44SL01	3/30/2006	Trichlorofluoromethane	0.0053	U	NA	306,600
SF44SL01	3/30/2006	Vinyl Chloride	0.0053	U	NA	3.97
SF44SL01	3/30/2006	Xylene (Total)	0.0053	U	NA	204,400
SF44SL01	3/30/2006	2,4-Dinitrotoluene	1.4	U	NA	2,044
SF44SL01	3/30/2006	2,6-Dinitrotoluene	1.4	U	NA	1,022
SF44SL01	3/30/2006	2-Chloronaphthalene	7.3	U	NA	81,760
SF44SL01	3/30/2006	2-Methylnaphthalene	7.3	U	NA	4,088
SF44SL01	3/30/2006	2-Nitroaniline	14	U	NA	NA
SF44SL01	3/30/2006	3,3'-Dichlorobenzidine	14	U	NA	6.36
SF44SL01	3/30/2006	3-Nitroaniline	14	U	NA	NA
SF44SL01	3/30/2006	4-Bromophenyl phenyl ether	7.3	U	NA	NA
SF44SL01	3/30/2006	4-Chloroaniline	7.3	U	NA	4,088
SF44SL01	3/30/2006	4-Chlorophenyl phenyl ether	7.3	U	NA	NA

Table 4-43

Summary of Analytical Results
 SF-44 Solid Characterization Sample
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soils Screening Criteria for Industrial Soil
SF44SL01	3/30/2006	4-Nitroaniline	14	U	NA	NA
SF44SL01	3/30/2006	Acenaphthene	7.3	U	NA	61,320
SF44SL01	3/30/2006	Acenaphthylene	7.3	U	NA	NA
SF44SL01	3/30/2006	Acetophenone	7.3	U	NA	102,200
SF44SL01	3/30/2006	Anthracene	7.3	U	NA	306,600
SF44SL01	3/30/2006	Atrazine	7.3	U	NA	13.01
SF44SL01	3/30/2006	Benzaldehyde	7.3	U	NA	102,200
SF44SL01	3/30/2006	Benzo(a)anthracene	0.73	U	NA	3.92
SF44SL01	3/30/2006	Benzo(a)pyrene	0.73	U	0.29	0.392
SF44SL01	3/30/2006	Benzo(b)fluoranthene	0.17	J	NA	3.92
SF44SL01	3/30/2006	Benzo(g,h,i)perylene	7.3	U	NA	NA
SF44SL01	3/30/2006	Benzo(k)fluoranthene	2		NA	39.2
SF44SL01	3/30/2006	bis(2-Chloroethoxy)methane	7.3	U	NA	NA
SF44SL01	3/30/2006	bis(2-Chloroethyl)ether	0.73	U	NA	2.60
SF44SL01	3/30/2006	bis(2-Chloroisopropyl)ether	7.3	U	NA	40.88
SF44SL01	3/30/2006	bis(2-Ethylhexyl)phthalate	7.3	U	NA	204.4
SF44SL01	3/30/2006	Butyl benzyl phthalate	7.3	U	NA	204,400
SF44SL01	3/30/2006	Caprolactam	7.3	U	NA	511,000
SF44SL01	3/30/2006	Carbazole	7.3	U	NA	143.08
SF44SL01	3/30/2006	Chrysene	0.44	J	NA	392
SF44SL01	3/30/2006	Dibenz(a,h)anthracene	0.73	U	0.29	0.392
SF44SL01	3/30/2006	Dibenzofuran	7.3	U	NA	1,022
SF44SL01	3/30/2006	Diethyl phthalate	7.3	U	NA	817,600
SF44SL01	3/30/2006	Dimethyl phthalate	7.3	U	NA	NA
SF44SL01	3/30/2006	Di-n-butyl phthalate	7.3	U	NA	102,200
SF44SL01	3/30/2006	Di-n-octyl phthalate	7.3	U	NA	NA
SF44SL01	3/30/2006	Diphenyl	7.3	U	NA	NA
SF44SL01	3/30/2006	Fluoranthene	0.42	J	NA	40,880
SF44SL01	3/30/2006	Fluorene	7.3	U	NA	40,880
SF44SL01	3/30/2006	Hexachlorobenzene	0.73	U	NA	1.79
SF44SL01	3/30/2006	Hexachlorobutadiene	1.4	U	NA	36.69
SF44SL01	3/30/2006	Hexachlorocyclopentadiene	7.3	U	NA	6,132
SF44SL01	3/30/2006	Hexachloroethane	0.73	U	NA	204.4
SF44SL01	3/30/2006	Indeno(1,2,3-cd)pyrene	0.73	U	NA	3.92
SF44SL01	3/30/2006	Isophorone	7.3	U	NA	3,012
SF44SL01	3/30/2006	Naphthalene	7.3	U	NA	20,440
SF44SL01	3/30/2006	Nitrobenzene	0.73	U	NA	511
SF44SL01	3/30/2006	N-Nitrosodi-n-propylamine	0.73	U	NA	0.41
SF44SL01	3/30/2006	N-Nitrosodiphenylamine	7.3	U	NA	584
SF44SL01	3/30/2006	Phenanthrene	1.1	J	NA	NA
SF44SL01	3/30/2006	Pyrene	0.33	J	NA	30,660
SF44SL01	3/30/2006	4,4'-DDD	0.0073	U	NA	11.92
SF44SL01	3/30/2006	4,4'-DDE	0.0073	U	NA	8.42
SF44SL01	3/30/2006	4,4'-DDT	0.0073	U	NA	8.42
SF44SL01	3/30/2006	Aldrin	0.0073	U	NA	0.17
SF44SL01	3/30/2006	alpha-BHC	0.0073	U	NA	0.45
SF44SL01	3/30/2006	alpha-Chlordane	0.0073	U	NA	NA
SF44SL01	3/30/2006	beta-BHC	0.011	P*	NA	1.59
SF44SL01	3/30/2006	Chlordane	0.073	U	NA	8.176
SF44SL01	3/30/2006	delta-BHC	0.0073	U	NA	NA
SF44SL01	3/30/2006	Dieldrin	0.0073	U	NA	0.18
SF44SL01	3/30/2006	Endosulfan I	0.0073	U	NA	6132
SF44SL01	3/30/2006	Endosulfan II	0.0073	U	NA	6132
SF44SL01	3/30/2006	Endosulfan sulfate	0.016	P*	NA	NA
SF44SL01	3/30/2006	Endrin	0.0073	U	NA	306.60
SF44SL01	3/30/2006	Endrin Aldehyde	0.011	P*	NA	NA
SF44SL01	3/30/2006	Endrin ketone	0.0073	U	NA	NA
SF44SL01	3/30/2006	gamma-BHC (Lindane)	0.0073	U	NA	2.20

Table 4-43

**Summary of Analytical Results
SF-44 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF44SL01	3/30/2006	gamma-Chlordane	0.0073	U	NA	NA
SF44SL01	3/30/2006	Heptachlor	0.0073	U	NA	0.64
SF44SL01	3/30/2006	Heptachlor epoxide	0.0073	U	NA	0.31
SF44SL01	3/30/2006	Methoxychlor	0.035	P*	NA	5110
SF44SL01	3/30/2006	Toxaphene	0.073	U	NA	2.60
SF44SL01	3/30/2006	Aroclor 1016	0.079	U	NA	40.88
SF44SL01	3/30/2006	Aroclor 1221	0.079	U	NA	1.43
SF44SL01	3/30/2006	Aroclor 1232	0.079	U	NA	1.43
SF44SL01	3/30/2006	Aroclor 1242	0.079	U	NA	1.43
SF44SL01	3/30/2006	Aroclor 1248	0.079	U	NA	1.43
SF44SL01	3/30/2006	Aroclor 1254	0.079	U	NA	1.43
SF44SL01	3/30/2006	Aroclor 1260	0.079	U	NA	1.43
SF44SL01	3/30/2006	PCBs(total)	0.079	U	10	1.43
SF44SL01	3/30/2006	Aluminum	6,060		NA	1,022,000
SF44SL01	3/30/2006	Antimony	1.1	U	NA	408.8
SF44SL01	3/30/2006	Arsenic	2.8		NA	1.91
SF44SL01	3/30/2006	Barium	13.7	B	NA	204,400
SF44SL01	3/30/2006	Beryllium	0.21	B	NA	2,044
SF44SL01	3/30/2006	Cadmium	0.69	B	10	511
SF44SL01	3/30/2006	Calcium	561	B	NA	NA
SF44SL01	3/30/2006	Chromium	8.9		143	3,066
SF44SL01	3/30/2006	Cobalt	2.2	B	NA	NA
SF44SL01	3/30/2006	Copper	3.9	B	NA	40,880
SF44SL01	3/30/2006	Iron	23,700		NA	715,400
SF44SL01	3/30/2006	Lead	14.6		NA	NA
SF44SL01	3/30/2006	Magnesium	466	B	NA	NA
SF44SL01	3/30/2006	Manganese	157		NA	20,440
SF44SL01	3/30/2006	Mercury	0.03	B	NA	NA
SF44SL01	3/30/2006	Nickel	4	B	NA	20,440
SF44SL01	3/30/2006	Potassium	382	B	NA	NA
SF44SL01	3/30/2006	Selenium	1.1	U	NA	5,110
SF44SL01	3/30/2006	Silver	0.26	U	NA	5,110
SF44SL01	3/30/2006	Sodium	234	B	NA	NA
SF44SL01	3/30/2006	Thallium	1.1	U	NA	71.54
SF44SL01	3/30/2006	Vanadium	11.3		NA	1,022
SF44SL01	3/30/2006	Zinc	308		NA	306,600
SF44SL01	3/30/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - reported result is above the Contract Required Reporting Limit, but below the Instrument Detection Limit.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-44 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by ATL of Edison, New Jersey.

Table 4-44

**Summary of Analytical Results
SF-44 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF44BNE01	3/30/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF44BNE01	3/30/2006	TCE	0.001	U	0.7	7.15
SF44BNE01	3/30/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF44BNE01	3/30/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF44BNE01	3/30/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF44BNE01	3/30/2006	Chrysene	0.34	U	NA	392
SF44BNE01	3/30/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF44BNE01	3/30/2006	PCBs(total)	0.069	U	10	1.43
SF44BNE01	3/30/2006	Cadmium	0.082	U	10	511
SF44BNE01	3/30/2006	Chromium	2.1		143	3,066
SF44BNE01	3/30/2006	Zinc	3.8	B	NA	306,600
SF44BNE01	3/30/2006	Cyanide	0.5	U	35	20,440
SF44BNW01	3/30/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
SF44BNW01	3/30/2006	TCE	0.002		0.7	7.15
SF44BNW01	3/30/2006	Tetrachloroethene	0.001	J	1.4	5.30
SF44BNW01	3/30/2006	Benzo(a)pyrene	0.5		0.29	0.392
SF44BNW01	3/30/2006	Benzo(k)fluoranthene	0.49		NA	39.2
SF44BNW01	3/30/2006	Chrysene	0.39		NA	392
SF44BNW01	3/30/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF44BNW01	3/30/2006	PCBs(total)	0.071	U	10	1.43
SF44BNW01	3/30/2006	Cadmium	1.2		10	511
SF44BNW01	3/30/2006	Chromium	8.3		143	3,066
SF44BNW01	3/30/2006	Zinc	212		NA	306,600
SF44BNW01	3/30/2006	Cyanide	0.5	U	35	20,440
DUP02	3/30/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
DUP02	3/30/2006	TCE	0.0019		0.7	7.15
DUP02	3/30/2006	Tetrachloroethene	0.0008	J	1.4	5.30
DUP02	3/30/2006	Benzo(a)pyrene	0.68		0.29	0.392
DUP02	3/30/2006	Benzo(k)fluoranthene	0.86		NA	39.2
DUP02	3/30/2006	Chrysene	1		NA	392
DUP02	3/30/2006	Dibenz(a,h)anthracene	0.44		0.29	0.392
DUP02	3/30/2006	PCBs(total)	0.071	U	10	1.43
DUP02	3/30/2006	Cadmium	0.91	B	10	511
DUP02	3/30/2006	Chromium	6.4		143	3,066
DUP02	3/30/2006	Zinc	201		NA	306,600
DUP02	3/30/2006	Cyanide	0.5	U	35	20,440
SF44BSE01	3/30/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF44BSE01	3/30/2006	TCE	0.001	U	0.7	7.15
SF44BSE01	3/30/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF44BSE01	3/30/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF44BSE01	3/30/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF44BSE01	3/30/2006	Chrysene	0.34	U	NA	392
SF44BSE01	3/30/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF44BSE01	3/30/2006	PCBs(total)	0.068	U	10	1.43
SF44BSE01	3/30/2006	Cadmium	0.081	U	10	511
SF44BSE01	3/30/2006	Chromium	2.4		143	3,066
SF44BSE01	3/30/2006	Zinc	11.5		NA	306,600

Table 4-44

**Summary of Analytical Results
SF-44 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF44BSE01	3/30/2006	Cyanide	0.5	U	35	20,440
SF44BSW01	3/30/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF44BSW01	3/30/2006	TCE	0.001	U	0.7	7.15
SF44BSW01	3/30/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF44BSW01	3/30/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF44BSW01	3/30/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF44BSW01	3/30/2006	Chrysene	0.34	U	NA	392
SF44BSW01	3/30/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF44BSW01	3/30/2006	PCBs(total)	0.068	U	10	1.43
SF44BSW01	3/30/2006	Cadmium	0.16	B	10	511
SF44BSW01	3/30/2006	Chromium	2.5		143	3,066
SF44BSW01	3/30/2006	Zinc	27.5		NA	306,600
SF44BSW01	3/30/2006	Cyanide	0.5	U	35	20,440
SF44CN01	3/30/2006	Benzo(a)pyrene	0.037	U	0.29	0.392
SF44CN01	3/30/2006	Benzo(k)fluoranthene	0.037	U	NA	39.2
SF44CN01	3/30/2006	Chrysene	0.37	U	NA	392
SF44CN01	3/30/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF44CN01	3/30/2006	PCBs(total)	0.074	U	10	1.43
SF44CN01	3/30/2006	Cadmium	0.088	U	10	511
SF44CN01	3/30/2006	Chromium	5.5		143	3,066
SF44CN01	3/30/2006	Zinc	17		NA	306,600
SF44CN01	3/30/2006	Cyanide	0.5	U	35	20,440
SF44CS01	3/30/2006	Benzo(a)pyrene	0.67		0.29	0.392
SF44CS01	3/30/2006	Benzo(k)fluoranthene	0.63		NA	39.2
SF44CS01	3/30/2006	Chrysene	0.63		NA	392
SF44CS01	3/30/2006	Dibenz(a,h)anthracene	0.32		0.29	0.392
SF44CS01	3/30/2006	PCBs(total)	0.071	U	10	1.43
SF44CS01	3/30/2006	Cadmium	0.48	B	10	511
SF44CS01	3/30/2006	Chromium	6.3		143	3,066
SF44CS01	3/30/2006	Zinc	197		NA	306,600
SF44CS01	3/30/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-44 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Explanation:

- Reported result exceeds the ROD *Cleanup Goal*.
- Reported result exceeds the ROD *Cleanup Goal* and USEPA Region III *Risk-based Concentration for Industrial Soil*.

Table 4-45

Summary of Analytical Results
SF-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-45	5/14/1997	1,1,1-Trichloroethane	0.011	U	NA	286,160
SF-SL-45	5/14/1997	1,1,2,2-Tetrachloroethane	0.011	U	NA	14.31
SF-SL-45	5/14/1997	1,1,2-Trichloroethane	0.011	U	NA	50.20
SF-SL-45	5/14/1997	1,1-Dichloroethane	0.011	U	NA	204,400
SF-SL-45	5/14/1997	1,1-Dichloroethene	0.011	U	NA	51,100
SF-SL-45	5/14/1997	1,2-Dichloroethane	0.011	U	NA	31.45
SF-SL-45	5/14/1997	1,2-Dichloroethene (total)	0.011	U	0.25	9,198
SF-SL-45	5/14/1997	1,2-Dichloropropane	0.011	U	NA	42.08
SF-SL-45	5/14/1997	2-Butanone	0.011	U	NA	613,200
SF-SL-45	5/14/1997	2-Hexanone	0.011	U	NA	NA
SF-SL-45	5/14/1997	4-Methyl-2-pentanone	0.011	U	NA	NA
SF-SL-45	5/14/1997	Acetone	0.079		NA	919,800
SF-SL-45	5/14/1997	Benzene	0.011	U	NA	52.03
SF-SL-45	5/14/1997	Bromodichloromethane	0.011	U	NA	46.15
SF-SL-45	5/14/1997	Bromoform	0.011	U	NA	362.23
SF-SL-45	5/14/1997	Bromomethane	0.011	U	NA	1,430.8
SF-SL-45	5/14/1997	c-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-45	5/14/1997	Carbon Tetrachloride	0.011	U	NA	22.01
SF-SL-45	5/14/1997	Chlorobenzene	0.011	U	NA	20,440
SF-SL-45	5/14/1997	Chloroethane	0.011	U	NA	986.76
SF-SL-45	5/14/1997	Chloroform	0.011	U	NA	10,220
SF-SL-45	5/14/1997	Chloromethane	0.011	U	NA	NA
SF-SL-45	5/14/1997	Dibromochloromethane	0.011	U	NA	34.07
SF-SL-45	5/14/1997	Ethylbenzene	0.011	U	NA	102,200
SF-SL-45	5/14/1997	Methylene Chloride	0.011	U	NA	381.55
SF-SL-45	5/14/1997	Styrene	0.011	U	NA	204,400
SF-SL-45	5/14/1997	t-1,3-Dichloropropene	0.011	U	NA	NA
SF-SL-45	5/14/1997	TCE	0.011	U	0.7	7.154
SF-SL-45	5/14/1997	Tetrachloroethene	0.011	U	1.4	5.30
SF-SL-45	5/14/1997	Toluene	0.011	U	NA	81,760
SF-SL-45	5/14/1997	Vinyl Chloride	0.011	U	NA	3.97
SF-SL-45	5/14/1997	Xylene (Total)	0.011	U	NA	204,400
SF-SL-45	5/14/1997	1,2,4-Trimethylbenzene	0.35	R	NA	NA
SF-SL-45	5/14/1997	1,2,4-Trimethylbenzene	6.9	U	NA	NA
SF-SL-45	5/14/1997	1,2-Dichlorobenzene	0.35	R	NA	91,980
SF-SL-45	5/14/1997	1,2-Dichlorobenzene	6.9	U	NA	91,980
SF-SL-45	5/14/1997	1,3-Dichlorobenzene	0.35	R	NA	3,066
SF-SL-45	5/14/1997	1,3-Dichlorobenzene	6.9	U	NA	3,066
SF-SL-45	5/14/1997	1,4-Dichlorobenzene	0.35	R	NA	119.23
SF-SL-45	5/14/1997	1,4-Dichlorobenzene	6.9	U	NA	119.23
SF-SL-45	5/14/1997	2,4,5-Trichlorophenol	0.85	R	NA	102,200
SF-SL-45	5/14/1997	2,4,5-Trichlorophenol	17	U	NA	102,200
SF-SL-45	5/14/1997	2,4,6-Trichlorophenol	0.35	R	NA	260.15
SF-SL-45	5/14/1997	2,4,6-Trichlorophenol	6.9	U	NA	260.15
SF-SL-45	5/14/1997	2,4-Dichlorophenol	0.35	R	NA	3,066
SF-SL-45	5/14/1997	2,4-Dichlorophenol	6.9	U	NA	3,066
SF-SL-45	5/14/1997	2,4-Dimethylphenol	0.35	R	NA	20,440
SF-SL-45	5/14/1997	2,4-Dimethylphenol	6.9	U	NA	20,440
SF-SL-45	5/14/1997	2,4-Dinitrophenol	0.85	R	NA	2,044
SF-SL-45	5/14/1997	2,4-Dinitrophenol	17	U	NA	2,044
SF-SL-45	5/14/1997	2,4-Dinitrotoluene	0.35	R	NA	2,044
SF-SL-45	5/14/1997	2,4-Dinitrotoluene	6.9	U	NA	2,044
SF-SL-45	5/14/1997	2,6-Dinitrotoluene	0.35	R	NA	1,022
SF-SL-45	5/14/1997	2,6-Dinitrotoluene	6.9	U	NA	1,022
SF-SL-45	5/14/1997	2-Chloronaphthalene	0.35	R	NA	81,760
SF-SL-45	5/14/1997	2-Chloronaphthalene	6.9	U	NA	81,760
SF-SL-45	5/14/1997	2-Chlorophenol	0.35	R	NA	5,110

Table 4-45

Summary of Analytical Results
SF-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-45	5/14/1997	2-Chlorophenol	6.9	U	NA	5,110
SF-SL-45	5/14/1997	2-Methylnaphthalene	0.35	R	NA	4,088
SF-SL-45	5/14/1997	2-Methylnaphthalene	6.9	U	NA	4,088
SF-SL-45	5/14/1997	2-Methylphenol	0.35	R	NA	51,100
SF-SL-45	5/14/1997	2-Methylphenol	0.37	J	NA	51,100
SF-SL-45	5/14/1997	2-Nitroaniline	0.35	R	NA	NA
SF-SL-45	5/14/1997	2-Nitroaniline	17	U	NA	NA
SF-SL-45	5/14/1997	2-Nitrophenol	0.35	R	NA	NA
SF-SL-45	5/14/1997	2-Nitrophenol	6.9	U	NA	NA
SF-SL-45	5/14/1997	3,3'-Dichlorobenzidine	0.35	R	NA	6.36
SF-SL-45	5/14/1997	3,3'-Dichlorobenzidine	6.9	U	NA	6.36
SF-SL-45	5/14/1997	3+4-Methylphenol	0.35	R	NA	5,110
SF-SL-45	5/14/1997	3+4-Methylphenol	0.66	J	NA	5,110
SF-SL-45	5/14/1997	3-Nitroaniline	0.85	R	NA	NA
SF-SL-45	5/14/1997	3-Nitroaniline	17	U	NA	NA
SF-SL-45	5/14/1997	4,6-Dinitro-2-methylphenol	0.85	R	NA	NA
SF-SL-45	5/14/1997	4,6-Dinitro-2-methylphenol	17	U	NA	NA
SF-SL-45	5/14/1997	4-Bromophenyl phenyl ether	0.35	R	NA	NA
SF-SL-45	5/14/1997	4-Bromophenyl phenyl ether	6.9	U	NA	NA
SF-SL-45	5/14/1997	4-Chloro-3-methylphenol	0.009	J	NA	NA
SF-SL-45	5/14/1997	4-Chloro-3-methylphenol	6.9	U	NA	NA
SF-SL-45	5/14/1997	4-Chloroaniline	0.35	U	NA	4,088
SF-SL-45	5/14/1997	4-Chloroaniline	6.9	U	NA	4,088
SF-SL-45	5/14/1997	4-Chlorophenyl phenyl ether	0.35	R	NA	NA
SF-SL-45	5/14/1997	4-Chlorophenyl phenyl ether	6.9	U	NA	NA
SF-SL-45	5/14/1997	4-Nitroaniline	0.85	R	NA	NA
SF-SL-45	5/14/1997	4-Nitroaniline	17	U	NA	NA
SF-SL-45	5/14/1997	4-Nitrophenol	0.85	R	NA	NA
SF-SL-45	5/14/1997	4-Nitrophenol	17	U	NA	NA
SF-SL-45	5/14/1997	Acenaphthene	0.35	R	NA	61,320
SF-SL-45	5/14/1997	Acenaphthene	6.9	U	NA	61,320
SF-SL-45	5/14/1997	Acenaphthylene	0.35	R	NA	NA
SF-SL-45	5/14/1997	Acenaphthylene	6.9	U	NA	NA
SF-SL-45	5/14/1997	Anthracene	0.35	R	NA	306,600
SF-SL-45	5/14/1997	Anthracene	6.9	U	NA	306,600
SF-SL-45	5/14/1997	Benzo(a)anthracene	0.35	R	NA	3.92
SF-SL-45	5/14/1997	Benzo(a)anthracene	6.9	U	NA	3.92
SF-SL-45	5/14/1997	Benzo(a)pyrene	0.35	R	0.29	0.392
SF-SL-45	5/14/1997	Benzo(a)pyrene	6.9	U	0.29	0.392
SF-SL-45	5/14/1997	Benzo(b)fluoranthene	0.35	R	NA	3.92
SF-SL-45	5/14/1997	Benzo(b)fluoranthene	6.9	U	NA	3.92
SF-SL-45	5/14/1997	Benzo(g,h,i)perylene	0.35	R	NA	NA
SF-SL-45	5/14/1997	Benzo(g,h,i)perylene	6.9	U	NA	NA
SF-SL-45	5/14/1997	Benzo(k)fluoranthene	0.35	R	NA	39.2
SF-SL-45	5/14/1997	Benzo(k)fluoranthene	6.9	U	NA	39.2
SF-SL-45	5/14/1997	bis(2-Chloroethoxy)methane	0.35	R	NA	NA
SF-SL-45	5/14/1997	bis(2-Chloroethoxy)methane	6.9	U	NA	NA
SF-SL-45	5/14/1997	bis(2-Chloroethyl)ether	0.35	R	NA	2.60
SF-SL-45	5/14/1997	bis(2-Chloroethyl)ether	6.9	U	NA	2.60
SF-SL-45	5/14/1997	bis(2-Chloroisopropyl)ether	0.35	R	NA	40.88
SF-SL-45	5/14/1997	bis(2-Chloroisopropyl)ether	6.9	U	NA	40.88
SF-SL-45	5/14/1997	bis(2-Ethylhexyl)phthalate	0.044	J	NA	204.4
SF-SL-45	5/14/1997	bis(2-Ethylhexyl)phthalate	0.76	J	NA	204.4
SF-SL-45	5/14/1997	Carbazole	0.35	R	NA	143.08
SF-SL-45	5/14/1997	Carbazole	6.9	U	NA	143.08
SF-SL-45	5/14/1997	Chrysene	0.35	R	NA	392
SF-SL-45	5/14/1997	Chrysene	6.9	U	NA	392

Table 4-45

Summary of Analytical Results
SF-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-45	5/14/1997	Dibenz(a,h)anthracene	0.35	R	0.29	0.392
SF-SL-45	5/14/1997	Dibenz(a,h)anthracene	6.9	U	0.29	0.392
SF-SL-45	5/14/1997	Dibenzofuran	0.35	R	NA	1,022
SF-SL-45	5/14/1997	Dibenzofuran	6.9	U	NA	1,022
SF-SL-45	5/14/1997	Diethyl phthalate	0.35	R	NA	817,600
SF-SL-45	5/14/1997	Diethyl phthalate	6.9	U	NA	817,600
SF-SL-45	5/14/1997	Dimethyl phthalate	0.35	R	NA	NA
SF-SL-45	5/14/1997	Dimethyl phthalate	6.9	U	NA	NA
SF-SL-45	5/14/1997	Di-n-butyl phthalate	0.35	R	NA	102,200
SF-SL-45	5/14/1997	Di-n-butyl phthalate	6.9	U	NA	102,200
SF-SL-45	5/14/1997	Di-n-octyl phthalate	0.35	R	NA	NA
SF-SL-45	5/14/1997	Di-n-octyl phthalate	6.9	U	NA	NA
SF-SL-45	5/14/1997	Fluoranthene	0.35	R	NA	40,880
SF-SL-45	5/14/1997	Fluoranthene	6.9	U	NA	40,880
SF-SL-45	5/14/1997	Fluorene	0.35	R	NA	40,880
SF-SL-45	5/14/1997	Fluorene	6.9	U	NA	40,880
SF-SL-45	5/14/1997	Hexachlorobenzene	0.35	R	NA	1,7885
SF-SL-45	5/14/1997	Hexachlorobenzene	6.9	U	NA	1,7885
SF-SL-45	5/14/1997	Hexachlorobutadiene	0.35	R	NA	36.69
SF-SL-45	5/14/1997	Hexachlorobutadiene	6.9	U	NA	36.69
SF-SL-45	5/14/1997	Hexachlorocyclopentadiene	0.35	R	NA	6,132
SF-SL-45	5/14/1997	Hexachlorocyclopentadiene	6.9	U	NA	6,132
SF-SL-45	5/14/1997	Hexachloroethane	0.35	R	NA	204.4
SF-SL-45	5/14/1997	Hexachloroethane	6.9	U	NA	204.4
SF-SL-45	5/14/1997	Indeno(1,2,3-cd)pyrene	0.35	R	NA	3.92
SF-SL-45	5/14/1997	Indeno(1,2,3-cd)pyrene	6.9	U	NA	3.92
SF-SL-45	5/14/1997	Isophorone	0.35	R	NA	3,012
SF-SL-45	5/14/1997	Isophorone	6.9	U	NA	3,012
SF-SL-45	5/14/1997	Naphthalene	0.35	R	NA	20,440
SF-SL-45	5/14/1997	Naphthalene	6.9	U	NA	20,440
SF-SL-45	5/14/1997	Nitrobenzene	0.35	R	NA	511
SF-SL-45	5/14/1997	Nitrobenzene	6.9	U	NA	511
SF-SL-45	5/14/1997	N-Nitrosodi-n-propylamine	0.35	R	NA	0.41
SF-SL-45	5/14/1997	N-Nitrosodi-n-propylamine	6.9	U	NA	0.41
SF-SL-45	5/14/1997	N-Nitrosodiphenylamine	0.35	R	NA	584
SF-SL-45	5/14/1997	N-Nitrosodiphenylamine	6.9	U	NA	584
SF-SL-45	5/14/1997	Pentachlorophenol	0.85	R	NA	23.85
SF-SL-45	5/14/1997	Pentachlorophenol	17	UJ	NA	23.85
SF-SL-45	5/14/1997	Phenanthrene	0.35	R	NA	NA
SF-SL-45	5/14/1997	Phenanthrene	6.9	U	NA	NA
SF-SL-45	5/14/1997	Phenol	0.35	R	NA	306,600
SF-SL-45	5/14/1997	Phenol	0.45	J	NA	306,600
SF-SL-45	5/14/1997	Pyrene	0.35	R	NA	30,660
SF-SL-45	5/14/1997	Pyrene	6.9	U	NA	30,660
SF-SL-45	5/14/1997	4,4'-DDD	0.0035	U	NA	11.92
SF-SL-45	5/14/1997	4,4'-DDE	0.0035	U	NA	8.42
SF-SL-45	5/14/1997	4,4'-DDT	0.0035	U	NA	8.42
SF-SL-45	5/14/1997	Aldrin	0.0018	U	NA	0.17
SF-SL-45	5/14/1997	alpha-BHC	0.0018	U	NA	0.45
SF-SL-45	5/14/1997	alpha-Chlordane	0.0018	U	NA	NA
SF-SL-45	5/14/1997	beta-BHC	0.0018	U	NA	1.59
SF-SL-45	5/14/1997	delta-BHC	0.0018	U	NA	NA
SF-SL-45	5/14/1997	Dieldrin	0.0035	U	NA	0.18
SF-SL-45	5/14/1997	Endosulfan I	0.0018	U	NA	6,132
SF-SL-45	5/14/1997	Endosulfan II	0.0035	U	NA	6,132
SF-SL-45	5/14/1997	Endosulfan sulfate	0.0035	U	NA	NA
SF-SL-45	5/14/1997	Endrin	0.0035	U	NA	306.6

Table 4-45

**Summary of Analytical Results
SF-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Soil Screening Criteria for Industrial Soil
SF-SL-45	5/14/1997	Endrin Aldehyde	0.0035	U	NA	NA
SF-SL-45	5/14/1997	Endrin ketone	0.0035	U	NA	NA
SF-SL-45	5/14/1997	gamma-BHC (Lindane)	0.0018	U	NA	2.20
SF-SL-45	5/14/1997	gamma-Chlordane	0.0018	U	NA	NA
SF-SL-45	5/14/1997	Heptachlor	0.0018	U	NA	0.64
SF-SL-45	5/14/1997	Heptachlor epoxide	0.0018	U	NA	0.31
SF-SL-45	5/14/1997	Methoxychlor	0.018	U	NA	5110
SF-SL-45	5/14/1997	Toxaphene	0.18	U	NA	2.60
SF-SL-45	5/14/1997	Aroclor 1016	0.035	U	NA	40.88
SF-SL-45	5/14/1997	Aroclor 1221	0.071	U	NA	1.43
SF-SL-45	5/14/1997	Aroclor 1232	0.035	U	NA	1.43
SF-SL-45	5/14/1997	Aroclor 1242	0.035	U	NA	1.43
SF-SL-45	5/14/1997	Aroclor 1248	0.035	U	NA	1.43
SF-SL-45	5/14/1997	Aroclor 1254	0.035	U	NA	1.43
SF-SL-45	5/14/1997	Aroclor 1260	0.035	U	NA	1.43
SF-SL-45	5/14/1997	PCBs(total)	0.071	U	10	1.43
SF-SL-45	5/14/1997	Aluminum	4510		NA	1,022,000
SF-SL-45	5/14/1997	Antimony	0.47	U	NA	408.8
SF-SL-45	5/14/1997	Arsenic	0.94		NA	1.91
SF-SL-45	5/14/1997	Barium	16.8		NA	204,400
SF-SL-45	5/14/1997	Beryllium	0.2		NA	2,044
SF-SL-45	5/14/1997	Cadmium	0.06	U	10	511
SF-SL-45	5/14/1997	Calcium	313		NA	NA
SF-SL-45	5/14/1997	Chromium	6.5		143	3,066
SF-SL-45	5/14/1997	Cobalt	2.3		NA	NA
SF-SL-45	5/14/1997	Copper	2.9		NA	40,880
SF-SL-45	5/14/1997	Cyanide	0.53	U	35	20,440
SF-SL-45	5/14/1997	Iron	5900		NA	715,400
SF-SL-45	5/14/1997	Lead	3.3		NA	NA
SF-SL-45	5/14/1997	Magnesium	745		NA	NA
SF-SL-45	5/14/1997	Manganese	72.5		NA	20,440
SF-SL-45	5/14/1997	Mercury	0.05	U	NA	NA
SF-SL-45	5/14/1997	Nickel	3.4		NA	20,440
SF-SL-45	5/14/1997	Potassium	202		NA	NA
SF-SL-45	5/14/1997	Selenium	0.68	U	NA	5,110
SF-SL-45	5/14/1997	Silver	0.21	U	NA	5,110
SF-SL-45	5/14/1997	Sodium	106		NA	NA
SF-SL-45	5/14/1997	Thallium	0.66	U	NA	71.54
SF-SL-45	5/14/1997	Vanadium	8		NA	1,022
SF-SL-45	5/14/1997	Zinc	9.1		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) R - reported result if from a re-analysis of the sample.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) SF-45 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-46

**Summary of Analytical Results
SF-45 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF45BNE01	4/3/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF45BNE01	4/3/2006	TCE	0.001	U	0.7	7.15
SF45BNE01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF45BNE01	4/3/2006	2,4,5-Trichlorophenol	0.35	U	NA	102,200
SF45BNE01	4/3/2006	2,4-Dinitrophenol	1	U	NA	2,044
SF45BNE01	4/3/2006	2-Methylphenol	0.35	U	NA	51,100
SF45BNE01	4/3/2006	2-Nitrophenol	0.35	U	NA	NA
SF45BNE01	4/3/2006	3-Nitroaniline	0.7	U	NA	NA
SF45BNE01	4/3/2006	4-Nitrophenol	1	U	NA	NA
SF45BNE01	4/3/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF45BNE01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF45BNE01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF45BNE01	4/3/2006	Phenol	0.35	U	NA	306,600
SF45BNE01	4/3/2006	PCBs(total)	0.071	U	10	1.43
SF45BNE01	4/3/2006	Cadmium	0.13	U	10	511
SF45BNE01	4/3/2006	Chromium	3.5		143	3,066
SF45BNE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF45BNW01	4/3/2006	c-1,2-Dichloroethene	0.0058	U	0.25	10,220
SF45BNW01	4/3/2006	TCE	0.0012	U	0.7	7.15
SF45BNW01	4/3/2006	Tetrachloroethene	0.0012	U	1.4	5.30
SF45BNW01	4/3/2006	2,4,5-Trichlorophenol	2	U	NA	102,200
SF45BNW01	4/3/2006	2,4-Dinitrophenol	6	U	NA	2,044
SF45BNW01	4/3/2006	2-Methylphenol	2	U	NA	51,100
SF45BNW01	4/3/2006	2-Nitrophenol	2	U	NA	NA
SF45BNW01	4/3/2006	3-Nitroaniline	4	U	NA	NA
SF45BNW01	4/3/2006	4-Nitrophenol	6	U	NA	NA
SF45BNW01	4/3/2006	Benzo(a)anthracene	0.2	U	NA	3.92
SF45BNW01	4/3/2006	Benzo(a)pyrene	0.2	U	0.29	0.392
SF45BNW01	4/3/2006	Dibenz(a,h)anthracene	0.2	U	0.29	0.392
SF45BNW01	4/3/2006	Phenol	2	U	NA	306,600
SF45BNW01	4/3/2006	PCBs(total)	0.08	U	10	1.43
SF45BNW01	4/3/2006	Cadmium	0.14	U	10	511
SF45BNW01	4/3/2006	Chromium	16.7		143	3,066
SF45BNW01	4/3/2006	Cyanide	0.5	U	35	20,440
SF45BSE01	4/3/2006	c-1,2-Dichloroethene	0.0056	U	0.25	10,220
SF45BSE01	4/3/2006	TCE	0.0011	U	0.7	7.15
SF45BSE01	4/3/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF45BSE01	4/3/2006	2,4,5-Trichlorophenol	0.39	U	NA	102,200
SF45BSE01	4/3/2006	2,4-Dinitrophenol	1.2	U	NA	2,044
SF45BSE01	4/3/2006	2-Methylphenol	0.39	U	NA	51,100
SF45BSE01	4/3/2006	2-Nitrophenol	0.39	U	NA	NA
SF45BSE01	4/3/2006	3-Nitroaniline	0.77	U	NA	NA
SF45BSE01	4/3/2006	4-Nitrophenol	1.2	U	NA	NA
SF45BSE01	4/3/2006	Benzo(a)anthracene	0.039	U	NA	3.92
SF45BSE01	4/3/2006	Benzo(a)pyrene	0.039	U	0.29	0.392
SF45BSE01	4/3/2006	Dibenz(a,h)anthracene	0.039	U	0.29	0.392
SF45BSE01	4/3/2006	Phenol	0.39	U	NA	306,600
SF45BSE01	4/3/2006	PCBs(total)	0.078	U	10	1.43

Table 4-46

**Summary of Analytical Results
SF-45 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF45BSE01	4/3/2006	Cadmium	0.14	U	10	511
SF45BSE01	4/3/2006	Chromium	13		143	3,066
SF45BSE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF45BSW01	4/3/2006	c-1,2-Dichloroethene	0.006	U	0.25	10,220
SF45BSW01	4/3/2006	TCE	0.0012	U	0.7	7.15
SF45BSW01	4/3/2006	Tetrachloroethene	0.0012	U	1.4	5.30
SF45BSW01	4/3/2006	2,4,5-Trichlorophenol	0.42	U	NA	102,200
SF45BSW01	4/3/2006	2,4-Dinitrophenol	1.3	U	NA	2,044
SF45BSW01	4/3/2006	2-Methylphenol	0.42	U	NA	51,100
SF45BSW01	4/3/2006	2-Nitrophenol	0.42	U	NA	NA
SF45BSW01	4/3/2006	3-Nitroaniline	0.84	U	NA	NA
SF45BSW01	4/3/2006	4-Nitrophenol	1.3	U	NA	NA
SF45BSW01	4/3/2006	Benzo(a)anthracene	0.042	U	NA	3.92
SF45BSW01	4/3/2006	Benzo(a)pyrene	0.042	U	0.29	0.392
SF45BSW01	4/3/2006	Dibenz(a,h)anthracene	0.042	U	0.29	0.392
SF45BSW01	4/3/2006	Phenol	0.42	U	NA	306,600
SF45BSW01	4/3/2006	PCBs(total)	0.085	U	10	1.43
SF45BSW01	4/3/2006	Cadmium	0.15	U	10	511
SF45BSW01	4/3/2006	Chromium	5.7		143	3,066
SF45BSW01	4/3/2006	Cyanide	0.5	U	35	20,440
SF45CNE01	4/3/2006	2,4,5-Trichlorophenol	0.34	U	NA	102,200
SF45CNE01	4/3/2006	2,4-Dinitrophenol	1	U	NA	2,044
SF45CNE01	4/3/2006	2-Methylphenol	0.34	U	NA	51,100
SF45CNE01	4/3/2006	2-Nitrophenol	0.34	U	NA	NA
SF45CNE01	4/3/2006	3-Nitroaniline	0.69	U	NA	NA
SF45CNE01	4/3/2006	4-Nitrophenol	1	U	NA	NA
SF45CNE01	4/3/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF45CNE01	4/3/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF45CNE01	4/3/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF45CNE01	4/3/2006	Phenol	0.34	U	NA	306,600
SF45CNE01	4/3/2006	PCBs(total)	0.069	U	10	1.43
SF45CNE01	4/3/2006	Cadmium	0.12	U	10	511
SF45CNE01	4/3/2006	Chromium	5.9		143	3,066
SF45CNE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF45CNW01	4/3/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
SF45CNW01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF45CNW01	4/3/2006	2-Methylphenol	0.36	U	NA	51,100
SF45CNW01	4/3/2006	2-Nitrophenol	0.36	U	NA	NA
SF45CNW01	4/3/2006	3-Nitroaniline	0.71	U	NA	NA
SF45CNW01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF45CNW01	4/3/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF45CNW01	4/3/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF45CNW01	4/3/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF45CNW01	4/3/2006	Phenol	0.36	U	NA	306,600
SF45CNW01	4/3/2006	PCBs(total)	0.072	U	10	1.43
SF45CNW01	4/3/2006	Cadmium	0.13	U	10	511
SF45CNW01	4/3/2006	Chromium	8.6		143	3,066
SF45CNW01	4/3/2006	Cyanide	0.5	U	35	20,440

Table 4-46

**Summary of Analytical Results
SF-45 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF45CSE01	4/3/2006	2,4,5-Trichlorophenol	0.35	U	NA	102,200
SF45CSE01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF45CSE01	4/3/2006	2-Methylphenol	0.35	U	NA	51,100
SF45CSE01	4/3/2006	2-Nitrophenol	0.35	U	NA	NA
SF45CSE01	4/3/2006	3-Nitroaniline	0.71	U	NA	NA
SF45CSE01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF45CSE01	4/3/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF45CSE01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF45CSE01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF45CSE01	4/3/2006	Phenol	0.35	U	NA	306,600
SF45CSE01	4/3/2006	PCBs(total)	0.071	U	10	1.43
SF45CSE01	4/3/2006	Cadmium	0.13	U	10	511
SF45CSE01	4/3/2006	Chromium	5.3		143	3,066
SF45CSE01	4/3/2006	Cyanide	0.5	U	35	20,440
SF45CSW01	4/3/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
SF45CSW01	4/3/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF45CSW01	4/3/2006	2-Methylphenol	0.36	U	NA	51,100
SF45CSW01	4/3/2006	2-Nitrophenol	0.36	U	NA	NA
SF45CSW01	4/3/2006	3-Nitroaniline	0.72	U	NA	NA
SF45CSW01	4/3/2006	4-Nitrophenol	1.1	U	NA	NA
SF45CSW01	4/3/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF45CSW01	4/3/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF45CSW01	4/3/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF45CSW01	4/3/2006	Phenol	0.36	U	NA	306,600
SF45CSW01	4/3/2006	PCBs(total)	0.072	U	10	1.43
SF45CSW01	4/3/2006	Cadmium	0.13	U	10	511
SF45CSW01	4/3/2006	Chromium	6.8		143	3,066
SF45CSW01	4/3/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) SF-45 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-47

**Summary of Analytical Results
SF-46 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46SL01	3/29/2006	1,1,1-Trichloroethane	0.0091	U	NA	286,160
SF46SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.0018	U	NA	14.31
SF46SL01	3/29/2006	1,1,2-Trichloroethane	0.0055	U	NA	50.20
SF46SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.0091	U	NA	30,660,000
SF46SL01	3/29/2006	1,1-Dichloroethane	0.0091	U	NA	204,400
SF46SL01	3/29/2006	1,1-Dichloroethene	0.0036	U	NA	51,100
SF46SL01	3/29/2006	1,2,4-Trichlorobenzene	0.0091	U	NA	10,220
SF46SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.0091	U	NA	3.58
SF46SL01	3/29/2006	1,2-Dibromoethane	0.0091	U	NA	1.43
SF46SL01	3/29/2006	1,2-Dichlorobenzene	0.0091	U	NA	91,980
SF46SL01	3/29/2006	1,2-Dichloroethane	0.0036	U	NA	31.45
SF46SL01	3/29/2006	1,2-Dichloropropane	0.0018	U	NA	42.08
SF46SL01	3/29/2006	1,3-Dichlorobenzene	0.0091	U	NA	3,066
SF46SL01	3/29/2006	1,4-Dichlorobenzene	0.0091	U	NA	119.23
SF46SL01	3/29/2006	2-Butanone	0.0091	U	NA	613,200
SF46SL01	3/29/2006	2-Hexanone	0.0091	U	NA	NA
SF46SL01	3/29/2006	4-Methyl-2-pentanone	0.0091	U	NA	NA
SF46SL01	3/29/2006	Acetone	0.22		NA	919,800
SF46SL01	3/29/2006	Benzene	0.0018	U	NA	52.03
SF46SL01	3/29/2006	Bromodichloromethane	0.0018	U	NA	46.15
SF46SL01	3/29/2006	Bromoform	0.0073	U	NA	362.23
SF46SL01	3/29/2006	Bromomethane	0.0091	U	NA	1,430.8
SF46SL01	3/29/2006	c-1,2-Dichloroethene	0.0091	U	0.25	10,220
SF46SL01	3/29/2006	c-1,3-Dichloropropene	0.0091	U	NA	NA
SF46SL01	3/29/2006	Carbon disulfide	0.0091	U	NA	102,200
SF46SL01	3/29/2006	Carbon Tetrachloride	0.0036	U	NA	22.01
SF46SL01	3/29/2006	Chlorobenzene	0.0091	U	NA	20,440
SF46SL01	3/29/2006	Chloroethane	0.0091	U	NA	986.76
SF46SL01	3/29/2006	Chloroform	0.0091	U	NA	10,220
SF46SL01	3/29/2006	Chloromethane	0.0091	U	NA	NA
SF46SL01	3/29/2006	Cyclohexane	0.0091	U	NA	NA
SF46SL01	3/29/2006	Dibromochloromethane	0.0091	U	NA	34.07
SF46SL01	3/29/2006	Dichlorodifluoromethane	0.0091	U	NA	204,400
SF46SL01	3/29/2006	Ethylbenzene	0.0073	U	NA	102,200
SF46SL01	3/29/2006	Isopropylbenzene	0.0091	U	NA	102,200
SF46SL01	3/29/2006	Methyl Acetate	0.0091	U	NA	1,022,000
SF46SL01	3/29/2006	Methyl Cyclohexane	0.0091	U	NA	NA
SF46SL01	3/29/2006	Methyl t-butyl ether	0.0091	U	NA	715.4
SF46SL01	3/29/2006	Methylene Chloride	0.0055	U	NA	381.546667
SF46SL01	3/29/2006	Styrene	0.0091	U	NA	204,400
SF46SL01	3/29/2006	t-1,2-Dichloroethene	0.0091	U	NA	20,440
SF46SL01	3/29/2006	t-1,3-Dichloropropene	0.0091	U	NA	NA
SF46SL01	3/29/2006	TCE	0.0051		0.7	7.15
SF46SL01	3/29/2006	Tetrachloroethene	0.0027		1.4	5.30
SF46SL01	3/29/2006	Toluene	0.0091	U	NA	81,760
SF46SL01	3/29/2006	Trichlorofluoromethane	0.0091	U	NA	306,600
SF46SL01	3/29/2006	Vinyl Chloride	0.0091	U	NA	3.97

Table 4-47

**Summary of Analytical Results
SF-46 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46SL01	3/29/2006	Xylene (Total)	0.0091	U	NA	204,400
SF46SL01	3/29/2006	2,4,5-Trichlorophenol	1.2	U	NA	102,200
SF46SL01	3/29/2006	2,4,6-Trichlorophenol	1.2	U	NA	260.15
SF46SL01	3/29/2006	2,4-Dichlorophenol	1.2	U	NA	3,066
SF46SL01	3/29/2006	2,4-Dimethylphenol	1.2	U	NA	20,440
SF46SL01	3/29/2006	2,4-Dinitrophenol	4.8	U	NA	2,044
SF46SL01	3/29/2006	2,4-Dinitrotoluene	0.24	U	NA	2,044
SF46SL01	3/29/2006	2,6-Dinitrotoluene	0.24	U	NA	1,022
SF46SL01	3/29/2006	2-Chloronaphthalene	1.2	U	NA	81,760
SF46SL01	3/29/2006	2-Chlorophenol	1.2	U	NA	5,110
SF46SL01	3/29/2006	2-Methylnaphthalene	0.15	J	NA	4,088
SF46SL01	3/29/2006	2-Methylphenol	1.2	U	NA	51,100
SF46SL01	3/29/2006	2-Nitroaniline	2.4	U	NA	NA
SF46SL01	3/29/2006	2-Nitrophenol	1.2	U	NA	NA
SF46SL01	3/29/2006	3,3'-Dichlorobenzidine	2.4	U	NA	6.36
SF46SL01	3/29/2006	3+4-Methylphenol	1.2	U	NA	5,110
SF46SL01	3/29/2006	3-Nitroaniline	2.4	U	NA	NA
SF46SL01	3/29/2006	4,6-Dinitro-2-methylphenol	4.8	U	NA	NA
SF46SL01	3/29/2006	4-Bromophenyl phenyl ether	1.2	U	NA	NA
SF46SL01	3/29/2006	4-Chloro-3-methylphenol	1.2	U	NA	NA
SF46SL01	3/29/2006	4-Chloroaniline	1.2	U	NA	4,088
SF46SL01	3/29/2006	4-Chlorophenyl phenyl ether	1.2	U	NA	NA
SF46SL01	3/29/2006	4-Nitroaniline	2.4	U	NA	NA
SF46SL01	3/29/2006	4-Nitrophenol	4.8	U	NA	NA
SF46SL01	3/29/2006	Acenaphthene	0.27	J	NA	61,320
SF46SL01	3/29/2006	Acenaphthylene	0.37	J	NA	NA
SF46SL01	3/29/2006	Acetophenone	0.33	J	NA	102,200
SF46SL01	3/29/2006	Anthracene	1.3		NA	306,600
SF46SL01	3/29/2006	Atrazine	1.2	U	NA	13.01
SF46SL01	3/29/2006	Benzaldehyde	0.84	J	NA	102,200
SF46SL01	3/29/2006	Benzo(a)anthracene	5.2		NA	3.92
SF46SL01	3/29/2006	Benzo(a)pyrene	4.3		0.29	0.392
SF46SL01	3/29/2006	Benzo(b)fluoranthene	5.4		NA	3.92
SF46SL01	3/29/2006	Benzo(g,h,i)perylene	1.2	J	NA	NA
SF46SL01	3/29/2006	Benzo(k)fluoranthene	6.2		NA	39.2
SF46SL01	3/29/2006	bis(2-Chloroethoxy)methane	1.2	U	NA	NA
SF46SL01	3/29/2006	bis(2-Chloroethyl)ether	0.12	U	NA	2.60
SF46SL01	3/29/2006	bis(2-Chloroisopropyl)ether	1.2	U	NA	40.88
SF46SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	4.2		NA	204.4
SF46SL01	3/29/2006	Butyl benzyl phthalate	1.4		NA	204,400
SF46SL01	3/29/2006	Carbazole	1.1	J	NA	143.08
SF46SL01	3/29/2006	Chrysene	6		NA	392
SF46SL01	3/29/2006	Dibenz(a,h)anthracene	0.49		0.29	0.392
SF46SL01	3/29/2006	Dibenzofuran	0.32	J	NA	1,022
SF46SL01	3/29/2006	Diethyl phthalate	1.2	U	NA	817,600
SF46SL01	3/29/2006	Dimethyl phthalate	1.2	U	NA	NA
SF46SL01	3/29/2006	Di-n-butyl phthalate	0.36	J	NA	102,200

Table 4-47

**Summary of Analytical Results
SF-46 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46SL01	3/29/2006	Di-n-octyl phthalate	0.59	J	NA	NA
SF46SL01	3/29/2006	Diphenyl	1.2	U	NA	NA
SF46SL01	3/29/2006	Fluoranthene	14		NA	40,880
SF46SL01	3/29/2006	Fluorene	0.41	J	NA	40,880
SF46SL01	3/29/2006	Hexachlorobenzene	0.12	U	NA	1.79
SF46SL01	3/29/2006	Hexachlorobutadiene	0.24	U	NA	36.69
SF46SL01	3/29/2006	Hexachlorocyclopentadiene	1.2	U	NA	6,132
SF46SL01	3/29/2006	Hexachloroethane	0.12	U	NA	204.4
SF46SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	1.2		NA	3.92
SF46SL01	3/29/2006	Isophorone	1.2	U	NA	3,012.21
SF46SL01	3/29/2006	Naphthalene	0.32	J	NA	20,440
SF46SL01	3/29/2006	Nitrobenzene	0.12	U	NA	511
SF46SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.12	U	NA	0.41
SF46SL01	3/29/2006	N-Nitrosodiphenylamine	1.2	U	NA	584
SF46SL01	3/29/2006	Pentachlorophenol	4.8	U	NA	23.85
SF46SL01	3/29/2006	Phenanthrene	6.4		NA	NA
SF46SL01	3/29/2006	Phenol	0.14	J	NA	306,600
SF46SL01	3/29/2006	Pyrene	13		NA	30,660
SF46SL01	3/29/2006	4,4'-DDD	0.033		NA	11.92
SF46SL01	3/29/2006	4,4'-DDE	0.013	P*	NA	8.42
SF46SL01	3/29/2006	4,4'-DDT	0.26		NA	8.42
SF46SL01	3/29/2006	Aldrin	0.012	U	NA	0.17
SF46SL01	3/29/2006	alpha-BHC	0.012	U	NA	0.45
SF46SL01	3/29/2006	alpha-Chlordane	0.023		NA	NA
SF46SL01	3/29/2006	beta-BHC	0.012	U	NA	1.59
SF46SL01	3/29/2006	delta-BHC	0.012	U	NA	NA
SF46SL01	3/29/2006	Dieldrin	0.041		NA	0.18
SF46SL01	3/29/2006	Endosulfan I	0.012	U	NA	6,132
SF46SL01	3/29/2006	Endosulfan II	0.012	U	NA	6,132
SF46SL01	3/29/2006	Endosulfan sulfate	0.032	P*	NA	NA
SF46SL01	3/29/2006	Endrin	0.012	U	NA	306.6
SF46SL01	3/29/2006	Endrin Aldehyde	0.047	P*	NA	NA
SF46SL01	3/29/2006	Endrin ketone	0.013	P*	NA	NA
SF46SL01	3/29/2006	gamma-BHC (Lindane)	0.012	U	NA	2.20
SF46SL01	3/29/2006	gamma-Chlordane	0.029		NA	NA
SF46SL01	3/29/2006	Heptachlor	0.012	U	NA	0.64
SF46SL01	3/29/2006	Heptachlor epoxide	0.012	U	NA	0.31
SF46SL01	3/29/2006	Methoxychlor	0.012	U	NA	5,110
SF46SL01	3/29/2006	Toxaphene	0.12	U	NA	2.60
SF46SL01	3/29/2006	Aroclor 1016	0.12	U	NA	40.88
SF46SL01	3/29/2006	Aroclor 1221	0.12	U	NA	1.43
SF46SL01	3/29/2006	Aroclor 1232	0.12	U	NA	1.43
SF46SL01	3/29/2006	Aroclor 1242	0.12	U	NA	1.43
SF46SL01	3/29/2006	Aroclor 1248	0.12	U	NA	1.43
SF46SL01	3/29/2006	Aroclor 1254	0.65		NA	1.43
SF46SL01	3/29/2006	Aroclor 1260	1.5		NA	1.43
SF46SL01	3/29/2006	PCBs(total)	2.15		10	1.43

Table 4-47

**Summary of Analytical Results
SF-46 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46SL01	3/29/2006	Aluminum	4,920		NA	1,022,000
SF46SL01	3/29/2006	Antimony	3.6		NA	408.8
SF46SL01	3/29/2006	Arsenic	5.5		NA	1.91
SF46SL01	3/29/2006	Barium	704		NA	204,400
SF46SL01	3/29/2006	Beryllium	0.4	B	NA	2,044
SF46SL01	3/29/2006	Cadmium	13.8		10	511
SF46SL01	3/29/2006	Calcium	34,100		NA	NA
SF46SL01	3/29/2006	Chromium	127		143	3,066
SF46SL01	3/29/2006	Cobalt	22.6		NA	NA
SF46SL01	3/29/2006	Copper	320		NA	40,880
SF46SL01	3/29/2006	Iron	31,100		NA	715,400
SF46SL01	3/29/2006	Lead	300		NA	NA
SF46SL01	3/29/2006	Magnesium	3,570		NA	NA
SF46SL01	3/29/2006	Manganese	455		NA	20,440
SF46SL01	3/29/2006	Mercury	0.77		NA	NA
SF46SL01	3/29/2006	Nickel	82.7		NA	20,440
SF46SL01	3/29/2006	Potassium	779	B	NA	NA
SF46SL01	3/29/2006	Selenium	1.8	B	NA	5,110
SF46SL01	3/29/2006	Silver	11.1		NA	5,110
SF46SL01	3/29/2006	Sodium	145	B	NA	NA
SF46SL01	3/29/2006	Thallium	1.7	U	NA	71.54
SF46SL01	3/29/2006	Vanadium	16.8	B	NA	1,022
SF46SL01	3/29/2006	Zinc	3,390		NA	306,600
SF46SL01	3/29/2006	Cyanide	1.2		35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-46 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-48

**Summary of Analytical Results
SF-46 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46BN01	3/30/2006	Acetone	0.029		NA	919,800
SF46BN01	3/30/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF46BN01	3/30/2006	TCE	0.0043		0.7	7.15
SF46BN01	3/30/2006	Tetrachloroethene	0.0014		1.4	5.30
SF46BN01	3/30/2006	Benzo(a)anthracene	0.037	U	NA	3.92
SF46BN01	3/30/2006	Benzo(a)pyrene	0.034	J	0.29	0.392
SF46BN01	3/30/2006	Benzo(b)fluoranthene	0.042		NA	3.92
SF46BN01	3/30/2006	Benzo(k)fluoranthene	0.037	U	NA	39.2
SF46BN01	3/30/2006	Chrysene	0.37	U	NA	392
SF46BN01	3/30/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF46BN01	3/30/2006	Phenol	0.37	U	NA	306,600
SF46BN01	3/30/2006	PCBs(total)	0.044	J	10	1.43
SF46BN01	3/30/2006	Barium	43.7		NA	204,400
SF46BN01	3/30/2006	Cadmium	2.3		10	511
SF46BN01	3/30/2006	Chromium	11.3		143	3,066
SF46BN01	3/30/2006	Copper	61.4		NA	40,880
SF46BN01	3/30/2006	Mercury	0.13		NA	NA
SF46BN01	3/30/2006	Nickel	10.2		NA	20,440
SF46BN01	3/30/2006	Zinc	467		NA	306,600
SF46BN01	3/30/2006	Cyanide	0.5	U	35	20,440
SF46BS01	3/30/2006	Acetone	0.0052	U	NA	919,800
SF46BS01	3/30/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF46BS01	3/30/2006	TCE	0.0038		0.7	7.15
SF46BS01	3/30/2006	Tetrachloroethene	0.0018		1.4	5.30
SF46BS01	3/30/2006	Benzo(a)anthracene	0.45		NA	3.92
SF46BS01	3/30/2006	Benzo(a)pyrene	0.42		0.29	0.392
SF46BS01	3/30/2006	Benzo(b)fluoranthene	0.34		NA	3.92
SF46BS01	3/30/2006	Benzo(k)fluoranthene	0.37		NA	39.2
SF46BS01	3/30/2006	Chrysene	0.8		NA	392
SF46BS01	3/30/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF46BS01	3/30/2006	Phenol	0.36	U	NA	306,600
SF46BS01	3/30/2006	PCBs(total)	0.072	U	10	1.43
SF46BS01	3/30/2006	Barium	29.8	B	NA	204,400
SF46BS01	3/30/2006	Cadmium	0.34	B	10	511
SF46BS01	3/30/2006	Chromium	8		143	3,066
SF46BS01	3/30/2006	Copper	8		NA	40,880
SF46BS01	3/30/2006	Mercury	0.06		NA	NA
SF46BS01	3/30/2006	Nickel	4	B	NA	20,440
SF46BS01	3/30/2006	Zinc	50.4		NA	306,600
SF46BS01	3/30/2006	Cyanide	0.5	U	35	20,440
SF46N01	3/30/2006	Acetone	0.023		NA	919,800
SF46N01	3/30/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF46N01	3/30/2006	TCE	0.0027		0.7	7.15
SF46N01	3/30/2006	Tetrachloroethene	0.0007	J	1.4	5.30
SF46N01	3/30/2006	Benzo(a)anthracene	0.52		NA	3.92
SF46N01	3/30/2006	Benzo(a)pyrene	0.15		0.29	0.392

Table 4-48

**Summary of Analytical Results
SF-46 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46N01	3/30/2006	Benzo(b)fluoranthene	0.56		NA	3.92
SF46N01	3/30/2006	Benzo(k)fluoranthene	0.5		NA	39.2
SF46N01	3/30/2006	Chrysene	0.62		NA	392
SF46N01	3/30/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF46N01	3/30/2006	Phenol	0.36	U	NA	306,600
SF46N01	3/30/2006	PCBs(total)	0.072	U	10	1.43
SF46N01	3/30/2006	Barium	19.8	B	NA	204,400
SF46N01	3/30/2006	Cadmium	2.6		10	511
SF46N01	3/30/2006	Chromium	7.9		143	3,066
SF46N01	3/30/2006	Copper	3.4	B	NA	40,880
SF46N01	3/30/2006	Mercury	0.03	B	NA	NA
SF46N01	3/30/2006	Nickel	3.9	B	NA	20,440
SF46N01	3/30/2006	Zinc	1060		NA	306,600
SF46N01	3/30/2006	Cyanide	0.5	U	35	20,440
SF46S01	3/30/2006	Acetone	0.026		NA	919,800
SF46S01	3/30/2006	c-1,2-Dichloroethene	0.0017	J	0.25	10,220
SF46S01	3/30/2006	TCE	0.013		0.7	7.154
SF46S01	3/30/2006	Tetrachloroethene	0.008		1.4	5.30
SF46S01	3/30/2006	Benzo(a)anthracene	7.6		NA	3.92
SF46S01	3/30/2006	Benzo(a)pyrene	10		0.29	0.392
SF46S01	3/30/2006	Benzo(b)fluoranthene	9		NA	3.92
SF46S01	3/30/2006	Benzo(k)fluoranthene	13		NA	39.2
SF46S01	3/30/2006	Chrysene	10		NA	392
SF46S01	3/30/2006	Dibenz(a,h)anthracene	3.1		0.29	0.392
SF46S01	3/30/2006	Phenol	0.25	J	NA	306,600
SF46S01	3/30/2006	PCBs(total)	0.078	U	10	1.43
SF46S01	3/30/2006	Barium	248		NA	204,400
SF46S01	3/30/2006	Cadmium	31.3		10	511
SF46S01	3/30/2006	Chromium	38.9		143	3,066
SF46S01	3/30/2006	Copper	48.8		NA	40,880
SF46S01	3/30/2006	Mercury	0.28		NA	NA
SF46S01	3/30/2006	Nickel	9.4		NA	20,440
SF46S01	3/30/2006	Zinc	1,240		NA	306,600
SF46S01	3/30/2006	Cyanide	0.5	U	35	20,440
SF46CN01	3/30/2006	Benzo(a)anthracene	0.037	U	NA	3.92
SF46CN01	3/30/2006	Benzo(a)pyrene	0.037	U	0.29	0.392
SF46CN01	3/30/2006	Benzo(b)fluoranthene	0.037	U	NA	3.92
SF46CN01	3/30/2006	Benzo(k)fluoranthene	0.037	U	NA	39.2
SF46CN01	3/30/2006	Chrysene	0.37	U	NA	392
SF46CN01	3/30/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF46CN01	3/30/2006	Phenol	0.37	U	NA	306,600
SF46CN01	3/30/2006	PCBs(total)	0.074	U	10	1.43
SF46CN01	3/30/2006	Barium	24.6	B	NA	204,400
SF46CN01	3/30/2006	Cadmium	0.089	U	10	511
SF46CN01	3/30/2006	Chromium	11.9		143	3,066
SF46CN01	3/30/2006	Copper	10.4		NA	40,880

Table 4-48

**Summary of Analytical Results
SF-46 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF46CN01	3/30/2006	Mercury	0.06		NA	NA
SF46CN01	3/30/2006	Nickel	5.6	B	NA	20,440
SF46CN01	3/30/2006	Zinc	54		NA	306,600
SF46CN01	3/30/2006	Cyanide	0.5	U	35	20,440
SF46CS01	3/30/2006	Benzo(a)anthracene	1		NA	3.92
SF46CS01	3/30/2006	Benzo(a)pyrene	1		0.29	0.392
SF46CS01	3/30/2006	Benzo(b)fluoranthene	0.85		NA	3.92
SF46CS01	3/30/2006	Benzo(k)fluoranthene	0.99		NA	39.2
SF46CS01	3/30/2006	Chrysene	1		NA	392
SF46CS01	3/30/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF46CS01	3/30/2006	Phenol	0.37	U	NA	306,600
SF46CS01	3/30/2006	PCBs(total)	0.074	U	10	1.43
SF46CS01	3/30/2006	Barium	69.3		NA	204,400
SF46CS01	3/30/2006	Cadmium	2.2		10	511
SF46CS01	3/30/2006	Chromium	13.7		143	3,066
SF46CS01	3/30/2006	Copper	21.3		NA	40,880
SF46CS01	3/30/2006	Mercury	0.42		NA	NA
SF46CS01	3/30/2006	Nickel	5.3	B	NA	20,440
SF46CS01	3/30/2006	Zinc	104		NA	306,600
SF46CS01	3/30/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-46 post-remediation confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Explanation:

- Reported result exceeds the ROD *Cleanup Goal*.
- Reported result exceeds the ROD *Cleanup Goal* and USEPA Region III *Risk-based Concentration for Industrial Soil*.

Table 4-49

**Summary of Analytical Results
SF-47 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47SL01	3/28/2006	1,1,1-Trichloroethane	1.2		NA	286,160
SF47SL01	3/28/2006	1,1,2,2-Tetrachloroethane	0.12	U	NA	14.31
SF47SL01	3/28/2006	1,1,2-Trichloroethane	0.36	U	NA	50.20
SF47SL01	3/28/2006	1,1,2-Trichlorotrifluoroethane	0.61	U	NA	30,660,000
SF47SL01	3/28/2006	1,1-Dichloroethane	1.3		NA	204,400
SF47SL01	3/28/2006	1,1-Dichloroethene	0.24	U	NA	51,100
SF47SL01	3/28/2006	1,2,4-Trichlorobenzene	0.61	U	NA	10,220
SF47SL01	3/28/2006	1,2-Dibromo-3-chloropropane	0.61	U	NA	3.58
SF47SL01	3/28/2006	1,2-Dibromoethane	0.61	U	NA	1.43
SF47SL01	3/28/2006	1,2-Dichlorobenzene	0.61	U	NA	91,980
SF47SL01	3/28/2006	1,2-Dichloroethane	0.24	U	NA	31.45
SF47SL01	3/28/2006	1,2-Dichloropropane	0.12	U	NA	42.08
SF47SL01	3/28/2006	1,3-Dichlorobenzene	0.61	U	NA	3,066
SF47SL01	3/28/2006	1,4-Dichlorobenzene	0.61	U	NA	119.23
SF47SL01	3/28/2006	2-Butanone	0.61	U	NA	613,200
SF47SL01	3/28/2006	2-Hexanone	0.61	U	NA	NA
SF47SL01	3/28/2006	4-Methyl-2-pentanone	0.61	U	NA	NA
SF47SL01	3/28/2006	Acetone	0.61	U	NA	919,800
SF47SL01	3/28/2006	Benzene	0.12	U	NA	52.03
SF47SL01	3/28/2006	Bromodichloromethane	0.12	U	NA	46.15
SF47SL01	3/28/2006	Bromoform	0.49	U	NA	362.23
SF47SL01	3/28/2006	Bromomethane	0.61	U	NA	1,431
SF47SL01	3/28/2006	c-1,2-Dichloroethene	0.61	U	0.25	10,220
SF47SL01	3/28/2006	c-1,3-Dichloropropene	0.61	U	NA	NA
SF47SL01	3/28/2006	Carbon disulfide	0.61	U	NA	102,200
SF47SL01	3/28/2006	Carbon Tetrachloride	0.24	U	NA	22.01
SF47SL01	3/28/2006	Chlorobenzene	0.61	U	NA	20,440
SF47SL01	3/28/2006	Chloroethane	0.61	U	NA	986.76
SF47SL01	3/28/2006	Chloroform	0.61	U	NA	10,220
SF47SL01	3/28/2006	Chloromethane	0.61	U	NA	NA
SF47SL01	3/28/2006	Cyclohexane	0.61	U	NA	NA
SF47SL01	3/28/2006	Dibromochloromethane	0.61	U	NA	34.07
SF47SL01	3/28/2006	Dichlorodifluoromethane	0.61	U	NA	204,400
SF47SL01	3/28/2006	Ethylbenzene	0.49	U	NA	102,200
SF47SL01	3/28/2006	Isopropylbenzene	0.61	U	NA	102,200
SF47SL01	3/28/2006	Methyl Acetate	0.61	U	NA	1,022,000
SF47SL01	3/28/2006	Methyl Cyclohexane	0.61	U	NA	NA
SF47SL01	3/28/2006	Methyl t-butyl ether	0.61	U	NA	715.4
SF47SL01	3/28/2006	Methylene Chloride	0.36	U	NA	381.55
SF47SL01	3/28/2006	Styrene	0.15	J	NA	204,400
SF47SL01	3/28/2006	t-1,2-Dichloroethene	0.61	U	NA	20,440
SF47SL01	3/28/2006	t-1,3-Dichloropropene	0.61	U	NA	NA
SF47SL01	3/28/2006	TCE	0.12	U	0.7	7.15
SF47SL01	3/28/2006	Tetrachloroethene	0.16		1.4	5.30
SF47SL01	3/28/2006	Toluene	0.14	J	NA	81,760
SF47SL01	3/28/2006	Trichlorofluoromethane	0.61	U	NA	306,600
SF47SL01	3/28/2006	Vinyl Chloride	0.61	U	NA	3.97

Table 4-49

**Summary of Analytical Results
SF-47 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47SL01	3/28/2006	Xylene (Total)	0.61	U	NA	204,400
SF47SL01	3/28/2006	2,4,5-Trichlorophenol	0.84	U	NA	102,200
SF47SL01	3/28/2006	2,4,6-Trichlorophenol	0.84	U	NA	260.15
SF47SL01	3/28/2006	2,4-Dichlorophenol	0.84	U	NA	3,066
SF47SL01	3/28/2006	2,4-Dimethylphenol	0.37	J	NA	20,440
SF47SL01	3/28/2006	2,4-Dinitrophenol	3.4	U	NA	2,044
SF47SL01	3/28/2006	2,4-Dinitrotoluene	0.17	U	NA	2,044
SF47SL01	3/28/2006	2,6-Dinitrotoluene	0.17	U	NA	1,022
SF47SL01	3/28/2006	2-Chloronaphthalene	0.84	U	NA	81,760
SF47SL01	3/28/2006	2-Chlorophenol	0.84	U	NA	5,110
SF47SL01	3/28/2006	2-Methylnaphthalene	0.26	J	NA	4,088
SF47SL01	3/28/2006	2-Methylphenol	0.31	J	NA	51,100
SF47SL01	3/28/2006	2-Nitroaniline	1.7	U	NA	NA
SF47SL01	3/28/2006	2-Nitrophenol	0.84	U	NA	NA
SF47SL01	3/28/2006	3,3'-Dichlorobenzidine	1.7	U	NA	6.36
SF47SL01	3/28/2006	3+4-Methylphenol	2.5		NA	5,110
SF47SL01	3/28/2006	3-Nitroaniline	1.7	U	NA	NA
SF47SL01	3/28/2006	4,6-Dinitro-2-methylphenol	3.4	U	NA	NA
SF47SL01	3/28/2006	4-Bromophenyl phenyl ether	0.84	U	NA	NA
SF47SL01	3/28/2006	4-Chloro-3-methylphenol	0.84	U	NA	NA
SF47SL01	3/28/2006	4-Chloroaniline	0.84	U	NA	4,088
SF47SL01	3/28/2006	4-Chlorophenyl phenyl ether	0.84	U	NA	NA
SF47SL01	3/28/2006	4-Nitroaniline	1.7	U	NA	NA
SF47SL01	3/28/2006	4-Nitrophenol	3.4	U	NA	NA
SF47SL01	3/28/2006	Acenaphthene	0.36	J	NA	61,320
SF47SL01	3/28/2006	Acenaphthylene	0.22	J	NA	NA
SF47SL01	3/28/2006	Acetophenone	0.84	U	NA	102,200
SF47SL01	3/28/2006	Anthracene	1		NA	306,600
SF47SL01	3/28/2006	Atrazine	0.84	U	NA	13.01
SF47SL01	3/28/2006	Benzaldehyde	0.84	U	NA	102,200
SF47SL01	3/28/2006	Benzo(a)anthracene	2.4		NA	3.92
SF47SL01	3/28/2006	Benzo(a)pyrene	1.6		0.29	0.392
SF47SL01	3/28/2006	Benzo(b)fluoranthene	2.3		NA	3.92
SF47SL01	3/28/2006	Benzo(g,h,i)perylene	0.47	J	NA	NA
SF47SL01	3/28/2006	Benzo(k)fluoranthene	2.2		NA	39.2
SF47SL01	3/28/2006	bis(2-Chloroethoxy)methane	0.84	U	NA	NA
SF47SL01	3/28/2006	bis(2-Chloroethyl)ether	0.084	U	NA	2.60
SF47SL01	3/28/2006	bis(2-Chloroisopropyl)ether	0.84	U	NA	40.88
SF47SL01	3/28/2006	bis(2-Ethylhexyl)phthalate	1.2		NA	204.4
SF47SL01	3/28/2006	Butyl benzyl phthalate	0.84	U	NA	204,400
SF47SL01	3/28/2006	Carbazole	0.69	J	NA	143.08
SF47SL01	3/28/2006	Chrysene	2.9		NA	392
SF47SL01	3/28/2006	Dibenz(a,h)anthracene	0.7		0.29	0.39
SF47SL01	3/28/2006	Dibenzofuran	0.46	J	NA	1,022
SF47SL01	3/28/2006	Diethyl phthalate	0.84	U	NA	817,600
SF47SL01	3/28/2006	Dimethyl phthalate	0.84	U	NA	NA
SF47SL01	3/28/2006	Di-n-butyl phthalate	0.84	U	NA	102,200

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**Summary of Analytical Results
SF-47 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47SL01	3/28/2006	Di-n-octyl phthalate	0.84	U	NA	NA
SF47SL01	3/28/2006	Diphenyl	0.84	U	NA	NA
SF47SL01	3/28/2006	Fluoranthene	5.9		NA	40,880
SF47SL01	3/28/2006	Fluorene	0.57	J	NA	40,880
SF47SL01	3/28/2006	Hexachlorobenzene	0.084	U	NA	1.79
SF47SL01	3/28/2006	Hexachlorobutadiene	0.17	U	NA	36.69
SF47SL01	3/28/2006	Hexachlorocyclopentadiene	0.84	U	NA	6,132
SF47SL01	3/28/2006	Hexachloroethane	0.084	U	NA	204.4
SF47SL01	3/28/2006	Indeno(1,2,3-cd)pyrene	0.97		NA	3.92
SF47SL01	3/28/2006	Isophorone	0.84	U	NA	3012.21
SF47SL01	3/28/2006	Naphthalene	0.31	J	NA	20,440
SF47SL01	3/28/2006	Nitrobenzene	0.084	U	NA	511
SF47SL01	3/28/2006	N-Nitrosodi-n-propylamine	0.084	U	NA	0.41
SF47SL01	3/28/2006	N-Nitrosodiphenylamine	0.84	U	NA	584
SF47SL01	3/28/2006	Pentachlorophenol	3.4	U	NA	23.85
SF47SL01	3/28/2006	Phenanthrene	5.1		NA	NA
SF47SL01	3/28/2006	Phenol	0.54	J	NA	306,600
SF47SL01	3/28/2006	Pyrene	4.8		NA	30,660
SF47SL01	3/28/2006	4,4'-DDD	0.0085	U	NA	11.92
SF47SL01	3/28/2006	4,4'-DDE	0.017		NA	8.42
SF47SL01	3/28/2006	4,4'-DDT	0.028		NA	8.42
SF47SL01	3/28/2006	Aldrin	0.0085	U	NA	0.17
SF47SL01	3/28/2006	alpha-BHC	0.0085	U	NA	0.45
SF47SL01	3/28/2006	alpha-Chlordane	0.0085	U	NA	NA
SF47SL01	3/28/2006	beta-BHC	0.0085	U	NA	1.59
SF47SL01	3/28/2006	delta-BHC	0.0085	U	NA	NA
SF47SL01	3/28/2006	Dieldrin	0.0085	U	NA	0.18
SF47SL01	3/28/2006	Endosulfan I	0.0085	U	NA	6,132
SF47SL01	3/28/2006	Endosulfan II	0.0085	U	NA	6,132
SF47SL01	3/28/2006	Endosulfan sulfate	0.0085	U	NA	NA
SF47SL01	3/28/2006	Endrin	0.0085	U	NA	307
SF47SL01	3/28/2006	Endrin Aldehyde	0.0085	U	NA	NA
SF47SL01	3/28/2006	Endrin ketone	0.0085	U	NA	NA
SF47SL01	3/28/2006	gamma-BHC (Lindane)	0.0085	U	NA	2.20
SF47SL01	3/28/2006	gamma-Chlordane	0.0085	U	NA	NA
SF47SL01	3/28/2006	Heptachlor	0.0085	U	NA	0.64
SF47SL01	3/28/2006	Heptachlor epoxide	0.0085	U	NA	0.31
SF47SL01	3/28/2006	Methoxychlor	0.012	P*	NA	5,110
SF47SL01	3/28/2006	Toxaphene	0.085	U	NA	2.6
SF47SL01	3/28/2006	Aroclor 1016	0.085	U	NA	40.88
SF47SL01	3/28/2006	Aroclor 1221	0.085	U	NA	1.43
SF47SL01	3/28/2006	Aroclor 1232	0.085	U	NA	1.43
SF47SL01	3/28/2006	Aroclor 1242	0.085	U	NA	1.43
SF47SL01	3/28/2006	Aroclor 1248	0.085	U	NA	1.43
SF47SL01	3/28/2006	Aroclor 1254	0.16		NA	1.43
SF47SL01	3/28/2006	Aroclor 1260	0.1		NA	1.43
SF47SL01	3/28/2006	Aroclor 1262	0.085	U	NA	NA

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**Summary of Analytical Results
SF-47 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47SL01	3/28/2006	Aroclor 1268	0.085	U	NA	NA
SF47SL01	3/28/2006	PCBs(total)	0.26		10	1,431
SF47SL01	3/28/2006	Aluminum	3,260		NA	1,022,000
SF47SL01	3/28/2006	Antimony	1.5	U	NA	408.8
SF47SL01	3/28/2006	Arsenic	0.97	B	NA	1.91
SF47SL01	3/28/2006	Barium	469		NA	204,400
SF47SL01	3/28/2006	Beryllium	0.25	B	NA	2,044
SF47SL01	3/28/2006	Cadmium	1.1	B	10	511
SF47SL01	3/28/2006	Calcium	28,600		NA	NA
SF47SL01	3/28/2006	Chromium	18.7		143	3,066
SF47SL01	3/28/2006	Cobalt	2.4	B	NA	NA
SF47SL01	3/28/2006	Copper	28.2		NA	40,880
SF47SL01	3/28/2006	Iron	5,890		NA	715,400
SF47SL01	3/28/2006	Lead	48.8		NA	NA
SF47SL01	3/28/2006	Magnesium	1,590		NA	NA
SF47SL01	3/28/2006	Manganese	89.4		NA	20,440
SF47SL01	3/28/2006	Mercury	0.32		NA	NA
SF47SL01	3/28/2006	Nickel	6.2	B	NA	20,440
SF47SL01	3/28/2006	Potassium	841	B	NA	NA
SF47SL01	3/28/2006	Selenium	1.1	U	NA	5,110
SF47SL01	3/28/2006	Silver	4.7		NA	5,110
SF47SL01	3/28/2006	Sodium	556	B	NA	NA
SF47SL01	3/28/2006	Thallium	1.2	U	NA	71.54
SF47SL01	3/28/2006	Vanadium	9.9	B	NA	1,022
SF47SL01	3/28/2006	Zinc	341		NA	306,600
SF47SL01	3/28/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) SF-47 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was

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**Summary of Analytical Results
SF-47 Aqueous Characterization Sample
Liberty Industrial Finishing Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF47AQ01	3/28/2006	1,1,1-Trichloroethane	230	
SF47AQ01	3/28/2006	1,1,2,2-Tetrachloroethane	2	U
SF47AQ01	3/28/2006	1,1,2-Trichloroethane	6	U
SF47AQ01	3/28/2006	1,1,2-Trichlorotrifluoroethane	10	U
SF47AQ01	3/28/2006	1,1-Dichloroethane	140	
SF47AQ01	3/28/2006	1,1-Dichloroethene	38	
SF47AQ01	3/28/2006	1,2,4-Trichlorobenzene	10	U
SF47AQ01	3/28/2006	1,2-Dibromo-3-chloropropane	10	U
SF47AQ01	3/28/2006	1,2-Dibromoethane	10	U
SF47AQ01	3/28/2006	1,2-Dichlorobenzene	10	U
SF47AQ01	3/28/2006	1,2-Dichloroethane	4	U
SF47AQ01	3/28/2006	1,2-Dichloropropane	2	U
SF47AQ01	3/28/2006	1,3-Dichlorobenzene	10	U
SF47AQ01	3/28/2006	1,4-Dichlorobenzene	10	U
SF47AQ01	3/28/2006	2-Butanone	10	U
SF47AQ01	3/28/2006	2-Hexanone	10	U
SF47AQ01	3/28/2006	4-Methyl-2-pentanone	10	U
SF47AQ01	3/28/2006	Acetone	75	
SF47AQ01	3/28/2006	Benzene	2.3	
SF47AQ01	3/28/2006	Bromodichloromethane	2	U
SF47AQ01	3/28/2006	Bromoform	8	U
SF47AQ01	3/28/2006	Bromomethane	10	U
SF47AQ01	3/28/2006	c-1,2-Dichloroethene	10	U
SF47AQ01	3/28/2006	c-1,3-Dichloropropene	10	U
SF47AQ01	3/28/2006	Carbon disulfide	10	U
SF47AQ01	3/28/2006	Carbon Tetrachloride	4	U
SF47AQ01	3/28/2006	Chlorobenzene	10	U
SF47AQ01	3/28/2006	Chloroethane	10	U
SF47AQ01	3/28/2006	Chloroform	1.7	J
SF47AQ01	3/28/2006	Chloromethane	10	U
SF47AQ01	3/28/2006	Cyclohexane	10	U
SF47AQ01	3/28/2006	Dibromochloromethane	10	U
SF47AQ01	3/28/2006	Dichlorodifluoromethane	10	U
SF47AQ01	3/28/2006	Ethylbenzene	1.5	J
SF47AQ01	3/28/2006	Isopropylbenzene	11	
SF47AQ01	3/28/2006	Methyl Acetate	10	U
SF47AQ01	3/28/2006	Methyl Cyclohexane	10	U
SF47AQ01	3/28/2006	Methyl t-butyl ether	1.9	J
SF47AQ01	3/28/2006	Methylene Chloride	6	U
SF47AQ01	3/28/2006	Styrene	4.9	J
SF47AQ01	3/28/2006	t-1,2-Dichloroethene	10	U
SF47AQ01	3/28/2006	t-1,3-Dichloropropene	10	U
SF47AQ01	3/28/2006	TCE	5.1	
SF47AQ01	3/28/2006	Tetrachloroethene	5	
SF47AQ01	3/28/2006	Toluene	24	
SF47AQ01	3/28/2006	Trichlorofluoromethane	10	U
SF47AQ01	3/28/2006	Vinyl Chloride	3.5	J

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**Summary of Analytical Results
SF-47 Aqueous Characterization Sample
Liberty Industrial Finishing Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF47AQ01	3/28/2006	Xylene (Total)	22	
SF47AQ01	3/28/2006	2,4,5-Trichlorophenol	110	U
SF47AQ01	3/28/2006	2,4,6-Trichlorophenol	110	U
SF47AQ01	3/28/2006	2,4-Dichlorophenol	110	U
SF47AQ01	3/28/2006	2,4-Dimethylphenol	110	U
SF47AQ01	3/28/2006	2,4-Dinitrophenol	330	U
SF47AQ01	3/28/2006	2,4-Dinitrotoluene	22	U
SF47AQ01	3/28/2006	2,6-Dinitrotoluene	22	U
SF47AQ01	3/28/2006	2-Chloronaphthalene	110	U
SF47AQ01	3/28/2006	2-Chlorophenol	110	U
SF47AQ01	3/28/2006	2-Methylnaphthalene	110	U
SF47AQ01	3/28/2006	2-Methylphenol	110	U
SF47AQ01	3/28/2006	2-Nitroaniline	220	U
SF47AQ01	3/28/2006	2-Nitrophenol	110	U
SF47AQ01	3/28/2006	3,3'-Dichlorobenzidine	220	U
SF47AQ01	3/28/2006	3+4-Methylphenol	110	U
SF47AQ01	3/28/2006	3-Nitroaniline	220	U
SF47AQ01	3/28/2006	4,6-Dinitro-2-methylphenol	330	U
SF47AQ01	3/28/2006	4-Bromophenyl phenyl ether	110	U
SF47AQ01	3/28/2006	4-Chloro-3-methylphenol	110	U
SF47AQ01	3/28/2006	4-Chloroaniline	110	U
SF47AQ01	3/28/2006	4-Chlorophenyl phenyl ether	110	U
SF47AQ01	3/28/2006	4-Nitroaniline	220	U
SF47AQ01	3/28/2006	4-Nitrophenol	330	U
SF47AQ01	3/28/2006	Acenaphthene	110	U
SF47AQ01	3/28/2006	Acenaphthylene	110	U
SF47AQ01	3/28/2006	Acetophenone	110	U
SF47AQ01	3/28/2006	Anthracene	110	U
SF47AQ01	3/28/2006	Atrazine	110	U
SF47AQ01	3/28/2006	Benzaldehyde	110	U
SF47AQ01	3/28/2006	Benzo(a)anthracene	11	U
SF47AQ01	3/28/2006	Benzo(a)pyrene	11	U
SF47AQ01	3/28/2006	Benzo(b)fluoranthene	11	U
SF47AQ01	3/28/2006	Benzo(g,h,i)perylene	110	U
SF47AQ01	3/28/2006	Benzo(k)fluoranthene	11	U
SF47AQ01	3/28/2006	bis(2-Chloroethoxy)methane	110	U
SF47AQ01	3/28/2006	bis(2-Chloroethyl)ether	11	U
SF47AQ01	3/28/2006	bis(2-Chloroisopropyl)ether	110	U
SF47AQ01	3/28/2006	bis(2-Ethylhexyl)phthalate	110	U
SF47AQ01	3/28/2006	Butyl benzyl phthalate	110	U
SF47AQ01	3/28/2006	Carbazole	110	U
SF47AQ01	3/28/2006	Chrysene	110	U
SF47AQ01	3/28/2006	Dibenz(a,h)anthracene	11	U
SF47AQ01	3/28/2006	Dibenzofuran	110	U
SF47AQ01	3/28/2006	Diethyl phthalate	110	U
SF47AQ01	3/28/2006	Dimethyl phthalate	110	U
SF47AQ01	3/28/2006	Di-n-butyl phthalate	110	U

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**Summary of Analytical Results
SF-47 Aqueous Characterization Sample
Liberty Industrial Finishing Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF47AQ01	3/28/2006	Di-n-octyl phthalate	110	U
SF47AQ01	3/28/2006	Diphenyl	110	U
SF47AQ01	3/28/2006	Fluoranthene	110	U
SF47AQ01	3/28/2006	Fluorene	110	U
SF47AQ01	3/28/2006	Hexachlorobenzene	11	U
SF47AQ01	3/28/2006	Hexachlorobutadiene	22	U
SF47AQ01	3/28/2006	Hexachlorocyclopentadiene	110	U
SF47AQ01	3/28/2006	Hexachloroethane	11	U
SF47AQ01	3/28/2006	Indeno(1,2,3-cd)pyrene	11	U
SF47AQ01	3/28/2006	Isophorone	110	U
SF47AQ01	3/28/2006	Naphthalene	110	U
SF47AQ01	3/28/2006	Nitrobenzene	11	U
SF47AQ01	3/28/2006	N-Nitrosodi-n-propylamine	11	U
SF47AQ01	3/28/2006	N-Nitrosodiphenylamine	110	U
SF47AQ01	3/28/2006	Pentachlorophenol	330	U
SF47AQ01	3/28/2006	Phenanthrene	110	U
SF47AQ01	3/28/2006	Phenol	110	U
SF47AQ01	3/28/2006	Pyrene	110	U
SF47AQ01	3/28/2006	4,4'-DDD	0.054	U
SF47AQ01	3/28/2006	4,4'-DDE	0.054	U
SF47AQ01	3/28/2006	4,4'-DDT	0.054	U
SF47AQ01	3/28/2006	Aldrin	0.054	U
SF47AQ01	3/28/2006	alpha-BHC	0.054	U
SF47AQ01	3/28/2006	alpha-Chlordane	0.054	U
SF47AQ01	3/28/2006	beta-BHC	0.054	U
SF47AQ01	3/28/2006	delta-BHC	0.054	U
SF47AQ01	3/28/2006	Dieldrin	0.054	U
SF47AQ01	3/28/2006	Endosulfan I	0.054	U
SF47AQ01	3/28/2006	Endosulfan II	0.054	U
SF47AQ01	3/28/2006	Endosulfan sulfate	0.054	U
SF47AQ01	3/28/2006	Endrin	0.054	U
SF47AQ01	3/28/2006	Endrin Aldehyde	0.054	U
SF47AQ01	3/28/2006	Endrin ketone	0.054	U
SF47AQ01	3/28/2006	gamma-BHC (Lindane)	0.054	U
SF47AQ01	3/28/2006	gamma-Chlordane	0.054	U
SF47AQ01	3/28/2006	Heptachlor	0.054	U
SF47AQ01	3/28/2006	Heptachlor epoxide	0.054	U
SF47AQ01	3/28/2006	Methoxychlor	0.1	P*
SF47AQ01	3/28/2006	Toxaphene	0.54	U
SF47AQ01	3/28/2006	Aroclor 1016	0.54	U
SF47AQ01	3/28/2006	Aroclor 1221	0.54	U
SF47AQ01	3/28/2006	Aroclor 1232	0.54	U
SF47AQ01	3/28/2006	Aroclor 1242	0.54	U
SF47AQ01	3/28/2006	Aroclor 1248	0.54	U
SF47AQ01	3/28/2006	Aroclor 1254	0.54	U
SF47AQ01	3/28/2006	Aroclor 1260	0.54	U
SF47AQ01	3/28/2006	PCBs(total)	0.54	U

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**Summary of Analytical Results
SF-47 Aqueous Characterization Sample
Liberty Industrial Finishing Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier
SF47AQ01	3/28/2006	Aluminum	4,320	
SF47AQ01	3/28/2006	Antimony	4.9	U
SF47AQ01	3/28/2006	Arsenic	10.6	
SF47AQ01	3/28/2006	Barium	206	
SF47AQ01	3/28/2006	Beryllium	0.1	U
SF47AQ01	3/28/2006	Cadmium	4.6	
SF47AQ01	3/28/2006	Calcium	216,000	
SF47AQ01	3/28/2006	Chromium	15.6	
SF47AQ01	3/28/2006	Cobalt	3.5	U
SF47AQ01	3/28/2006	Copper	23.2	B
SF47AQ01	3/28/2006	Iron	3,800	
SF47AQ01	3/28/2006	Lead	38.6	
SF47AQ01	3/28/2006	Magnesium	1,080	B
SF47AQ01	3/28/2006	Manganese	66.1	
SF47AQ01	3/28/2006	Mercury	0.25	
SF47AQ01	3/28/2006	Nickel	12.5	B
SF47AQ01	3/28/2006	Potassium	90,400	
SF47AQ01	3/28/2006	Selenium	4.8	U
SF47AQ01	3/28/2006	Silver	2.6	B
SF47AQ01	3/28/2006	Sodium	213,000	
SF47AQ01	3/28/2006	Thallium	4.8	U
SF47AQ01	3/28/2006	Vanadium	14.2	B
SF47AQ01	3/28/2006	Zinc	160	

Notes:

- 1) All results reported in micrograms per liter.
- 2) U - compound not detected at a concentration equal to or exceeding the method detection limit.
- 3) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 4) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) SF-47 liquid characterization sample collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-51

**Summary of Analytical Results
SF-47 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47BNE01	4/6/2006	1,1,1-Trichloroethane	0.0049	U	NA	286,160
SF47BNE01	4/6/2006	1,1-Dichloroethane	0.0049	U	NA	204,400
SF47BNE01	4/6/2006	Acetone	0.0049	U	NA	919,800
SF47BNE01	4/6/2006	Benzene	0.001	U	NA	52.03
SF47BNE01	4/6/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF47BNE01	4/6/2006	TCE	0.001	U	0.7	7.15
SF47BNE01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF47BNE01	4/6/2006	Toluene	0.0049	U	NA	81,760
SF47BNE01	4/6/2006	Vinyl Chloride	0.0049	U	NA	3.97
SF47BNE01	4/6/2006	Xylene (Total)	0.0049	U	NA	204,400
SF47BNE01	4/6/2006	2-Methylphenol	0.34	U	NA	51,100
SF47BNE01	4/6/2006	3+4-Methylphenol	0.34	U	NA	5,110
SF47BNE01	4/6/2006	Benzo(a)anthracene	0.034	U	NA	3.92
SF47BNE01	4/6/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
SF47BNE01	4/6/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
SF47BNE01	4/6/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
SF47BNE01	4/6/2006	Chrysene	0.34	U	NA	392
SF47BNE01	4/6/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
SF47BNE01	4/6/2006	Phenol	0.34	U	NA	306,600
SF47BNE01	4/6/2006	PCBs(total)	0.069	U	10	1.43
SF47BNE01	4/6/2006	Cadmium	0.1	U	10	511
SF47BNE01	4/6/2006	Chromium	6.5		143	3,066
SF47BNE01	4/6/2006	Mercury	0.017	U	NA	NA
SF47BNE01	4/6/2006	Zinc	2.4	B	NA	306,600
SF47BNE01	4/6/2006	Cyanide	0.5	U	35	20,440
SF47BSW01	4/6/2006	1,1,1-Trichloroethane	0.005	U	NA	286,160
SF47BSW01	4/6/2006	1,1-Dichloroethane	0.005	U	NA	204,400
SF47BSW01	4/6/2006	Acetone	0.005	U	NA	919,800
SF47BSW01	4/6/2006	Benzene	0.001	U	NA	52.03
SF47BSW01	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF47BSW01	4/6/2006	TCE	0.001	U	0.7	7.15
SF47BSW01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF47BSW01	4/6/2006	Toluene	0.005	U	NA	81,760
SF47BSW01	4/6/2006	Vinyl Chloride	0.005	U	NA	3.97
SF47BSW01	4/6/2006	Xylene (Total)	0.005	U	NA	204,400
SF47BSW01	4/6/2006	2-Methylphenol	0.35	U	NA	51,100
SF47BSW01	4/6/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF47BSW01	4/6/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF47BSW01	4/6/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF47BSW01	4/6/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF47BSW01	4/6/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
SF47BSW01	4/6/2006	Chrysene	0.35	U	NA	392
SF47BSW01	4/6/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF47BSW01	4/6/2006	Phenol	0.35	U	NA	306,600
SF47BSW01	4/6/2006	PCBs(total)	0.07	U	10	1.43
SF47BSW01	4/6/2006	Cadmium	0.1	U	10	511
SF47BSW01	4/6/2006	Chromium	10.6		143	3,066
SF47BSW01	4/6/2006	Mercury	0.02	B	NA	NA

Table 4-51

**Summary of Analytical Results
SF-47 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47BSW01	4/6/2006	Zinc	6.4		NA	306,600
SF47BSW01	4/6/2006	Cyanide	0.5	U	35	20,440
DUP09	4/6/2006	1,1,1-Trichloroethane	0.0048	U	NA	286,160
DUP09	4/6/2006	1,1-Dichloroethane	0.0048	U	NA	204,400
DUP09	4/6/2006	Acetone	0.0048	U	NA	919,800
DUP09	4/6/2006	Benzene	0.001	U	NA	52.03
DUP09	4/6/2006	c-1,2-Dichloroethene	0.0048	U	0.25	10,220
DUP09	4/6/2006	TCE	0.001	U	0.7	7.15
DUP09	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP09	4/6/2006	Toluene	0.0048	U	NA	81,760
DUP09	4/6/2006	Vinyl Chloride	0.0048	U	NA	3.97
DUP09	4/6/2006	Xylene (Total)	0.0048	U	NA	204,400
DUP09	4/6/2006	2-Methylphenol	0.34	U	NA	51,100
DUP09	4/6/2006	3+4-Methylphenol	0.34	U	NA	5,110
DUP09	4/6/2006	Benzo(a)anthracene	0.034	U	NA	3.92
DUP09	4/6/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
DUP09	4/6/2006	Benzo(b)fluoranthene	0.034	U	NA	3.92
DUP09	4/6/2006	Benzo(k)fluoranthene	0.034	U	NA	39.2
DUP09	4/6/2006	Chrysene	0.34	U	NA	392
DUP09	4/6/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
DUP09	4/6/2006	Phenol	0.34	U	NA	306,600
DUP09	4/6/2006	PCBs(total)	0.042	J	10	1.43
DUP09	4/6/2006	Cadmium	0.1	U	10	511
DUP09	4/6/2006	Chromium	1.5	B	143	3,066
DUP09	4/6/2006	Mercury	0.017	U	NA	NA
DUP09	4/6/2006	Zinc	1.7	B	NA	306,600
DUP09	4/6/2006	Cyanide	0.5	U	35	20,440
SF47BNW01	4/6/2006	1,1,1-Trichloroethane	0.005	U	NA	286,160
SF47BNW01	4/6/2006	1,1-Dichloroethane	0.005	U	NA	204,400
SF47BNW01	4/6/2006	Acetone	0.005	U	NA	919,800
SF47BNW01	4/6/2006	Benzene	0.001	U	NA	52.03
SF47BNW01	4/6/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF47BNW01	4/6/2006	TCE	0.001	U	0.7	7.15
SF47BNW01	4/6/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF47BNW01	4/6/2006	Toluene	0.005	U	NA	81,760
SF47BNW01	4/6/2006	Vinyl Chloride	0.005	U	NA	3.97
SF47BNW01	4/6/2006	Xylene (Total)	0.005	U	NA	204,400
SF47BSE01	4/6/2006	1,1,1-Trichloroethane	0.0061	U	NA	286,160
SF47BSE01	4/6/2006	1,1-Dichloroethane	0.0061	U	NA	204,400
SF47BSE01	4/6/2006	Acetone	0.0061	U	NA	919,800
SF47BSE01	4/6/2006	Benzene	0.0012	U	NA	52.03
SF47BSE01	4/6/2006	c-1,2-Dichloroethene	0.0061	U	0.25	10,220
SF47BSE01	4/6/2006	TCE	0.0012	U	0.7	7.15
SF47BSE01	4/6/2006	Tetrachloroethene	0.0012	U	1.4	5.30
SF47BSE01	4/6/2006	Toluene	0.0061	U	NA	81,760
SF47BSE01	4/6/2006	Vinyl Chloride	0.0061	U	NA	3.97
SF47BSE01	4/6/2006	Xylene (Total)	0.0061	U	NA	204,400
SF47CN01	4/6/2006	2-Methylphenol	0.35	U	NA	51,100

Table 4-51

**Summary of Analytical Results
SF-47 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF47CN01	4/6/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF47CN01	4/6/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF47CN01	4/6/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF47CN01	4/6/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF47CN01	4/6/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
SF47CN01	4/6/2006	Chrysene	0.35	U	NA	392
SF47CN01	4/6/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF47CN01	4/6/2006	Phenol	0.35	U	NA	306,600
SF47CN01	4/6/2006	PCBs(total)	0.071	U	10	1.43
SF47CN01	4/6/2006	Cadmium	0.097	U	10	511
SF47CN01	4/6/2006	Chromium	2.7		143	3,066
SF47CN01	4/6/2006	Mercury	0.018	U	NA	NA
SF47CN01	4/6/2006	Zinc	3.5	B	NA	306,600
SF47CN01	4/6/2006	Cyanide	0.5	U	35	20,440
SF47CS01	4/6/2006	2-Methylphenol	0.35	U	NA	51,100
SF47CS01	4/6/2006	3+4-Methylphenol	0.35	U	NA	5,110
SF47CS01	4/6/2006	Benzo(a)anthracene	0.035	U	NA	3.92
SF47CS01	4/6/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF47CS01	4/6/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
SF47CS01	4/6/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
SF47CS01	4/6/2006	Chrysene	0.35	U	NA	392
SF47CS01	4/6/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF47CS01	4/6/2006	Phenol	0.35	U	NA	306,600
SF47CS01	4/6/2006	PCBs(total)	0.071	U	10	1.43
SF47CS01	4/6/2006	Cadmium	0.11	U	10	511
SF47CS01	4/6/2006	Chromium	4.8		143	3,066
SF47CS01	4/6/2006	Mercury	0.02	B	NA	NA
SF47CS01	4/6/2006	Zinc	6.8		NA	306,600
SF47CS01	4/6/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-47 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-52

**Summary of Analytical Results
SF-49 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-49	5/9/1997	1,1,1-Trichloroethane	0.01	U	NA	286,160
SF-SL-49	5/9/1997	1,1,2,2-Tetrachloroethane	0.01	U	NA	14.31
SF-SL-49	5/9/1997	1,1,2-Trichloroethane	0.01	U	NA	50.2
SF-SL-49	5/9/1997	1,1-Dichloroethane	0.01	U	NA	204,400
SF-SL-49	5/9/1997	1,1-Dichloroethene	0.01	U	NA	51,100
SF-SL-49	5/9/1997	1,2-Dichloroethane	0.01	U	NA	31.45
SF-SL-49	5/9/1997	1,2-Dichloroethene (total)	0.01	U	0.25	9,198
SF-SL-49	5/9/1997	1,2-Dichloropropane	0.01	U	NA	42.08
SF-SL-49	5/9/1997	2-Butanone	0.01	U	NA	613,200
SF-SL-49	5/9/1997	2-Hexanone	0.01	U	NA	NA
SF-SL-49	5/9/1997	4-Methyl-2-pentanone	0.01	U	NA	NA
SF-SL-49	5/9/1997	Acetone	0.006	J	NA	919,800
SF-SL-49	5/9/1997	Benzene	0.01	U	NA	52.03
SF-SL-49	5/9/1997	Bromodichloromethane	0.01	U	NA	46.15
SF-SL-49	5/9/1997	Bromoform	0.01	U	NA	362.23
SF-SL-49	5/9/1997	Bromomethane	0.01	U	NA	1,430.8
SF-SL-49	5/9/1997	c-1,3-Dichloropropene	0.01	U	NA	NA
SF-SL-49	5/9/1997	Carbon Tetrachloride	0.01	U	NA	22.01
SF-SL-49	5/9/1997	Chlorobenzene	0.01	U	NA	20,440
SF-SL-49	5/9/1997	Chloroethane	0.01	U	NA	986.76
SF-SL-49	5/9/1997	Chloroform	0.01	U	NA	10,220
SF-SL-49	5/9/1997	Chloromethane	0.01	U	NA	NA
SF-SL-49	5/9/1997	Dibromochloromethane	0.01	U	NA	34.07
SF-SL-49	5/9/1997	Ethylbenzene	0.01	U	NA	102,200
SF-SL-49	5/9/1997	Methylene Chloride	0.01	U	NA	381.55
SF-SL-49	5/9/1997	Styrene	0.01	U	NA	204,400
SF-SL-49	5/9/1997	t-1,3-Dichloropropene	0.01	U	NA	NA
SF-SL-49	5/9/1997	TCE	0.01	U	0.7	7.15
SF-SL-49	5/9/1997	Tetrachloroethene	0.001	J	1.4	5.30
SF-SL-49	5/9/1997	Toluene	0.01	U	NA	81,760
SF-SL-49	5/9/1997	Vinyl Chloride	0.01	U	NA	3.97
SF-SL-49	5/9/1997	Xylene (Total)	0.01	U	NA	204,400
SF-SL-49	5/9/1997	1,2,4-Trimethylbenzene	1.8	U	NA	NA
SF-SL-49	5/9/1997	1,2-Dichlorobenzene	1.8	U	NA	91,980
SF-SL-49	5/9/1997	1,3-Dichlorobenzene	1.8	U	NA	3,066
SF-SL-49	5/9/1997	1,4-Dichlorobenzene	1.8	U	NA	119.23
SF-SL-49	5/9/1997	2,4,5-Trichlorophenol	4.3	U	NA	102,200
SF-SL-49	5/9/1997	2,4,6-Trichlorophenol	1.8	U	NA	260.15
SF-SL-49	5/9/1997	2,4-Dichlorophenol	1.8	U	NA	3,066
SF-SL-49	5/9/1997	2,4-Dimethylphenol	1.8	U	NA	20,440
SF-SL-49	5/9/1997	2,4-Dinitrophenol	4.3	U	NA	2,044
SF-SL-49	5/9/1997	2,4-Dinitrotoluene	1.8	U	NA	2,044
SF-SL-49	5/9/1997	2,6-Dinitrotoluene	1.8	U	NA	1,022
SF-SL-49	5/9/1997	2-Chloronaphthalene	1.8	U	NA	81,760
SF-SL-49	5/9/1997	2-Chlorophenol	1.8	U	NA	5,110
SF-SL-49	5/9/1997	2-Methylnaphthalene	1.8	U	NA	4,088

Table 4-52

**Summary of Analytical Results
SF-49 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-49	5/9/1997	2-Methylphenol	1.8	U	NA	51,100
SF-SL-49	5/9/1997	2-Nitroaniline	4.3	U	NA	NA
SF-SL-49	5/9/1997	2-Nitrophenol	1.8	U	NA	NA
SF-SL-49	5/9/1997	3,3'-Dichlorobenzidine	1.8	U	NA	6.36
SF-SL-49	5/9/1997	3+4-Methylphenol	1.8	U	NA	5,110
SF-SL-49	5/9/1997	3-Nitroaniline	4.3	U	NA	NA
SF-SL-49	5/9/1997	4,6-Dinitro-2-methylphenol	4.3	U	NA	NA
SF-SL-49	5/9/1997	4-Bromophenyl phenyl ether	1.8	U	NA	NA
SF-SL-49	5/9/1997	4-Chloro-3-methylphenol	1.8	U	NA	NA
SF-SL-49	5/9/1997	4-Chloroaniline	1.8	U	NA	4,088
SF-SL-49	5/9/1997	4-Chlorophenyl phenyl ether	1.8	U	NA	NA
SF-SL-49	5/9/1997	4-Nitroaniline	4.3	U	NA	NA
SF-SL-49	5/9/1997	4-Nitrophenol	4.3	U	NA	NA
SF-SL-49	5/9/1997	Acenaphthene	1.8	U	NA	61,320
SF-SL-49	5/9/1997	Acenaphthylene	1.8	U	NA	NA
SF-SL-49	5/9/1997	Anthracene	1.8	U	NA	306,600
SF-SL-49	5/9/1997	Benzo(a)anthracene	1.8	U	NA	3,920
SF-SL-49	5/9/1997	Benzo(a)pyrene	1.8	U	0.29	0.392
SF-SL-49	5/9/1997	Benzo(b)fluoranthene	1.8	U	NA	3.92
SF-SL-49	5/9/1997	Benzo(g,h,i)perylene	1.8	U	NA	NA
SF-SL-49	5/9/1997	Benzo(k)fluoranthene	1.8	U	NA	39.2
SF-SL-49	5/9/1997	bis(2-Chloroethoxy)methane	1.8	U	NA	NA
SF-SL-49	5/9/1997	bis(2-Chloroethyl)ether	1.8	U	NA	2.6
SF-SL-49	5/9/1997	bis(2-Chloroisopropyl)ether	1.8	U	NA	40.88
SF-SL-49	5/9/1997	bis(2-Ethylhexyl)phthalate	1.8	U	NA	204
SF-SL-49	5/9/1997	Carbazole	1.8	U	NA	143.08
SF-SL-49	5/9/1997	Chrysene	1.8	U	NA	392
SF-SL-49	5/9/1997	Dibenz(a,h)anthracene	1.8	U	0.29	0.392
SF-SL-49	5/9/1997	Dibenzofuran	1.8	U	NA	1,022
SF-SL-49	5/9/1997	Diethyl phthalate	1.8	U	NA	817,600
SF-SL-49	5/9/1997	Dimethyl phthalate	1.8	U	NA	NA
SF-SL-49	5/9/1997	Di-n-butyl phthalate	1.8	U	NA	102,200
SF-SL-49	5/9/1997	Di-n-octyl phthalate	1.8	U	NA	NA
SF-SL-49	5/9/1997	Fluoranthene	1.8	U	NA	40,880
SF-SL-49	5/9/1997	Fluorene	1.8	U	NA	40,880
SF-SL-49	5/9/1997	Hexachlorobenzene	1.8	U	NA	1.79
SF-SL-49	5/9/1997	Hexachlorobutadiene	1.8	U	NA	36.69
SF-SL-49	5/9/1997	Hexachlorocyclopentadiene	1.8	U	NA	6,132
SF-SL-49	5/9/1997	Hexachloroethane	1.8	U	NA	204
SF-SL-49	5/9/1997	Indeno(1,2,3-cd)pyrene	1.8	U	NA	3.92
SF-SL-49	5/9/1997	Isophorone	1.8	U	NA	3,012.21
SF-SL-49	5/9/1997	Naphthalene	1.8	U	NA	20,440
SF-SL-49	5/9/1997	Nitrobenzene	1.8	U	NA	511
SF-SL-49	5/9/1997	N-Nitrosodi-n-propylamine	1.8	U	NA	0.41
SF-SL-49	5/9/1997	N-Nitrosodiphenylamine	1.8	U	NA	584
SF-SL-49	5/9/1997	Pentachlorophenol	4.3	U	NA	23.85

Table 4-52

**Summary of Analytical Results
SF-49 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-49	5/9/1997	Phenanthrene	1.8	U	NA	NA
SF-SL-49	5/9/1997	Phenol	1.8	U	NA	306,600
SF-SL-49	5/9/1997	Pyrene	1.8	U	NA	30,660
SF-SL-49	5/9/1997	4,4'-DDD	0.0033	U	NA	11.92
SF-SL-49	5/9/1997	4,4'-DDE	0.0033	U	NA	8.42
SF-SL-49	5/9/1997	4,4'-DDT	0.0081	J	NA	8.42
SF-SL-49	5/9/1997	Aldrin	0.0017	U	NA	0.17
SF-SL-49	5/9/1997	alpha-BHC	0.0017	U	NA	0.45
SF-SL-49	5/9/1997	alpha-Chlordane	0.0017	U	NA	NA
SF-SL-49	5/9/1997	beta-BHC	0.0017	U	NA	1.59
SF-SL-49	5/9/1997	delta-BHC	0.0017	U	NA	NA
SF-SL-49	5/9/1997	Dieldrin	0.0033	U	NA	0.18
SF-SL-49	5/9/1997	Endosulfan I	0.0017	U	NA	6,132
SF-SL-49	5/9/1997	Endosulfan II	0.0033	U	NA	6,132
SF-SL-49	5/9/1997	Endosulfan sulfate	0.0033	U	NA	NA
SF-SL-49	5/9/1997	Endrin	0.0033	U	NA	307
SF-SL-49	5/9/1997	Endrin Aldehyde	0.0033	U	NA	NA
SF-SL-49	5/9/1997	Endrin ketone	0.0033	U	NA	NA
SF-SL-49	5/9/1997	gamma-BHC (Lindane)	0.0017	U	NA	2.2
SF-SL-49	5/9/1997	gamma-Chlordane	0.0017	U	NA	NA
SF-SL-49	5/9/1997	Heptachlor	0.0017	U	NA	0.64
SF-SL-49	5/9/1997	Heptachlor epoxide	0.0017	U	NA	0.31
SF-SL-49	5/9/1997	Methoxychlor	0.017	U	NA	5,110
SF-SL-49	5/9/1997	Toxaphene	0.17	U	NA	2.6
SF-SL-49	5/9/1997	Aroclor 1016	0.033	U	NA	40.88
SF-SL-49	5/9/1997	Aroclor 1221	0.068	U	NA	1.43
SF-SL-49	5/9/1997	Aroclor 1232	0.033	U	NA	1.43
SF-SL-49	5/9/1997	Aroclor 1242	0.033	U	NA	1.43
SF-SL-49	5/9/1997	Aroclor 1248	0.033	U	NA	1.43
SF-SL-49	5/9/1997	Aroclor 1254	0.033	U	NA	1.43
SF-SL-49	5/9/1997	Aroclor 1260	0.033	U	NA	1.43
SF-SL-49	5/9/1997	PCBs(total)	0.068	U	10	1.43
SF-SL-49	5/9/1997	Aluminum	842		NA	1,022,000
SF-SL-49	5/9/1997	Antimony	0.44	UJ	NA	409
SF-SL-49	5/9/1997	Arsenic	0.54		NA	1.91
SF-SL-49	5/9/1997	Barium	3.1		NA	204,400
SF-SL-49	5/9/1997	Beryllium	0.08		NA	2,044
SF-SL-49	5/9/1997	Cadmium	0.06	UJ	10	511
SF-SL-49	5/9/1997	Calcium	37.4		NA	NA
SF-SL-49	5/9/1997	Chromium	2.1		143	3,066
SF-SL-49	5/9/1997	Cobalt	0.84		NA	NA
SF-SL-49	5/9/1997	Copper	1.7		NA	40,880
SF-SL-49	5/9/1997	Cyanide	0.51	UJ	35	20,440
SF-SL-49	5/9/1997	Iron	1,850		NA	715,400
SF-SL-49	5/9/1997	Lead	1.6	J	NA	NA
SF-SL-49	5/9/1997	Magnesium	144		NA	NA

Table 4-52

**Summary of Analytical Results
SF-49 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF-SL-49	5/9/1997	Manganese	49.6		NA	20,440
SF-SL-49	5/9/1997	Mercury	0.05	U	NA	NA
SF-SL-49	5/9/1997	Nickel	1		NA	20,440
SF-SL-49	5/9/1997	Potassium	91		NA	NA
SF-SL-49	5/9/1997	Selenium	0.65	U	NA	5,110
SF-SL-49	5/9/1997	Silver	0.2	U	NA	5,110
SF-SL-49	5/9/1997	Sodium	68.8		NA	NA
SF-SL-49	5/9/1997	Thallium	0.63	U	NA	71.54
SF-SL-49	5/9/1997	Vanadium	2		NA	1,022
SF-SL-49	5/9/1997	Zinc	4.2		NA	306,600

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) UJ - non-detect result (reporting limit) is estimated due to minor quality control anomaly.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) SF-49 solid characterization sample was collected during the Continued Remedial Investigation.

Table 4-53

**Summary of Analytical Results
SF-49 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF49BNE01	4/12/2006	c-1,2-Dichloroethene	0.0058	U	0.25	10,220
SF49BNE01	4/12/2006	TCE	0.0012	U	0.7	7.15
SF49BNE01	4/12/2006	Tetrachloroethene	0.0012	U	1.4	5.30
SF49BNW01	4/12/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF49BNW01	4/12/2006	TCE	0.001	U	0.7	7.15
SF49BNW01	4/12/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF49BSE01	4/12/2006	c-1,2-Dichloroethene	0.0048	U	0.25	10,220
SF49BSE01	4/12/2006	TCE	0.001	U	0.7	7.15
SF49BSE01	4/12/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF49BSW01	4/12/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
SF49BSW01	4/12/2006	TCE	0.001	U	0.7	7.15
SF49BSW01	4/12/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF49CE01	4/13/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF49CE01	4/13/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF49CE01	4/13/2006	PCBs(total)	0.072	U	10	1.43
SF49CE01	4/13/2006	Cadmium	0.11	U	10	511
SF49CE01	4/13/2006	Chromium	6.2		143	3,066
SF49CE01	4/13/2006	Cyanide	0.5	U	35	20,440
SF49CN01	4/13/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF49CN01	4/13/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF49CN01	4/13/2006	PCBs(total)	0.071	U	10	1.43
SF49CN01	4/13/2006	Cadmium	0.11	U	10	511
SF49CN01	4/13/2006	Chromium	6.4		143	3,066
SF49CN01	4/13/2006	Cyanide	0.5	U	35	20,440
SF49CS01	4/13/2006	Benzo(a)pyrene	0.037	U	0.29	0.392
SF49CS01	4/13/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
SF49CS01	4/13/2006	PCBs(total)	0.074	U	10	1.43
SF49CS01	4/13/2006	Cadmium	0.11	U	10	511
SF49CS01	4/13/2006	Chromium	11.6		143	3,066
SF49CS01	4/13/2006	Cyanide	0.5	U	35	20,440
SF49CW01	4/13/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF49CW01	4/13/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF49CW01	4/13/2006	PCBs(total)	0.071	U	10	1.43
SF49CW01	4/13/2006	Cadmium	0.11	U	10	511
SF49CW01	4/13/2006	Chromium	5.8		143	3,066
SF49CW01	4/13/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-49 post-remediation confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action were and analyzed by STL of Edison, New Jersey.

Table 4-54

**Summary of Analytical Results
SF-51 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
SF51SL01	3/28/2006	1,1,1-Trichloroethane	0.0053	U	NA	286,160
SF51SL01	3/28/2006	1,1,2,2-Tetrachloroethane	0.0011	U	NA	14.31
SF51SL01	3/28/2006	1,1,2-Trichloroethane	0.0032	U	NA	50.20
SF51SL01	3/28/2006	1,1,2-Trichlorotrifluoroethane	0.0053	U	NA	30,660,000
SF51SL01	3/28/2006	1,1-Dichloroethane	0.0053	U	NA	204,400
SF51SL01	3/28/2006	1,1-Dichloroethene	0.0021	U	NA	51,100
SF51SL01	3/28/2006	1,2,4-Trichlorobenzene	0.0053	U	NA	10,220
SF51SL01	3/28/2006	1,2-Dibromo-3-chloropropane	0.0053	U	NA	3.577
SF51SL01	3/28/2006	1,2-Dibromoethane	0.0053	U	NA	1.43
SF51SL01	3/28/2006	1,2-Dichlorobenzene	0.0053	U	NA	91,980
SF51SL01	3/28/2006	1,2-Dichloroethane	0.0021	U	NA	31.45
SF51SL01	3/28/2006	1,2-Dichloropropane	0.0011	U	NA	42.08
SF51SL01	3/28/2006	1,3-Dichlorobenzene	0.0053	U	NA	3,066
SF51SL01	3/28/2006	1,4-Dichlorobenzene	0.0053	U	NA	119.23
SF51SL01	3/28/2006	2-Butanone	0.0053	U	NA	613,200
SF51SL01	3/28/2006	2-Hexanone	0.0053	U	NA	NA
SF51SL01	3/28/2006	4-Methyl-2-pentanone	0.0053	U	NA	NA
SF51SL01	3/28/2006	Acetone	0.0053	U	NA	919,800
SF51SL01	3/28/2006	Benzene	0.0011	U	NA	52.03
SF51SL01	3/28/2006	Bromodichloromethane	0.0011	U	NA	46.15
SF51SL01	3/28/2006	Bromoform	0.0043	U	NA	362.23
SF51SL01	3/28/2006	Bromomethane	0.0053	U	NA	1,430.8
SF51SL01	3/28/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF51SL01	3/28/2006	c-1,3-Dichloropropene	0.0053	U	NA	NA
SF51SL01	3/28/2006	Carbon disulfide	0.0053	U	NA	102,200
SF51SL01	3/28/2006	Carbon Tetrachloride	0.0021	U	NA	22.01
SF51SL01	3/28/2006	Chlorobenzene	0.0053	U	NA	20,440
SF51SL01	3/28/2006	Chloroethane	0.0053	U	NA	986.76
SF51SL01	3/28/2006	Chloroform	0.0053	U	NA	10,220
SF51SL01	3/28/2006	Chloromethane	0.0053	U	NA	NA
SF51SL01	3/28/2006	Cyclohexane	0.0053	U	NA	NA
SF51SL01	3/28/2006	Dibromochloromethane	0.0053	U	NA	34.07
SF51SL01	3/28/2006	Dichlorodifluoromethane	0.0053	U	NA	204,400
SF51SL01	3/28/2006	Ethylbenzene	0.0043	U	NA	102,200
SF51SL01	3/28/2006	Isopropylbenzene	0.0053	U	NA	102,200
SF51SL01	3/28/2006	Methyl Acetate	0.0053	U	NA	1,022,000
SF51SL01	3/28/2006	Methyl Cyclohexane	0.0053	U	NA	NA
SF51SL01	3/28/2006	Methyl t-butyl ether	0.0053	U	NA	715.4
SF51SL01	3/28/2006	Methylene Chloride	0.0032	U	NA	381.55
SF51SL01	3/28/2006	Styrene	0.0053	U	NA	204,400
SF51SL01	3/28/2006	t-1,2-Dichloroethene	0.0053	U	NA	20,440
SF51SL01	3/28/2006	t-1,3-Dichloropropene	0.0053	U	NA	NA
SF51SL01	3/28/2006	TCE	0.0021		0.7	7.15
SF51SL01	3/28/2006	Tetrachloroethene	0.0006	J	1.4	5.30
SF51SL01	3/28/2006	Toluene	0.0053	U	NA	81,760
SF51SL01	3/28/2006	Trichlorofluoromethane	0.0053	U	NA	306,600
SF51SL01	3/28/2006	Vinyl Chloride	0.0053	U	NA	3.97
SF51SL01	3/28/2006	Xylene (Total)	0.0029	J	NA	204,400

Table 4-54

**Summary of Analytical Results
SF-51 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
SF51SL01	3/28/2006	2,4,5-Trichlorophenol	0.36	U	NA	102,200
SF51SL01	3/28/2006	2,4,6-Trichlorophenol	0.36	U	NA	260.15
SF51SL01	3/28/2006	2,4-Dichlorophenol	0.36	U	NA	3,066
SF51SL01	3/28/2006	2,4-Dimethylphenol	0.36	U	NA	20,440
SF51SL01	3/28/2006	2,4-Dinitrophenol	1.1	U	NA	2,044
SF51SL01	3/28/2006	2,4-Dinitrotoluene	0.071	U	NA	2,044
SF51SL01	3/28/2006	2,6-Dinitrotoluene	0.071	U	NA	1,022
SF51SL01	3/28/2006	2-Chloronaphthalene	0.36	U	NA	81,760
SF51SL01	3/28/2006	2-Chlorophenol	0.36	U	NA	5,110
SF51SL01	3/28/2006	2-Methylnaphthalene	0.36	U	NA	4,088
SF51SL01	3/28/2006	2-Methylphenol	0.36	U	NA	51,100
SF51SL01	3/28/2006	2-Nitroaniline	0.71	U	NA	NA
SF51SL01	3/28/2006	2-Nitrophenol	0.36	U	NA	NA
SF51SL01	3/28/2006	3,3'-Dichlorobenzidine	0.71	U	NA	6.36
SF51SL01	3/28/2006	3+4-Methylphenol	0.36	U	NA	5,110
SF51SL01	3/28/2006	3-Nitroaniline	0.71	U	NA	NA
SF51SL01	3/28/2006	4,6-Dinitro-2-methylphenol	1.1	U	NA	NA
SF51SL01	3/28/2006	4-Bromophenyl phenyl ether	0.36	U	NA	NA
SF51SL01	3/28/2006	4-Chloro-3-methylphenol	0.36	U	NA	NA
SF51SL01	3/28/2006	4-Chloroaniline	0.36	U	NA	4,088
SF51SL01	3/28/2006	4-Chlorophenyl phenyl ether	0.36	U	NA	NA
SF51SL01	3/28/2006	4-Nitroaniline	0.71	U	NA	NA
SF51SL01	3/28/2006	4-Nitrophenol	1.1	U	NA	NA
SF51SL01	3/28/2006	Acenaphthene	0.36	U	NA	61,320
SF51SL01	3/28/2006	Acenaphthylene	0.36	U	NA	NA
SF51SL01	3/28/2006	Acetophenone	0.36	U	NA	102,200
SF51SL01	3/28/2006	Anthracene	0.013	J	NA	306,600
SF51SL01	3/28/2006	Atrazine	0.36	U	NA	13.01
SF51SL01	3/28/2006	Benzaldehyde	0.36	U	NA	102,200
SF51SL01	3/28/2006	Benzo(a)anthracene	0.036	U	NA	3.92
SF51SL01	3/28/2006	Benzo(a)pyrene	0.036		0.29	0.392
SF51SL01	3/28/2006	Benzo(b)fluoranthene	0.04		NA	3.92
SF51SL01	3/28/2006	Benzo(g,h,i)perylene	0.039	J	NA	NA
SF51SL01	3/28/2006	Benzo(k)fluoranthene	0.12		NA	39.2
SF51SL01	3/28/2006	bis(2-Chloroethoxy)methane	0.36	U	NA	NA
SF51SL01	3/28/2006	bis(2-Chloroethyl)ether	0.036	U	NA	2.60
SF51SL01	3/28/2006	bis(2-Chloroisopropyl)ether	0.36	U	NA	40.88
SF51SL01	3/28/2006	bis(2-Ethylhexyl)phthalate	0.12	J	NA	204.4
SF51SL01	3/28/2006	Butyl benzyl phthalate	0.36	U	NA	204,400
SF51SL01	3/28/2006	Carbazole	0.36	U	NA	143.08
SF51SL01	3/28/2006	Chrysene	0.05	J	NA	392
SF51SL01	3/28/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF51SL01	3/28/2006	Dibenzofuran	0.36	U	NA	1022
SF51SL01	3/28/2006	Diethyl phthalate	0.36	U	NA	817,600
SF51SL01	3/28/2006	Dimethyl phthalate	0.36	U	NA	NA
SF51SL01	3/28/2006	Di-n-butyl phthalate	0.36	U	NA	102,200
SF51SL01	3/28/2006	Di-n-octyl phthalate	0.36	U	NA	NA
SF51SL01	3/28/2006	Diphenyl	0.36	U	NA	NA

Table 4-54

**Summary of Analytical Results
SF-51 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
SF51SL01	3/28/2006	Fluoranthene	0.072	J	NA	40,880
SF51SL01	3/28/2006	Fluorene	0.36	U	NA	40,880
SF51SL01	3/28/2006	Hexachlorobenzene	0.036	U	NA	1,7885
SF51SL01	3/28/2006	Hexachlorobutadiene	0.071	U	NA	36.69
SF51SL01	3/28/2006	Hexachlorocyclopentadiene	0.36	U	NA	6,132
SF51SL01	3/28/2006	Hexachloroethane	0.036	U	NA	204.4
SF51SL01	3/28/2006	Indeno(1,2,3-cd)pyrene	0.028	J	NA	3.92
SF51SL01	3/28/2006	Isophorone	0.36	U	NA	3,012.21
SF51SL01	3/28/2006	Naphthalene	0.36	U	NA	20,440
SF51SL01	3/28/2006	Nitrobenzene	0.036	U	NA	511
SF51SL01	3/28/2006	N-Nitrosodi-n-propylamine	0.036	U	NA	0.41
SF51SL01	3/28/2006	N-Nitrosodiphenylamine	0.36	U	NA	584
SF51SL01	3/28/2006	Pentachlorophenol	1.1	U	NA	23.85
SF51SL01	3/28/2006	Phenanthrene	0.045	J	NA	NA
SF51SL01	3/28/2006	Phenol	0.36	U	NA	306,600
SF51SL01	3/28/2006	Pyrene	0.062	J	NA	30,660
SF51SL01	3/28/2006	4,4'-DDD	0.0072	U	NA	11.92
SF51SL01	3/28/2006	4,4'-DDE	0.0072	U	NA	8.42
SF51SL01	3/28/2006	4,4'-DDT	0.14		NA	8.42
SF51SL01	3/28/2006	Aldrin	0.0072	U	NA	0.17
SF51SL01	3/28/2006	alpha-BHC	0.0072	U	NA	0.45
SF51SL01	3/28/2006	alpha-Chlordane	0.0072	U	NA	NA
SF51SL01	3/28/2006	beta-BHC	0.0072	U	NA	1.59
SF51SL01	3/28/2006	delta-BHC	0.0072	U	NA	NA
SF51SL01	3/28/2006	Dieldrin	0.0072	U	NA	0.18
SF51SL01	3/28/2006	Endosulfan I	0.0072	U	NA	6,132
SF51SL01	3/28/2006	Endosulfan II	0.0072	U	NA	6,132
SF51SL01	3/28/2006	Endosulfan sulfate	0.0072	U	NA	NA
SF51SL01	3/28/2006	Endrin	0.0072	U	NA	306.6
SF51SL01	3/28/2006	Endrin Aldehyde	0.0072	U	NA	NA
SF51SL01	3/28/2006	Endrin ketone	0.0072	U	NA	NA
SF51SL01	3/28/2006	gamma-BHC (Lindane)	0.0072	U	NA	2.20
SF51SL01	3/28/2006	gamma-Chlordane	0.0072	U	NA	NA
SF51SL01	3/28/2006	Heptachlor	0.0072	U	NA	0.64
SF51SL01	3/28/2006	Heptachlor epoxide	0.0072	U	NA	0.31
SF51SL01	3/28/2006	Methoxychlor	0.0072	U	NA	5,110
SF51SL01	3/28/2006	Toxaphene	0.072	U	NA	2.60
SF51SL01	3/28/2006	Aroclor 1016	0.072	U	NA	40.88
SF51SL01	3/28/2006	Aroclor 1221	0.072	U	NA	1.43
SF51SL01	3/28/2006	Aroclor 1232	0.072	U	NA	1.43
SF51SL01	3/28/2006	Aroclor 1242	0.072	U	NA	1.43
SF51SL01	3/28/2006	Aroclor 1248	0.072	U	NA	1.43
SF51SL01	3/28/2006	Aroclor 1254	0.072	U	NA	1.43
SF51SL01	3/28/2006	Aroclor 1260	0.23		NA	1.43
SF51SL01	3/28/2006	PCBs(total)	0.23		10	1.43
SF51SL01	3/28/2006	Aluminum	7,740		NA	1,022,000
SF51SL01	3/28/2006	Antimony	1.2	U	NA	408.8
SF51SL01	3/28/2006	Arsenic	3.2		NA	1.91

Table 4-54

**Summary of Analytical Results
SF-51 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
SF51SL01	3/28/2006	Barium	33.2	B	NA	204,400
SF51SL01	3/28/2006	Beryllium	0.36	B	NA	2,044
SF51SL01	3/28/2006	Cadmium	2.3		10	511
SF51SL01	3/28/2006	Calcium	1,850		NA	NA
SF51SL01	3/28/2006	Chromium	16.8		143	3,066
SF51SL01	3/28/2006	Cobalt	5.1	B	NA	NA
SF51SL01	3/28/2006	Copper	169		NA	40,880
SF51SL01	3/28/2006	Iron	20,100		NA	715,400
SF51SL01	3/28/2006	Lead	240		NA	NA
SF51SL01	3/28/2006	Magnesium	864	B	NA	NA
SF51SL01	3/28/2006	Manganese	136		NA	20,440
SF51SL01	3/28/2006	Mercury	0.13		NA	NA
SF51SL01	3/28/2006	Nickel	20.1		NA	20,440
SF51SL01	3/28/2006	Potassium	385	B	NA	NA
SF51SL01	3/28/2006	Selenium	0.94	B	NA	5,110
SF51SL01	3/28/2006	Silver	0.3	U	NA	5,110
SF51SL01	3/28/2006	Sodium	84.5	U	NA	NA
SF51SL01	3/28/2006	Thallium	1	U	NA	71.54
SF51SL01	3/28/2006	Vanadium	13		NA	1,022
SF51SL01	3/28/2006	Zinc	188		NA	306,600
SF51SL01	3/28/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) SF-51 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-55

**Summary of Analytical Results
SF-51 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF51BNE01	4/20/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
SF51BNE01	4/20/2006	TCE	0.0011	U	0.7	7.15
SF51BNE01	4/20/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF51BNE01	4/20/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF51BNE01	4/20/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF51BNE01	4/20/2006	PCBs(total)	0.073	U	10	1.43
SF51BNE01	4/20/2006	Cadmium	0.22	B	10	511
SF51BNE01	4/20/2006	Chromium	12.8		143	3,066
SF51BNE01	4/20/2006	Copper	51		NA	40,880
SF51BNE01	4/20/2006	Zinc	50.9		NA	306,600
SF51BNE01	4/20/2006	Cyanide	0.5	U	35	20,440
SF51BNW01	4/20/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF51BNW01	4/20/2006	TCE	0.0009	J	0.7	7.15
SF51BNW01	4/20/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF51BSE01	4/20/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF51BSE01	4/20/2006	TCE	0.0009	J	0.7	7.15
SF51BSE01	4/20/2006	Tetrachloroethene	0.0007	J	1.4	5.30
SF51BSW01	4/20/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
SF51BSW01	4/20/2006	TCE	0.0007	J	0.7	7.15
SF51BSW01	4/20/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF51BSW01	4/20/2006	Benzo(a)pyrene	0.014	J	0.29	0.392
SF51BSW01	4/20/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF51BSW01	4/20/2006	PCBs(total)	0.071	U	10	1.43
SF51BSW01	4/20/2006	Cadmium	0.46	B	10	511
SF51BSW01	4/20/2006	Chromium	6.3		143	3,066
SF51BSW01	4/20/2006	Copper	27.7		NA	40,880
SF51BSW01	4/20/2006	Zinc	33.8		NA	306,600
SF51BSW01	4/20/2006	Cyanide	0.5	U	35	20,440
SF51CE01	4/20/2006	Benzo(a)pyrene	0.036	U	0.29	0.392
SF51CE01	4/20/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF51CE01	4/20/2006	PCBs(total)	0.073	U	10	1.43
SF51CE01	4/20/2006	Cadmium	0.15	B	10	511
SF51CE01	4/20/2006	Chromium	8.8		143	3,066
SF51CE01	4/20/2006	Copper	7.6		NA	40,880
SF51CE01	4/20/2006	Zinc	18.5		NA	306,600
SF51CE01	4/20/2006	Cyanide	0.5	U	35	20,440
SF51CW01	4/20/2006	Benzo(a)pyrene	0.035	J	0.29	0.392
SF51CW01	4/20/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF51CW01	4/20/2006	PCBs(total)	0.072	U	10	1.43
SF51CW01	4/20/2006	Cadmium	0.48	B	10	511
SF51CW01	4/20/2006	Chromium	9.3		143	3,066
SF51CW01	4/20/2006	Copper	14.5		NA	40,880
SF51CW01	4/20/2006	Zinc	25.1		NA	306,600
SF51CW01	4/20/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-51 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and analyzed by STL of Edison, New Jersey.

Table 4-56

**Summary of Analytical Results
SF-55 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
DUP12	4/11/2006	c-1,2-Dichloroethene	0.0051	U	0.25	10,220
DUP12	4/11/2006	TCE	0.001	U	0.7	7.15
DUP12	4/11/2006	Tetrachloroethene	0.001	U	1.4	5.30
DUP12	4/11/2006	Benzo(a)pyrene	0.013	J	0.29	0.392
DUP12	4/11/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
DUP12	4/11/2006	PCBs(total)	0.073	U	10	1.43
DUP12	4/11/2006	Cadmium	0.13	U	10	511
DUP12	4/11/2006	Chromium	5.6		143	3,066
DUP12	4/11/2006	Cyanide	0.5	U	35	20,440
SF55BNE01	4/11/2006	c-1,2-Dichloroethene	0.0057	U	0.25	10,220
SF55BNE01	4/11/2006	TCE	0.0011	U	0.7	7.15
SF55BNE01	4/11/2006	Tetrachloroethene	0.0011	U	1.4	5.30
SF55BNE01	4/11/2006	Benzo(a)pyrene	1.1		0.29	0.392
SF55BNE01	4/11/2006	Dibenz(a,h)anthracene	0.2	U	0.29	0.392
SF55BNE01	4/11/2006	PCBs(total)	0.079	U	10	1.43
SF55BNE01	4/11/2006	Cadmium	0.86	B	10	511
SF55BNE01	4/11/2006	Chromium	50		143	3,066
SF55BNE01	4/11/2006	Cyanide	0.5	U	35	20,440
SF55BNW01	4/11/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF55BNW01	4/11/2006	TCE	0.001	U	0.7	7.15
SF55BNW01	4/11/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF55BSE01	4/11/2006	c-1,2-Dichloroethene	0.005	U	0.25	10,220
SF55BSE01	4/11/2006	TCE	0.001	U	0.7	7.15
SF55BSE01	4/11/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF55BSW01	4/11/2006	c-1,2-Dichloroethene	0.0052	U	0.25	10,220
SF55BSW01	4/11/2006	TCE	0.001	U	0.7	7.15
SF55BSW01	4/11/2006	Tetrachloroethene	0.001	U	1.4	5.30
SF55BSW01	4/11/2006	Benzo(a)pyrene	0.019	J	0.29	0.392
SF55BSW01	4/11/2006	Dibenz(a,h)anthracene	0.036	U	0.29	0.392
SF55BSW01	4/11/2006	PCBs(total)	0.072	U	10	1.43
SF55BSW01	4/11/2006	Cadmium	0.13	U	10	511
SF55BSW01	4/11/2006	Chromium	6.8		143	3,066
SF55BSW01	4/11/2006	Cyanide	0.5	U	35	20,440
SF55CE01	4/11/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF55CE01	4/11/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF55CE01	4/11/2006	PCBs(total)	0.07	U	10	1.43
SF55CE01	4/11/2006	Cadmium	0.13	U	10	511
SF55CE01	4/11/2006	Chromium	2.7		143	3,066
SF55CE01	4/11/2006	Cyanide	0.5	U	35	20,440
SF55CW01	4/11/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
SF55CW01	4/11/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
SF55CW01	4/11/2006	PCBs(total)	0.071	U	10	1.43

Table 4-56

**Summary of Analytical Results
SF-55 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
SF55CW01	4/11/2006	Cadmium	0.13	U	10	511
SF55CW01	4/11/2006	Chromium	2.6		143	3,066
SF55CW01	4/11/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) SF-55 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action were and analyzed by STL of Edison, New Jersey.

Explanation:

Reported concentration exceeds the AOC *Cleanup Goal* and the USEPA Region III *Risk-based Soil Concentration for Industrial Soil*.

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK01SL01	3/29/2006	1,1,1-Trichloroethane	0.0073	U	NA	286,160
UK01SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.0014	U	NA	14.31
UK01SL01	3/29/2006	1,1,2-Trichloroethane	0.0044	U	NA	50.20
UK01SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.0073	U	NA	30,660,000
UK01SL01	3/29/2006	1,1-Dichloroethane	0.0073	U	NA	204,400
UK01SL01	3/29/2006	1,1-Dichloroethene	0.0029	U	NA	51,100
UK01SL01	3/29/2006	1,2,4-Trichlorobenzene	0.0073	U	NA	10,220
UK01SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.0073	U	NA	3.58
UK01SL01	3/29/2006	1,2-Dibromoethane	0.0073	U	NA	1.43
UK01SL01	3/29/2006	1,2-Dichlorobenzene	0.0073	U	NA	91,980
UK01SL01	3/29/2006	1,2-Dichloroethane	0.0029	U	NA	31.45
UK01SL01	3/29/2006	1,2-Dichloropropane	0.0014	U	NA	42.08
UK01SL01	3/29/2006	1,3-Dichlorobenzene	0.0073	U	NA	3,066
UK01SL01	3/29/2006	1,4-Dichlorobenzene	0.0073	U	NA	119.23
UK01SL01	3/29/2006	2-Butanone	0.0073	U	NA	613,200
UK01SL01	3/29/2006	2-Hexanone	0.0073	U	NA	NA
UK01SL01	3/29/2006	4-Methyl-2-pentanone	0.0073	U	NA	NA
UK01SL01	3/29/2006	Acetone	0.1		NA	919,800
UK01SL01	3/29/2006	Benzene	0.0011	J	NA	52.03
UK01SL01	3/29/2006	Bromodichloromethane	0.0014	U	NA	46.15
UK01SL01	3/29/2006	Bromoform	0.0058	U	NA	362.23
UK01SL01	3/29/2006	Bromomethane	0.0073	U	NA	1,430.80
UK01SL01	3/29/2006	c-1,2-Dichloroethene	0.0073	U	0.25	10,220
UK01SL01	3/29/2006	c-1,3-Dichloropropene	0.0073	U	NA	NA
UK01SL01	3/29/2006	Carbon disulfide	0.0073	U	NA	102,200
UK01SL01	3/29/2006	Carbon Tetrachloride	0.0029	U	NA	22.01
UK01SL01	3/29/2006	Chlorobenzene	0.0073	U	NA	20,440
UK01SL01	3/29/2006	Chloroethane	0.0073	U	NA	986.76
UK01SL01	3/29/2006	Chloroform	0.0073	U	NA	10,220
UK01SL01	3/29/2006	Chloromethane	0.0073	U	NA	NA
UK01SL01	3/29/2006	Cyclohexane	0.0073	U	NA	NA
UK01SL01	3/29/2006	Dibromochloromethane	0.0073	U	NA	34.07
UK01SL01	3/29/2006	Dichlorodifluoromethane	0.0073	U	NA	204,400
UK01SL01	3/29/2006	Ethylbenzene	0.0058	U	NA	102,200
UK01SL01	3/29/2006	Isopropylbenzene	0.0073	U	NA	102,200
UK01SL01	3/29/2006	Methyl Acetate	0.0073	U	NA	1,022,000
UK01SL01	3/29/2006	Methyl Cyclohexane	0.0073	U	NA	NA
UK01SL01	3/29/2006	Methyl t-butyl ether	0.0073	U	NA	715.40
UK01SL01	3/29/2006	Methylene Chloride	0.0044	U	NA	381.55
UK01SL01	3/29/2006	Styrene	0.0073	U	NA	204,400
UK01SL01	3/29/2006	t-1,2-Dichloroethene	0.0073	U	NA	20,440
UK01SL01	3/29/2006	t-1,3-Dichloropropene	0.0073	U	NA	NA
UK01SL01	3/29/2006	TCE	0.0014	U	0.7	7.15
UK01SL01	3/29/2006	Tetrachloroethene	0.0014	U	1.4	5.30
UK01SL01	3/29/2006	Toluene	0.001	J	NA	81,760
UK01SL01	3/29/2006	Trichlorofluoromethane	0.0073	U	NA	306,600
UK01SL01	3/29/2006	Vinyl Chloride	0.0073	U	NA	3.97
UK01SL01	3/29/2006	Xylene (Total)	0.0073	U	NA	204,400
UK01SL01	3/29/2006	2,4,5-Trichlorophenol	1	U	NA	102,200
UK01SL01	3/29/2006	2,4,6-Trichlorophenol	1	U	NA	260.15

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK01SL01	3/29/2006	2,4-Dichlorophenol	1	U	NA	3,066
UK01SL01	3/29/2006	2,4-Dimethylphenol	1	U	NA	20,440
UK01SL01	3/29/2006	2,4-Dinitrophenol	4	U	NA	2,044
UK01SL01	3/29/2006	2,4-Dinitrotoluene	0.2	U	NA	2,044
UK01SL01	3/29/2006	2,6-Dinitrotoluene	0.2	U	NA	1,022
UK01SL01	3/29/2006	2-Chloronaphthalene	1	U	NA	81,760
UK01SL01	3/29/2006	2-Chlorophenol	1	U	NA	5,110
UK01SL01	3/29/2006	2-Methylnaphthalene	0.028	J	NA	4,088
UK01SL01	3/29/2006	2-Methylphenol	1	U	NA	51,100
UK01SL01	3/29/2006	2-Nitroaniline	2	U	NA	NA
UK01SL01	3/29/2006	2-Nitrophenol	1	U	NA	NA
UK01SL01	3/29/2006	3,3'-Dichlorobenzidine	2	U	NA	6.36
UK01SL01	3/29/2006	3+4-Methylphenol	0.33	J	NA	5,110
UK01SL01	3/29/2006	3-Nitroaniline	2	U	NA	NA
UK01SL01	3/29/2006	4,6-Dinitro-2-methylphenol	4	U	NA	NA
UK01SL01	3/29/2006	4-Bromophenyl phenyl ether	1	U	NA	NA
UK01SL01	3/29/2006	4-Chloro-3-methylphenol	1	U	NA	NA
UK01SL01	3/29/2006	4-Chloroaniline	1	U	NA	4,088
UK01SL01	3/29/2006	4-Chlorophenyl phenyl ether	1	U	NA	NA
UK01SL01	3/29/2006	4-Nitroaniline	2	U	NA	NA
UK01SL01	3/29/2006	4-Nitrophenol	4	U	NA	NA
UK01SL01	3/29/2006	Acenaphthene	0.04	J	NA	61,320
UK01SL01	3/29/2006	Acenaphthylene	1	U	NA	NA
UK01SL01	3/29/2006	Acetophenone	1	U	NA	102,200
UK01SL01	3/29/2006	Anthracene	0.18	J	NA	306,600
UK01SL01	3/29/2006	Atrazine	1	U	NA	13.01
UK01SL01	3/29/2006	Benzaldehyde	1	U	NA	102,200
UK01SL01	3/29/2006	Benzo(a)anthracene	0.59		NA	3.92
UK01SL01	3/29/2006	Benzo(a)pyrene	0.61		0.29	0.392
UK01SL01	3/29/2006	Benzo(b)fluoranthene	1.2		NA	3.92
UK01SL01	3/29/2006	Benzo(g,h,i)perylene	0.18	J	NA	NA
UK01SL01	3/29/2006	Benzo(k)fluoranthene	0.67		NA	39.20
UK01SL01	3/29/2006	bis(2-Chloroethoxy)methane	1	U	NA	NA
UK01SL01	3/29/2006	bis(2-Chloroethyl)ether	0.1	U	NA	2.60
UK01SL01	3/29/2006	bis(2-Chloroisopropyl)ether	1	U	NA	40.88
UK01SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	2.5		NA	204.40
UK01SL01	3/29/2006	Butyl benzyl phthalate	1	U	NA	204,400
UK01SL01	3/29/2006	Carbazole	0.092	J	NA	143.08
UK01SL01	3/29/2006	Chrysene	0.73	J	NA	392
UK01SL01	3/29/2006	Dibenz(a,h)anthracene	0.1	U	0.29	0.392
UK01SL01	3/29/2006	Dibenzofuran	0.032	J	NA	1,022
UK01SL01	3/29/2006	Diethyl phthalate	1	U	NA	817,600
UK01SL01	3/29/2006	Dimethyl phthalate	1	U	NA	NA
UK01SL01	3/29/2006	Di-n-butyl phthalate	1	U	NA	102,200
UK01SL01	3/29/2006	Di-n-octyl phthalate	1	U	NA	NA
UK01SL01	3/29/2006	Diphenyl	1	U	NA	NA
UK01SL01	3/29/2006	Fluoranthene	1.2		NA	40,880
UK01SL01	3/29/2006	Fluorene	0.061	J	NA	40,880
UK01SL01	3/29/2006	Hexachlorobenzene	0.1	U	NA	1.79
UK01SL01	3/29/2006	Hexachlorobutadiene	0.2	U	NA	36.69

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK01SL01	3/29/2006	Hexachlorocyclopentadiene	1	U	NA	6,132
UK01SL01	3/29/2006	Hexachloroethane	0.1	U	NA	204.40
UK01SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	0.78		NA	3.92
UK01SL01	3/29/2006	Isophorone	1	U	NA	3,012.21
UK01SL01	3/29/2006	Naphthalene	1	U	NA	20,440
UK01SL01	3/29/2006	Nitrobenzene	0.1	U	NA	511
UK01SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.1	U	NA	0.41
UK01SL01	3/29/2006	N-Nitrosodiphenylamine	1	U	NA	584
UK01SL01	3/29/2006	Pentachlorophenol	4	U	NA	23.85
UK01SL01	3/29/2006	Phenanthrene	0.63	J	NA	NA
UK01SL01	3/29/2006	Phenol	0.12	J	NA	306,600
UK01SL01	3/29/2006	Pyrene	1.1		NA	30,660
UK01SL01	3/29/2006	4,4'-DDD	0.01	U	NA	11.92
UK01SL01	3/29/2006	4,4'-DDE	0.011	P*	NA	8.42
UK01SL01	3/29/2006	4,4'-DDT	0.022		NA	8.42
UK01SL01	3/29/2006	Aldrin	0.01	U	NA	0.17
UK01SL01	3/29/2006	alpha-BHC	0.01	U	NA	0.45
UK01SL01	3/29/2006	alpha-Chlordane	0.021	P*	NA	NA
UK01SL01	3/29/2006	beta-BHC	0.01	U	NA	1.59
UK01SL01	3/29/2006	delta-BHC	0.42		NA	NA
UK01SL01	3/29/2006	Dieldrin	0.01	U	NA	0.18
UK01SL01	3/29/2006	Endosulfan I	0.01	U	NA	6,132
UK01SL01	3/29/2006	Endosulfan II	0.013	P*	NA	6,132
UK01SL01	3/29/2006	Endosulfan sulfate	0.01	U	NA	NA
UK01SL01	3/29/2006	Endrin	0.01	U	NA	306.60
UK01SL01	3/29/2006	Endrin Aldehyde	0.01	U	NA	NA
UK01SL01	3/29/2006	Endrin ketone	0.01	U	NA	NA
UK01SL01	3/29/2006	gamma-BHC (Lindane)	0.01	U	NA	2.20
UK01SL01	3/29/2006	gamma-Chlordane	0.026		NA	NA
UK01SL01	3/29/2006	Heptachlor	0.01	U	NA	0.64
UK01SL01	3/29/2006	Heptachlor epoxide	0.01	U	NA	0.31
UK01SL01	3/29/2006	Methoxychlor	0.03	P*	NA	5,110
UK01SL01	3/29/2006	Toxaphene	0.1	U	NA	2.60
UK01SL01	3/29/2006	Aroclor 1016	0.1	U	NA	40.88
UK01SL01	3/29/2006	Aroclor 1221	0.1	U	NA	1.43
UK01SL01	3/29/2006	Aroclor 1232	0.1	U	NA	1.43
UK01SL01	3/29/2006	Aroclor 1242	0.1	U	NA	1.43
UK01SL01	3/29/2006	Aroclor 1248	0.1	U	NA	1.43
UK01SL01	3/29/2006	Aroclor 1254	0.1	U	NA	1.43
UK01SL01	3/29/2006	Aroclor 1260	0.1	U	NA	1.43
UK01SL01	3/29/2006	PCBs(total)	0.1	U	10	1.43
UK01SL01	3/29/2006	Aluminum	2,460		NA	1,022,000
UK01SL01	3/29/2006	Antimony	1.8	U	NA	408.80
UK01SL01	3/29/2006	Arsenic	2.4		NA	1.91
UK01SL01	3/29/2006	Barium	29.5	B	NA	204,400
UK01SL01	3/29/2006	Beryllium	0.27	B	NA	2,044
UK01SL01	3/29/2006	Cadmium	0.38	B	10	511
UK01SL01	3/29/2006	Calcium	7,820		NA	NA
UK01SL01	3/29/2006	Chromium	8.9		143	3,066
UK01SL01	3/29/2006	Cobalt	1.8	B	NA	NA

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK01SL01	3/29/2006	Copper	24.5		NA	40,880
UK01SL01	3/29/2006	Iron	6,520		NA	715,400
UK01SL01	3/29/2006	Lead	19.5		NA	NA
UK01SL01	3/29/2006	Magnesium	2,240		NA	NA
UK01SL01	3/29/2006	Manganese	82.1		NA	20,440
UK01SL01	3/29/2006	Mercury	0.03	B	NA	NA
UK01SL01	3/29/2006	Nickel	5.9	B	NA	20,440
UK01SL01	3/29/2006	Potassium	518	B	NA	NA
UK01SL01	3/29/2006	Selenium	1.3	U	NA	5,110
UK01SL01	3/29/2006	Silver	0.42	U	NA	5,110
UK01SL01	3/29/2006	Sodium	120	U	NA	NA
UK01SL01	3/29/2006	Thallium	1.4	U	NA	71.54
UK01SL01	3/29/2006	Vanadium	8.5	B	NA	1,022
UK01SL01	3/29/2006	Zinc	87		NA	306,600
UK01SL01	3/29/2006	Cyanide	0.5	U	35	20,440
UK1BSL01110	3/11/2008	1,1,1-Trichloroethane	0.00107	U	NA	286,160
UK1BSL01110	3/11/2008	1,1,2,2-Tetrachloroethane	0.00124	U	NA	14.31
UK1BSL01110	3/11/2008	1,1,2-Trichloroethane	0.0013	U	NA	50.20
UK1BSL01110	3/11/2008	1,1-Dichloroethane	0.00117	U	NA	204,400
UK1BSL01110	3/11/2008	1,1-Dichloroethene	0.00076	U	NA	51,100
UK1BSL01110	3/11/2008	1,2-Dichloroethane	0.00119	U	NA	31.45
UK1BSL01110	3/11/2008	1,2-Dichloroethene (total)	0.00095	U	0.25	9,198
UK1BSL01110	3/11/2008	1,2-Dichloropropane	0.00122	U	NA	42.08
UK1BSL01110	3/11/2008	2-Butanone	0.00457	U	NA	613,200
UK1BSL01110	3/11/2008	2-Hexanone	0.00408	U	NA	NA
UK1BSL01110	3/11/2008	4-Methyl-2-pentanone	0.00443	U	NA	NA
UK1BSL01110	3/11/2008	Acetone	0.0427	J	NA	919,800
UK1BSL01110	3/11/2008	Benzene	0.00109	U	NA	52.03
UK1BSL01110	3/11/2008	Bromodichloromethane	0.00097	U	NA	46.15
UK1BSL01110	3/11/2008	Bromoform	0.00099	U	NA	362.227848
UK1BSL01110	3/11/2008	Bromomethane	0.00101	U	NA	1430.800000
UK1BSL01110	3/11/2008	c-1,2-Dichloroethene	0.00093	U	0.25	10,220
UK1BSL01110	3/11/2008	c-1,3-Dichloropropene	0.00105	U	NA	NA
UK1BSL01110	3/11/2008	Carbon disulfide	0.00097	U	NA	102,200
UK1BSL01110	3/11/2008	Carbon Tetrachloride	0.00115	U	NA	22.01
UK1BSL01110	3/11/2008	Chlorobenzene	0.00126	U	NA	20,440
UK1BSL01110	3/11/2008	Chloroethane	0.00144	U	NA	986.76
UK1BSL01110	3/11/2008	Chloroform	0.00122	U	NA	10,220
UK1BSL01110	3/11/2008	Chloromethane	0.00103	U	NA	NA
UK1BSL01110	3/11/2008	Dibromochloromethane	0.00095	U	NA	34.07
UK1BSL01110	3/11/2008	Ethylbenzene	0.00107	U	NA	102,200
UK1BSL01110	3/11/2008	m,p-xylene	0.00185	U	NA	NA
UK1BSL01110	3/11/2008	Methylene Chloride	0.00194	U	NA	381.55
UK1BSL01110	3/11/2008	o-xylene	0.0008	U	NA	NA
UK1BSL01110	3/11/2008	Styrene	0.00089	U	NA	204,400
UK1BSL01110	3/11/2008	t-1,2-Dichloroethene	0.00095	U	NA	20,440
UK1BSL01110	3/11/2008	t-1,3-Dichloropropene	0.00087	U	NA	NA
UK1BSL01110	3/11/2008	TCE	0.00101	U	0.7	7.15
UK1BSL01110	3/11/2008	Tetrachloroethene	0.00093	U	1.4	5.30
UK1BSL01110	3/11/2008	Toluene	0.00099	U	NA	81,760

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK1BSL01110	3/11/2008	Vinyl Chloride	0.0014	U	NA	3.97
UK1BSL01110	3/11/2008	Xylene (Total)	0.00185	U	NA	204,400
UK1BSL01110	3/11/2008	1,2,4-Trichlorobenzene	0.0841	U	NA	10,220
UK1BSL01110	3/11/2008	1,2-Dichlorobenzene	0.18	U	NA	91,980
UK1BSL01110	3/11/2008	1,3-Dichlorobenzene	0.176	U	NA	3,066
UK1BSL01110	3/11/2008	1,4-Dichlorobenzene	0.219	U	NA	119.23
UK1BSL01110	3/11/2008	2,4,5-Trichlorophenol	0.171	U	NA	102,200
UK1BSL01110	3/11/2008	2,4,6-Trichlorophenol	0.126	U	NA	260.15
UK1BSL01110	3/11/2008	2,4-Dichlorophenol	0.262	U	NA	3,066
UK1BSL01110	3/11/2008	2,4-Dimethylphenol	0.165	U	NA	20,440
UK1BSL01110	3/11/2008	2,4-Dinitrophenol	3.35	U	NA	2,044
UK1BSL01110	3/11/2008	2,4-Dinitrotoluene	0.18	U	NA	2,044
UK1BSL01110	3/11/2008	2,6-Dinitrotoluene	0.245	U	NA	1,022
UK1BSL01110	3/11/2008	2-Chloronaphthalene	0.154	U	NA	81,760
UK1BSL01110	3/11/2008	2-Chlorophenol	0.123	U	NA	5,110
UK1BSL01110	3/11/2008	2-Methylnaphthalene	0.129	U	NA	4,088
UK1BSL01110	3/11/2008	2-Methylphenol	0.224	U	NA	51,100
UK1BSL01110	3/11/2008	2-Nitroaniline	0.169	U	NA	NA
UK1BSL01110	3/11/2008	2-Nitrophenol	0.211	U	NA	NA
UK1BSL01110	3/11/2008	3,3'-Dichlorobenzidine	0.274	U	NA	6.36
UK1BSL01110	3/11/2008	3+4-Methylphenol	0.339	J	NA	5,110
UK1BSL01110	3/11/2008	3-Nitroaniline	0.326	U	NA	NA
UK1BSL01110	3/11/2008	4,6-Dinitro-2-methylphenol	0.416	U	NA	NA
UK1BSL01110	3/11/2008	4-Bromophenyl phenyl ether	0.19	U	NA	NA
UK1BSL01110	3/11/2008	4-Chloro-3-methylphenol	0.207	U	NA	NA
UK1BSL01110	3/11/2008	4-Chloroaniline	0.176	U	NA	4,088
UK1BSL01110	3/11/2008	4-Chlorophenyl phenyl ether	0.226	U	NA	NA
UK1BSL01110	3/11/2008	4-Nitroaniline	0.191	U	NA	NA
UK1BSL01110	3/11/2008	4-Nitrophenol	0.251	U	NA	NA
UK1BSL01110	3/11/2008	Acenaphthene	0.136	U	NA	61,320
UK1BSL01110	3/11/2008	Acenaphthylene	0.148	U	NA	NA
UK1BSL01110	3/11/2008	Anthracene	0.823	J	NA	306,600
UK1BSL01110	3/11/2008	Benzo(a)anthracene	1.32	J	NA	3.92
UK1BSL01110	3/11/2008	Benzo(a)pyrene	1.19	J	0.29	0.392
UK1BSL01110	3/11/2008	Benzo(b)fluoranthene	1.37	J	NA	3.92
UK1BSL01110	3/11/2008	Benzo(g,h,i)perylene	0.907	J	NA	NA
UK1BSL01110	3/11/2008	Benzo(k)fluoranthene	1.09	J	NA	39.20
UK1BSL01110	3/11/2008	bis(2-Chloroethoxy)methane	0.2	U	NA	NA
UK1BSL01110	3/11/2008	bis(2-Chloroethyl)ether	0.138	U	NA	2.60
UK1BSL01110	3/11/2008	bis(2-Chloroisopropyl)ether	0.136	U	NA	40.88
UK1BSL01110	3/11/2008	bis(2-Ethylhexyl)phthalate	17.4		NA	204.40
UK1BSL01110	3/11/2008	Butyl benzyl phthalate	0.236	U	NA	204,400
UK1BSL01110	3/11/2008	Carbazole	0.232	U	NA	143.08
UK1BSL01110	3/11/2008	Chrysene	1.78	J	NA	392
UK1BSL01110	3/11/2008	Dibenz(a,h)anthracene	0.132	U	0.29	0.392
UK1BSL01110	3/11/2008	Dibenzofuran	0.129	J	NA	1,022
UK1BSL01110	3/11/2008	Diethyl phthalate	0.221	U	NA	817,600
UK1BSL01110	3/11/2008	Dimethyl phthalate	0.167	U	NA	NA
UK1BSL01110	3/11/2008	Di-n-butyl phthalate	0.19	U	NA	102,200
UK1BSL01110	3/11/2008	Di-n-octyl phthalate	0.198	U	NA	NA

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK1BSL01110	3/11/2008	Fluoranthene	0.556	J	NA	40,880
UK1BSL01110	3/11/2008	Fluorene	0.265	J	NA	40,880
UK1BSL01110	3/11/2008	Hexachlorobenzene	0.247	U	NA	1.79
UK1BSL01110	3/11/2008	Hexachlorobutadiene	0.256	U	NA	36.69
UK1BSL01110	3/11/2008	Hexachlorocyclopentadiene	0.8	U	NA	6,132
UK1BSL01110	3/11/2008	Hexachloroethane	0.24	U	NA	204.40
UK1BSL01110	3/11/2008	Indeno(1,2,3-cd)pyrene	0.804	J	NA	3.92
UK1BSL01110	3/11/2008	Isophorone	0.0915	U	NA	3012.210526
UK1BSL01110	3/11/2008	Naphthalene	0.218	J	NA	20,440
UK1BSL01110	3/11/2008	Nitrobenzene	0.327	U	NA	511
UK1BSL01110	3/11/2008	N-Nitrosodi-n-propylamine	0.323	U	NA	0.41
UK1BSL01110	3/11/2008	N-Nitrosodiphenylamine	0.169	U	NA	584
UK1BSL01110	3/11/2008	Pentachlorophenol	1.25	U	NA	23.85
UK1BSL01110	3/11/2008	Phenanthrene	2.37		NA	NA
UK1BSL01110	3/11/2008	Phenol	0.266	U	NA	306,600
UK1BSL01110	3/11/2008	Pyrene	2.06	J	NA	30,660
UK1BSL01110	3/11/2008	Pyridine	0.202	U	NA	1,022
UK1BSL01110	3/11/2008	4,4'-DDD	0.017		NA	11.92
UK1BSL01110	3/11/2008	4,4'-DDE	0.0387		NA	8.42
UK1BSL01110	3/11/2008	4,4'-DDT	0.00105	U	NA	8.42
UK1BSL01110	3/11/2008	Aldrin	0.00202	U	NA	0.17
UK1BSL01110	3/11/2008	alpha-BHC	0.00146	U	NA	0.45
UK1BSL01110	3/11/2008	alpha-Chlordane	0.0576		NA	NA
UK1BSL01110	3/11/2008	beta-BHC	0.00159	U	NA	1.59
UK1BSL01110	3/11/2008	Chlordane	0.0165	U	NA	8.18
UK1BSL01110	3/11/2008	delta-BHC	0.00282	U	NA	NA
UK1BSL01110	3/11/2008	Dieldrin	0.0115		NA	0.18
UK1BSL01110	3/11/2008	Endosulfan I	0.0277		NA	6,132
UK1BSL01110	3/11/2008	Endosulfan II	0.00148	U	NA	6,132
UK1BSL01110	3/11/2008	Endosulfan sulfate	0.00165	U	NA	NA
UK1BSL01110	3/11/2008	Endrin	0.00245	U	NA	306.60
UK1BSL01110	3/11/2008	Endrin Aldehyde	0.00375	U	NA	NA
UK1BSL01110	3/11/2008	Endrin ketone	0.00476	U	NA	NA
UK1BSL01110	3/11/2008	gamma-BHC (Lindane)	0.00287	U	NA	2.20
UK1BSL01110	3/11/2008	gamma-Chlordane	0.0505		NA	NA
UK1BSL01110	3/11/2008	Heptachlor	0.0013	U	NA	0.64
UK1BSL01110	3/11/2008	Heptachlor epoxide	0.0021	U	NA	0.31
UK1BSL01110	3/11/2008	Methoxychlor	0.0032	U	NA	5,110
UK1BSL01110	3/11/2008	Toxaphene	0.0454	U	NA	2.60
UK1BSL01110	3/11/2008	Aroclor 1016	0.00421	U	NA	40.88
UK1BSL01110	3/11/2008	Aroclor 1221	0.0198	U	NA	1.43
UK1BSL01110	3/11/2008	Aroclor 1232	0.00439	U	NA	1.43
UK1BSL01110	3/11/2008	Aroclor 1242	0.0033	U	NA	1.43
UK1BSL01110	3/11/2008	Aroclor 1248	0.00742	U	NA	1.43
UK1BSL01110	3/11/2008	Aroclor 1254	0.0112	U	NA	1.43
UK1BSL01110	3/11/2008	Aroclor 1260	0.0129	U	NA	1.43
UK1BSL01110	3/11/2008	PCBs(total)	0.0198	U	10	1.43
UK1BSL01110	3/11/2008	Aluminum	7,080		NA	1,022,000
UK1BSL01110	3/11/2008	Antimony	0.4	U	NA	408.80
UK1BSL01110	3/11/2008	Arsenic	12.8		NA	1.91

Table 4-57

**Summary of Analytical Results
UK-01 Solid Characterization Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK1BSL01110	3/11/2008	Barium	162		NA	204,400
UK1BSL01110	3/11/2008	Beryllium	0.04	U	NA	2,044
UK1BSL01110	3/11/2008	Cadmium	0.061	U	10	511
UK1BSL01110	3/11/2008	Calcium	16,600		NA	NA
UK1BSL01110	3/11/2008	Chromium	42.8		143	3,066
UK1BSL01110	3/11/2008	Cobalt	8.35		NA	NA
UK1BSL01110	3/11/2008	Copper	316		NA	40,880
UK1BSL01110	3/11/2008	Iron	16,000		NA	715,400
UK1BSL01110	3/11/2008	Lead	192		NA	NA
UK1BSL01110	3/11/2008	Magnesium	5,420		NA	NA
UK1BSL01110	3/11/2008	Manganese	173		NA	20,440
UK1BSL01110	3/11/2008	Mercury	0.43		NA	NA
UK1BSL01110	3/11/2008	Nickel	26.2		NA	20,440
UK1BSL01110	3/11/2008	Potassium	947		NA	NA
UK1BSL01110	3/11/2008	Selenium	0.87	U	NA	5,110
UK1BSL01110	3/11/2008	Silver	0.2	U	NA	5,110
UK1BSL01110	3/11/2008	Sodium	214		NA	NA
UK1BSL01110	3/11/2008	Thallium	0.4	U	NA	71.54
UK1BSL01110	3/11/2008	Vanadium	32.3		NA	1,022
UK1BSL01110	3/11/2008	Zinc	590		NA	306,600
UK1BSL01110	3/11/2008	Cyanide	0.28	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) UK-01 solid characterization sample was collected during the 2006 Subsurface Feature Removal Action.
- 12) UK-01B solid characterization sample was collected during the 2008 Subsurface Feature Removal Action.

Table 4-58

**Summary of Analytical Results
UK-07 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK07B01	3/29/2006	c-1,2-Dichloroethene	0.0054	U	0.25	10,220
UK07B01	3/29/2006	TCE	0.0011	U	0.7	7.15
UK07B01	3/29/2006	Tetrachloroethene	0.0008	J	1.4	5.30
UK07B01	3/29/2006	Benzo(a)pyrene	0.086		0.29	0.392
UK07B01	3/29/2006	Dibenz(a,h)anthracene	0.038	U	0.29	0.392
UK07B01	3/29/2006	PCBs(total)	0.076	U	10	1.43
UK07B01	3/29/2006	Cadmium	0.91	B	10	511
UK07B01	3/29/2006	Chromium	9.7		143	3,066
UK07B01	3/29/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) UK-07 post-removal confirmation sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-59

**Summary of Analytical Results
UK-08 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK08SL01	3/29/2006	1,1,1-Trichloroethane	0.0058	U	NA	286,160
UK08SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.0012	U	NA	14.31
UK08SL01	3/29/2006	1,1,2-Trichloroethane	0.0034	U	NA	50.20
UK08SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.0058	U	NA	30,660,000
UK08SL01	3/29/2006	1,1-Dichloroethane	0.0058	U	NA	204,400
UK08SL01	3/29/2006	1,1-Dichloroethene	0.0023	U	NA	51,100
UK08SL01	3/29/2006	1,2,4-Trichlorobenzene	0.0058	U	NA	10,220
UK08SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.0058	U	NA	3.58
UK08SL01	3/29/2006	1,2-Dibromoethane	0.0058	U	NA	1.43
UK08SL01	3/29/2006	1,2-Dichlorobenzene	0.0058	U	NA	91,980
UK08SL01	3/29/2006	1,2-Dichloroethane	0.0023	U	NA	31.45
UK08SL01	3/29/2006	1,2-Dichloropropane	0.0012	U	NA	42.08
UK08SL01	3/29/2006	1,3-Dichlorobenzene	0.0058	U	NA	3,066
UK08SL01	3/29/2006	1,4-Dichlorobenzene	0.0058	U	NA	119.23
UK08SL01	3/29/2006	2-Butanone	0.0058	U	NA	613,200
UK08SL01	3/29/2006	2-Hexanone	0.0058	U	NA	NA
UK08SL01	3/29/2006	4-Methyl-2-pentanone	0.0058	U	NA	NA
UK08SL01	3/29/2006	Acetone	0.042		NA	919,800
UK08SL01	3/29/2006	Benzene	0.0012	U	NA	52.03
UK08SL01	3/29/2006	Bromodichloromethane	0.0012	U	NA	46.15
UK08SL01	3/29/2006	Bromoform	0.0046	U	NA	362.23
UK08SL01	3/29/2006	Bromomethane	0.0058	U	NA	1,430.8
UK08SL01	3/29/2006	c-1,2-Dichloroethene	0.0058	U	0.25	10,220
UK08SL01	3/29/2006	c-1,3-Dichloropropene	0.0058	U	NA	NA
UK08SL01	3/29/2006	Carbon disulfide	0.0044	J	NA	102,200
UK08SL01	3/29/2006	Carbon Tetrachloride	0.0023	U	NA	22.01
UK08SL01	3/29/2006	Chlorobenzene	0.0058	U	NA	20,440
UK08SL01	3/29/2006	Chloroethane	0.0058	U	NA	986.76
UK08SL01	3/29/2006	Chloroform	0.0058	U	NA	10,220
UK08SL01	3/29/2006	Chloromethane	0.0058	U	NA	NA
UK08SL01	3/29/2006	Cyclohexane	0.0058	U	NA	NA
UK08SL01	3/29/2006	Dibromochloromethane	0.0058	U	NA	34.07
UK08SL01	3/29/2006	Dichlorodifluoromethane	0.0058	U	NA	204,400
UK08SL01	3/29/2006	Ethylbenzene	0.0015	J	NA	102,200
UK08SL01	3/29/2006	Isopropylbenzene	0.0058	U	NA	102,200
UK08SL01	3/29/2006	Methyl Acetate	0.0058	U	NA	1,022,000
UK08SL01	3/29/2006	Methyl Cyclohexane	0.0034	J	NA	NA
UK08SL01	3/29/2006	Methyl t-butyl ether	0.0058	U	NA	715.4
UK08SL01	3/29/2006	Methylene Chloride	0.0034	U	NA	381.546667
UK08SL01	3/29/2006	Styrene	0.0058	U	NA	204,400
UK08SL01	3/29/2006	t-1,2-Dichloroethene	0.0058	U	NA	20,440
UK08SL01	3/29/2006	t-1,3-Dichloropropene	0.0058	U	NA	NA
UK08SL01	3/29/2006	TCE	0.0012	U	0.7	7.15
UK08SL01	3/29/2006	Tetrachloroethene	0.0012	U	1.4	5.30
UK08SL01	3/29/2006	Toluene	0.0058	U	NA	81,760
UK08SL01	3/29/2006	Trichlorofluoromethane	0.0058	U	NA	306,600

Table 4-59

**Summary of Analytical Results
UK-08 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK08SL01	3/29/2006	Vinyl Chloride	0.0058	U	NA	3.97
UK08SL01	3/29/2006	Xylene (Total)	0.0015	J	NA	204,400
UK08SL01	3/29/2006	2,4,5-Trichlorophenol	0.77	U	NA	102,200
UK08SL01	3/29/2006	2,4,6-Trichlorophenol	0.77	U	NA	260.15
UK08SL01	3/29/2006	2,4-Dichlorophenol	0.77	U	NA	3,066
UK08SL01	3/29/2006	2,4-Dimethylphenol	0.77	U	NA	20,440
UK08SL01	3/29/2006	2,4-Dinitrophenol	3.1	U	NA	2,044
UK08SL01	3/29/2006	2,4-Dinitrotoluene	0.15	U	NA	2,044
UK08SL01	3/29/2006	2,6-Dinitrotoluene	0.15	U	NA	1,022
UK08SL01	3/29/2006	2-Chloronaphthalene	0.77	U	NA	81,760
UK08SL01	3/29/2006	2-Chlorophenol	0.77	U	NA	5,110
UK08SL01	3/29/2006	2-Methylnaphthalene	0.77	U	NA	4,088
UK08SL01	3/29/2006	2-Methylphenol	0.77	U	NA	51,100
UK08SL01	3/29/2006	2-Nitroaniline	1.5	U	NA	NA
UK08SL01	3/29/2006	2-Nitrophenol	0.77	U	NA	NA
UK08SL01	3/29/2006	3,3'-Dichlorobenzidine	1.5	U	NA	6.36
UK08SL01	3/29/2006	3+4-Methylphenol	0.77	U	NA	5,110
UK08SL01	3/29/2006	3-Nitroaniline	1.5	U	NA	NA
UK08SL01	3/29/2006	4,6-Dinitro-2-methylphenol	3.1	U	NA	NA
UK08SL01	3/29/2006	4-Bromophenyl phenyl ether	0.77	U	NA	NA
UK08SL01	3/29/2006	4-Chloro-3-methylphenol	0.77	U	NA	NA
UK08SL01	3/29/2006	4-Chloroaniline	0.77	U	NA	4,088
UK08SL01	3/29/2006	4-Chlorophenyl phenyl ether	0.77	U	NA	NA
UK08SL01	3/29/2006	4-Nitroaniline	1.5	U	NA	NA
UK08SL01	3/29/2006	4-Nitrophenol	3.1	U	NA	NA
UK08SL01	3/29/2006	Acenaphthene	0.77	U	NA	61,320
UK08SL01	3/29/2006	Acenaphthylene	0.77	U	NA	NA
UK08SL01	3/29/2006	Acetophenone	0.77	U	NA	102,200
UK08SL01	3/29/2006	Anthracene	0.032	J	NA	306,600
UK08SL01	3/29/2006	Atrazine	0.77	U	NA	13.01
UK08SL01	3/29/2006	Benzaldehyde	0.77	U	NA	102,200
UK08SL01	3/29/2006	Benzo(a)anthracene	0.02	J	NA	3.92
UK08SL01	3/29/2006	Benzo(a)pyrene	0.077	U	0.29	0.392
UK08SL01	3/29/2006	Benzo(b)fluoranthene	0.077	U	NA	3.92
UK08SL01	3/29/2006	Benzo(g,h,i)perylene	0.35	J	NA	NA
UK08SL01	3/29/2006	Benzo(k)fluoranthene	0.077	U	NA	39.2
UK08SL01	3/29/2006	bis(2-Chloroethoxy)methane	0.77	U	NA	NA
UK08SL01	3/29/2006	bis(2-Chloroethyl)ether	0.077	U	NA	2.60
UK08SL01	3/29/2006	bis(2-Chloroisopropyl)ether	0.77	U	NA	40.88
UK08SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	0.77	U	NA	204.4
UK08SL01	3/29/2006	Butyl benzyl phthalate	0.77	U	NA	204,400
UK08SL01	3/29/2006	Carbazole	0.77	U	NA	143.08
UK08SL01	3/29/2006	Chrysene	0.035	J	NA	392
UK08SL01	3/29/2006	Dibenz(a,h)anthracene	0.077	U	0.29	0.392
UK08SL01	3/29/2006	Dibenzofuran	0.77	U	NA	1,022
UK08SL01	3/29/2006	Diethyl phthalate	0.77	U	NA	817,600

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**Summary of Analytical Results
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Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK08SL01	3/29/2006	Dimethyl phthalate	0.77	U	NA	NA
UK08SL01	3/29/2006	Di-n-butyl phthalate	0.77	U	NA	102,200
UK08SL01	3/29/2006	Di-n-octyl phthalate	0.77	U	NA	NA
UK08SL01	3/29/2006	Diphenyl	0.77	U	NA	NA
UK08SL01	3/29/2006	Fluoranthene	0.77	U	NA	40,880
UK08SL01	3/29/2006	Fluorene	0.77	U	NA	40,880
UK08SL01	3/29/2006	Hexachlorobenzene	0.077	U	NA	1.79
UK08SL01	3/29/2006	Hexachlorobutadiene	0.15	U	NA	36.69
UK08SL01	3/29/2006	Hexachlorocyclopentadiene	0.77	U	NA	6,132
UK08SL01	3/29/2006	Hexachloroethane	0.077	U	NA	204.4
UK08SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	0.57		NA	3.92
UK08SL01	3/29/2006	Isophorone	0.77	U	NA	3,012.21
UK08SL01	3/29/2006	Naphthalene	0.77	U	NA	20,440
UK08SL01	3/29/2006	Nitrobenzene	0.077	U	NA	511
UK08SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.077	U	NA	0.41
UK08SL01	3/29/2006	N-Nitrosodiphenylamine	0.77	U	NA	584
UK08SL01	3/29/2006	Pentachlorophenol	3.1	U	NA	23.85
UK08SL01	3/29/2006	Phenanthrene	0.035	J	NA	NA
UK08SL01	3/29/2006	Phenol	0.77	U	NA	306,600
UK08SL01	3/29/2006	Pyrene	0.048	J	NA	30,660
UK08SL01	3/29/2006	4,4'-DDD	0.0077	U	NA	11.92
UK08SL01	3/29/2006	4,4'-DDE	0.0077	U	NA	8.42
UK08SL01	3/29/2006	4,4'-DDT	0.0077	U	NA	8.42
UK08SL01	3/29/2006	Aldrin	0.0077	U	NA	0.17
UK08SL01	3/29/2006	alpha-BHC	0.0077	U	NA	0.45
UK08SL01	3/29/2006	alpha-Chlordane	0.0077	U	NA	NA
UK08SL01	3/29/2006	beta-BHC	0.0077	U	NA	1.59
UK08SL01	3/29/2006	delta-BHC	0.0077	U	NA	NA
UK08SL01	3/29/2006	Dieldrin	0.0077	U	NA	0.18
UK08SL01	3/29/2006	Endosulfan I	0.0077	U	NA	6,132
UK08SL01	3/29/2006	Endosulfan II	0.0077	U	NA	6,132
UK08SL01	3/29/2006	Endosulfan sulfate	0.0077	U	NA	NA
UK08SL01	3/29/2006	Endrin	0.0077	U	NA	306.6
UK08SL01	3/29/2006	Endrin Aldehyde	0.0077	U	NA	NA
UK08SL01	3/29/2006	Endrin ketone	0.0077	U	NA	NA
UK08SL01	3/29/2006	gamma-BHC (Lindane)	0.0077	U	NA	2.20
UK08SL01	3/29/2006	gamma-Chlordane	0.0077	U	NA	NA
UK08SL01	3/29/2006	Heptachlor	0.0077	U	NA	0.64
UK08SL01	3/29/2006	Heptachlor epoxide	0.0077	U	NA	0.31
UK08SL01	3/29/2006	Methoxychlor	0.0077	U	NA	5,110
UK08SL01	3/29/2006	Toxaphene	0.077	U	NA	2.60
UK08SL01	3/29/2006	Aroclor 1016	0.077	U	NA	40.88
UK08SL01	3/29/2006	Aroclor 1221	0.077	U	NA	1.43
UK08SL01	3/29/2006	Aroclor 1232	0.077	U	NA	1.43
UK08SL01	3/29/2006	Aroclor 1242	0.077	U	NA	1.43
UK08SL01	3/29/2006	Aroclor 1248	0.077	U	NA	1.43

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**Summary of Analytical Results
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Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK08SL01	3/29/2006	Aroclor 1254	0.077	U	NA	1.43
UK08SL01	3/29/2006	Aroclor 1260	0.077	U	NA	1.43
UK08SL01	3/29/2006	PCBs(total)	0.077	U	10	1.43
UK08SL01	3/29/2006	Aluminum	876		NA	1,022,000
UK08SL01	3/29/2006	Antimony	1.3	U	NA	408.8
UK08SL01	3/29/2006	Arsenic	0.98	B	NA	1.91
UK08SL01	3/29/2006	Barium	21.8	B	NA	204,400
UK08SL01	3/29/2006	Beryllium	0.16	B	NA	2,044
UK08SL01	3/29/2006	Cadmium	0.092	U	10	511
UK08SL01	3/29/2006	Calcium	286	B	NA	NA
UK08SL01	3/29/2006	Chromium	2.7		143	3,066
UK08SL01	3/29/2006	Cobalt	0.81	B	NA	NA
UK08SL01	3/29/2006	Copper	5.8		NA	40,880
UK08SL01	3/29/2006	Iron	7,190		NA	715,400
UK08SL01	3/29/2006	Lead	6.4		NA	NA
UK08SL01	3/29/2006	Magnesium	157	B	NA	NA
UK08SL01	3/29/2006	Manganese	65.7		NA	20,440
UK08SL01	3/29/2006	Mercury	0.06		NA	NA
UK08SL01	3/29/2006	Nickel	1.6	B	NA	20,440
UK08SL01	3/29/2006	Potassium	161	B	NA	NA
UK08SL01	3/29/2006	Selenium	0.97	U	NA	5,110
UK08SL01	3/29/2006	Silver	0.32	U	NA	5,110
UK08SL01	3/29/2006	Sodium	91.3	U	NA	NA
UK08SL01	3/29/2006	Thallium	1.1	U	NA	71.54
UK08SL01	3/29/2006	Vanadium	2	B	NA	1,022
UK08SL01	3/29/2006	Zinc	27.8		NA	306,600
UK08SL01	3/29/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 9) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 10) UK-08 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

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**Summary of Analytical Results
UK-09 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal
UK09SL01	3/29/2006	1,1,1-Trichloroethane	0.54	U	NA
UK09SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.11	U	NA
UK09SL01	3/29/2006	1,1,2-Trichloroethane	0.32	U	NA
UK09SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.54	U	NA
UK09SL01	3/29/2006	1,1-Dichloroethane	0.54	U	NA
UK09SL01	3/29/2006	1,1-Dichloroethene	0.21	U	NA
UK09SL01	3/29/2006	1,2,4-Trichlorobenzene	0.54	U	NA
UK09SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.54	U	NA
UK09SL01	3/29/2006	1,2-Dibromoethane	0.54	U	NA
UK09SL01	3/29/2006	1,2-Dichlorobenzene	0.54	U	NA
UK09SL01	3/29/2006	1,2-Dichloroethane	0.21	U	NA
UK09SL01	3/29/2006	1,2-Dichloropropane	0.11	U	NA
UK09SL01	3/29/2006	1,3-Dichlorobenzene	0.54	U	NA
UK09SL01	3/29/2006	1,4-Dichlorobenzene	0.54	U	NA
UK09SL01	3/29/2006	2-Butanone	0.54	U	NA
UK09SL01	3/29/2006	2-Hexanone	0.54	U	NA
UK09SL01	3/29/2006	4-Methyl-2-pentanone	0.54	U	NA
UK09SL01	3/29/2006	Acetone	0.54	U	NA
UK09SL01	3/29/2006	Benzene	0.11	U	NA
UK09SL01	3/29/2006	Bromodichloromethane	0.11	U	NA
UK09SL01	3/29/2006	Bromoform	0.43	U	NA
UK09SL01	3/29/2006	Bromomethane	0.54	U	NA
UK09SL01	3/29/2006	c-1,2-Dichloroethene	0.54	U	0.25
UK09SL01	3/29/2006	c-1,3-Dichloropropene	0.54	U	NA
UK09SL01	3/29/2006	Carbon disulfide	0.54	U	NA
UK09SL01	3/29/2006	Carbon Tetrachloride	0.21	U	NA
UK09SL01	3/29/2006	Chlorobenzene	0.54	U	NA
UK09SL01	3/29/2006	Chloroethane	0.54	U	NA
UK09SL01	3/29/2006	Chloroform	0.54	U	NA
UK09SL01	3/29/2006	Chloromethane	0.54	U	NA
UK09SL01	3/29/2006	Cyclohexane	0.54	U	NA
UK09SL01	3/29/2006	Dibromochloromethane	0.54	U	NA
UK09SL01	3/29/2006	Dichlorodifluoromethane	0.54	U	NA
UK09SL01	3/29/2006	Ethylbenzene	0.43	U	NA
UK09SL01	3/29/2006	Isopropylbenzene	0.36	J	NA
UK09SL01	3/29/2006	Methyl Acetate	0.54	U	NA
UK09SL01	3/29/2006	Methyl Cyclohexane	0.54	U	NA
UK09SL01	3/29/2006	Methyl t-butyl ether	0.54	U	NA
UK09SL01	3/29/2006	Methylene Chloride	0.32	U	NA
UK09SL01	3/29/2006	Styrene	0.54	U	NA
UK09SL01	3/29/2006	t-1,2-Dichloroethene	0.54	U	NA
UK09SL01	3/29/2006	t-1,3-Dichloropropene	0.54	U	NA
UK09SL01	3/29/2006	TCE	0.11	U	0.7
UK09SL01	3/29/2006	Tetrachloroethene	0.11	U	1.4
UK09SL01	3/29/2006	Toluene	0.08	J	NA

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**Summary of Analytical Results
UK-09 Solid Characterization Sample
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Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal
UK09SL01	3/29/2006	Trichlorofluoromethane	0.54	U	NA
UK09SL01	3/29/2006	Vinyl Chloride	0.54	U	NA
UK09SL01	3/29/2006	Xylene (Total)	0.45	J	NA
UK09SL01	3/29/2006	2,4,5-Trichlorophenol	7.6	U	NA
UK09SL01	3/29/2006	2,4,6-Trichlorophenol	7.6	U	NA
UK09SL01	3/29/2006	2,4-Dichlorophenol	7.6	U	NA
UK09SL01	3/29/2006	2,4-Dimethylphenol	7.6	U	NA
UK09SL01	3/29/2006	2,4-Dinitrophenol	30	U	NA
UK09SL01	3/29/2006	2,4-Dinitrotoluene	1.5	U	NA
UK09SL01	3/29/2006	2,6-Dinitrotoluene	1.5	U	NA
UK09SL01	3/29/2006	2-Chloronaphthalene	7.6	U	NA
UK09SL01	3/29/2006	2-Chlorophenol	7.6	U	NA
UK09SL01	3/29/2006	2-Methylnaphthalene	7.6	U	NA
UK09SL01	3/29/2006	2-Methylphenol	7.6	U	NA
UK09SL01	3/29/2006	2-Nitroaniline	15	U	NA
UK09SL01	3/29/2006	2-Nitrophenol	7.6	U	NA
UK09SL01	3/29/2006	3,3'-Dichlorobenzidine	15	U	NA
UK09SL01	3/29/2006	3+4-Methylphenol	7.6	U	NA
UK09SL01	3/29/2006	3-Nitroaniline	15	U	NA
UK09SL01	3/29/2006	4,6-Dinitro-2-methylphenol	30	U	NA
UK09SL01	3/29/2006	4-Bromophenyl phenyl ether	7.6	U	NA
UK09SL01	3/29/2006	4-Chloro-3-methylphenol	7.6	U	NA
UK09SL01	3/29/2006	4-Chloroaniline	7.6	U	NA
UK09SL01	3/29/2006	4-Chlorophenyl phenyl ether	7.6	U	NA
UK09SL01	3/29/2006	4-Nitroaniline	15	U	NA
UK09SL01	3/29/2006	4-Nitrophenol	30	U	NA
UK09SL01	3/29/2006	Acenaphthene	7.6	U	NA
UK09SL01	3/29/2006	Acenaphthylene	7.6	U	NA
UK09SL01	3/29/2006	Acetophenone	7.6	U	NA
UK09SL01	3/29/2006	Anthracene	7.6	U	NA
UK09SL01	3/29/2006	Atrazine	7.6	U	NA
UK09SL01	3/29/2006	Benzaldehyde	7.6	U	NA
UK09SL01	3/29/2006	Benzo(a)anthracene	0.76	U	NA
UK09SL01	3/29/2006	Benzo(a)pyrene	0.76	U	0.29
UK09SL01	3/29/2006	Benzo(b)fluoranthene	0.76	U	NA
UK09SL01	3/29/2006	Benzo(g,h,i)perylene	7.6	U	NA
UK09SL01	3/29/2006	Benzo(k)fluoranthene	0.76	U	NA
UK09SL01	3/29/2006	bis(2-Chloroethoxy)methane	7.6	U	NA
UK09SL01	3/29/2006	bis(2-Chloroethyl)ether	0.76	U	NA
UK09SL01	3/29/2006	bis(2-Chloroisopropyl)ether	7.6	U	NA
UK09SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	89		NA
UK09SL01	3/29/2006	Butyl benzyl phthalate	7.6	U	NA
UK09SL01	3/29/2006	Carbazole	7.6	U	NA
UK09SL01	3/29/2006	Chrysene	7.6	U	NA
UK09SL01	3/29/2006	Dibenz(a,h)anthracene	0.76	U	0.29

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**Summary of Analytical Results
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Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal
UK09SL01	3/29/2006	Dibenzofuran	7.6	U	NA
UK09SL01	3/29/2006	Diethyl phthalate	7.6	U	NA
UK09SL01	3/29/2006	Dimethyl phthalate	7.6	U	NA
UK09SL01	3/29/2006	Di-n-butyl phthalate	7.6	U	NA
UK09SL01	3/29/2006	Di-n-octyl phthalate	7.6	U	NA
UK09SL01	3/29/2006	Diphenyl	7.6	U	NA
UK09SL01	3/29/2006	Fluoranthene	7.6	U	NA
UK09SL01	3/29/2006	Fluorene	7.6	U	NA
UK09SL01	3/29/2006	Hexachlorobenzene	0.76	U	NA
UK09SL01	3/29/2006	Hexachlorobutadiene	1.5	U	NA
UK09SL01	3/29/2006	Hexachlorocyclopentadiene	7.6	U	NA
UK09SL01	3/29/2006	Hexachloroethane	0.76	U	NA
UK09SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	0.76	U	NA
UK09SL01	3/29/2006	Isophorone	7.6	U	NA
UK09SL01	3/29/2006	Naphthalene	2.2	J	NA
UK09SL01	3/29/2006	Nitrobenzene	0.76	U	NA
UK09SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.76	U	NA
UK09SL01	3/29/2006	N-Nitrosodiphenylamine	7.6	U	NA
UK09SL01	3/29/2006	Pentachlorophenol	30	U	NA
UK09SL01	3/29/2006	Phenanthrene	7.6	U	NA
UK09SL01	3/29/2006	Phenol	7.6	U	NA
UK09SL01	3/29/2006	Pyrene	7.6	U	NA
UK09SL01	3/29/2006	4,4'-DDD	0.22		NA
UK09SL01	3/29/2006	4,4'-DDE	0.051		NA
UK09SL01	3/29/2006	4,4'-DDT	0.028		NA
UK09SL01	3/29/2006	Aldrin	0.0076	U	NA
UK09SL01	3/29/2006	alpha-BHC	0.0076	U	NA
UK09SL01	3/29/2006	alpha-Chlordane	0.0076	U	NA
UK09SL01	3/29/2006	beta-BHC	0.0076	U	NA
UK09SL01	3/29/2006	delta-BHC	0.0076	U	NA
UK09SL01	3/29/2006	Dieldrin	0.0076	U	NA
UK09SL01	3/29/2006	Endosulfan I	0.0076	U	NA
UK09SL01	3/29/2006	Endosulfan II	0.0076	U	NA
UK09SL01	3/29/2006	Endosulfan sulfate	0.0076	U	NA
UK09SL01	3/29/2006	Endrin	0.0076	U	NA
UK09SL01	3/29/2006	Endrin Aldehyde	0.0076	U	NA
UK09SL01	3/29/2006	Endrin ketone	0.0076	U	NA
UK09SL01	3/29/2006	gamma-BHC (Lindane)	0.0076	U	NA
UK09SL01	3/29/2006	gamma-Chlordane	0.0076	U	NA
UK09SL01	3/29/2006	Heptachlor	0.0076	U	NA
UK09SL01	3/29/2006	Heptachlor epoxide	0.0076	U	NA
UK09SL01	3/29/2006	Methoxychlor	0.0076	U	NA
UK09SL01	3/29/2006	Toxaphene	0.076	U	NA
UK09SL01	3/29/2006	Aroclor 1016	0.076	U	NA
UK09SL01	3/29/2006	Aroclor 1221	0.076	U	NA

Table 4-60

**Summary of Analytical Results
UK-09 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal
UK09SL01	3/29/2006	Aroclor 1232	0.076	U	NA
UK09SL01	3/29/2006	Aroclor 1242	0.076	U	NA
UK09SL01	3/29/2006	Aroclor 1248	0.076	U	NA
UK09SL01	3/29/2006	Aroclor 1254	0.37		NA
UK09SL01	3/29/2006	Aroclor 1260	0.25		NA
UK09SL01	3/29/2006	PCBs(total)	0.62		10
UK09SL01	3/29/2006	Aluminum	3,800		NA
UK09SL01	3/29/2006	Antimony	1.3	U	NA
UK09SL01	3/29/2006	Arsenic	1.4		NA
UK09SL01	3/29/2006	Barium	53.4		NA
UK09SL01	3/29/2006	Beryllium	0.3	B	NA
UK09SL01	3/29/2006	Cadmium	2.4		10
UK09SL01	3/29/2006	Calcium	1,010	B	NA
UK09SL01	3/29/2006	Chromium	42.7		143
UK09SL01	3/29/2006	Cobalt	6	B	NA
UK09SL01	3/29/2006	Copper	45.9		NA
UK09SL01	3/29/2006	Iron	9,980		NA
UK09SL01	3/29/2006	Lead	37		NA
UK09SL01	3/29/2006	Magnesium	453	B	NA
UK09SL01	3/29/2006	Manganese	58.5		NA
UK09SL01	3/29/2006	Mercury	0.2		NA
UK09SL01	3/29/2006	Nickel	6.4	B	NA
UK09SL01	3/29/2006	Potassium	280	B	NA
UK09SL01	3/29/2006	Selenium	0.95	U	NA
UK09SL01	3/29/2006	Silver	5		NA
UK09SL01	3/29/2006	Sodium	89.9	U	NA
UK09SL01	3/29/2006	Thallium	1.1	U	NA
UK09SL01	3/29/2006	Vanadium	7.4	B	NA
UK09SL01	3/29/2006	Zinc	286		NA
UK09SL01	3/29/2006	Cyanide	0.5	U	35

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per liter.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.

Table 4-61

**Summary of Analytical Results
UK-09 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK09B01	3/29/2006	c-1,2-Dichloroethene	0.0049	U	0.25	10,220
UK09B01	3/29/2006	TCE	0.001	U	0.7	7.15
UK09B01	3/29/2006	Tetrachloroethene	0.0008	J	1.4	5.30
UK09B01	3/29/2006	Benzo(a)pyrene	0.034	U	0.29	0.392
UK09B01	3/29/2006	bis(2-Ethylhexyl)phthalate	6.3		NA	204.40
UK09B01	3/29/2006	Dibenz(a,h)anthracene	0.034	U	0.29	0.392
UK09B01	3/29/2006	PCBs(total)	0.069	U	10	1.43
UK09B01	3/29/2006	Cadmium	0.082	U	10	511
UK09B01	3/29/2006	Chromium	2.3		143	3,066
UK09B01	3/29/2006	Zinc	24.2		NA	306,600
UK09B01	3/29/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) UK-09 post-removal confirmation sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was analyzed by STL of Edison, New Jersey.

Table 4-62

**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK10SL01	3/29/2006	1,1,1-Trichloroethane	0.66	U	NA	286,160
UK10SL01	3/29/2006	1,1,2,2-Tetrachloroethane	0.13	U	NA	14.31
UK10SL01	3/29/2006	1,1,2-Trichloroethane	0.39	U	NA	50.20
UK10SL01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.66	U	NA	30,660,000
UK10SL01	3/29/2006	1,1-Dichloroethane	0.66	U	NA	204,400
UK10SL01	3/29/2006	1,1-Dichloroethene	0.26	U	NA	51,100
UK10SL01	3/29/2006	1,2,4-Trichlorobenzene	0.66	U	NA	10,220
UK10SL01	3/29/2006	1,2-Dibromo-3-chloropropane	0.66	U	NA	3.58
UK10SL01	3/29/2006	1,2-Dibromoethane	0.66	U	NA	1.43
UK10SL01	3/29/2006	1,2-Dichlorobenzene	0.25	J	NA	91,980
UK10SL01	3/29/2006	1,2-Dichloroethane	0.26	U	NA	31.45
UK10SL01	3/29/2006	1,2-Dichloropropane	0.13	U	NA	42.08
UK10SL01	3/29/2006	1,3-Dichlorobenzene	0.66	U	NA	3,066
UK10SL01	3/29/2006	1,4-Dichlorobenzene	0.66	U	NA	119.23
UK10SL01	3/29/2006	2-Butanone	0.66	U	NA	613,200
UK10SL01	3/29/2006	2-Hexanone	0.66	U	NA	NA
UK10SL01	3/29/2006	4-Methyl-2-pentanone	0.66	U	NA	NA
UK10SL01	3/29/2006	Acetone	0.66	U	NA	919,800
UK10SL01	3/29/2006	Benzene	0.67		NA	52.03
UK10SL01	3/29/2006	Bromodichloromethane	0.13	U	NA	46.15
UK10SL01	3/29/2006	Bromoform	0.52	U	NA	362.23
UK10SL01	3/29/2006	Bromomethane	0.66	U	NA	1,430.8
UK10SL01	3/29/2006	c-1,2-Dichloroethene	0.66	U	0.25	10,220
UK10SL01	3/29/2006	c-1,3-Dichloropropene	0.66	U	NA	NA
UK10SL01	3/29/2006	Carbon disulfide	0.66	U	NA	102,200
UK10SL01	3/29/2006	Carbon Tetrachloride	0.26	U	NA	22.01
UK10SL01	3/29/2006	Chlorobenzene	0.66	U	NA	20,440
UK10SL01	3/29/2006	Chloroethane	0.66	U	NA	986.76
UK10SL01	3/29/2006	Chloroform	0.66	U	NA	10,220
UK10SL01	3/29/2006	Chloromethane	0.66	U	NA	NA
UK10SL01	3/29/2006	Cyclohexane	0.6	J	NA	NA
UK10SL01	3/29/2006	Dibromochloromethane	0.66	U	NA	34.07
UK10SL01	3/29/2006	Dichlorodifluoromethane	0.66	U	NA	204,400
UK10SL01	3/29/2006	Ethylbenzene	1.7		NA	102,200
UK10SL01	3/29/2006	Isopropylbenzene	0.7		NA	102,200
UK10SL01	3/29/2006	Methyl Acetate	0.66	U	NA	1,022,000
UK10SL01	3/29/2006	Methyl Cyclohexane	0.42	J	NA	NA
UK10SL01	3/29/2006	Methyl t-butyl ether	0.66	U	NA	715.4
UK10SL01	3/29/2006	Methylene Chloride	0.39	U	NA	381.55
UK10SL01	3/29/2006	Styrene	0.45	J	NA	204,400
UK10SL01	3/29/2006	t-1,2-Dichloroethene	0.66	U	NA	20,440
UK10SL01	3/29/2006	t-1,3-Dichloropropene	0.66	U	NA	NA
UK10SL01	3/29/2006	TCE	0.15		0.7	7.15
UK10SL01	3/29/2006	Tetrachloroethene	0.16		1.4	5.30
UK10SL01	3/29/2006	Toluene	9		NA	81,760
UK10SL01	3/29/2006	Trichlorofluoromethane	0.66	U	NA	306,600
UK10SL01	3/29/2006	Vinyl Chloride	0.66	U	NA	3.97
UK10SL01	3/29/2006	Xylene (Total)	7.4		NA	204,400
UK10SL01	3/29/2006	2,4,5-Trichlorophenol	4.5	U	NA	102,200
UK10SL01	3/29/2006	2,4,6-Trichlorophenol	4.5	U	NA	260.15
UK10SL01	3/29/2006	2,4-Dichlorophenol	4.5	U	NA	3,066

Table 4-62

**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK10SL01	3/29/2006	2,4-Dimethylphenol	4.5	U	NA	20,440
UK10SL01	3/29/2006	2,4-Dinitrophenol	18	U	NA	2,044
UK10SL01	3/29/2006	2,4-Dinitrotoluene	0.91	U	NA	2,044
UK10SL01	3/29/2006	2,6-Dinitrotoluene	0.91	U	NA	1,022
UK10SL01	3/29/2006	2-Chloronaphthalene	4.5	U	NA	81,760
UK10SL01	3/29/2006	2-Chlorophenol	4.5	U	NA	5,110
UK10SL01	3/29/2006	2-Methylnaphthalene	0.17	J	NA	4,088
UK10SL01	3/29/2006	2-Methylphenol	0.12	J	NA	51,100
UK10SL01	3/29/2006	2-Nitroaniline	9.1	U	NA	NA
UK10SL01	3/29/2006	2-Nitrophenol	4.5	U	NA	NA
UK10SL01	3/29/2006	3,3'-Dichlorobenzidine	9.1	U	NA	6.36
UK10SL01	3/29/2006	3+4-Methylphenol	0.25	J	NA	5,110
UK10SL01	3/29/2006	3-Nitroaniline	9.1	U	NA	NA
UK10SL01	3/29/2006	4,6-Dinitro-2-methylphenol	18	U	NA	NA
UK10SL01	3/29/2006	4-Bromophenyl phenyl ether	4.5	U	NA	NA
UK10SL01	3/29/2006	4-Chloro-3-methylphenol	4.5	U	NA	NA
UK10SL01	3/29/2006	4-Chloroaniline	4.5	U	NA	4,088
UK10SL01	3/29/2006	4-Chlorophenyl phenyl ether	4.5	U	NA	NA
UK10SL01	3/29/2006	4-Nitroaniline	9.1	U	NA	NA
UK10SL01	3/29/2006	4-Nitrophenol	18	U	NA	NA
UK10SL01	3/29/2006	Acenaphthene	0.12	J	NA	61,320
UK10SL01	3/29/2006	Acenaphthylene	4.5	U	NA	NA
UK10SL01	3/29/2006	Acetophenone	4.5	U	NA	102,200
UK10SL01	3/29/2006	Anthracene	1.1	J	NA	306,600
UK10SL01	3/29/2006	Atrazine	4.5	U	NA	13.01
UK10SL01	3/29/2006	Benzaldehyde	4.5	U	NA	102,200
UK10SL01	3/29/2006	Benzo(a)anthracene	5.1		NA	3.92
UK10SL01	3/29/2006	Benzo(a)pyrene	4.4		0.29	0.392
UK10SL01	3/29/2006	Benzo(b)fluoranthene	8.9		NA	3.92
UK10SL01	3/29/2006	Benzo(g,h,i)perylene	1.2	J	NA	NA
UK10SL01	3/29/2006	Benzo(k)fluoranthene	7.6		NA	39.2
UK10SL01	3/29/2006	bis(2-Chloroethoxy)methane	4.5	U	NA	NA
UK10SL01	3/29/2006	bis(2-Chloroethyl)ether	0.45	U	NA	2.60
UK10SL01	3/29/2006	bis(2-Chloroisopropyl)ether	4.5	U	NA	40.88
UK10SL01	3/29/2006	bis(2-Ethylhexyl)phthalate	8.6		NA	204.4
UK10SL01	3/29/2006	Butyl benzyl phthalate	4.5	U	NA	204,400
UK10SL01	3/29/2006	Carbazole	1	J	NA	143.08
UK10SL01	3/29/2006	Chrysene	7		NA	392
UK10SL01	3/29/2006	Dibenz(a,h)anthracene	0.45	U	0.29	0.392
UK10SL01	3/29/2006	Dibenzofuran	4.5	U	NA	1022
UK10SL01	3/29/2006	Diethyl phthalate	4.5	U	NA	817,600
UK10SL01	3/29/2006	Dimethyl phthalate	4.5	U	NA	NA
UK10SL01	3/29/2006	Di-n-butyl phthalate	4.5	U	NA	102,200
UK10SL01	3/29/2006	Di-n-octyl phthalate	3.2	J	NA	NA
UK10SL01	3/29/2006	Diphenyl	4.5	U	NA	NA
UK10SL01	3/29/2006	Fluoranthene	10		NA	40,880
UK10SL01	3/29/2006	Fluorene	4.5	U	NA	40,880
UK10SL01	3/29/2006	Hexachlorobenzene	0.45	U	NA	1.79
UK10SL01	3/29/2006	Hexachlorobutadiene	0.91	U	NA	36.69
UK10SL01	3/29/2006	Hexachlorocyclopentadiene	4.5	U	NA	6,132
UK10SL01	3/29/2006	Hexachloroethane	0.45	U	NA	204.4

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**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK10SL01	3/29/2006	Indeno(1,2,3-cd)pyrene	3.8		NA	3.92
UK10SL01	3/29/2006	Isophorone	4.5	U	NA	3,012.21
UK10SL01	3/29/2006	Naphthalene	4.5	U	NA	20,440
UK10SL01	3/29/2006	Nitrobenzene	0.45	U	NA	511
UK10SL01	3/29/2006	N-Nitrosodi-n-propylamine	0.45	U	NA	0.41
UK10SL01	3/29/2006	N-Nitrosodiphenylamine	4.5	U	NA	584
UK10SL01	3/29/2006	Pentachlorophenol	18	U	NA	23.85
UK10SL01	3/29/2006	Phenanthrene	4	J	NA	NA
UK10SL01	3/29/2006	Phenol	4.5	U	NA	306,600
UK10SL01	3/29/2006	Pyrene	12		NA	30,660
UK10SL01	3/29/2006	4,4'-DDD	0.11		NA	11.92
UK10SL01	3/29/2006	4,4'-DDE	0.16		NA	8.42
UK10SL01	3/29/2006	4,4'-DDT	0.24		NA	8.42
UK10SL01	3/29/2006	Aldrin	0.0091	U	NA	0.17
UK10SL01	3/29/2006	alpha-BHC	0.0091	U	NA	0.45
UK10SL01	3/29/2006	alpha-Chlordane	0.014		NA	NA
UK10SL01	3/29/2006	beta-BHC	0.0091	U	NA	1.59
UK10SL01	3/29/2006	delta-BHC	0.0091	U	NA	NA
UK10SL01	3/29/2006	Dieldrin	0.059		NA	0.18
UK10SL01	3/29/2006	Endosulfan I	0.0091	U	NA	6,132
UK10SL01	3/29/2006	Endosulfan II	0.0091	U	NA	6,132
UK10SL01	3/29/2006	Endosulfan sulfate	0.074		NA	NA
UK10SL01	3/29/2006	Endrin	0.013		NA	306.6
UK10SL01	3/29/2006	Endrin Aldehyde	0.078	P*	NA	NA
UK10SL01	3/29/2006	Endrin ketone	0.13		NA	NA
UK10SL01	3/29/2006	gamma-BHC (Lindane)	0.0091	U	NA	2.20
UK10SL01	3/29/2006	gamma-Chlordane	0.024	P*	NA	NA
UK10SL01	3/29/2006	Heptachlor	0.0099		NA	0.64
UK10SL01	3/29/2006	Heptachlor epoxide	0.0091	U	NA	0.31
UK10SL01	3/29/2006	Methoxychlor	0.042	P*	NA	5,110
UK10SL01	3/29/2006	Toxaphene	0.091	U	NA	2.60
UK10SL01	3/29/2006	Aroclor 1016	0.18	U	NA	40.88
UK10SL01	3/29/2006	Aroclor 1221	0.18	U	NA	1.43
UK10SL01	3/29/2006	Aroclor 1232	0.18	U	NA	1.43
UK10SL01	3/29/2006	Aroclor 1242	0.18	U	NA	1.43
UK10SL01	3/29/2006	Aroclor 1248	1		NA	1.43
UK10SL01	3/29/2006	Aroclor 1254	1.9		NA	1.43
UK10SL01	3/29/2006	Aroclor 1260	3.6		NA	1.43
UK10SL01	3/29/2006	PCBs(total)	6.5		10	1.43
UK10SL01	3/29/2006	Aluminum	6,210		NA	1,022,000
UK10SL01	3/29/2006	Antimony	1.6	U	NA	408.8
UK10SL01	3/29/2006	Arsenic	6.7		NA	1.91
UK10SL01	3/29/2006	Barium	459		NA	204,400
UK10SL01	3/29/2006	Beryllium	0.46	B	NA	2,044
UK10SL01	3/29/2006	Cadmium	6.1		10	511
UK10SL01	3/29/2006	Calcium	39,800		NA	NA
UK10SL01	3/29/2006	Chromium	166		143	3,066
UK10SL01	3/29/2006	Cobalt	9.4	B	NA	NA
UK10SL01	3/29/2006	Copper	312		NA	40,880
UK10SL01	3/29/2006	Iron	51,200		NA	715,400
UK10SL01	3/29/2006	Lead	248		NA	NA

Table 4-62

**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK10SL01	3/29/2006	Magnesium	4,010		NA	NA
UK10SL01	3/29/2006	Manganese	487		NA	20,440
UK10SL01	3/29/2006	Mercury	0.49		NA	NA
UK10SL01	3/29/2006	Nickel	170		NA	20,440
UK10SL01	3/29/2006	Potassium	709	B	NA	NA
UK10SL01	3/29/2006	Selenium	1.1	U	NA	5,110
UK10SL01	3/29/2006	Silver	0.5	B	NA	5,110
UK10SL01	3/29/2006	Sodium	174	B	NA	NA
UK10SL01	3/29/2006	Thallium	1.3	U	NA	71.54
UK10SL01	3/29/2006	Vanadium	24.4		NA	1,022
UK10SL01	3/29/2006	Zinc	1,020		NA	306,600
UK10SL01	3/29/2006	Cyanide	1.2		35	20,440
DUP01	3/29/2006	1,1,1-Trichloroethane	0.63	U	NA	286,160
DUP01	3/29/2006	1,1,2,2-Tetrachloroethane	0.12	U	NA	14.31
DUP01	3/29/2006	1,1,2-Trichloroethane	0.38	U	NA	50.20
DUP01	3/29/2006	1,1,2-Trichlorotrifluoroethane	0.63	U	NA	30,660,000
DUP01	3/29/2006	1,1-Dichloroethane	0.63	U	NA	204,400
DUP01	3/29/2006	1,1-Dichloroethene	0.25	U	NA	51,100
DUP01	3/29/2006	1,2,4-Trichlorobenzene	0.63	U	NA	10,220
DUP01	3/29/2006	1,2-Dibromo-3-chloropropane	0.63	U	NA	3.58
DUP01	3/29/2006	1,2-Dibromoethane	0.63	U	NA	1.43
DUP01	3/29/2006	1,2-Dichlorobenzene	0.14	J	NA	91,980
DUP01	3/29/2006	1,2-Dichloroethane	0.25	U	NA	31.45
DUP01	3/29/2006	1,2-Dichloropropane	0.12	U	NA	42.08
DUP01	3/29/2006	1,3-Dichlorobenzene	0.63	U	NA	3,066
DUP01	3/29/2006	1,4-Dichlorobenzene	0.63	U	NA	119.23
DUP01	3/29/2006	2-Butanone	0.63	U	NA	613,200
DUP01	3/29/2006	2-Hexanone	0.63	U	NA	NA
DUP01	3/29/2006	4-Methyl-2-pentanone	0.63	U	NA	NA
DUP01	3/29/2006	Acetone	0.63	U	NA	919,800
DUP01	3/29/2006	Benzene	0.42		NA	52.03
DUP01	3/29/2006	Bromodichloromethane	0.12	U	NA	46.15
DUP01	3/29/2006	Bromoform	0.5	U	NA	362.23
DUP01	3/29/2006	Bromomethane	0.63	U	NA	1,430.80
DUP01	3/29/2006	c-1,2-Dichloroethene	0.63	U	0.25	10,220
DUP01	3/29/2006	c-1,3-Dichloropropene	0.63	U	NA	NA
DUP01	3/29/2006	Carbon disulfide	0.63	U	NA	102,200
DUP01	3/29/2006	Carbon Tetrachloride	0.25	U	NA	22.01
DUP01	3/29/2006	Chlorobenzene	0.63	U	NA	20,440
DUP01	3/29/2006	Chloroethane	0.63	U	NA	986.76
DUP01	3/29/2006	Chloroform	0.63	U	NA	10,220
DUP01	3/29/2006	Chloromethane	0.63	U	NA	NA
DUP01	3/29/2006	Cyclohexane	0.42	J	NA	NA
DUP01	3/29/2006	Dibromochloromethane	0.63	U	NA	34.07
DUP01	3/29/2006	Dichlorodifluoromethane	0.63	U	NA	204,400
DUP01	3/29/2006	Ethylbenzene	1.1		NA	102,200
DUP01	3/29/2006	Isopropylbenzene	0.31	J	NA	102,200
DUP01	3/29/2006	Methyl Acetate	0.63	U	NA	1,022,000
DUP01	3/29/2006	Methyl Cyclohexane	0.31	J	NA	NA
DUP01	3/29/2006	Methyl t-butyl ether	0.63	U	NA	715.40
DUP01	3/29/2006	Methylene Chloride	0.38	U	NA	381.55

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**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
DUP01	3/29/2006	Styrene	0.18	J	NA	204,400
DUP01	3/29/2006	t-1,2-Dichloroethene	0.63	U	NA	20,440
DUP01	3/29/2006	t-1,3-Dichloropropene	0.63	U	NA	NA
DUP01	3/29/2006	TCE	0.11	J	0.7	7.15
DUP01	3/29/2006	Tetrachloroethene	0.12	U	1.4	5.30
DUP01	3/29/2006	Toluene	5		NA	81,760
DUP01	3/29/2006	Trichlorofluoromethane	0.63	U	NA	306,600
DUP01	3/29/2006	Vinyl Chloride	0.63	U	NA	3.97
DUP01	3/29/2006	Xylene (Total)	4.9		NA	204,400
DUP01	3/29/2006	2,4,5-Trichlorophenol	4.4	U	NA	102,200
DUP01	3/29/2006	2,4,6-Trichlorophenol	4.4	U	NA	260.15
DUP01	3/29/2006	2,4-Dichlorophenol	4.4	U	NA	3,066
DUP01	3/29/2006	2,4-Dimethylphenol	4.4	U	NA	20,440
DUP01	3/29/2006	2,4-Dinitrophenol	18	U	NA	2,044
DUP01	3/29/2006	2,4-Dinitrotoluene	0.89	U	NA	2,044
DUP01	3/29/2006	2,6-Dinitrotoluene	0.89	U	NA	1,022
DUP01	3/29/2006	2-Chloronaphthalene	4.4	U	NA	81,760
DUP01	3/29/2006	2-Chlorophenol	4.4	U	NA	5,110
DUP01	3/29/2006	2-Methylnaphthalene	4.4	U	NA	4,088
DUP01	3/29/2006	2-Methylphenol	4.4	U	NA	51,100
DUP01	3/29/2006	2-Nitroaniline	8.9	U	NA	NA
DUP01	3/29/2006	2-Nitrophenol	4.4	U	NA	NA
DUP01	3/29/2006	3,3'-Dichlorobenzidine	8.9	U	NA	6.36
DUP01	3/29/2006	3+4-Methylphenol	4.4	U	NA	5,110
DUP01	3/29/2006	3-Nitroaniline	8.9	U	NA	NA
DUP01	3/29/2006	4,6-Dinitro-2-methylphenol	18	U	NA	NA
DUP01	3/29/2006	4-Bromophenyl phenyl ether	4.4	U	NA	NA
DUP01	3/29/2006	4-Chloro-3-methylphenol	4.4	U	NA	NA
DUP01	3/29/2006	4-Chloroaniline	4.4	U	NA	4,088
DUP01	3/29/2006	4-Chlorophenyl phenyl ether	4.4	U	NA	NA
DUP01	3/29/2006	4-Nitroaniline	8.9	U	NA	NA
DUP01	3/29/2006	4-Nitrophenol	18	U	NA	NA
DUP01	3/29/2006	Acenaphthene	4.4	U	NA	61,320
DUP01	3/29/2006	Acenaphthylene	4.4	U	NA	NA
DUP01	3/29/2006	Acetophenone	4.4	U	NA	102,200
DUP01	3/29/2006	Anthracene	0.65	J	NA	306,600
DUP01	3/29/2006	Atrazine	4.4	U	NA	13.01
DUP01	3/29/2006	Benzaldehyde	4.4	U	NA	102,200
DUP01	3/29/2006	Benzo(a)anthracene	3.1		NA	3.92
DUP01	3/29/2006	Benzo(a)pyrene	2.5		0.29	0.39
DUP01	3/29/2006	Benzo(b)fluoranthene	5.8		NA	3.92
DUP01	3/29/2006	Benzo(g,h,i)perylene	1.2	J	NA	NA
DUP01	3/29/2006	Benzo(k)fluoranthene	3.5		NA	39.20
DUP01	3/29/2006	bis(2-Chloroethoxy)methane	4.4	U	NA	NA
DUP01	3/29/2006	bis(2-Chloroethyl)ether	0.44	U	NA	2.60
DUP01	3/29/2006	bis(2-Chloroisopropyl)ether	4.4	U	NA	40.88
DUP01	3/29/2006	bis(2-Ethylhexyl)phthalate	6.4		NA	204.40
DUP01	3/29/2006	Butyl benzyl phthalate	1.6	J	NA	204,400
DUP01	3/29/2006	Carbazole	0.54	J	NA	143.08
DUP01	3/29/2006	Chrysene	4.4	J	NA	392
DUP01	3/29/2006	Dibenz(a,h)anthracene	0.44	U	0.29	0.39

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**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
DUP01	3/29/2006	Dibenzofuran	4.4	U	NA	1,022
DUP01	3/29/2006	Diethyl phthalate	4.4	U	NA	817,600
DUP01	3/29/2006	Dimethyl phthalate	4.4	U	NA	NA
DUP01	3/29/2006	Di-n-butyl phthalate	4.4	U	NA	102,200
DUP01	3/29/2006	Di-n-octyl phthalate	1.2	J	NA	NA
DUP01	3/29/2006	Diphenyl	4.4	U	NA	NA
DUP01	3/29/2006	Fluoranthene	5.5		NA	40,880
DUP01	3/29/2006	Fluorene	4.4	U	NA	40,880
DUP01	3/29/2006	Hexachlorobenzene	0.44	U	NA	1.79
DUP01	3/29/2006	Hexachlorobutadiene	0.89	U	NA	36.69
DUP01	3/29/2006	Hexachlorocyclopentadiene	4.4	U	NA	6,132
DUP01	3/29/2006	Hexachloroethane	0.44	U	NA	204
DUP01	3/29/2006	Indeno(1,2,3-cd)pyrene	3.7		NA	3.92
DUP01	3/29/2006	Isophorone	4.4	U	NA	3,012.21
DUP01	3/29/2006	Naphthalene	4.4	U	NA	20,440
DUP01	3/29/2006	Nitrobenzene	0.44	U	NA	511
DUP01	3/29/2006	N-Nitrosodi-n-propylamine	0.44	U	NA	0.41
DUP01	3/29/2006	N-Nitrosodiphenylamine	4.4	U	NA	584
DUP01	3/29/2006	Pentachlorophenol	18	U	NA	23.85
DUP01	3/29/2006	Phenanthrene	2.1	J	NA	NA
DUP01	3/29/2006	Phenol	4.4	U	NA	306,600
DUP01	3/29/2006	Pyrene	6.2		NA	30,660
DUP01	3/29/2006	4,4'-DDD	0.21		NA	11.92
DUP01	3/29/2006	4,4'-DDE	0.33		NA	8.42
DUP01	3/29/2006	4,4'-DDT	0.41		NA	8.42
DUP01	3/29/2006	Aldrin	0.0089	U	NA	0.17
DUP01	3/29/2006	alpha-BHC	0.0089	U	NA	0.45
DUP01	3/29/2006	alpha-Chlordane	0.018		NA	NA
DUP01	3/29/2006	beta-BHC	0.0089	U	NA	1.59
DUP01	3/29/2006	delta-BHC	0.0089	U	NA	NA
DUP01	3/29/2006	Dieldrin	0.078		NA	0.18
DUP01	3/29/2006	Endosulfan I	0.0089	U	NA	6,132
DUP01	3/29/2006	Endosulfan II	0.0089	U	NA	6,132
DUP01	3/29/2006	Endosulfan sulfate	0.056	P*	NA	NA
DUP01	3/29/2006	Endrin	0.027		NA	307
DUP01	3/29/2006	Endrin Aldehyde	0.17		NA	NA
DUP01	3/29/2006	Endrin ketone	0.0089	U	NA	NA
DUP01	3/29/2006	gamma-BHC (Lindane)	0.0089	U	NA	2.20
DUP01	3/29/2006	gamma-Chlordane	0.036	P*	NA	NA
DUP01	3/29/2006	Heptachlor	0.0089	U	NA	0.64
DUP01	3/29/2006	Heptachlor epoxide	0.015	P*	NA	0.31
DUP01	3/29/2006	Methoxychlor	0.057	P*	NA	5,110
DUP01	3/29/2006	Toxaphene	0.089	U	NA	2.60
DUP01	3/29/2006	Aroclor 1016	0.18	U	NA	40.88
DUP01	3/29/2006	Aroclor 1221	0.18	U	NA	1.43
DUP01	3/29/2006	Aroclor 1232	0.18	U	NA	1.43
DUP01	3/29/2006	Aroclor 1242	0.18	U	NA	1.43
DUP01	3/29/2006	Aroclor 1248	0.71		NA	1.43
DUP01	3/29/2006	Aroclor 1254	2.4		NA	1.43
DUP01	3/29/2006	Aroclor 1260	0.18	U	NA	1.43
DUP01	3/29/2006	Aroclor 1262	0.18	U	NA	NA

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**Summary of Analytical Results
UK-10 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
DUP01	3/29/2006	Aroclor 1268	0.81		NA	NA
DUP01	3/29/2006	PCBs(total)	3.92		10	1.43
DUP01	3/29/2006	Aluminum	6,480		NA	1,022,000
DUP01	3/29/2006	Antimony	1.5	U	NA	409
DUP01	3/29/2006	Arsenic	6.1		NA	1.91
DUP01	3/29/2006	Barium	613		NA	204,400
DUP01	3/29/2006	Beryllium	0.45	B	NA	2,044
DUP01	3/29/2006	Cadmium	7.3		10	511
DUP01	3/29/2006	Calcium	24,500		NA	NA
DUP01	3/29/2006	Chromium	83.2		143	3,066
DUP01	3/29/2006	Cobalt	7.3	B	NA	NA
DUP01	3/29/2006	Copper	517		NA	40,880
DUP01	3/29/2006	Iron	36,900		NA	715,400
DUP01	3/29/2006	Lead	298		NA	NA
DUP01	3/29/2006	Magnesium	4,010		NA	NA
DUP01	3/29/2006	Manganese	427		NA	20,440
DUP01	3/29/2006	Mercury	0.44		NA	NA
DUP01	3/29/2006	Nickel	45.7		NA	20,440
DUP01	3/29/2006	Potassium	664	B	NA	NA
DUP01	3/29/2006	Selenium	1.2	B	NA	5,110
DUP01	3/29/2006	Silver	0.85	B	NA	5,110
DUP01	3/29/2006	Sodium	131	B	NA	NA
DUP01	3/29/2006	Thallium	1.3	U	NA	71.54
DUP01	3/29/2006	Vanadium	26.5		NA	1,022
DUP01	3/29/2006	Zinc	1,380		NA	306,600
DUP01	3/29/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) P* - for dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent. The lowest quantitated concentration is being reported due to coeluting interference.
- 9) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 10) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 11) UK-10 solid characterization sample was collected by AMO during the 2006 Subsurface Feature Removal Action and was

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**Summary of Analytical Results
UK-10 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK10BNE01	4/3/2006	Benzene	0.001	U	NA	52.03
UK10BNE01	4/3/2006	c-1,2-Dichloroethene	0.0053	U	0.25	10,220
UK10BNE01	4/3/2006	TCE	0.001	U	0.7	7.15
UK10BNE01	4/3/2006	Tetrachloroethene	0.001	U	1.4	5.30
UK10BNE01	4/3/2006	Toluene	0.0053	U	NA	81,760
UK10BNE01	4/3/2006	Xylene (Total)	0.0053	U	NA	204,400
UK10BNE01	4/3/2006	2-Methylphenol	0.37	U	NA	51,100
UK10BNE01	4/3/2006	Benzo(a)anthracene	0.037	U	NA	3.92
UK10BNE01	4/3/2006	Benzo(a)pyrene	0.037	U	0.29	0.392
UK10BNE01	4/3/2006	Benzo(b)fluoranthene	0.037	U	NA	3.92
UK10BNE01	4/3/2006	Benzo(k)fluoranthene	0.037	U	NA	39.2
UK10BNE01	4/3/2006	Chrysene	0.37	U	NA	392
UK10BNE01	4/3/2006	Dibenz(a,h)anthracene	0.037	U	0.29	0.392
UK10BNE01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.037	U	NA	3.92
UK10BNE01	4/3/2006	Dieldrin	0.0075	U	NA	0.18
UK10BNE01	4/3/2006	PCBs(total)	0.075	U	10	1.43
UK10BNE01	4/3/2006	Barium	24.7	B	NA	204,400
UK10BNE01	4/3/2006	Cadmium	0.13	U	10	511
UK10BNE01	4/3/2006	Chromium	10.8		143	3,066
UK10BNE01	4/3/2006	Copper	3.8	B	NA	40,880
UK10BNE01	4/3/2006	Mercury	0.019	U	NA	NA
UK10BNE01	4/3/2006	Nickel	5.7	B	NA	20,440
UK10BNE01	4/3/2006	Zinc	18.5		NA	306,600
UK10BNE01	4/3/2006	Cyanide	0.5	U	35	20,440
UK10BNW01	4/3/2006	Benzene	0.0011	U	NA	52.03
UK10BNW01	4/3/2006	c-1,2-Dichloroethene	0.0057	U	0.25	10,220
UK10BNW01	4/3/2006	TCE	0.0011	U	0.7	7.15
UK10BNW01	4/3/2006	Tetrachloroethene	0.0011	U	1.4	5.30
UK10BNW01	4/3/2006	Toluene	0.0057	U	NA	81,760
UK10BNW01	4/3/2006	Xylene (Total)	0.0057	U	NA	204,400
UK10BNW01	4/3/2006	2-Methylphenol	0.39	U	NA	51,100
UK10BNW01	4/3/2006	Benzo(a)anthracene	0.039	U	NA	3.92
UK10BNW01	4/3/2006	Benzo(a)pyrene	0.039	U	0.29	0.392
UK10BNW01	4/3/2006	Benzo(b)fluoranthene	0.039	U	NA	3.92
UK10BNW01	4/3/2006	Benzo(k)fluoranthene	0.039	U	NA	39.2
UK10BNW01	4/3/2006	Chrysene	0.39	U	NA	392
UK10BNW01	4/3/2006	Dibenz(a,h)anthracene	0.039	U	0.29	0.392
UK10BNW01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.039	U	NA	3.92
UK10BNW01	4/3/2006	Dieldrin	0.0078	U	NA	0.18
UK10BNW01	4/3/2006	PCBs(total)	0.078	U	10	1.43
UK10BNW01	4/3/2006	Barium	51.2		NA	204,400
UK10BNW01	4/3/2006	Cadmium	0.14	U	10	511
UK10BNW01	4/3/2006	Chromium	11.7		143	3,066
UK10BNW01	4/3/2006	Copper	5.2	B	NA	40,880

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**Summary of Analytical Results
UK-10 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK10BNW01	4/3/2006	Mercury	0.02	U	NA	NA
UK10BNW01	4/3/2006	Nickel	7	B	NA	20,440
UK10BNW01	4/3/2006	Zinc	19.8		NA	306,600
UK10BNW01	4/3/2006	Cyanide	0.5	U	35	20,440
UK10BSE01	4/3/2006	Benzene	0.0011	U	NA	52.03
UK10BSE01	4/3/2006	c-1,2-Dichloroethene	0.0056	U	0.25	10,220
UK10BSE01	4/3/2006	TCE	0.0011	U	0.7	7.15
UK10BSE01	4/3/2006	Tetrachloroethene	0.0011	U	1.4	5.30
UK10BSE01	4/3/2006	Toluene	0.0056	U	NA	81,760
UK10BSE01	4/3/2006	Xylene (Total)	0.0056	U	NA	204,400
UK10BSE01	4/3/2006	2-Methylphenol	0.39	U	NA	51,100
UK10BSE01	4/3/2006	Benzo(a)anthracene	0.039	U	NA	3.92
UK10BSE01	4/3/2006	Benzo(a)pyrene	0.039	U	0.29	0.392
UK10BSE01	4/3/2006	Benzo(b)fluoranthene	0.039	U	NA	3.92
UK10BSE01	4/3/2006	Benzo(k)fluoranthene	0.039	U	NA	39.2
UK10BSE01	4/3/2006	Chrysene	0.39	U	NA	392
UK10BSE01	4/3/2006	Dibenz(a,h)anthracene	0.039	U	0.29	0.392
UK10BSE01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.039	U	NA	3.92
UK10BSE01	4/3/2006	Dieldrin	0.0078	U	NA	0.18
UK10BSE01	4/3/2006	PCBs(total)	0.078	U	10	1.43
UK10BSE01	4/3/2006	Barium	29.2	B	NA	204,400
UK10BSE01	4/3/2006	Cadmium	0.14	U	10	511
UK10BSE01	4/3/2006	Chromium	9.3		143	3,066
UK10BSE01	4/3/2006	Copper	3.9	B	NA	40,880
UK10BSE01	4/3/2006	Mercury	0.02	B	NA	NA
UK10BSE01	4/3/2006	Nickel	6.1	B	NA	20,440
UK10BSE01	4/3/2006	Zinc	15.3		NA	306,600
UK10BSE01	4/3/2006	Cyanide	0.5	U	35	20,440
UK10BSW01	4/3/2006	Benzene	0.0012	U	NA	52.03
UK10BSW01	4/3/2006	c-1,2-Dichloroethene	0.006	U	0.25	10,220
UK10BSW01	4/3/2006	TCE	0.0012	U	0.7	7.15
UK10BSW01	4/3/2006	Tetrachloroethene	0.0012	U	1.4	5.30
UK10BSW01	4/3/2006	Toluene	0.006	U	NA	81,760
UK10BSW01	4/3/2006	Xylene (Total)	0.006	U	NA	204,400
UK10BSW01	4/3/2006	2-Methylphenol	0.4	U	NA	51,100
UK10BSW01	4/3/2006	Benzo(a)anthracene	0.04	U	NA	3.92
UK10BSW01	4/3/2006	Benzo(a)pyrene	0.04	U	0.29	0.392
UK10BSW01	4/3/2006	Benzo(b)fluoranthene	0.04	U	NA	3.92
UK10BSW01	4/3/2006	Benzo(k)fluoranthene	0.04	U	NA	39.2
UK10BSW01	4/3/2006	Chrysene	0.4	U	NA	392
UK10BSW01	4/3/2006	Dibenz(a,h)anthracene	0.04	U	0.29	0.392
UK10BSW01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.04	U	NA	3.92
UK10BSW01	4/3/2006	Dieldrin	0.0081	U	NA	0.18
UK10BSW01	4/3/2006	PCBs(total)	0.081	U	10	1.43

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**Summary of Analytical Results
UK-10 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK10BSW01	4/3/2006	Barium	39	B	NA	204,400
UK10BSW01	4/3/2006	Cadmium	0.13	U	10	511
UK10BSW01	4/3/2006	Chromium	16.5		143	3,066
UK10BSW01	4/3/2006	Copper	7.5		NA	40,880
UK10BSW01	4/3/2006	Mercury	0.02	U	NA	NA
UK10BSW01	4/3/2006	Nickel	8.3	B	NA	20,440
UK10BSW01	4/3/2006	Zinc	28.2		NA	306,600
UK10BSW01	4/3/2006	Cyanide	0.5	U	35	20,440
DUP04	4/3/2006	Benzene	0.0012	U	NA	52.03
DUP04	4/3/2006	c-1,2-Dichloroethene	0.0059	U	0.25	10,220
DUP04	4/3/2006	TCE	0.0012	U	0.7	7.15
DUP04	4/3/2006	Tetrachloroethene	0.0012	U	1.4	5.30
DUP04	4/3/2006	Toluene	0.0059	U	NA	81,760
DUP04	4/3/2006	Xylene (Total)	0.0059	U	NA	204,400
DUP04	4/3/2006	2-Methylphenol	0.39	U	NA	51,100
DUP04	4/3/2006	Benzo(a)anthracene	0.039	U	NA	3.92
DUP04	4/3/2006	Benzo(a)pyrene	0.039	U	0.29	0.392
DUP04	4/3/2006	Benzo(b)fluoranthene	0.039	U	NA	3.92
DUP04	4/3/2006	Benzo(k)fluoranthene	0.039	U	NA	39.2
DUP04	4/3/2006	Chrysene	0.39	U	NA	392
DUP04	4/3/2006	Dibenz(a,h)anthracene	0.039	U	0.29	0.392
DUP04	4/3/2006	Indeno(1,2,3-cd)pyrene	0.039	U	NA	3.92
DUP04	4/3/2006	Dieldrin	0.0079	U	NA	0.18
DUP04	4/3/2006	PCBs(total)	0.079	U	10	1.43
DUP04	4/3/2006	Barium	36.5	B	NA	204,400
DUP04	4/3/2006	Cadmium	0.14	U	10	511
DUP04	4/3/2006	Chromium	17.6		143	3,066
DUP04	4/3/2006	Copper	7.4		NA	40,880
DUP04	4/3/2006	Mercury	0.02	B	NA	NA
DUP04	4/3/2006	Nickel	7.7	B	NA	20,440
DUP04	4/3/2006	Zinc	23.4		NA	306,600
DUP04	4/3/2006	Cyanide	0.5	U	35	20,440
UK10CN01	4/3/2006	2-Methylphenol	0.35	U	NA	51,100
UK10CN01	4/3/2006	Benzo(a)anthracene	0.035	U	NA	3.92
UK10CN01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
UK10CN01	4/3/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
UK10CN01	4/3/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
UK10CN01	4/3/2006	Chrysene	0.35	U	NA	392
UK10CN01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
UK10CN01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
UK10CN01	4/3/2006	Dieldrin	0.007	U	NA	0.18
UK10CN01	4/3/2006	PCBs(total)	0.07	U	10	1.43
UK10CN01	4/3/2006	Barium	7.4	B	NA	204,400
UK10CN01	4/3/2006	Cadmium	0.13	U	10	511

Table 4-63

**Summary of Analytical Results
UK-10 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK10CN01	4/3/2006	Chromium	3.5		143	3,066
UK10CN01	4/3/2006	Copper	2.6	B	NA	40,880
UK10CN01	4/3/2006	Mercury	0.02	B	NA	NA
UK10CN01	4/3/2006	Nickel	2.1	B	NA	20,440
UK10CN01	4/3/2006	Zinc	13		NA	306,600
UK10CN01	4/3/2006	Cyanide	0.5	U	35	20,440
UK10CS01	4/3/2006	2-Methylphenol	0.35	U	NA	51,100
UK10CS01	4/3/2006	Benzo(a)anthracene	0.035	U	NA	3.92
UK10CS01	4/3/2006	Benzo(a)pyrene	0.035	U	0.29	0.392
UK10CS01	4/3/2006	Benzo(b)fluoranthene	0.035	U	NA	3.92
UK10CS01	4/3/2006	Benzo(k)fluoranthene	0.035	U	NA	39.2
UK10CS01	4/3/2006	Chrysene	0.35	U	NA	392
UK10CS01	4/3/2006	Dibenz(a,h)anthracene	0.035	U	0.29	0.392
UK10CS01	4/3/2006	Indeno(1,2,3-cd)pyrene	0.035	U	NA	3.92
UK10CS01	4/3/2006	Dieldrin	0.007	U	NA	0.18
UK10CS01	4/3/2006	PCBs(total)	0.07	U	10	1.43
UK10CS01	4/3/2006	Barium	8.3	B	NA	204,400
UK10CS01	4/3/2006	Cadmium	0.11	U	10	511
UK10CS01	4/3/2006	Chromium	4.9		143	3,066
UK10CS01	4/3/2006	Copper	2	B	NA	40,880
UK10CS01	4/3/2006	Mercury	0.018	U	NA	NA
UK10CS01	4/3/2006	Nickel	2.4	B	NA	20,440
UK10CS01	4/3/2006	Zinc	5.8	B	NA	306,600
UK10CS01	4/3/2006	Cyanide	0.5	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) UK-10 post-removal confirmation samples were collected by AMO during the 2006 Subsurface Feature Removal Action and were analyzed by STL of Edison, New Jersey.

Table 4-64

**Summary of Analytical Results
UK-33 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK33B01130	9/27/2007	c-1,2-Dichloroethene	0.00041	U	0.25	10,220
UK33B01130	9/27/2007	TCE	0.0003	U	0.7	7.15
UK33B01130	9/27/2007	Tetrachloroethene	0.0027	U	1.4	5.30
UK33B01130	9/27/2007	Benzo(a)anthracene	0.0402	U	NA	3.92
UK33B01130	9/27/2007	Benzo(a)pyrene	0.0351	U	0.29	0.392
UK33B01130	9/27/2007	Dibenz(a,h)anthracene	0.033	U	0.29	0.392
UK33B01130	9/27/2007	Aroclor 1016	0.00209	U	NA	40.88
UK33B01130	9/27/2007	Aroclor 1221	0.00984	U	NA	1.43
UK33B01130	9/27/2007	Aroclor 1232	0.00218	U	NA	1.43
UK33B01130	9/27/2007	Aroclor 1242	0.00164	U	NA	1.43
UK33B01130	9/27/2007	Aroclor 1248	0.00369	U	NA	1.43
UK33B01130	9/27/2007	Aroclor 1254	0.00558	U	NA	1.43
UK33B01130	9/27/2007	Aroclor 1260	0.00641	U	NA	1.43
UK33B01130	9/27/2007	PCBs(total)	0.00984	U	10	1.43
UK33B01130	9/27/2007	Cadmium	0.03	U	10	511
UK33B01130	9/27/2007	Chromium	0.16	U	143	3,066

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations are presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-33 post-removal confirmation sample was collected by AMO during implementation of Remedial Work Element II and was analyzed by ETL of Farmingdale, New York.

Table 4-65

**Summary of Analytical Results
UST-13A Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UST13ABG01090	9/27/2007	1,2,4-Trimethylbenzene	0.00172	U	NA	NA
UST13ABG01090	9/27/2007	1,3,5-Trimethylbenzene	0.00066	U	NA	NA
UST13ABG01090	9/27/2007	4-Isopropyltoluene	0.00051	U	NA	NA
UST13ABG01090	9/27/2007	Benzene	0.00029	U	NA	52.03
UST13ABG01090	9/27/2007	c-1,2-Dichloroethene	0.00042	U	0.25	10,220
UST13ABG01090	9/27/2007	Ethylbenzene	0.00073	U	NA	102,200
UST13ABG01090	9/27/2007	Isopropylbenzene	0.00041	U	NA	102,200
UST13ABG01090	9/27/2007	m,p-xylene	0.00343	U	NA	NA
UST13ABG01090	9/27/2007	Methyl t-butyl ether	0.00039	U	NA	715.40
UST13ABG01090	9/27/2007	Naphthalene	0.00061	U	NA	20,440
UST13ABG01090	9/27/2007	n-Butylbenzene	0.00046	U	NA	NA
UST13ABG01090	9/27/2007	n-Propylbenzene	0.00047	U	NA	NA
UST13ABG01090	9/27/2007	o-xylene	0.0008	U	NA	NA
UST13ABG01090	9/27/2007	sec-Butylbenzene	0.00043	U	NA	NA
UST13ABG01090	9/27/2007	TCE	0.00031	U	0.7	7.15
UST13ABG01090	9/27/2007	tert-Butylbenzene	0.0004	U	NA	NA
UST13ABG01090	9/27/2007	Tetrachloroethene	0.00281	U	1.4	5.30
UST13ABG01090	9/27/2007	Toluene	0.00111	U	NA	81,760
UST13ABG01090	9/27/2007	Xylene (Total)	0.00093	U	NA	204,400
UST13ABG01090	9/27/2007	Acenaphthene	0.0387	U	NA	61,320
UST13ABG01090	9/27/2007	Acenaphthylene	0.0379	U	NA	NA
UST13ABG01090	9/27/2007	Anthracene	0.0413	U	NA	306,600
UST13ABG01090	9/27/2007	Benzo(a)anthracene	0.0417	U	NA	3.92
UST13ABG01090	9/27/2007	Benzo(a)pyrene	0.0365	U	0.29	0.392
UST13ABG01090	9/27/2007	Benzo(b)fluoranthene	0.0451	U	NA	3.92
UST13ABG01090	9/27/2007	Benzo(g,h,i)perylene	0.0357	U	NA	NA
UST13ABG01090	9/27/2007	Benzo(k)fluoranthene	0.0426	U	NA	39.2
UST13ABG01090	9/27/2007	Chrysene	0.0466	U	NA	392
UST13ABG01090	9/27/2007	Dibenz(a,h)anthracene	0.0343	U	0.29	0.392
UST13ABG01090	9/27/2007	Fluoranthene	0.0366	U	NA	40,880
UST13ABG01090	9/27/2007	Fluorene	0.0328	U	NA	40,880
UST13ABG01090	9/27/2007	Indeno(1,2,3-cd)pyrene	0.0364	U	NA	3.92
UST13ABG01090	9/27/2007	Naphthalene	0.0331	U	NA	20,440
UST13ABG01090	9/27/2007	Phenanthrene	0.0411	U	NA	NA
UST13ABG01090	9/27/2007	Pyrene	0.0266	U	NA	30,660
UST13ABG01090	9/27/2007	Aroclor 1016	0.00217	U	NA	40.88
UST13ABG01090	9/27/2007	Aroclor 1221	0.0102	U	NA	1.43
UST13ABG01090	9/27/2007	Aroclor 1232	0.00227	U	NA	1.43
UST13ABG01090	9/27/2007	Aroclor 1242	0.0017	U	NA	1.43
UST13ABG01090	9/27/2007	Aroclor 1248	0.00383	U	NA	1.43
UST13ABG01090	9/27/2007	Aroclor 1254	0.0058	U	NA	1.43
UST13ABG01090	9/27/2007	Aroclor 1260	0.00666	U	NA	1.43
UST13ABG01090	9/27/2007	PCBs(total)	0.0102	U	10	1.43
UST13ABG01090	9/27/2007	Cadmium	0.032	U	10	511

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**Summary of Analytical Results
UST-13A Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UST13ABG01090	9/27/2007	Chromium	0.17	U	143	3,066
UST13ABG01090	9/27/2007	Cyanide	0.77		35	20,440
UST13AEG01040	9/27/2007	1,2,4-Trimethylbenzene	0.00175	U	NA	NA
UST13AEG01040	9/27/2007	1,3,5-Trimethylbenzene	0.00067	U	NA	NA
UST13AEG01040	9/27/2007	4-Isopropyltoluene	0.00052	U	NA	NA
UST13AEG01040	9/27/2007	Benzene	0.00029	U	NA	52.03
UST13AEG01040	9/27/2007	c-1,2-Dichloroethene	0.00043	U	0.25	10,220
UST13AEG01040	9/27/2007	Ethylbenzene	0.00075	U	NA	102,200
UST13AEG01040	9/27/2007	Isopropylbenzene	0.00042	U	NA	102,200
UST13AEG01040	9/27/2007	m,p-xylene	0.0035	U	NA	NA
UST13AEG01040	9/27/2007	Methyl t-butyl ether	0.0004	U	NA	715.40
UST13AEG01040	9/27/2007	Naphthalene	0.00063	U	NA	20,440
UST13AEG01040	9/27/2007	n-Butylbenzene	0.00046	U	NA	NA
UST13AEG01040	9/27/2007	n-Propylbenzene	0.00048	U	NA	NA
UST13AEG01040	9/27/2007	o-xylene	0.00081	U	NA	NA
UST13AEG01040	9/27/2007	sec-Butylbenzene	0.00044	U	NA	NA
UST13AEG01040	9/27/2007	TCE	0.00031	U	0.7	7.15
UST13AEG01040	9/27/2007	tert-Butylbenzene	0.00041	U	NA	NA
UST13AEG01040	9/27/2007	Tetrachloroethene	0.00286	U	1.4	5.30
UST13AEG01040	9/27/2007	Toluene	0.00113	U	NA	81,760
UST13AEG01040	9/27/2007	Xylene (Total)	0.00095	U	NA	204,400
UST13AEG01040	9/27/2007	Acenaphthene	0.0392	U	NA	61,320
UST13AEG01040	9/27/2007	Acenaphthylene	0.0384	U	NA	NA
UST13AEG01040	9/27/2007	Anthracene	0.0418	U	NA	306,600
UST13AEG01040	9/27/2007	Benzo(a)anthracene	0.0422	U	NA	3.92
UST13AEG01040	9/27/2007	Benzo(a)pyrene	0.037	U	0.29	0.392
UST13AEG01040	9/27/2007	Benzo(b)fluoranthene	0.0457	U	NA	3.92
UST13AEG01040	9/27/2007	Benzo(g,h,i)perylene	0.0362	U	NA	NA
UST13AEG01040	9/27/2007	Benzo(k)fluoranthene	0.0431	U	NA	39.2
UST13AEG01040	9/27/2007	Chrysene	0.0472	U	NA	392
UST13AEG01040	9/27/2007	Dibenz(a,h)anthracene	0.0347	U	0.29	0.392
UST13AEG01040	9/27/2007	Fluoranthene	0.0371	U	NA	40,880
UST13AEG01040	9/27/2007	Fluorene	0.0332	U	NA	40,880
UST13AEG01040	9/27/2007	Indeno(1,2,3-cd)pyrene	0.0369	U	NA	3.92
UST13AEG01040	9/27/2007	Naphthalene	0.0335	U	NA	20,440
UST13AEG01040	9/27/2007	Phenanthrene	0.0416	U	NA	NA
UST13AEG01040	9/27/2007	Pyrene	0.0269	U	NA	30,660
UST13AEG01040	9/27/2007	Aroclor 1016	0.0022	U	NA	40.88
UST13AEG01040	9/27/2007	Aroclor 1221	0.0103	U	NA	1.43
UST13AEG01040	9/27/2007	Aroclor 1232	0.0023	U	NA	1.43
UST13AEG01040	9/27/2007	Aroclor 1242	0.00172	U	NA	1.43
UST13AEG01040	9/27/2007	Aroclor 1248	0.00388	U	NA	1.43
UST13AEG01040	9/27/2007	Aroclor 1254	0.00587	U	NA	1.43
UST13AEG01040	9/27/2007	Aroclor 1260	0.0982		NA	1.43

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**Summary of Analytical Results
UST-13A Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UST13AEG01040	9/27/2007	PCBs(total)	0.0982		10	1.43
UST13AEG01040	9/27/2007	Cadmium	0.033	U	10	511
UST13AEG01040	9/27/2007	Chromium	0.18	U	143	3,066
UST13AEG01040	9/27/2007	Cyanide	0.47		35	20,440
UST13ANG01040	9/27/2007	1,2,4-Trimethylbenzene	0.00167	U	NA	NA
UST13ANG01040	9/27/2007	1,3,5-Trimethylbenzene	0.00064	U	NA	NA
UST13ANG01040	9/27/2007	4-Isopropyltoluene	0.00049	U	NA	NA
UST13ANG01040	9/27/2007	Benzene	0.00028	U	NA	52.03
UST13ANG01040	9/27/2007	c-1,2-Dichloroethene	0.00041	U	0.25	10,220
UST13ANG01040	9/27/2007	Ethylbenzene	0.00071	U	NA	102,200
UST13ANG01040	9/27/2007	Isopropylbenzene	0.0004	U	NA	102,200
UST13ANG01040	9/27/2007	m,p-xylene	0.00334	U	NA	NA
UST13ANG01040	9/27/2007	Methyl t-butyl ether	0.00038	U	NA	715.40
UST13ANG01040	9/27/2007	Naphthalene	0.0006	U	NA	20,440
UST13ANG01040	9/27/2007	n-Butylbenzene	0.00044	U	NA	NA
UST13ANG01040	9/27/2007	n-Propylbenzene	0.00045	U	NA	NA
UST13ANG01040	9/27/2007	o-xylene	0.00077	U	NA	NA
UST13ANG01040	9/27/2007	sec-Butylbenzene	0.00042	U	NA	NA
UST13ANG01040	9/27/2007	TCE	0.0003	U	0.7	7.15
UST13ANG01040	9/27/2007	tert-Butylbenzene	0.00039	U	NA	NA
UST13ANG01040	9/27/2007	Tetrachloroethene	0.00273	U	1.4	5.30
UST13ANG01040	9/27/2007	Toluene	0.00108	U	NA	81,760
UST13ANG01040	9/27/2007	Xylene (Total)	0.00091	U	NA	204,400
UST13ANG01040	9/27/2007	Acenaphthene	0.0375	U	NA	61,320
UST13ANG01040	9/27/2007	Acenaphthylene	0.0367	U	NA	NA
UST13ANG01040	9/27/2007	Anthracene	0.04	U	NA	306,600
UST13ANG01040	9/27/2007	Benzo(a)anthracene	0.0404	U	NA	3.92
UST13ANG01040	9/27/2007	Benzo(a)pyrene	0.0353	U	0.29	0.392
UST13ANG01040	9/27/2007	Benzo(b)fluoranthene	0.0437	U	NA	3.92
UST13ANG01040	9/27/2007	Benzo(g,h,i)perylene	0.0346	U	NA	NA
UST13ANG01040	9/27/2007	Benzo(k)fluoranthene	0.0412	U	NA	39.2
UST13ANG01040	9/27/2007	Chrysene	0.0451	U	NA	392
UST13ANG01040	9/27/2007	Dibenz(a,h)anthracene	0.0332	U	0.29	0.392
UST13ANG01040	9/27/2007	Fluoranthene	0.0354	U	NA	40,880
UST13ANG01040	9/27/2007	Fluorene	0.0317	U	NA	40,880
UST13ANG01040	9/27/2007	Indeno(1,2,3-cd)pyrene	0.0352	U	NA	3.92
UST13ANG01040	9/27/2007	Naphthalene	0.032	U	NA	20,440
UST13ANG01040	9/27/2007	Phenanthrene	0.0398	U	NA	NA
UST13ANG01040	9/27/2007	Pyrene	0.0257	U	NA	30,660
UST13ANG01040	9/27/2007	Aroclor 1016	0.0021	U	NA	40.88
UST13ANG01040	9/27/2007	Aroclor 1221	0.00989	U	NA	1.43
UST13ANG01040	9/27/2007	Aroclor 1232	0.00219	U	NA	1.43
UST13ANG01040	9/27/2007	Aroclor 1242	0.00165	U	NA	1.43
UST13ANG01040	9/27/2007	Aroclor 1248	0.00371	U	NA	1.43

Table 4-65

**Summary of Analytical Results
UST-13A Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UST13ANG01040	9/27/2007	Aroclor 1254	0.00561	U	NA	1.43
UST13ANG01040	9/27/2007	Aroclor 1260	0.00645	U	NA	1.43
UST13ANG01040	9/27/2007	PCBs(total)	0.00989	U	10	1.43
UST13ANG01040	9/27/2007	Cadmium	0.031	U	10	511
UST13ANG01040	9/27/2007	Chromium	0.17	U	143	3,066
UST13ANG01040	9/27/2007	Cyanide	0.53		35	20,440
UST13ASG01040	9/27/2007	1,2,4-Trimethylbenzene	0.00178	U	NA	NA
UST13ASG01040	9/27/2007	1,3,5-Trimethylbenzene	0.00068	U	NA	NA
UST13ASG01040	9/27/2007	4-Isopropyltoluene	0.00053	U	NA	NA
UST13ASG01040	9/27/2007	Benzene	0.0003	U	NA	52.03
UST13ASG01040	9/27/2007	c-1,2-Dichloroethene	0.00044	U	0.25	10,220
UST13ASG01040	9/27/2007	Ethylbenzene	0.00076	U	NA	102,200
UST13ASG01040	9/27/2007	Isopropylbenzene	0.00043	U	NA	102,200
UST13ASG01040	9/27/2007	m,p-xylene	0.00356	U	NA	NA
UST13ASG01040	9/27/2007	Methyl t-butyl ether	0.00041	U	NA	715.40
UST13ASG01040	9/27/2007	Naphthalene	0.00064	U	NA	20,440
UST13ASG01040	9/27/2007	n-Butylbenzene	0.00047	U	NA	NA
UST13ASG01040	9/27/2007	n-Propylbenzene	0.00048	U	NA	NA
UST13ASG01040	9/27/2007	o-xylene	0.00082	U	NA	NA
UST13ASG01040	9/27/2007	sec-Butylbenzene	0.00045	U	NA	NA
UST13ASG01040	9/27/2007	TCE	0.00032	U	0.7	7.15
UST13ASG01040	9/27/2007	tert-Butylbenzene	0.00042	U	NA	NA
UST13ASG01040	9/27/2007	Tetrachloroethene	0.00291	U	1.4	5.30
UST13ASG01040	9/27/2007	Toluene	0.00115	U	NA	81,760
UST13ASG01040	9/27/2007	Xylene (Total)	0.00097	U	NA	204,400
UST13ASG01040	9/27/2007	Acenaphthene	0.0399	U	NA	61,320
UST13ASG01040	9/27/2007	Acenaphthylene	0.039	U	NA	NA
UST13ASG01040	9/27/2007	Anthracene	0.0425	U	NA	306,600
UST13ASG01040	9/27/2007	Benzo(a)anthracene	0.043	U	NA	3.92
UST13ASG01040	9/27/2007	Benzo(a)pyrene	0.0376	U	0.29	0.392
UST13ASG01040	9/27/2007	Benzo(b)fluoranthene	0.0465	U	NA	3.92
UST13ASG01040	9/27/2007	Benzo(g,h,i)perylene	0.0368	U	NA	NA
UST13ASG01040	9/27/2007	Benzo(k)fluoranthene	0.0439	U	NA	39.2
UST13ASG01040	9/27/2007	Chrysene	0.048	U	NA	392
UST13ASG01040	9/27/2007	Dibenz(a,h)anthracene	0.0353	U	0.29	0.392
UST13ASG01040	9/27/2007	Fluoranthene	0.0377	U	NA	40,880
UST13ASG01040	9/27/2007	Fluorene	0.0338	U	NA	40,880
UST13ASG01040	9/27/2007	Indeno(1,2,3-cd)pyrene	0.0375	U	NA	3.92
UST13ASG01040	9/27/2007	Naphthalene	0.0341	U	NA	20,440
UST13ASG01040	9/27/2007	Phenanthrene	0.0423	U	NA	NA
UST13ASG01040	9/27/2007	Pyrene	0.0274	U	NA	30,660
UST13ASG01040	9/27/2007	Aroclor 1016	0.00224	U	NA	40.88
UST13ASG01040	9/27/2007	Aroclor 1221	0.0105	U	NA	1.43
UST13ASG01040	9/27/2007	Aroclor 1232	0.00234	U	NA	1.43

Table 4-65

**Summary of Analytical Results
UST-13A Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UST13ASG01040	9/27/2007	Aroclor 1242	0.00175	U	NA	1.43
UST13ASG01040	9/27/2007	Aroclor 1248	0.00395	U	NA	1.43
UST13ASG01040	9/27/2007	Aroclor 1254	0.00598	U	NA	1.43
UST13ASG01040	9/27/2007	Aroclor 1260	0.00686	U	NA	1.43
UST13ASG01040	9/27/2007	PCBs(total)	0.0105	U	10	1.43
UST13ASG01040	9/27/2007	Cadmium	0.034	U	10	511
UST13ASG01040	9/27/2007	Chromium	19		143	3,066
UST13ASG01040	9/27/2007	Cyanide	0.49		35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) UST-13A post-removal confirmation samples were collected by AMO during implementation of Remedial Work Element II and were analyzed by ETL of Farmingdale, New York.

Table 4-66

**Summary of Analytical Results
UK-37 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK37SL01	11/2/2007	1,1,1,2-Tetrachloroethane	0.00466	U	NA	110.06
UK37SL01	11/2/2007	1,1,1-Trichloroethane	0.00222	U	NA	286,160
UK37SL01	11/2/2007	1,1,2,2-Tetrachloroethane	0.00622	U	NA	14.31
UK37SL01	11/2/2007	1,1,2-Trichloroethane	0.00422	U	NA	50.20
UK37SL01	11/2/2007	1,1,2-Trichlorotrifluoroethane	0.0222	U	NA	30,660,000
UK37SL01	11/2/2007	1,1-Dichloroethane	0.00244	U	NA	204,400
UK37SL01	11/2/2007	1,1-Dichloroethene	0.00611	U	NA	51,100
UK37SL01	11/2/2007	1,1-Dichloropropene	0.0137	U	NA	NA
UK37SL01	11/2/2007	1,2,3-Trichlorobenzene	0.00377	U	NA	NA
UK37SL01	11/2/2007	1,2,3-Trichloropropane	0.0196	U	NA	1.43
UK37SL01	11/2/2007	1,2,4,5-Tetramethylbenzene	0.246		NA	NA
UK37SL01	11/2/2007	1,2,4-Trichlorobenzene	0.00555	U	NA	10,220
UK37SL01	11/2/2007	1,2,4-Trimethylbenzene	42.8		NA	NA
UK37SL01	11/2/2007	1,2-Dibromo-3-chloropropane	0.0256	U	NA	3.58
UK37SL01	11/2/2007	1,2-Dibromoethane	0.00699	U	NA	1.43
UK37SL01	11/2/2007	1,2-Dichlorobenzene	0.529		NA	91,980
UK37SL01	11/2/2007	1,2-Dichloroethane	0.00322	U	NA	31.45
UK37SL01	11/2/2007	1,2-Dichloropropane	0.00544	U	NA	42.08
UK37SL01	11/2/2007	1,3,5-Trimethylbenzene	0.897		NA	NA
UK37SL01	11/2/2007	1,3-Dichlorobenzene	0.457		NA	3,066
UK37SL01	11/2/2007	1,3-Dichloropropane	0.00366	U	NA	20,440
UK37SL01	11/2/2007	1,4-Dichlorobenzene	71.1		NA	119.2
UK37SL01	11/2/2007	2,2-Dichloropropane	0.00255	U	NA	NA
UK37SL01	11/2/2007	2-Butanone	0.0142	U	NA	613,200
UK37SL01	11/2/2007	2-Chloroethylvinylether	0.0278	U	NA	NA
UK37SL01	11/2/2007	2-Chlorotoluene	0.00533	U	NA	20,440
UK37SL01	11/2/2007	2-Hexanone	0.0166	U	NA	NA
UK37SL01	11/2/2007	4-Chlorotoluene	0.00289	U	NA	71,540
UK37SL01	11/2/2007	4-Isopropyltoluene	0.898		NA	NA
UK37SL01	11/2/2007	4-Methyl-2-pentanone	0.013	U	NA	NA
UK37SL01	11/2/2007	Acetone	0.591		NA	919,800
UK37SL01	11/2/2007	Acrylonitrile	0.0695	U	NA	5.3
UK37SL01	11/2/2007	Benzene	0.238		NA	52.03
UK37SL01	11/2/2007	Bromobenzene	0.00599	U	NA	NA
UK37SL01	11/2/2007	Bromochloromethane	0.0201	U	NA	NA
UK37SL01	11/2/2007	Bromodichloromethane	0.00411	U	NA	46.15
UK37SL01	11/2/2007	Bromoform	0.00633	U	NA	362.23
UK37SL01	11/2/2007	Bromomethane	0.00777	U	NA	1430.800000
UK37SL01	11/2/2007	c-1,2-Dichloroethene	0.00444	U	0.25	10,220
UK37SL01	11/2/2007	c-1,3-Dichloropropene	0.00289	U	NA	NA
UK37SL01	11/2/2007	Carbon disulfide	0.0731		NA	102,200
UK37SL01	11/2/2007	Carbon Tetrachloride	0.00411	U	NA	22.01
UK37SL01	11/2/2007	Chlorobenzene	431		NA	20,440
UK37SL01	11/2/2007	Chlorodifluoromethane	0.00333	U	NA	NA
UK37SL01	11/2/2007	Chloroethane	0.0219	U	NA	986.76
UK37SL01	11/2/2007	Chloroform	0.00333	U	NA	10,220
UK37SL01	11/2/2007	Chloromethane	0.00444	U	NA	NA
UK37SL01	11/2/2007	Dibromochloromethane	0.00422	U	NA	34.07

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**Summary of Analytical Results
UK-37 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK37SL01	11/2/2007	Dibromomethane	0.00755	U	NA	10,220
UK37SL01	11/2/2007	Dichlorodifluoromethane	0.00166	U	NA	204,400
UK37SL01	11/2/2007	Ethylbenzene	0.326		NA	102,200
UK37SL01	11/2/2007	Hexachlorobutadiene	0.00544	U	NA	36.69
UK37SL01	11/2/2007	Isopropylbenzene	0.167		NA	102,200
UK37SL01	11/2/2007	m,p-xylene	0.758		NA	NA
UK37SL01	11/2/2007	Methyl t-butyl ether	0.00411	U	NA	715.400000
UK37SL01	11/2/2007	Methylene Chloride	0.0081	U	NA	381.55
UK37SL01	11/2/2007	Naphthalene	0.229		NA	20,440
UK37SL01	11/2/2007	n-Butylbenzene	0.54		NA	NA
UK37SL01	11/2/2007	n-Propylbenzene	0.421		NA	NA
UK37SL01	11/2/2007	o-xylene	0.366		NA	NA
UK37SL01	11/2/2007	p-Diethylbenzene	0.00677	U	NA	NA
UK37SL01	11/2/2007	p-Ethyltoluene	1.42		NA	NA
UK37SL01	11/2/2007	sec-Butylbenzene	0.329		NA	NA
UK37SL01	11/2/2007	Styrene	0.00377	U	NA	204,400
UK37SL01	11/2/2007	t-1,2-Dichloroethene	0.00255	U	NA	20,440
UK37SL01	11/2/2007	t-1,3-Dichloropropene	0.004	U	NA	NA
UK37SL01	11/2/2007	TAME	0.0202	U	NA	NA
UK37SL01	11/2/2007	TCE	0.00322	U	0.7	7.15
UK37SL01	11/2/2007	tert-Butylbenzene	0.00422	U	NA	NA
UK37SL01	11/2/2007	Tertiary butyl alcohol	0.0676	U	NA	NA
UK37SL01	11/2/2007	Tetrachloroethene	0.0294	U	1.4	5.3
UK37SL01	11/2/2007	Toluene	0.0592		NA	81,760
UK37SL01	11/2/2007	Trichlorofluoromethane	0.00555	U	NA	306,600
UK37SL01	11/2/2007	Vinyl Chloride	0.00566	U	NA	3.97
UK37SL01	11/2/2007	Xylene (Total)	1.124		NA	204,400
UK37SL01	11/2/2007	1,2,4-Trichlorobenzene	0.183	U	NA	10,220
UK37SL01	11/2/2007	1,2-Dichlorobenzene	1.84	J	NA	91,980
UK37SL01	11/2/2007	1,3-Dichlorobenzene	0.248	U	NA	3,066
UK37SL01	11/2/2007	1,4-Dichlorobenzene	6.47		NA	119.23
UK37SL01	11/2/2007	2,4,5-Trichlorophenol	0.191	U	NA	102,200
UK37SL01	11/2/2007	2,4,6-Trichlorophenol	0.193	U	NA	260.15
UK37SL01	11/2/2007	2,4-Dichlorophenol	0.2	U	NA	3,066
UK37SL01	11/2/2007	2,4-Dimethylphenol	0.303	U	NA	20,440
UK37SL01	11/2/2007	2,4-Dinitrophenol	2.49	U	NA	2,044
UK37SL01	11/2/2007	2,4-Dinitrotoluene	0.511	U	NA	2,044
UK37SL01	11/2/2007	2,6-Dinitrotoluene	0.346	U	NA	1,022
UK37SL01	11/2/2007	2-Chloronaphthalene	0.247	U	NA	81,760
UK37SL01	11/2/2007	2-Chlorophenol	0.382	U	NA	5,110
UK37SL01	11/2/2007	2-Methylnaphthalene	0.94	J	NA	4,088
UK37SL01	11/2/2007	2-Methylphenol	0.189	U	NA	51,100
UK37SL01	11/2/2007	2-Nitroaniline	0.248	U	NA	NA
UK37SL01	11/2/2007	2-Nitrophenol	0.237	U	NA	NA
UK37SL01	11/2/2007	3,3'-Dichlorobenzidine	0.269	U	NA	6.36
UK37SL01	11/2/2007	3+4-Methylphenol	0.242	U	NA	5,110
UK37SL01	11/2/2007	3-Nitroaniline	0.333	U	NA	NA
UK37SL01	11/2/2007	4,6-Dinitro-2-methylphenol	4.56	U	NA	NA

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**Summary of Analytical Results
UK-37 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK37SL01	11/2/2007	4-Bromophenyl phenyl ether	0.127	U	NA	NA
UK37SL01	11/2/2007	4-Chloro-3-methylphenol	0.546	U	NA	NA
UK37SL01	11/2/2007	4-Chloroaniline	0.349	U	NA	4,088
UK37SL01	11/2/2007	4-Chlorophenyl phenyl ether	0.237	U	NA	NA
UK37SL01	11/2/2007	4-Nitroaniline	0.596	U	NA	NA
UK37SL01	11/2/2007	4-Nitrophenol	0.741	U	NA	NA
UK37SL01	11/2/2007	Acenaphthene	0.36	J	NA	61,320
UK37SL01	11/2/2007	Acenaphthylene	0.23	U	NA	NA
UK37SL01	11/2/2007	Anthracene	0.303	U	NA	306,600
UK37SL01	11/2/2007	Benzo(a)anthracene	0.338	U	NA	3.92
UK37SL01	11/2/2007	Benzo(a)pyrene	0.234	U	0.29	0.392000
UK37SL01	11/2/2007	Benzo(b)fluoranthene	0.314	U	NA	3.92
UK37SL01	11/2/2007	Benzo(g,h,i)perylene	0.364	U	NA	NA
UK37SL01	11/2/2007	Benzo(k)fluoranthene	0.424	U	NA	39.200000
UK37SL01	11/2/2007	Benzoic acid	26.9	U	NA	4,088,000
UK37SL01	11/2/2007	Benzyl alcohol	0.27	U	NA	511,000
UK37SL01	11/2/2007	bis(2-Chloroethoxy)methane	0.22	U	NA	NA
UK37SL01	11/2/2007	bis(2-Chloroethyl)ether	0.251	U	NA	2.6
UK37SL01	11/2/2007	bis(2-Chloroisopropyl)ether	0.242	U	NA	40.88
UK37SL01	11/2/2007	bis(2-Ethylhexyl)phthalate	3.04	J	NA	204.400000
UK37SL01	11/2/2007	Butyl benzyl phthalate	0.29	U	NA	204,400
UK37SL01	11/2/2007	Chrysene	0.349	U	NA	392
UK37SL01	11/2/2007	Dibenz(a,h)anthracene	0.348	U	0.29	0.392000
UK37SL01	11/2/2007	Dibenzofuran	0.267	U	NA	1,022
UK37SL01	11/2/2007	Diethyl phthalate	0.494	J	NA	817,600
UK37SL01	11/2/2007	Dimethyl phthalate	0.212	U	NA	NA
UK37SL01	11/2/2007	Di-n-butyl phthalate	0.392	U	NA	102,200
UK37SL01	11/2/2007	Di-n-octyl phthalate	0.392	U	NA	NA
UK37SL01	11/2/2007	Fluoranthene	1.44	J	NA	40,880
UK37SL01	11/2/2007	Fluorene	0.261	U	NA	40,880
UK37SL01	11/2/2007	Hexachlorobenzene	0.318	U	NA	1.79
UK37SL01	11/2/2007	Hexachlorobutadiene	0.17	U	NA	36.69
UK37SL01	11/2/2007	Hexachlorocyclopentadiene	0.0718	U	NA	6,132
UK37SL01	11/2/2007	Hexachloroethane	0.251	U	NA	204.400000
UK37SL01	11/2/2007	Indeno(1,2,3-cd)pyrene	0.349	U	NA	3.92
UK37SL01	11/2/2007	Isophorone	0.276	U	NA	3,012.21
UK37SL01	11/2/2007	Naphthalene	1.01	J	NA	20,440
UK37SL01	11/2/2007	Nitrobenzene	0.198	U	NA	511
UK37SL01	11/2/2007	N-Nitrosodi-n-propylamine	0.476	U	NA	0.41
UK37SL01	11/2/2007	N-Nitrosodiphenylamine	0.284	U	NA	584
UK37SL01	11/2/2007	Pentachlorophenol	4.48	U	NA	23.85
UK37SL01	11/2/2007	Phenanthrene	2.21	J	NA	NA
UK37SL01	11/2/2007	Phenol	0.446	U	NA	306,600
UK37SL01	11/2/2007	Pyrene	1.51	J	NA	30,660
UK37SL01	11/2/2007	4,4'-DDD	0.0152	U	NA	11.92
UK37SL01	11/2/2007	4,4'-DDE	0.0183	U	NA	8.42
UK37SL01	11/2/2007	4,4'-DDT	0.00567	U	NA	8.42
UK37SL01	11/2/2007	Aldrin	0.0109	U	NA	0.17

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**Summary of Analytical Results
UK-37 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK37SL01	11/2/2007	alpha-BHC	0.00789	U	NA	0.45
UK37SL01	11/2/2007	alpha-Chlordane	0.0132	U	NA	NA
UK37SL01	11/2/2007	beta-BHC	0.00856	U	NA	1.59
UK37SL01	11/2/2007	Chlordane	0.0889	U	NA	8.18
UK37SL01	11/2/2007	delta-BHC	0.0152	U	NA	NA
UK37SL01	11/2/2007	Dieldrin	0.0174	U	NA	0.18
UK37SL01	11/2/2007	Endosulfan I	0.0119	U	NA	6,132
UK37SL01	11/2/2007	Endosulfan II	0.008	U	NA	6,132
UK37SL01	11/2/2007	Endosulfan sulfate	0.00889	U	NA	NA
UK37SL01	11/2/2007	Endrin	0.0132	U	NA	306.6
UK37SL01	11/2/2007	Endrin Aldehyde	0.0202	U	NA	NA
UK37SL01	11/2/2007	Endrin ketone	0.0257	U	NA	NA
UK37SL01	11/2/2007	gamma-BHC (Lindane)	0.0154	U	NA	2.2
UK37SL01	11/2/2007	gamma-Chlordane	0.0219	U	NA	NA
UK37SL01	11/2/2007	Heptachlor	0.007	U	NA	0.64
UK37SL01	11/2/2007	Heptachlor epoxide	0.0113	U	NA	0.31
UK37SL01	11/2/2007	Methoxychlor	0.0172	U	NA	5,110
UK37SL01	11/2/2007	Toxaphene	0.244	U	NA	2.6
UK37SL01	11/2/2007	Aroclor 1016	0.0227	U	NA	40.88
UK37SL01	11/2/2007	Aroclor 1221	0.107	U	NA	1.43
UK37SL01	11/2/2007	Aroclor 1232	0.0237	U	NA	1.43
UK37SL01	11/2/2007	Aroclor 1242	0.0178	U	NA	1.43
UK37SL01	11/2/2007	Aroclor 1248	0.04	U	NA	1.43
UK37SL01	11/2/2007	Aroclor 1254	0.0606	U	NA	1.43
UK37SL01	11/2/2007	Aroclor 1260	0.0696	U	NA	1.43
UK37SL01	11/2/2007	PCBs(total)	0.107	U	10	1.43
UK37SL01	11/2/2007	Aluminum	8,440		NA	1,022,000
UK37SL01	11/2/2007	Antimony	1.09	U	NA	408.8
UK37SL01	11/2/2007	Arsenic	1.84	U	NA	1.91
UK37SL01	11/2/2007	Barium	290		NA	204,400
UK37SL01	11/2/2007	Beryllium	0.11	U	NA	2,044
UK37SL01	11/2/2007	Cadmium	164		10	511
UK37SL01	11/2/2007	Calcium	7,310		NA	NA
UK37SL01	11/2/2007	Chromium	153		143	3,066
UK37SL01	11/2/2007	Cobalt	13.9		NA	NA
UK37SL01	11/2/2007	Copper	7130		NA	40,880
UK37SL01	11/2/2007	Iron	13,700		NA	715,400
UK37SL01	11/2/2007	Lead	485		NA	NA
UK37SL01	11/2/2007	Magnesium	687		NA	NA
UK37SL01	11/2/2007	Manganese	72.4		NA	20,440
UK37SL01	11/2/2007	Mercury	2.95		NA	NA
UK37SL01	11/2/2007	Nickel	205		NA	20,440
UK37SL01	11/2/2007	Potassium	28.4	U	NA	NA
UK37SL01	11/2/2007	Selenium	2.33	U	NA	5,110
UK37SL01	11/2/2007	Silver	0.54	U	NA	5,110
UK37SL01	11/2/2007	Sodium	228		NA	NA
UK37SL01	11/2/2007	Thallium	1.09	U	NA	71.54
UK37SL01	11/2/2007	Vanadium	18.1		NA	1,022

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**Summary of Analytical Results
UK-37 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK37SL01	11/2/2007	Zinc	4,530		NA	306,600
UK37SL01	11/2/2007	Cyanide	0.94	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-37 solid characterization sample was collected by AMO during implementation of Remedial Work Element II and was analyzed by ETL of Farmingdale, New York.

Table 4-67

**Summary of Analytical Results
UK-37 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK37B01150	11/5/2007	1,2,4-Trimethylbenzene	0.00167	U	NA	NA
UK37B01150	11/5/2007	1,4-Dichlorobenzene	0.00039	U	NA	119.23
UK37B01150	11/5/2007	Benzene	0.00028	U	NA	52.03
UK37B01150	11/5/2007	c-1,2-Dichloroethene	0.00041	U	0.25	10,220
UK37B01150	11/5/2007	Chlorobenzene	0.00024	U	NA	20,440
UK37B01150	11/5/2007	TCE	0.0003	U	0.7	7.15
UK37B01150	11/5/2007	Tetrachloroethene	0.00273	U	1.4	5.30
UK37B01150	11/5/2007	Benzo(a)pyrene	0.0218	U	0.29	0.392
UK37B01150	11/5/2007	Dibenz(a,h)anthracene	0.0324	U	0.29	0.392
UK37B01150	11/5/2007	Aroclor 1016	0.00211	U	NA	40.88
UK37B01150	11/5/2007	Aroclor 1221	0.00993	U	NA	1.43
UK37B01150	11/5/2007	Aroclor 1232	0.0022	U	NA	1.43
UK37B01150	11/5/2007	Aroclor 1242	0.00165	U	NA	1.43
UK37B01150	11/5/2007	Aroclor 1248	0.00372	U	NA	1.43
UK37B01150	11/5/2007	Aroclor 1254	0.00564	U	NA	1.43
UK37B01150	11/5/2007	Aroclor 1260	0.00647	U	NA	1.43
UK37B01150	11/5/2007	PCBs(total)	0.00993	U	10	1.43
UK37B01150	11/5/2007	Cadmium	0.03	U	10	511
UK37B01150	11/5/2007	Chromium	0.16	U	143	3,066
UK37B01150	11/5/2007	Cyanide	0.14	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-37 post-removal confirmation sample was collected by AMO during implementation of Remedial Work Element II and was analyzed by ETL of Farmingdale, New York.

Table 4-68

**Summary of Analytical Results
UK-42 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK42B01060	2/19/2008	c-1,2-Dichloroethene	0.00047	U	0.25	10,220
UK42B01060	2/19/2008	TCE	0.00051	U	0.7	7.15
UK42B01060	2/19/2008	Tetrachloroethene	0.00047	U	1.4	5.30
UK42B01060	2/19/2008	Benzo(a)pyrene	0.0549	U	0.29	0.392
UK42B01060	2/19/2008	Dibenz(a,h)anthracene	0.0588	U	0.29	0.392
UK42B01060	2/19/2008	Aroclor 1016	0.00215	U	NA	40.88
UK42B01060	2/19/2008	Aroclor 1221	0.0101	U	NA	1.43
UK42B01060	2/19/2008	Aroclor 1232	0.00224	U	NA	1.43
UK42B01060	2/19/2008	Aroclor 1242	0.00169	U	NA	1.43
UK42B01060	2/19/2008	Aroclor 1248	0.00379	U	NA	1.43
UK42B01060	2/19/2008	Aroclor 1254	0.00574	U	NA	1.43
UK42B01060	2/19/2008	Aroclor 1260	0.0066	U	NA	1.43
UK42B01060	2/19/2008	PCBs(total)	0.0101	U	10	1.43
UK42B01060	2/19/2008	Cadmium	0.032	U	10	511
UK42B01060	2/19/2008	Chromium	45.5		143	3,066
UK42B01060	2/19/2008	Cyanide	0.15	U	35	20,440
DUP22	2/19/2008	c-1,2-Dichloroethene	0.00047	U	0.25	10,220
DUP22	2/19/2008	TCE	0.00051	U	0.7	7.15
DUP22	2/19/2008	Tetrachloroethene	0.00047	U	1.4	5.30
DUP22	2/19/2008	Benzo(a)pyrene	0.0548	U	0.29	0.392
DUP22	2/19/2008	Dibenz(a,h)anthracene	0.0587	U	0.29	0.392
DUP22	2/19/2008	Aroclor 1016	0.00215	U	NA	40.88
DUP22	2/19/2008	Aroclor 1221	0.0101	U	NA	1.43
DUP22	2/19/2008	Aroclor 1232	0.00224	U	NA	1.43
DUP22	2/19/2008	Aroclor 1242	0.00168	U	NA	1.43
DUP22	2/19/2008	Aroclor 1248	0.00379	U	NA	1.43
DUP22	2/19/2008	Aroclor 1254	0.00573	U	NA	1.43
DUP22	2/19/2008	Aroclor 1260	0.00658	U	NA	1.43
DUP22	2/19/2008	PCBs(total)	0.0101	U	10	1.43
DUP22	2/19/2008	Cadmium	0.032	U	10	511
DUP22	2/19/2008	Chromium	35.4		143	3,066
DUP22	2/19/2008	Cyanide	0.19	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-42 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-69

**Summary of Analytical Results
UK-43 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK43B01035	2/19/2008	c-1,2-Dichloroethene	0.0005	U	0.25	10,220
UK43B01035	2/19/2008	TCE	0.00054	U	0.7	7.15
UK43B01035	2/19/2008	Tetrachloroethene	0.0005	U	1.4	5.30
UK43B01035	2/19/2008	Benzo(a)pyrene	0.0578	U	0.29	0.392
UK43B01035	2/19/2008	Dibenz(a,h)anthracene	0.0619	U	0.29	0.392
UK43B01035	2/19/2008	% Solids	90.1		NA	NA9
UK43B01035	2/19/2008	Aroclor 1016	0.00226	U	NA	40.88
UK43B01035	2/19/2008	Aroclor 1221	0.0107	U	NA	1.43
UK43B01035	2/19/2008	Aroclor 1232	0.00236	U	NA	1.43
UK43B01035	2/19/2008	Aroclor 1242	0.00178	U	NA	1.43
UK43B01035	2/19/2008	Aroclor 1248	0.004	U	NA	1.43
UK43B01035	2/19/2008	Aroclor 1254	0.00605	U	NA	1.43
UK43B01035	2/19/2008	Aroclor 1260	0.00695	U	NA	1.43
UK43B01035	2/19/2008	PCBs(total)	0.0107	U	10	1.43
UK43B01035	2/19/2008	Cadmium	0.034	U	10	511
UK43B01035	2/19/2008	Chromium	6.65		143	3,066
UK43B01035	2/19/2008	Cyanide	0.16	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent. established for this constituent.
- 6) UK-43 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-70

**Summary of Analytical Results
UK-44 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK44SL01030	2/14/2008	1,1,1-Trichloroethane	0.00059	U	NA	286,160
UK44SL01030	2/14/2008	1,1,2,2-Tetrachloroethane	0.00068	U	NA	14.31
UK44SL01030	2/14/2008	1,1,2-Trichloroethane	0.00071	U	NA	50.20
UK44SL01030	2/14/2008	1,1-Dichloroethane	0.00064	U	NA	204,400
UK44SL01030	2/14/2008	1,1-Dichloroethene	0.00042	U	NA	51,100
UK44SL01030	2/14/2008	1,2-Dichloroethane	0.00066	U	NA	31.45
UK44SL01030	2/14/2008	1,2-Dichloroethene (total)	0.00052	U	0.25	9,198
UK44SL01030	2/14/2008	1,2-Dichloropropane	0.00067	U	NA	42.08
UK44SL01030	2/14/2008	2-Butanone	0.00251	U	NA	613,200
UK44SL01030	2/14/2008	2-Hexanone	0.00224	U	NA	NA
UK44SL01030	2/14/2008	4-Methyl-2-pentanone	0.00243	U	NA	NA
UK44SL01030	2/14/2008	Acetone	0.00294	U	NA	919,800
UK44SL01030	2/14/2008	Benzene	0.0006	U	NA	52.03
UK44SL01030	2/14/2008	Bromodichloromethane	0.00053	U	NA	46.15
UK44SL01030	2/14/2008	Bromoform	0.00054	U	NA	362.23
UK44SL01030	2/14/2008	Bromomethane	0.00055	U	NA	1,431
UK44SL01030	2/14/2008	c-1,2-Dichloroethene	0.00051	U	0.25	10,220
UK44SL01030	2/14/2008	c-1,3-Dichloropropene	0.00058	U	NA	NA
UK44SL01030	2/14/2008	Carbon disulfide	0.00053	U	NA	102,200
UK44SL01030	2/14/2008	Carbon Tetrachloride	0.00063	U	NA	22.01
UK44SL01030	2/14/2008	Chlorobenzene	0.00069	U	NA	20,440
UK44SL01030	2/14/2008	Chloroethane	0.00079	U	NA	986.76
UK44SL01030	2/14/2008	Chloroform	0.00067	U	NA	10,220
UK44SL01030	2/14/2008	Chloromethane	0.00056	U	NA	NA
UK44SL01030	2/14/2008	Dibromochloromethane	0.00052	U	NA	34.07
UK44SL01030	2/14/2008	Ethylbenzene	0.00059	U	NA	102,200
UK44SL01030	2/14/2008	m,p-xylene	0.00102	U	NA	NA
UK44SL01030	2/14/2008	Methylene Chloride	0.00106	U	NA	381.55
UK44SL01030	2/14/2008	o-xylene	0.00044	U	NA	NA
UK44SL01030	2/14/2008	Styrene	0.00049	U	NA	204,400
UK44SL01030	2/14/2008	t-1,2-Dichloroethene	0.00052	U	NA	20,440
UK44SL01030	2/14/2008	t-1,3-Dichloropropene	0.00047	U	NA	NA
UK44SL01030	2/14/2008	TCE	0.00055	U	0.7	7.15
UK44SL01030	2/14/2008	Tetrachloroethene	0.00051	U	1.4	5.30
UK44SL01030	2/14/2008	Toluene	0.00054	U	NA	81,760
UK44SL01030	2/14/2008	Vinyl Chloride	0.00077	U	NA	3.97
UK44SL01030	2/14/2008	Xylene (Total)	0.00102	U	NA	204,400
UK44SL01030	2/14/2008	1,2,4-Trichlorobenzene	0.094	U	NA	10,220
UK44SL01030	2/14/2008	1,2-Dichlorobenzene	0.0698	U	NA	91,980
UK44SL01030	2/14/2008	1,3-Dichlorobenzene	0.0759	U	NA	3,066
UK44SL01030	2/14/2008	1,4-Dichlorobenzene	0.0737	U	NA	119.23
UK44SL01030	2/14/2008	2,4,5-Trichlorophenol	0.049	U	NA	102,200
UK44SL01030	2/14/2008	2,4,6-Trichlorophenol	0.085	U	NA	260.15
UK44SL01030	2/14/2008	2,4-Dichlorophenol	0.0741	U	NA	3,066
UK44SL01030	2/14/2008	2,4-Dimethylphenol	0.0945	U	NA	20,440
UK44SL01030	2/14/2008	2,4-Dinitrophenol	0.795	U	NA	2,044
UK44SL01030	2/14/2008	2,4-Dinitrotoluene	0.136	U	NA	2,044
UK44SL01030	2/14/2008	2,6-Dinitrotoluene	0.0931	U	NA	1,022
UK44SL01030	2/14/2008	2-Chloronaphthalene	0.109	U	NA	81,760
UK44SL01030	2/14/2008	2-Chlorophenol	0.109	U	NA	5,110

Table 4-70

**Summary of Analytical Results
UK-44 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK44SL01030	2/14/2008	2-Methylnaphthalene	0.104	J	NA	4,088
UK44SL01030	2/14/2008	2-Methylphenol	0.0809	U	NA	51,100
UK44SL01030	2/14/2008	2-Nitroaniline	0.118	U	NA	NA
UK44SL01030	2/14/2008	2-Nitrophenol	0.0687	U	NA	NA
UK44SL01030	2/14/2008	3,3'-Dichlorobenzidine	0.109	U	NA	6.36
UK44SL01030	2/14/2008	3+4-Methylphenol	0.0698	U	NA	5,110
UK44SL01030	2/14/2008	3-Nitroaniline	0.0389	U	NA	NA
UK44SL01030	2/14/2008	4,6-Dinitro-2-methylphenol	0.988	U	NA	NA
UK44SL01030	2/14/2008	4-Bromophenyl phenyl ether	0.103	U	NA	NA
UK44SL01030	2/14/2008	4-Chloro-3-methylphenol	0.0843	U	NA	NA
UK44SL01030	2/14/2008	4-Chloroaniline	0.0861	U	NA	4,088
UK44SL01030	2/14/2008	4-Chlorophenyl phenyl ether	0.0879	U	NA	NA
UK44SL01030	2/14/2008	4-Nitroaniline	0.221	U	NA	NA
UK44SL01030	2/14/2008	4-Nitrophenol	1.51	U	NA	NA
UK44SL01030	2/14/2008	Acenaphthene	0.0951	U	NA	61,320
UK44SL01030	2/14/2008	Acenaphthylene	0.0777	U	NA	NA
UK44SL01030	2/14/2008	Anthracene	0.105	J	NA	306,600
UK44SL01030	2/14/2008	Benzo(a)anthracene	0.637	J	NA	3.92
UK44SL01030	2/14/2008	Benzo(a)pyrene	0.84	J	0.29	0.392
UK44SL01030	2/14/2008	Benzo(b)fluoranthene	0.951	J	NA	3.92
UK44SL01030	2/14/2008	Benzo(g,h,i)perylene	0.533	J	NA	NA
UK44SL01030	2/14/2008	Benzo(k)fluoranthene	0.97	J	NA	39.2
UK44SL01030	2/14/2008	bis(2-Chloroethoxy)methane	0.0936	U	NA	NA
UK44SL01030	2/14/2008	bis(2-Chloroethyl)ether	0.107	U	NA	2.60
UK44SL01030	2/14/2008	bis(2-Chloroisopropyl)ether	0.0829	U	NA	40.88
UK44SL01030	2/14/2008	bis(2-Ethylhexyl)phthalate	0.148	U	NA	204.4
UK44SL01030	2/14/2008	Butyl benzyl phthalate	0.119	U	NA	204,400
UK44SL01030	2/14/2008	Carbazole	0.13	U	NA	143.08
UK44SL01030	2/14/2008	Chrysene	0.907	J	NA	392
UK44SL01030	2/14/2008	Dibenz(a,h)anthracene	0.126	U	0.29	0.392
UK44SL01030	2/14/2008	Dibenzofuran	0.0755	U	NA	1,022
UK44SL01030	2/14/2008	Diethyl phthalate	0.148	U	NA	817,600
UK44SL01030	2/14/2008	Dimethyl phthalate	0.109	U	NA	NA
UK44SL01030	2/14/2008	Di-n-butyl phthalate	0.127	U	NA	102,200
UK44SL01030	2/14/2008	Di-n-octyl phthalate	0.111	U	NA	NA
UK44SL01030	2/14/2008	Fluoranthene	1.4	U	NA	40,880
UK44SL01030	2/14/2008	Fluorene	0.0908	U	NA	40,880
UK44SL01030	2/14/2008	Hexachlorobenzene	0.0967	U	NA	1.79
UK44SL01030	2/14/2008	Hexachlorobutadiene	0.0904	U	NA	36.69
UK44SL01030	2/14/2008	Hexachlorocyclopentadiene	0.698	U	NA	6,132
UK44SL01030	2/14/2008	Hexachloroethane	0.101	U	NA	204.4
UK44SL01030	2/14/2008	Indeno(1,2,3-cd)pyrene	0.486	J	NA	3.92
UK44SL01030	2/14/2008	Isophorone	0.103	U	NA	3,012.21
UK44SL01030	2/14/2008	Naphthalene	0.0908	U	NA	20,440
UK44SL01030	2/14/2008	Nitrobenzene	0.0875	U	NA	511
UK44SL01030	2/14/2008	N-Nitrosodi-n-propylamine	0.0682	U	NA	0.41
UK44SL01030	2/14/2008	N-Nitrosodiphenylamine	0.123	U	NA	584
UK44SL01030	2/14/2008	Pentachlorophenol	0.856	U	NA	23.85
UK44SL01030	2/14/2008	Phenanthrene	0.545	J	NA	NA
UK44SL01030	2/14/2008	Phenol	0.059	U	NA	306,600

Table 4-70

**Summary of Analytical Results
UK-44 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK44SL01030	2/14/2008	Pyrene	1.35		NA	30,660
UK44SL01030	2/14/2008	Pyridine	0.129	U	NA	1,022
UK44SL01030	2/14/2008	4,4'-DDD	0.00155	U	NA	11.92
UK44SL01030	2/14/2008	4,4'-DDE	0.00186	U	NA	8.42
UK44SL01030	2/14/2008	4,4'-DDT	0.00058	U	NA	8.42
UK44SL01030	2/14/2008	Aldrin	0.00111	U	NA	0.17
UK44SL01030	2/14/2008	alpha-BHC	0.0008	U	NA	0.45
UK44SL01030	2/14/2008	alpha-Chlordane	0.00134	U	NA	NA
UK44SL01030	2/14/2008	beta-BHC	0.00087	U	NA	1.59
UK44SL01030	2/14/2008	Chlordane	0.00904	U	NA	8.18
UK44SL01030	2/14/2008	delta-BHC	0.00155	U	NA	NA
UK44SL01030	2/14/2008	Dieldrin	0.00177	U	NA	0.18
UK44SL01030	2/14/2008	Endosulfan I	0.00121	U	NA	6,132
UK44SL01030	2/14/2008	Endosulfan II	0.00081	U	NA	6,132
UK44SL01030	2/14/2008	Endosulfan sulfate	0.0009	U	NA	NA
UK44SL01030	2/14/2008	Endrin	0.00134	U	NA	306.6
UK44SL01030	2/14/2008	Endrin Aldehyde	0.00206	U	NA	NA
UK44SL01030	2/14/2008	Endrin ketone	0.00261	U	NA	NA
UK44SL01030	2/14/2008	gamma-BHC (Lindane)	0.00157	U	NA	2.20
UK44SL01030	2/14/2008	gamma-Chlordane	0.00223	U	NA	NA
UK44SL01030	2/14/2008	Heptachlor	0.00071	U	NA	0.64
UK44SL01030	2/14/2008	Heptachlor epoxide	0.00115	U	NA	0.31
UK44SL01030	2/14/2008	Methoxychlor	0.00175	U	NA	5,110
UK44SL01030	2/14/2008	Toxaphene	0.0249	U	NA	2.60
UK44SL01030	2/14/2008	Aroclor 1016	0.0231	U	NA	40.88
UK44SL01030	2/14/2008	Aroclor 1221	0.108	U	NA	1.43
UK44SL01030	2/14/2008	Aroclor 1232	0.0241	U	NA	1.43
UK44SL01030	2/14/2008	Aroclor 1242	0.0181	U	NA	1.43
UK44SL01030	2/14/2008	Aroclor 1248	0.0407	U	NA	1.43
UK44SL01030	2/14/2008	Aroclor 1254	20.9		NA	1.43
UK44SL01030	2/14/2008	Aroclor 1260	0.0707	U	NA	1.43
UK44SL01030	2/14/2008	PCBs(total)	20.9		10	1.43
UK44SL01030	2/14/2008	Aluminum	4,470		NA	1,022,000
UK44SL01030	2/14/2008	Antimony	0.22	U	NA	408.8
UK44SL01030	2/14/2008	Arsenic	4.94		NA	1.91
UK44SL01030	2/14/2008	Barium	20.2		NA	204,400
UK44SL01030	2/14/2008	Beryllium	0.022	U	NA	2,044
UK44SL01030	2/14/2008	Cadmium	5.38		10	511
UK44SL01030	2/14/2008	Calcium	1,310		NA	NA
UK44SL01030	2/14/2008	Chromium	323		143	3,066
UK44SL01030	2/14/2008	Cobalt	0.045	U	NA	NA
UK44SL01030	2/14/2008	Copper	132		NA	40,880
UK44SL01030	2/14/2008	Iron	6,360		NA	715,400
UK44SL01030	2/14/2008	Lead	128		NA	NA
UK44SL01030	2/14/2008	Magnesium	371		NA	NA
UK44SL01030	2/14/2008	Manganese	113		NA	20,440
UK44SL01030	2/14/2008	Mercury	0.25		NA	NA
UK44SL01030	2/14/2008	Nickel	13.9		NA	20,440
UK44SL01030	2/14/2008	Potassium	197		NA	NA
UK44SL01030	2/14/2008	Selenium	0.48	U	NA	5,110

Table 4-70

**Summary of Analytical Results
UK-44 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK44SL01030	2/14/2008	Silver	0.11	U	NA	5,110
UK44SL01030	2/14/2008	Sodium	135		NA	NA
UK44SL01030	2/14/2008	Thallium	0.22	U	NA	71.54
UK44SL01030	2/14/2008	Vanadium	26.8		NA	1,022
UK44SL01030	2/14/2008	Zinc	191		NA	306,600
UK44SL01030	2/14/2008	Cyanide	0.56		35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-44 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-71

**Summary of Analytical Results
UK-44 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK44B01070	3/4/2008	1,1,1-Trichloroethane	0.00055	U	NA	286,160
UK44B01070	3/4/2008	1,1,2,2-Tetrachloroethane	0.00064	U	NA	14.31
UK44B01070	3/4/2008	1,1,2-Trichloroethane	0.00067	U	NA	50.20
UK44B01070	3/4/2008	1,1-Dichloroethane	0.0006	U	NA	204,400
UK44B01070	3/4/2008	1,1-Dichloroethene	0.00039	U	NA	51,100
UK44B01070	3/4/2008	1,2-Dichloroethane	0.00061	U	NA	31.45
UK44B01070	3/4/2008	1,2-Dichloroethene (total)	0.00049	U	0.25	9,198
UK44B01070	3/4/2008	1,2-Dichloropropane	0.00063	U	NA	42.08
UK44B01070	3/4/2008	2-Butanone	0.00235	U	NA	613,200
UK44B01070	3/4/2008	2-Hexanone	0.0021	U	NA	NA
UK44B01070	3/4/2008	4-Methyl-2-pentanone	0.00228	U	NA	NA
UK44B01070	3/4/2008	Acetone	0.00276	U	NA	919,800
UK44B01070	3/4/2008	Benzene	0.00056	U	NA	52.03
UK44B01070	3/4/2008	Bromodichloromethane	0.0005	U	NA	46.15
UK44B01070	3/4/2008	Bromoform	0.00051	U	NA	362.23
UK44B01070	3/4/2008	Bromomethane	0.00052	U	NA	1430.8
UK44B01070	3/4/2008	c-1,2-Dichloroethene	0.00048	U	0.25	10,220
UK44B01070	3/4/2008	c-1,2-Dichloroethene	0.00048	U	0.25	10,220
UK44B01070	3/4/2008	c-1,3-Dichloropropene	0.00054	U	NA	NA
UK44B01070	3/4/2008	Carbon disulfide	0.0005	U	NA	102,200
UK44B01070	3/4/2008	Carbon Tetrachloride	0.00059	U	NA	22.01
UK44B01070	3/4/2008	Chlorobenzene	0.00065	U	NA	20,440
UK44B01070	3/4/2008	Chloroethane	0.00074	U	NA	986.76
UK44B01070	3/4/2008	Chloroform	0.00063	U	NA	10,220
UK44B01070	3/4/2008	Chloromethane	0.00053	U	NA	NA
UK44B01070	3/4/2008	Dibromochloromethane	0.00049	U	NA	34.07
UK44B01070	3/4/2008	Ethylbenzene	0.00055	U	NA	102,200
UK44B01070	3/4/2008	m,p-xylene	0.00095	U	NA	NA
UK44B01070	3/4/2008	Methylene Chloride	0.001	U	NA	381.55
UK44B01070	3/4/2008	o-xylene	0.00041	U	NA	NA
UK44B01070	3/4/2008	Styrene	0.00046	U	NA	204,400
UK44B01070	3/4/2008	t-1,2-Dichloroethene	0.00049	U	NA	20,440
UK44B01070	3/4/2008	t-1,3-Dichloropropene	0.00045	U	NA	NA
UK44B01070	3/4/2008	TCE	0.00052	U	0.7	7.15
UK44B01070	3/4/2008	TCE	0.00052	U	0.7	7.15
UK44B01070	3/4/2008	Tetrachloroethene	0.00048	U	1.4	5.30
UK44B01070	3/4/2008	Tetrachloroethene	0.00048	U	1.4	5.30
UK44B01070	3/4/2008	Toluene	0.00051	U	NA	81,760
UK44B01070	3/4/2008	Vinyl Chloride	0.00072	U	NA	3.97
UK44B01070	3/4/2008	Xylene (Total)	0.00095	U	NA	204,400
UK44B01070	3/4/2008	Benzo(a)anthracene	0.045	U	NA	3.92
UK44B01070	3/4/2008	Benzo(a)pyrene	0.0554	U	0.29	0.392
UK44B01070	3/4/2008	Benzo(b)fluoranthene	0.0441	U	NA	3.92
UK44B01070	3/4/2008	Benzo(k)fluoranthene	0.081	U	NA	39.2

Table 4-71

**Summary of Analytical Results
UK-44 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Risk-based Soil Screening Criteria for Industrial Soil
UK44B01070	3/4/2008	Chrysene	0.0563	U	NA	392
UK44B01070	3/4/2008	Dibenz(a,h)anthracene	0.0594	U	0.29	0.392
UK44B01070	3/4/2008	Indeno(1,2,3-cd)pyrene	0.0491	U	NA	3.92
UK44B01070	3/4/2008	% Solids	94		NA	NA
UK44B01070	3/4/2008	Aroclor 1016	0.00217	U	NA	40.88
UK44B01070	3/4/2008	Aroclor 1221	0.0102	U	NA	1.43
UK44B01070	3/4/2008	Aroclor 1232	0.00227	U	NA	1.43
UK44B01070	3/4/2008	Aroclor 1242	0.0017	U	NA	1.43
UK44B01070	3/4/2008	Aroclor 1248	0.00383	U	NA	1.43
UK44B01070	3/4/2008	Aroclor 1254	0.138		NA	1.43
UK44B01070	3/4/2008	Aroclor 1260	0.00666	U	NA	1.43
UK44B01070	3/4/2008	PCBs(total)	0.138		10	1.43
UK44B01070	3/4/2008	Arsenic	0.35	U	NA	1.91
UK44B01070	3/4/2008	Cadmium	0.031	U	10	511
UK44B01070	3/4/2008	Chromium	7.41		143	3,066
UK44B01070	3/4/2008	Lead	0.18	U	NA	NA
UK44B01070	3/4/2008	Mercury	0.099		NA	NA
UK44B01070	3/4/2008	Zinc	35.2		NA	306,600
UK44B01070	3/4/2008	Cyanide	0.16	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) B - result is greater than or equal to the Instrument Detection Limit, but less than the Contract Required Detection Limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) UK-44 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-72

**Summary of Analytical Results
UK-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK45SL01030	2/15/2008	1,1,1-Trichloroethane	0.0007	U	NA	286,160
UK45SL01030	2/15/2008	1,1,2,2-Tetrachloroethane	0.00081	U	NA	14.31
UK45SL01030	2/15/2008	1,1,2-Trichloroethane	0.00085	U	NA	50.20
UK45SL01030	2/15/2008	1,1-Dichloroethane	0.00077	U	NA	204,400
UK45SL01030	2/15/2008	1,1-Dichloroethene	0.0005	U	NA	51,100
UK45SL01030	2/15/2008	1,2-Dichloroethane	0.00078	U	NA	31.45
UK45SL01030	2/15/2008	1,2-Dichloroethene (total)	0.00062	U	0.25	9,198
UK45SL01030	2/15/2008	1,2-Dichloropropane	0.0008	U	NA	42.08
UK45SL01030	2/15/2008	2-Butanone	0.003	U	NA	613,200
UK45SL01030	2/15/2008	2-Hexanone	0.00267	U	NA	NA
UK45SL01030	2/15/2008	4-Methyl-2-pentanone	0.0029	U	NA	NA
UK45SL01030	2/15/2008	Acetone	0.00351	U	NA	919,800
UK45SL01030	2/15/2008	Benzene	0.00072	U	NA	52.03
UK45SL01030	2/15/2008	Bromodichloromethane	0.00063	U	NA	46.15
UK45SL01030	2/15/2008	Bromoform	0.00065	U	NA	362.23
UK45SL01030	2/15/2008	Bromomethane	0.00066	U	NA	1,430.8
UK45SL01030	2/15/2008	c-1,2-Dichloroethene	0.00061	U	0.25	10,220
UK45SL01030	2/15/2008	c-1,3-Dichloropropene	0.00069	U	NA	NA
UK45SL01030	2/15/2008	Carbon disulfide	0.00063	U	NA	102,200
UK45SL01030	2/15/2008	Carbon Tetrachloride	0.00076	U	NA	22.01
UK45SL01030	2/15/2008	Chlorobenzene	0.00082	U	NA	20,440
UK45SL01030	2/15/2008	Chloroethane	0.00094	U	NA	986.76
UK45SL01030	2/15/2008	Chloroform	0.0008	U	NA	10,220
UK45SL01030	2/15/2008	Chloromethane	0.00068	U	NA	NA
UK45SL01030	2/15/2008	Dibromochloromethane	0.00062	U	NA	34.07
UK45SL01030	2/15/2008	Ethylbenzene	0.0007	U	NA	102,200
UK45SL01030	2/15/2008	m,p-xylene	0.00122	U	NA	NA
UK45SL01030	2/15/2008	Methylene Chloride	0.00127	U	NA	381.55
UK45SL01030	2/15/2008	o-xylene	0.00053	U	NA	NA
UK45SL01030	2/15/2008	Styrene	0.00058	U	NA	204,400
UK45SL01030	2/15/2008	t-1,2-Dichloroethene	0.00062	U	NA	20,440
UK45SL01030	2/15/2008	t-1,3-Dichloropropene	0.00057	U	NA	NA
UK45SL01030	2/15/2008	TCE	0.00066	U	0.7	7.15
UK45SL01030	2/15/2008	Tetrachloroethene	0.00061	U	1.4	5.30
UK45SL01030	2/15/2008	Toluene	0.00065	U	NA	81,760
UK45SL01030	2/15/2008	Vinyl Chloride	0.00092	U	NA	3.97
UK45SL01030	2/15/2008	Xylene (Total)	0.00122	U	NA	204,400
UK45SL01030	2/15/2008	1,2,4-Trichlorobenzene	0.0561	U	NA	10,220
UK45SL01030	2/15/2008	1,2-Dichlorobenzene	0.0417	U	NA	91,980
UK45SL01030	2/15/2008	1,3-Dichlorobenzene	0.0453	U	NA	3,066
UK45SL01030	2/15/2008	1,4-Dichlorobenzene	0.044	U	NA	119.23
UK45SL01030	2/15/2008	2,4,5-Trichlorophenol	0.0293	U	NA	102,200
UK45SL01030	2/15/2008	2,4,6-Trichlorophenol	0.0507	U	NA	260.15
UK45SL01030	2/15/2008	2,4-Dichlorophenol	0.0443	U	NA	3,066
UK45SL01030	2/15/2008	2,4-Dimethylphenol	0.0564	U	NA	20,440
UK45SL01030	2/15/2008	2,4-Dinitrophenol	0.475	U	NA	2,044
UK45SL01030	2/15/2008	2,4-Dinitrotoluene	0.081	U	NA	2,044
UK45SL01030	2/15/2008	2,6-Dinitrotoluene	0.0556	U	NA	1,022
UK45SL01030	2/15/2008	2-Chloronaphthalene	0.065	U	NA	81,760
UK45SL01030	2/15/2008	2-Chlorophenol	0.065	U	NA	5,110

Table 4-72

**Summary of Analytical Results
UK-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK45SL01030	2/15/2008	2-Methylnaphthalene	0.0536	U	NA	4,088
UK45SL01030	2/15/2008	2-Methylphenol	0.0483	U	NA	51,100
UK45SL01030	2/15/2008	2-Nitroaniline	0.0703	U	NA	NA
UK45SL01030	2/15/2008	2-Nitrophenol	0.041	U	NA	NA
UK45SL01030	2/15/2008	3,3'-Dichlorobenzidine	0.065	U	NA	6.36
UK45SL01030	2/15/2008	3+4-Methylphenol	0.0417	U	NA	5,110
UK45SL01030	2/15/2008	3-Nitroaniline	0.0232	U	NA	NA
UK45SL01030	2/15/2008	4,6-Dinitro-2-methylphenol	0.59	U	NA	NA
UK45SL01030	2/15/2008	4-Bromophenyl phenyl ether	0.0613	U	NA	NA
UK45SL01030	2/15/2008	4-Chloro-3-methylphenol	0.0503	U	NA	NA
UK45SL01030	2/15/2008	4-Chloroaniline	0.0514	U	NA	4,088
UK45SL01030	2/15/2008	4-Chlorophenyl phenyl ether	0.0525	U	NA	NA
UK45SL01030	2/15/2008	4-Nitroaniline	0.132	U	NA	NA
UK45SL01030	2/15/2008	4-Nitrophenol	0.9	U	NA	NA
UK45SL01030	2/15/2008	Acenaphthene	0.0568	U	NA	61,320
UK45SL01030	2/15/2008	Acenaphthylene	0.0464	U	NA	NA
UK45SL01030	2/15/2008	Anthracene	0.115	J	NA	306,600
UK45SL01030	2/15/2008	Benzo(a)anthracene	0.449	J	NA	3.92
UK45SL01030	2/15/2008	Benzo(a)pyrene	0.57	J	0.29	0.392
UK45SL01030	2/15/2008	Benzo(b)fluoranthene	0.58	J	NA	3.92
UK45SL01030	2/15/2008	Benzo(g,h,i)perylene	0.327	J	NA	NA
UK45SL01030	2/15/2008	Benzo(k)fluoranthene	0.593	J	NA	39.2
UK45SL01030	2/15/2008	bis(2-Chloroethoxy)methane	0.0559	U	NA	NA
UK45SL01030	2/15/2008	bis(2-Chloroethyl)ether	0.0638	U	NA	2.60
UK45SL01030	2/15/2008	bis(2-Chloroisopropyl)ether	0.0495	U	NA	40.88
UK45SL01030	2/15/2008	bis(2-Ethylhexyl)phthalate	0.223	J	NA	204.4
UK45SL01030	2/15/2008	Butyl benzyl phthalate	0.0713	U	NA	204,400
UK45SL01030	2/15/2008	Carbazole	0.0974	J	NA	143.08
UK45SL01030	2/15/2008	Chrysene	0.543	J	NA	392
UK45SL01030	2/15/2008	Dibenz(a,h)anthracene	0.153	J	0.29	0.392
UK45SL01030	2/15/2008	Dibenzofuran	0.0451	U	NA	1,022
UK45SL01030	2/15/2008	Diethyl phthalate	0.0883	U	NA	817,600
UK45SL01030	2/15/2008	Dimethyl phthalate	0.0652	U	NA	NA
UK45SL01030	2/15/2008	Di-n-butyl phthalate	0.076	U	NA	102,200
UK45SL01030	2/15/2008	Di-n-octyl phthalate	0.0664	U	NA	NA
UK45SL01030	2/15/2008	Fluoranthene	1.02	U	NA	40,880
UK45SL01030	2/15/2008	Fluorene	0.0543	U	NA	40,880
UK45SL01030	2/15/2008	Hexachlorobenzene	0.0578	U	NA	1.79
UK45SL01030	2/15/2008	Hexachlorobutadiene	0.054	U	NA	36.69
UK45SL01030	2/15/2008	Hexachlorocyclopentadiene	0.417	U	NA	6,132
UK45SL01030	2/15/2008	Hexachloroethane	0.0601	U	NA	204.4
UK45SL01030	2/15/2008	Indeno(1,2,3-cd)pyrene	0.31	J	NA	3.92
UK45SL01030	2/15/2008	Isophorone	0.0617	U	NA	3,012.21
UK45SL01030	2/15/2008	Naphthalene	0.0543	U	NA	20,440
UK45SL01030	2/15/2008	Nitrobenzene	0.0522	U	NA	511
UK45SL01030	2/15/2008	N-Nitrosodi-n-propylamine	0.0408	U	NA	0.41
UK45SL01030	2/15/2008	N-Nitrosodiphenylamine	0.0735	U	NA	584
UK45SL01030	2/15/2008	Pentachlorophenol	0.511	U	NA	23.85
UK45SL01030	2/15/2008	Phenanthrene	0.552	J	NA	NA
UK45SL01030	2/15/2008	Phenol	0.0352	U	NA	306,600

Table 4-72

**Summary of Analytical Results
UK-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK45SL01030	2/15/2008	Pyrene	0.862		NA	30,660
UK45SL01030	2/15/2008	Pyridine	0.0773	U	NA	1,022
UK45SL01030	2/15/2008	4,4'-DDD	0.0023	J	NA	11.92
UK45SL01030	2/15/2008	4,4'-DDE	0.00223	U	NA	8.42
UK45SL01030	2/15/2008	4,4'-DDT	0.00928		NA	8.42
UK45SL01030	2/15/2008	Aldrin	0.00132	U	NA	0.17
UK45SL01030	2/15/2008	alpha-BHC	0.00096	U	NA	0.45
UK45SL01030	2/15/2008	alpha-Chlordane	0.015		NA	NA
UK45SL01030	2/15/2008	beta-BHC	0.00104	U	NA	1.59
UK45SL01030	2/15/2008	Chlordane	0.0108	U	NA	8.18
UK45SL01030	2/15/2008	delta-BHC	0.00185	U	NA	NA
UK45SL01030	2/15/2008	Dieldrin	0.0039	J	NA	0.18
UK45SL01030	2/15/2008	Endosulfan I	0.053		NA	6,132
UK45SL01030	2/15/2008	Endosulfan II	0.0762		NA	6,132
UK45SL01030	2/15/2008	Endosulfan sulfate	0.00882		NA	NA
UK45SL01030	2/15/2008	Endrin	0.00161	U	NA	306.6
UK45SL01030	2/15/2008	Endrin Aldehyde	0.00246	U	NA	NA
UK45SL01030	2/15/2008	Endrin ketone	0.00312	U	NA	NA
UK45SL01030	2/15/2008	gamma-BHC (Lindane)	0.00188	U	NA	2.20
UK45SL01030	2/15/2008	gamma-Chlordane	0.015		NA	NA
UK45SL01030	2/15/2008	Heptachlor	0.00085	U	NA	0.64
UK45SL01030	2/15/2008	Heptachlor epoxide	0.00138	U	NA	0.31
UK45SL01030	2/15/2008	Methoxychlor	0.00209	U	NA	5,110
UK45SL01030	2/15/2008	Toxaphene	0.00297	U	NA	2.60
UK45SL01030	2/15/2008	% Solids	74.1		NA	NA
UK45SL01030	2/15/2008	Aroclor 1016	0.00275	U	NA	40.88
UK45SL01030	2/15/2008	Aroclor 1221	0.013	U	NA	1.43
UK45SL01030	2/15/2008	Aroclor 1232	0.00287	U	NA	1.43
UK45SL01030	2/15/2008	Aroclor 1242	0.00216	U	NA	1.43
UK45SL01030	2/15/2008	Aroclor 1248	0.00486	U	NA	1.43
UK45SL01030	2/15/2008	Aroclor 1254	0.00735	U	NA	1.43
UK45SL01030	2/15/2008	Aroclor 1260	0.00845	U	NA	1.43
UK45SL01030	2/15/2008	PCBs(total)	0.013	U	10	1.43
UK45SL01030	2/15/2008	Aluminum	5280		NA	1,022,000
UK45SL01030	2/15/2008	Antimony	0.27	U	NA	408.8
UK45SL01030	2/15/2008	Arsenic	2.7		NA	1.91
UK45SL01030	2/15/2008	Barium	40.2		NA	204,400
UK45SL01030	2/15/2008	Beryllium	0.027	U	NA	2,044
UK45SL01030	2/15/2008	Cadmium	0.041	U	10	511
UK45SL01030	2/15/2008	Calcium	14,300		NA	NA
UK45SL01030	2/15/2008	Chromium	25.3		143	3,066
UK45SL01030	2/15/2008	Cobalt	5.43		NA	NA
UK45SL01030	2/15/2008	Copper	47.8		NA	40,880
UK45SL01030	2/15/2008	Iron	12,000		NA	715,400
UK45SL01030	2/15/2008	Lead	68.4		NA	NA
UK45SL01030	2/15/2008	Magnesium	6900		NA	NA
UK45SL01030	2/15/2008	Manganese	129		NA	20,440
UK45SL01030	2/15/2008	Mercury	0.12		NA	NA
UK45SL01030	2/15/2008	Nickel	10.6		NA	20,440
UK45SL01030	2/15/2008	Potassium	564		NA	NA

Table 4-72

**Summary of Analytical Results
UK-45 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK45SL01030	2/15/2008	Selenium	0.59	U	NA	5,110
UK45SL01030	2/15/2008	Silver	0.14	U	NA	5,110
UK45SL01030	2/15/2008	Sodium	186		NA	NA
UK45SL01030	2/15/2008	Thallium	0.27	U	NA	71.54
UK45SL01030	2/15/2008	Vanadium	21.6		NA	1,022
UK45SL01030	2/15/2008	Zinc	131		NA	306,600
UK45SL01030	2/15/2008	Cyanide	0.23	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-45 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-73

**Summary of Analytical Results
UK-45 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK45B01060	3/4/2008	c-1,2-Dichloroethene	0.00054	U	0.25	10,220
UK45B01060	3/4/2008	TCE	0.00059	U	0.7	7.15
UK45B01060	3/4/2008	Tetrachloroethene	0.00054	U	1.4	5.30
UK45B01060	3/4/2008	Benzo(a)anthracene	0.0513	U	NA	3.92
UK45B01060	3/4/2008	Benzo(a)pyrene	0.0632	U	0.29	0.392
UK45B01060	3/4/2008	Benzo(b)fluoranthene	0.0504	U	NA	3.92
UK45B01060	3/4/2008	Benzo(k)fluoranthene	0.0924	U	NA	39.2
UK45B01060	3/4/2008	Chrysene	0.0642	U	NA	392
UK45B01060	3/4/2008	Dibenz(a,h)anthracene	0.0677	U	0.29	0.392
UK45B01060	3/4/2008	Indeno(1,2,3-cd)pyrene	0.0561	U	NA	3.92
UK45B01060	3/4/2008	Dieldrin	0.00191	U	NA	0.18
UK45B01060	3/4/2008	% Solids	82.4		NA	NA
UK45B01060	3/4/2008	Aroclor 1016	0.00248	U	NA	40.88
UK45B01060	3/4/2008	Aroclor 1221	0.0117	U	NA	1.43
UK45B01060	3/4/2008	Aroclor 1232	0.00258	U	NA	1.43
UK45B01060	3/4/2008	Aroclor 1242	0.00194	U	NA	1.43
UK45B01060	3/4/2008	Aroclor 1248	0.00437	U	NA	1.43
UK45B01060	3/4/2008	Aroclor 1254	0.00661	U	NA	1.43
UK45B01060	3/4/2008	Aroclor 1260	0.0076	U	NA	1.43
UK45B01060	3/4/2008	PCBs(total)	0.0117	U	10	1.43
UK45B01060	3/4/2008	Arsenic	0.41	U	NA	1.91
UK45B01060	3/4/2008	Cadmium	0.036	U	10	511
UK45B01060	3/4/2008	Chromium	12.3		143	3,066
UK45B01060	3/4/2008	Lead	6.04		NA	NA
UK45B01060	3/4/2008	Mercury	0.14		NA	NA
UK45B01060	3/4/2008	Cyanide	0.18	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-45 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-74

**Summary of Analytical Results
UK-46 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentrations for Industrial Soil
UK46B01070	2/15/2008	c-1,2-Dichloroethene	0.00047	U	0.25	10,220
UK46B01070	2/15/2008	TCE	0.00102	J	0.7	7.15
UK46B01070	2/15/2008	Tetrachloroethene	0.00047	U	1.4	5.30
UK46B01070	2/15/2008	Benzo(a)pyrene	0.054	U	0.29	0.392
UK46B01070	2/15/2008	Dibenz(a,h)anthracene	0.0578	U	0.29	0.392
UK46B01070	2/15/2008	Aroclor 1016	0.00211	U	NA	40.88
UK46B01070	2/15/2008	Aroclor 1221	0.00995	U	NA	1.43
UK46B01070	2/15/2008	Aroclor 1232	0.00221	U	NA	1.43
UK46B01070	2/15/2008	Aroclor 1242	0.00166	U	NA	1.43
UK46B01070	2/15/2008	Aroclor 1248	0.00373	U	NA	1.43
UK46B01070	2/15/2008	Aroclor 1254	0.00565	U	NA	1.43
UK46B01070	2/15/2008	Aroclor 1260	0.00649	U	NA	1.43
UK46B01070	2/15/2008	PCBs(total)	0.00995	U	10	1.43
UK46B01070	2/15/2008	Cadmium	0.031	U	10	511
UK46B01070	2/15/2008	Chromium	7.24		143	3,066
UK46B01070	2/15/2008	Cyanide	0.18	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) UK-46 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-75

**Summary of Analytical Results
UK-54 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK54SL01120	2/26/2008	1,1,1-Trichloroethane	0.00056	U	NA	286,160
UK54SL01120	2/26/2008	1,1,2,2-Tetrachloroethane	0.00064	U	NA	14.31
UK54SL01120	2/26/2008	1,1,2-Trichloroethane	0.00067	U	NA	50.20
UK54SL01120	2/26/2008	1,1-Dichloroethane	0.00061	U	NA	204,400
UK54SL01120	2/26/2008	1,1-Dichloroethene	0.0004	U	NA	51,100
UK54SL01120	2/26/2008	1,2-Dichloroethane	0.00062	U	NA	31.45
UK54SL01120	2/26/2008	1,2-Dichloroethene (total)	0.00049	U	0.25	9,198
UK54SL01120	2/26/2008	1,2-Dichloropropane	0.00063	U	NA	42.08
UK54SL01120	2/26/2008	2-Butanone	0.00238	U	NA	613,200
UK54SL01120	2/26/2008	2-Hexanone	0.00212	U	NA	NA
UK54SL01120	2/26/2008	4-Methyl-2-pentanone	0.0023	U	NA	NA
UK54SL01120	2/26/2008	Acetone	0.00278	U	NA	919,800
UK54SL01120	2/26/2008	Benzene	0.00057	U	NA	52.03
UK54SL01120	2/26/2008	Bromodichloromethane	0.0005	U	NA	46.15
UK54SL01120	2/26/2008	Bromoform	0.00051	U	NA	362.23
UK54SL01120	2/26/2008	Bromomethane	0.00052	U	NA	1430.8
UK54SL01120	2/26/2008	c-1,2-Dichloroethene	0.00048	U	0.25	10,220
UK54SL01120	2/26/2008	c-1,3-Dichloropropene	0.00055	U	NA	NA
UK54SL01120	2/26/2008	Carbon disulfide	0.0005	U	NA	102,200
UK54SL01120	2/26/2008	Carbon Tetrachloride	0.0006	U	NA	22.01
UK54SL01120	2/26/2008	Chlorobenzene	0.00065	U	NA	20,440
UK54SL01120	2/26/2008	Chloroethane	0.00075	U	NA	986.76
UK54SL01120	2/26/2008	Chloroform	0.00063	U	NA	10,220
UK54SL01120	2/26/2008	Chloromethane	0.00054	U	NA	NA
UK54SL01120	2/26/2008	Dibromochloromethane	0.00049	U	NA	34.07
1) All analytical	2/26/2008	Ethylbenzene	0.00056	U	NA	102,200
UK54SL01120	2/26/2008	m,p-xylene	0.00096	U	NA	NA
UK54SL01120	2/26/2008	Methylene Chloride	0.00224	J	NA	381.55
UK54SL01120	2/26/2008	o-xylene	0.00042	U	NA	NA
UK54SL01120	2/26/2008	Styrene	0.00046	U	NA	204,400
UK54SL01120	2/26/2008	t-1,2-Dichloroethene	0.00049	U	NA	20,440
UK54SL01120	2/26/2008	t-1,3-Dichloropropene	0.00045	U	NA	NA
UK54SL01120	2/26/2008	TCE	0.00052	U	0.7	7.15
UK54SL01120	2/26/2008	Tetrachloroethene	0.00048	U	1.4	5.30
UK54SL01120	2/26/2008	Toluene	0.00051	U	NA	81,760
UK54SL01120	2/26/2008	Vinyl Chloride	0.00073	U	NA	3.97
UK54SL01120	2/26/2008	Xylene (Total)	0.00096	U	NA	204,400
UK54SL01120	2/26/2008	1,2,4-Trichlorobenzene	0.0445	U	NA	10,220
UK54SL01120	2/26/2008	1,2-Dichlorobenzene	0.11	J	NA	91,980
UK54SL01120	2/26/2008	1,3-Dichlorobenzene	0.036	U	NA	3,066
UK54SL01120	2/26/2008	1,4-Dichlorobenzene	0.0787	J	NA	119.23
UK54SL01120	2/26/2008	2,4,5-Trichlorophenol	0.0232	U	NA	102,200
UK54SL01120	2/26/2008	2,4,6-Trichlorophenol	0.0403	U	NA	260.15
UK54SL01120	2/26/2008	2,4-Dichlorophenol	0.0351	U	NA	3,066
UK54SL01120	2/26/2008	2,4-Dimethylphenol	0.0448	U	NA	20,440
UK54SL01120	2/26/2008	2,4-Dinitrophenol	0.377	U	NA	2,044
UK54SL01120	2/26/2008	2,4-Dinitrotoluene	0.0642	U	NA	2,044
UK54SL01120	2/26/2008	2,6-Dinitrotoluene	0.0441	U	NA	1,022
UK54SL01120	2/26/2008	2-Chloronaphthalene	0.0516	U	NA	81,760
UK54SL01120	2/26/2008	2-Chlorophenol	0.0516	U	NA	5,110

Table 4-75

**Summary of Analytical Results
UK-54 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK54SL01120	2/26/2008	2-Methylnaphthalene	0.182	J	NA	4,088
UK54SL01120	2/26/2008	2-Methylphenol	0.0383	U	NA	51,100
UK54SL01120	2/26/2008	2-Nitroaniline	0.0558	U	NA	NA
UK54SL01120	2/26/2008	2-Nitrophenol	0.0325	U	NA	NA
UK54SL01120	2/26/2008	3,3'-Dichlorobenzidine	0.0516	U	NA	6.36
UK54SL01120	2/26/2008	3+4-Methylphenol	0.0331	U	NA	5,110
UK54SL01120	2/26/2008	3-Nitroaniline	0.0184	U	NA	NA
UK54SL01120	2/26/2008	4,6-Dinitro-2-methylphenol	0.468	U	NA	NA
UK54SL01120	2/26/2008	4-Bromophenyl phenyl ether	0.0486	U	NA	NA
UK54SL01120	2/26/2008	4-Chloro-3-methylphenol	0.0399	U	NA	NA
UK54SL01120	2/26/2008	4-Chloroaniline	0.0408	U	NA	4,088
UK54SL01120	2/26/2008	4-Chlorophenyl phenyl ether	0.0416	U	NA	NA
UK54SL01120	2/26/2008	4-Nitroaniline	0.105	U	NA	NA
UK54SL01120	2/26/2008	4-Nitrophenol	0.714	U	NA	NA
UK54SL01120	2/26/2008	Acenaphthene	0.0558	J	NA	61,320
UK54SL01120	2/26/2008	Acenaphthylene	0.0368	U	NA	NA
UK54SL01120	2/26/2008	Anthracene	0.0889	J	NA	306,600
UK54SL01120	2/26/2008	Benzo(a)anthracene	0.375	J	NA	3.92
UK54SL01120	2/26/2008	Benzo(a)pyrene	0.311	J	0.29	0.392
UK54SL01120	2/26/2008	Benzo(b)fluoranthene	0.285	J	NA	3.92
UK54SL01120	2/26/2008	Benzo(g,h,i)perylene	0.189	J	NA	NA
UK54SL01120	2/26/2008	Benzo(k)fluoranthene	0.252	J	NA	39.2
UK54SL01120	2/26/2008	bis(2-Chloroethoxy)methane	0.0443	U	NA	NA
UK54SL01120	2/26/2008	bis(2-Chloroethyl)ether	0.0506	U	NA	2.60
UK54SL01120	2/26/2008	bis(2-Chloroisopropyl)ether	0.0393	U	NA	40.88
UK54SL01120	2/26/2008	bis(2-Ethylhexyl)phthalate	0.157	J	NA	204.4
UK54SL01120	2/26/2008	Butyl benzyl phthalate	0.0565	U	NA	204,400
UK54SL01120	2/26/2008	Carbazole	0.0617	U	NA	143.08
UK54SL01120	2/26/2008	Chrysene	0.399	J	NA	392
UK54SL01120	2/26/2008	Dibenz(a,h)anthracene	0.0597	U	0.29	0.392
UK54SL01120	2/26/2008	Dibenzofuran	0.151	J	NA	1,022
UK54SL01120	2/26/2008	Diethyl phthalate	0.07	U	NA	817,600
UK54SL01120	2/26/2008	Dimethyl phthalate	0.0517	U	NA	NA
UK54SL01120	2/26/2008	Di-n-butyl phthalate	0.0603	U	NA	102,200
UK54SL01120	2/26/2008	Di-n-octyl phthalate	0.0527	U	NA	NA
UK54SL01120	2/26/2008	Fluoranthene	0.586	U	NA	40,880
UK54SL01120	2/26/2008	Fluorene	0.043	U	NA	40,880
UK54SL01120	2/26/2008	Hexachlorobenzene	0.0458	U	NA	1.7885
UK54SL01120	2/26/2008	Hexachlorobutadiene	0.0428	U	NA	36.69
UK54SL01120	2/26/2008	Hexachlorocyclopentadiene	0.331	U	NA	6132
UK54SL01120	2/26/2008	Hexachloroethane	0.0476	U	NA	204.4
UK54SL01120	2/26/2008	Indeno(1,2,3-cd)pyrene	0.205	J	NA	3.92
UK54SL01120	2/26/2008	Isophorone	0.0489	U	NA	3,012.21
UK54SL01120	2/26/2008	Naphthalene	0.0633	J	NA	20,440
UK54SL01120	2/26/2008	Nitrobenzene	0.0414	U	NA	511
UK54SL01120	2/26/2008	N-Nitrosodi-n-propylamine	0.0323	U	NA	0.41
UK54SL01120	2/26/2008	N-Nitrosodiphenylamine	0.0584	U	NA	584
UK54SL01120	2/26/2008	Pentachlorophenol	0.406	U	NA	23.85
UK54SL01120	2/26/2008	Phenanthrene	0.318	J	NA	NA
UK54SL01120	2/26/2008	Phenol	0.0279	U	NA	306,600

Table 4-75

**Summary of Analytical Results
UK-54 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK54SL01120	2/26/2008	Pyrene	0.601		NA	30,660
UK54SL01120	2/26/2008	Pyridine	0.0613	U	NA	1,022
UK54SL01120	2/26/2008	4,4'-DDD	0.022		NA	11.92
UK54SL01120	2/26/2008	4,4'-DDE	0.00702		NA	8.42
UK54SL01120	2/26/2008	4,4'-DDT	0.00055	U	NA	8.42
UK54SL01120	2/26/2008	Aldrin	0.00105	U	NA	0.17
UK54SL01120	2/26/2008	alpha-BHC	0.00076	U	NA	0.45
UK54SL01120	2/26/2008	alpha-Chlordane	0.00127	U	NA	NA
UK54SL01120	2/26/2008	beta-BHC	0.00082	U	NA	1.59
UK54SL01120	2/26/2008	Chlordane	0.00857	U	NA	8.18
UK54SL01120	2/26/2008	delta-BHC	0.00147	U	NA	NA
UK54SL01120	2/26/2008	Dieldrin	0.0039	J	NA	0.18
UK54SL01120	2/26/2008	Endosulfan I	0.00115	U	NA	6,132
UK54SL01120	2/26/2008	Endosulfan II	0.00077	U	NA	6,132
UK54SL01120	2/26/2008	Endosulfan sulfate	0.00086	U	NA	NA
UK54SL01120	2/26/2008	Endrin	0.00127	U	NA	306.6
UK54SL01120	2/26/2008	Endrin Aldehyde	0.00195	U	NA	NA
UK54SL01120	2/26/2008	Endrin ketone	0.00247	U	NA	NA
UK54SL01120	2/26/2008	gamma-BHC (Lindane)	0.00149	U	NA	2.20
UK54SL01120	2/26/2008	gamma-Chlordane	0.00211	U	NA	NA
UK54SL01120	2/26/2008	Heptachlor	0.00067	U	NA	0.64
UK54SL01120	2/26/2008	Heptachlor epoxide	0.00109	U	NA	0.31
UK54SL01120	2/26/2008	Methoxychlor	0.00166	U	NA	5110
UK54SL01120	2/26/2008	Toxaphene	0.0236	U	NA	2.60
UK54SL01120	2/26/2008	% Solids	93.4		NA	NA
UK54SL01120	2/26/2008	Aroclor 1016	0.00218	U	NA	40.88
UK54SL01120	2/26/2008	Aroclor 1221	0.0103	U	NA	1.43
UK54SL01120	2/26/2008	Aroclor 1232	0.00228	U	NA	1.43
UK54SL01120	2/26/2008	Aroclor 1242	0.00171	U	NA	1.43
UK54SL01120	2/26/2008	Aroclor 1248	0.00385	U	NA	1.43
UK54SL01120	2/26/2008	Aroclor 1254	0.00584	U	NA	1.43
UK54SL01120	2/26/2008	Aroclor 1260	0.0067	U	NA	1.43
UK54SL01120	2/26/2008	PCBs(total)	0.0103	U	10	1.43
UK54SL01120	2/26/2008	Aluminum	2,110		NA	1,022,000
UK54SL01120	2/26/2008	Antimony	0.21	U	NA	408.8
UK54SL01120	2/26/2008	Arsenic	0.37	U	NA	1.91
UK54SL01120	2/26/2008	Barium	38.1		NA	204,400
UK54SL01120	2/26/2008	Beryllium	0.021	U	NA	2,044
UK54SL01120	2/26/2008	Cadmium	0.032	U	10	511
UK54SL01120	2/26/2008	Calcium	187		NA	NA
UK54SL01120	2/26/2008	Chromium	47.3		143	3,066
UK54SL01120	2/26/2008	Cobalt	0.043	U	NA	NA
UK54SL01120	2/26/2008	Copper	79		NA	40,880
UK54SL01120	2/26/2008	Iron	3,470		NA	715,400
UK54SL01120	2/26/2008	Lead	73.1		NA	NA
UK54SL01120	2/26/2008	Magnesium	510		NA	NA
UK54SL01120	2/26/2008	Manganese	15.3		NA	20,440
UK54SL01120	2/26/2008	Mercury	0.9		NA	NA
UK54SL01120	2/26/2008	Nickel	2.3		NA	20,440
UK54SL01120	2/26/2008	Potassium	5.62	U	NA	NA

Table 4-75

**Summary of Analytical Results
UK-54 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK54SL01120	2/26/2008	Selenium	0.46	U	NA	5,110
UK54SL01120	2/26/2008	Silver	26.9		NA	5,110
UK54SL01120	2/26/2008	Sodium	2.33	U	NA	NA
UK54SL01120	2/26/2008	Thallium	0.21	U	NA	71.54
UK54SL01120	2/26/2008	Vanadium	4.56		NA	1,022
UK54SL01120	2/26/2008	Zinc	24.2		NA	306,600
UK54SL01120	2/26/2008	Cyanide	0.21	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-54 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

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**Summary of Analytical Results
UK-54 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK54B01140	2/27/2008	c-1,2-Dichloroethene	0.00045	U	0.25	10,220
UK54B01140	2/27/2008	TCE	0.00049	U	0.7	7.15
UK54B01140	2/27/2008	Tetrachloroethene	0.00045	U	1.4	5.30
UK54B01140	2/27/2008	Benzo(a)anthracene	0.0429	U	NA	3.92
UK54B01140	2/27/2008	Benzo(a)pyrene	0.0528	U	0.29	0.392
UK54B01140	2/27/2008	Dibenz(a,h)anthracene	0.0566	U	0.29	0.392
UK54B01140	2/27/2008	Aroclor 1016	0.00207	U	NA	40.88
UK54B01140	2/27/2008	Aroclor 1221	0.00974	U	NA	1.43
UK54B01140	2/27/2008	Aroclor 1232	0.00216	U	NA	1.43
UK54B01140	2/27/2008	Aroclor 1242	0.00162	U	NA	1.43
UK54B01140	2/27/2008	Aroclor 1248	0.00365	U	NA	1.43
UK54B01140	2/27/2008	Aroclor 1254	0.00553	U	NA	1.43
UK54B01140	2/27/2008	Aroclor 1260	0.00635	U	NA	1.43
UK54B01140	2/27/2008	PCBs(total)	0.00974	U	10	1.43
UK54B01140	2/27/2008	Aluminum	570		NA	1,022,000
UK54B01140	2/27/2008	Cadmium	0.031	U	10	511
UK54B01140	2/27/2008	Chromium	12.9		143	3,066
UK54B01140	2/27/2008	Copper	7.56		NA	40,880
UK54B01140	2/27/2008	Iron	616		NA	715,400
UK54B01140	2/27/2008	Lead	2.34		NA	NA
UK54B01140	2/27/2008	Mercury	0.049		NA	NA
UK54B01140	2/27/2008	Silver	2.03		NA	5,110
UK54B01140	2/27/2008	Cyanide	0.18	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-54 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-77

**Summary of Analytical Results
UK-55 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK55SL01120	2/26/2008	1,1,1-Trichloroethane	0.00053	U	NA	286,160
UK55SL01120	2/26/2008	1,1,2,2-Tetrachloroethane	0.00061	U	NA	14.31
UK55SL01120	2/26/2008	1,1,2-Trichloroethane	0.00064	U	NA	50.20
UK55SL01120	2/26/2008	1,1-Dichloroethane	0.00058	U	NA	204,400
UK55SL01120	2/26/2008	1,1-Dichloroethene	0.00037	U	NA	51,100
UK55SL01120	2/26/2008	1,2-Dichloroethane	0.00059	U	NA	31.45
UK55SL01120	2/26/2008	1,2-Dichloroethene (total)	0.00046	U	0.25	9,198
UK55SL01120	2/26/2008	1,2-Dichloropropane	0.0006	U	NA	42.08
UK55SL01120	2/26/2008	2-Butanone	0.00224	U	NA	613,200
UK55SL01120	2/26/2008	2-Hexanone	0.002	U	NA	NA
UK55SL01120	2/26/2008	4-Methyl-2-pentanone	0.00217	U	NA	NA
UK55SL01120	2/26/2008	Acetone	0.00263	U	NA	919,800
UK55SL01120	2/26/2008	Benzene	0.00054	U	NA	52.03
UK55SL01120	2/26/2008	Bromodichloromethane	0.00047	U	NA	46.15
UK55SL01120	2/26/2008	Bromoform	0.00048	U	NA	362.23
UK55SL01120	2/26/2008	Bromomethane	0.00049	U	NA	1430.8
UK55SL01120	2/26/2008	c-1,2-Dichloroethene	0.00045	U	0.25	10,220
UK55SL01120	2/26/2008	c-1,3-Dichloropropene	0.00052	U	NA	NA
UK55SL01120	2/26/2008	Carbon disulfide	0.00047	U	NA	102,200
UK55SL01120	2/26/2008	Carbon Tetrachloride	0.00057	U	NA	22.01
UK55SL01120	2/26/2008	Chlorobenzene	0.00062	U	NA	20,440
UK55SL01120	2/26/2008	Chloroethane	0.00071	U	NA	986.76
UK55SL01120	2/26/2008	Chloroform	0.0006	U	NA	10,220
UK55SL01120	2/26/2008	Chloromethane	0.0005	U	NA	NA
UK55SL01120	2/26/2008	Dibromochloromethane	0.00046	U	NA	34.07
UK55SL01120	2/26/2008	Ethylbenzene	0.00053	U	NA	102,200
UK55SL01120	2/26/2008	m,p-xylene	0.00091	U	NA	NA
UK55SL01120	2/26/2008	Methylene Chloride	0.00195	J	NA	381.55
UK55SL01120	2/26/2008	o-xylene	0.00039	U	NA	NA
UK55SL01120	2/26/2008	Styrene	0.00043	U	NA	204,400
UK55SL01120	2/26/2008	t-1,2-Dichloroethene	0.00046	U	NA	20,440
UK55SL01120	2/26/2008	t-1,3-Dichloropropene	0.00042	U	NA	NA
UK55SL01120	2/26/2008	TCE	0.00049	U	0.7	7.15
UK55SL01120	2/26/2008	Tetrachloroethene	0.00045	U	1.4	5.30
UK55SL01120	2/26/2008	Toluene	0.00048	U	NA	81,760
UK55SL01120	2/26/2008	Vinyl Chloride	0.00069	U	NA	3.97
UK55SL01120	2/26/2008	Xylene (Total)	0.00091	U	NA	204,400
UK55SL01120	2/26/2008	1,2,4-Trichlorobenzene	0.0421	U	NA	10,220
UK55SL01120	2/26/2008	1,2-Dichlorobenzene	0.0313	U	NA	91,980
UK55SL01120	2/26/2008	1,3-Dichlorobenzene	0.034	U	NA	3,066
UK55SL01120	2/26/2008	1,4-Dichlorobenzene	0.033	U	NA	119.23
UK55SL01120	2/26/2008	2,4,5-Trichlorophenol	0.022	U	NA	102,200
UK55SL01120	2/26/2008	2,4,6-Trichlorophenol	0.0381	U	NA	260.15
UK55SL01120	2/26/2008	2,4-Dichlorophenol	0.0332	U	NA	3,066
UK55SL01120	2/26/2008	2,4-Dimethylphenol	0.0424	U	NA	20,440
UK55SL01120	2/26/2008	2,4-Dinitrophenol	0.357	U	NA	2,044
UK55SL01120	2/26/2008	2,4-Dinitrotoluene	0.0608	U	NA	2,044
UK55SL01120	2/26/2008	2,6-Dinitrotoluene	0.0417	U	NA	1,022
UK55SL01120	2/26/2008	2-Chloronaphthalene	0.0488	U	NA	81,760
UK55SL01120	2/26/2008	2-Chlorophenol	0.0488	U	NA	5,110

Table 4-77

**Summary of Analytical Results
UK-55 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK55SL01120	2/26/2008	2-Methylnaphthalene	0.0402	U	NA	4,088
UK55SL01120	2/26/2008	2-Methylphenol	0.0363	U	NA	51,100
UK55SL01120	2/26/2008	2-Nitroaniline	0.0528	U	NA	NA
UK55SL01120	2/26/2008	2-Nitrophenol	0.0308	U	NA	NA
UK55SL01120	2/26/2008	3,3'-Dichlorobenzidine	0.0488	U	NA	6.36
UK55SL01120	2/26/2008	3+4-Methylphenol	0.0313	U	NA	5,110
UK55SL01120	2/26/2008	3-Nitroaniline	0.0174	U	NA	NA
UK55SL01120	2/26/2008	4,6-Dinitro-2-methylphenol	0.443	U	NA	NA
UK55SL01120	2/26/2008	4-Bromophenyl phenyl ether	0.046	U	NA	NA
UK55SL01120	2/26/2008	4-Chloro-3-methylphenol	0.0378	U	NA	NA
UK55SL01120	2/26/2008	4-Chloroaniline	0.0386	U	NA	4,088
UK55SL01120	2/26/2008	4-Chlorophenyl phenyl ether	0.0394	U	NA	NA
UK55SL01120	2/26/2008	4-Nitroaniline	0.0991	U	NA	NA
UK55SL01120	2/26/2008	4-Nitrophenol	0.676	U	NA	NA
UK55SL01120	2/26/2008	Acenaphthene	0.0427	U	NA	61,320
UK55SL01120	2/26/2008	Acenaphthylene	0.0349	U	NA	NA
UK55SL01120	2/26/2008	Anthracene	0.0451	U	NA	306,600
UK55SL01120	2/26/2008	Benzo(a)anthracene	0.0429	U	NA	3.92
UK55SL01120	2/26/2008	Benzo(a)pyrene	0.0528	U	0.29	0.392
UK55SL01120	2/26/2008	Benzo(b)fluoranthene	0.042	U	NA	3.92
UK55SL01120	2/26/2008	Benzo(g,h,i)perylene	0.0774	U	NA	NA
UK55SL01120	2/26/2008	Benzo(k)fluoranthene	0.0771	U	NA	39.2
UK55SL01120	2/26/2008	bis(2-Chloroethoxy)methane	0.0419	U	NA	NA
UK55SL01120	2/26/2008	bis(2-Chloroethyl)ether	0.0479	U	NA	2.60
UK55SL01120	2/26/2008	bis(2-Chloroisopropyl)ether	0.0372	U	NA	40.88
UK55SL01120	2/26/2008	bis(2-Ethylhexyl)phthalate	0.0664	U	NA	204.4
UK55SL01120	2/26/2008	Butyl benzyl phthalate	0.0535	U	NA	204,400
UK55SL01120	2/26/2008	Carbazole	0.0584	U	NA	143.08
UK55SL01120	2/26/2008	Chrysene	0.0536	U	NA	392
UK55SL01120	2/26/2008	Dibenz(a,h)anthracene	0.0565	U	0.29	0.392
UK55SL01120	2/26/2008	Dibenzofuran	0.0338	U	NA	1,022
UK55SL01120	2/26/2008	Diethyl phthalate	0.0663	U	NA	817,600
UK55SL01120	2/26/2008	Dimethyl phthalate	0.0489	U	NA	NA
UK55SL01120	2/26/2008	Di-n-butyl phthalate	0.057	U	NA	102,200
UK55SL01120	2/26/2008	Di-n-octyl phthalate	0.0498	U	NA	NA
UK55SL01120	2/26/2008	Fluoranthene	0.0558	U	NA	40,880
UK55SL01120	2/26/2008	Fluorene	0.0407	U	NA	40,880
UK55SL01120	2/26/2008	Hexachlorobenzene	0.0434	U	NA	1.79
UK55SL01120	2/26/2008	Hexachlorobutadiene	0.0405	U	NA	36.69
UK55SL01120	2/26/2008	Hexachlorocyclopentadiene	0.313	U	NA	6,132
UK55SL01120	2/26/2008	Hexachloroethane	0.0451	U	NA	204.4
UK55SL01120	2/26/2008	Indeno(1,2,3-cd)pyrene	0.0468	U	NA	3.92
UK55SL01120	2/26/2008	Isophorone	0.0463	U	NA	3,012.21
UK55SL01120	2/26/2008	Naphthalene	0.0407	U	NA	20,440
UK55SL01120	2/26/2008	Nitrobenzene	0.0392	U	NA	511
UK55SL01120	2/26/2008	N-Nitrosodi-n-propylamine	0.0306	U	NA	0.41
UK55SL01120	2/26/2008	N-Nitrosodiphenylamine	0.0552	U	NA	584
UK55SL01120	2/26/2008	Pentachlorophenol	0.384	U	NA	23.85
UK55SL01120	2/26/2008	Phenanthrene	0.0461	U	NA	NA
UK55SL01120	2/26/2008	Phenol	0.0264	U	NA	306,600

Table 4-77

**Summary of Analytical Results
UK-55 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK55SL01120	2/26/2008	Pyrene	0.0375	U	NA	30,660
UK55SL01120	2/26/2008	Pyridine	0.0581	U	NA	1,022
UK55SL01120	2/26/2008	4,4'-DDD	0.00659		NA	11.92
UK55SL01120	2/26/2008	4,4'-DDE	0.00167	U	NA	8.42
UK55SL01120	2/26/2008	4,4'-DDT	0.00052	U	NA	8.42
UK55SL01120	2/26/2008	Aldrin	0.00099	U	NA	0.17
UK55SL01120	2/26/2008	alpha-BHC	0.00072	U	NA	0.45
UK55SL01120	2/26/2008	alpha-Chlordane	0.00121	U	NA	NA
UK55SL01120	2/26/2008	beta-BHC	0.00078	U	NA	1.59
UK55SL01120	2/26/2008	Chlordane	0.00811	U	NA	8.18
UK55SL01120	2/26/2008	delta-BHC	0.00139	U	NA	NA
UK55SL01120	2/26/2008	Dieldrin	0.00159	U	NA	0.18
UK55SL01120	2/26/2008	Endosulfan I	0.00108	U	NA	6,132
UK55SL01120	2/26/2008	Endosulfan II	0.00073	U	NA	6,132
UK55SL01120	2/26/2008	Endosulfan sulfate	0.00081	U	NA	NA
UK55SL01120	2/26/2008	Endrin	0.00121	U	NA	306.6
UK55SL01120	2/26/2008	Endrin Aldehyde	0.00184	U	NA	NA
UK55SL01120	2/26/2008	Endrin ketone	0.00234	U	NA	NA
UK55SL01120	2/26/2008	gamma-BHC (Lindane)	0.00141	U	NA	2.20
UK55SL01120	2/26/2008	gamma-Chlordane	0.002	U	NA	NA
UK55SL01120	2/26/2008	Heptachlor	0.00064	U	NA	0.64
UK55SL01120	2/26/2008	Heptachlor epoxide	0.00103	U	NA	0.31
UK55SL01120	2/26/2008	Methoxychlor	0.00157	U	NA	5110
UK55SL01120	2/26/2008	Toxaphene	0.0223	U	NA	2.60
UK55SL01120	2/26/2008	% Solids	98.7		NA	NA
UK55SL01120	2/26/2008	Aroclor 1016	0.00207	U	NA	40.88
UK55SL01120	2/26/2008	Aroclor 1221	0.00973	U	NA	1.43
UK55SL01120	2/26/2008	Aroclor 1232	0.00216	U	NA	1.43
UK55SL01120	2/26/2008	Aroclor 1242	0.00162	U	NA	1.43
UK55SL01120	2/26/2008	Aroclor 1248	0.00365	U	NA	1.43
UK55SL01120	2/26/2008	Aroclor 1254	0.00552	U	NA	1.43
UK55SL01120	2/26/2008	Aroclor 1260	0.00634	U	NA	1.43
UK55SL01120	2/26/2008	PCBs(total)	0.00973	U	10	1.43
UK55SL01120	2/26/2008	Aluminum	975		NA	1,022,000
UK55SL01120	2/26/2008	Antimony	0.2	U	NA	408.8
UK55SL01120	2/26/2008	Arsenic	0.35	U	NA	1.91
UK55SL01120	2/26/2008	Barium	19.6		NA	204,400
UK55SL01120	2/26/2008	Beryllium	0.02	U	NA	2,044
UK55SL01120	2/26/2008	Cadmium	3.34		10	511
UK55SL01120	2/26/2008	Calcium	2.65	U	NA	NA
UK55SL01120	2/26/2008	Chromium	14.9		143	3,066
UK55SL01120	2/26/2008	Cobalt	0.041	U	NA	NA
UK55SL01120	2/26/2008	Copper	4.57		NA	40,880
UK55SL01120	2/26/2008	Iron	2,520		NA	715,400
UK55SL01120	2/26/2008	Lead	5.56		NA	NA
UK55SL01120	2/26/2008	Magnesium	231		NA	NA
UK55SL01120	2/26/2008	Manganese	13.4		NA	20,440
UK55SL01120	2/26/2008	Mercury	0.059		NA	NA
UK55SL01120	2/26/2008	Nickel	0.051	U	NA	20,440
UK55SL01120	2/26/2008	Potassium	5.34	U	NA	NA

Table 4-77

**Summary of Analytical Results
UK-55 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK55SL01120	2/26/2008	Selenium	0.44	U	NA	5,110
UK55SL01120	2/26/2008	Silver	3.48		NA	5,110
UK55SL01120	2/26/2008	Sodium	2.22	U	NA	NA
UK55SL01120	2/26/2008	Thallium	0.2	U	NA	71.54
UK55SL01120	2/26/2008	Vanadium	0.051	U	NA	1,022
UK55SL01120	2/26/2008	Zinc	50.4		NA	306,600
UK55SL01120	2/26/2008	Cyanide	0.18	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-55 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-78

**Summary of Analytical Results
UK-55 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK55B01140	2/27/2008	c-1,2-Dichloroethene	0.00046	U	0.25	10,220
UK55B01140	2/27/2008	TCE	0.0005	U	0.7	7.15
UK55B01140	2/27/2008	Tetrachloroethene	0.00046	U	1.4	5.30
UK55B01140	2/27/2008	Benzo(a)pyrene	0.0533	U	0.29	0.392
UK55B01140	2/27/2008	Dibenz(a,h)anthracene	0.0571	U	0.29	0.392
UK55B01140	2/27/2008	Aroclor 1016	0.00209	U	NA	40.88
UK55B01140	2/27/2008	Aroclor 1221	0.00983	U	NA	1.43
UK55B01140	2/27/2008	Aroclor 1232	0.00218	U	NA	1.43
UK55B01140	2/27/2008	Aroclor 1242	0.00164	U	NA	1.43
UK55B01140	2/27/2008	Aroclor 1248	0.00368	U	NA	1.43
UK55B01140	2/27/2008	Aroclor 1254	0.00558	U	NA	1.43
UK55B01140	2/27/2008	Aroclor 1260	0.00641	U	NA	1.43
UK55B01140	2/27/2008	PCBs(total)	0.00983	U	10	1.43
UK55B01140	2/27/2008	Cadmium	0.03	U	10	511
UK55B01140	2/27/2008	Chromium	6.68		143	3,066
UK55B01140	2/27/2008	Iron	821		NA	715,400
UK55B01140	2/27/2008	Zinc	9.49		NA	306,600
UK55B01140	2/27/2008	Cyanide	0.16	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-55 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-79

**Summary of Analytical Results
UK-56 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK56SL01120	2/26/2008	1,1,1-Trichloroethane	0.00053	U	NA	286,160
UK56SL01120	2/26/2008	1,1,2,2-Tetrachloroethane	0.00061	U	NA	14.31
UK56SL01120	2/26/2008	1,1,2-Trichloroethane	0.00064	U	NA	50.20
UK56SL01120	2/26/2008	1,1-Dichloroethane	0.00058	U	NA	204,400
UK56SL01120	2/26/2008	1,1-Dichloroethene	0.00038	U	NA	51,100
UK56SL01120	2/26/2008	1,2-Dichloroethane	0.00059	U	NA	31.45
UK56SL01120	2/26/2008	1,2-Dichloroethene (total)	0.00047	U	0.25	9,198
UK56SL01120	2/26/2008	1,2-Dichloropropane	0.0006	U	NA	42.08
UK56SL01120	2/26/2008	2-Butanone	0.00226	U	NA	613,200
UK56SL01120	2/26/2008	2-Hexanone	0.00202	U	NA	NA
UK56SL01120	2/26/2008	4-Methyl-2-pentanone	0.00219	U	NA	NA
UK56SL01120	2/26/2008	Acetone	0.00265	U	NA	919,800
UK56SL01120	2/26/2008	Benzene	0.00054	U	NA	52.03
UK56SL01120	2/26/2008	Bromodichloromethane	0.00048	U	NA	46.15
UK56SL01120	2/26/2008	Bromoform	0.00049	U	NA	362.23
UK56SL01120	2/26/2008	Bromomethane	0.0005	U	NA	1,430.80
UK56SL01120	2/26/2008	c-1,2-Dichloroethene	0.00046	U	0.25	10,220
UK56SL01120	2/26/2008	c-1,3-Dichloropropene	0.00052	U	NA	NA
UK56SL01120	2/26/2008	Carbon disulfide	0.00048	U	NA	102,200
UK56SL01120	2/26/2008	Carbon Tetrachloride	0.00057	U	NA	22.01
1) All analytical	2/26/2008	Chlorobenzene	0.00062	U	NA	20,440
UK56SL01120	2/26/2008	Chloroethane	0.00071	U	NA	986.76
UK56SL01120	2/26/2008	Chloroform	0.0006	U	NA	10,220
UK56SL01120	2/26/2008	Chloromethane	0.00051	U	NA	NA
UK56SL01120	2/26/2008	Dibromochloromethane	0.00047	U	NA	34.07
6) NA - not appl	2/26/2008	Ethylbenzene	0.00053	U	NA	102,200
UK56SL01120	2/26/2008	Methylene Chloride	0.00223	J	NA	381.55
UK56SL01120	2/26/2008	o-xylene	0.0004	U	NA	NA
UK56SL01120	2/26/2008	Styrene	0.00044	U	NA	204,400
UK56SL01120	2/26/2008	t-1,2-Dichloroethene	0.00047	U	NA	20,440
UK56SL01120	2/26/2008	t-1,3-Dichloropropene	0.00043	U	NA	NA
UK56SL01120	2/26/2008	TCE	0.0005	U	0.7	7.15
UK56SL01120	2/26/2008	Tetrachloroethene	0.00046	U	1.4	5.30
UK56SL01120	2/26/2008	Toluene	0.00049	U	NA	81,760
UK56SL01120	2/26/2008	Vinyl Chloride	0.00069	U	NA	3.97
UK56SL01120	2/26/2008	Xylene (Total)	0.00092	U	NA	204,400
UK56SL01120	2/26/2008	1,2,4-Trichlorobenzene	0.0423	U	NA	10,220
UK56SL01120	2/26/2008	1,2-Dichlorobenzene	0.0314	U	NA	91,980
UK56SL01120	2/26/2008	1,3-Dichlorobenzene	0.0341	U	NA	3,066
UK56SL01120	2/26/2008	1,4-Dichlorobenzene	0.0331	U	NA	119.23
UK56SL01120	2/26/2008	2,4,5-Trichlorophenol	0.0221	U	NA	102,200
UK56SL01120	2/26/2008	2,4,6-Trichlorophenol	0.0382	U	NA	260.15
UK56SL01120	2/26/2008	2,4-Dichlorophenol	0.0333	U	NA	3,066
UK56SL01120	2/26/2008	2,4-Dimethylphenol	0.0425	U	NA	20,440
UK56SL01120	2/26/2008	2,4-Dinitrophenol	0.358	U	NA	2,044
UK56SL01120	2/26/2008	2,4-Dinitrotoluene	0.061	U	NA	2,044
UK56SL01120	2/26/2008	2,6-Dinitrotoluene	0.0419	U	NA	1,022
UK56SL01120	2/26/2008	2-Chloronaphthalene	0.049	U	NA	81,760
UK56SL01120	2/26/2008	2-Chlorophenol	0.049	U	NA	5,110
UK56SL01120	2/26/2008	2-Methylnaphthalene	0.0403	U	NA	4,088

Table 4-79

**Summary of Analytical Results
UK-56 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK56SL01120	2/26/2008	2-Methylphenol	0.0364	U	NA	51,100
UK56SL01120	2/26/2008	2-Nitroaniline	0.0529	U	NA	NA
UK56SL01120	2/26/2008	2-Nitrophenol	0.0309	U	NA	NA
UK56SL01120	2/26/2008	3,3'-Dichlorobenzidine	0.049	U	NA	6.36
UK56SL01120	2/26/2008	3+4-Methylphenol	0.0314	U	NA	5,110
UK56SL01120	2/26/2008	3-Nitroaniline	0.0175	U	NA	NA
UK56SL01120	2/26/2008	4,6-Dinitro-2-methylphenol	0.444	U	NA	NA
UK56SL01120	2/26/2008	4-Bromophenyl phenyl ether	0.0461	U	NA	NA
UK56SL01120	2/26/2008	4-Chloro-3-methylphenol	0.0379	U	NA	NA
UK56SL01120	2/26/2008	4-Chloroaniline	0.0387	U	NA	4,088
UK56SL01120	2/26/2008	4-Chlorophenyl phenyl ether	0.0395	U	NA	NA
UK56SL01120	2/26/2008	4-Nitroaniline	0.0994	U	NA	NA
UK56SL01120	2/26/2008	4-Nitrophenol	0.678	U	NA	NA
UK56SL01120	2/26/2008	Acenaphthene	0.0428	U	NA	61,320
UK56SL01120	2/26/2008	Acenaphthylene	0.035	U	NA	NA
UK56SL01120	2/26/2008	Anthracene	0.0452	U	NA	306,600
UK56SL01120	2/26/2008	Benzo(a)anthracene	0.043	U	NA	3.92
UK56SL01120	2/26/2008	Benzo(a)pyrene	0.0529	U	0.29	0.392
UK56SL01120	2/26/2008	Benzo(b)fluoranthene	0.0422	U	NA	3.92
UK56SL01120	2/26/2008	Benzo(g,h,i)perylene	0.0776	U	NA	NA
UK56SL01120	2/26/2008	Benzo(k)fluoranthene	0.0773	U	NA	39.2
UK56SL01120	2/26/2008	bis(2-Chloroethoxy)methane	0.0421	U	NA	NA
UK56SL01120	2/26/2008	bis(2-Chloroethyl)ether	0.0481	U	NA	2.60
UK56SL01120	2/26/2008	bis(2-Chloroisopropyl)ether	0.0373	U	NA	40.88
UK56SL01120	2/26/2008	bis(2-Ethylhexyl)phthalate	0.0666	U	NA	204.4
UK56SL01120	2/26/2008	Butyl benzyl phthalate	0.0537	U	NA	204,400
UK56SL01120	2/26/2008	Carbazole	0.0585	U	NA	143.08
UK56SL01120	2/26/2008	Chrysene	0.0784	J	NA	392
UK56SL01120	2/26/2008	Dibenz(a,h)anthracene	0.0567	U	0.29	0.392
UK56SL01120	2/26/2008	Dibenzofuran	0.0339	U	NA	1,022
UK56SL01120	2/26/2008	Diethyl phthalate	0.0665	U	NA	817,600
UK56SL01120	2/26/2008	Dimethyl phthalate	0.0491	U	NA	NA
UK56SL01120	2/26/2008	Di-n-butyl phthalate	0.0572	U	NA	102,200
UK56SL01120	2/26/2008	Di-n-octyl phthalate	0.05	U	NA	NA
UK56SL01120	2/26/2008	Fluoranthene	0.0688	J	NA	40,880
UK56SL01120	2/26/2008	Fluorene	0.0409	U	NA	40,880
UK56SL01120	2/26/2008	Hexachlorobenzene	0.0435	U	NA	1.79
UK56SL01120	2/26/2008	Hexachlorobutadiene	0.0407	U	NA	36.69
UK56SL01120	2/26/2008	Hexachlorocyclopentadiene	0.314	U	NA	6132
UK56SL01120	2/26/2008	Hexachloroethane	0.0452	U	NA	204.4
UK56SL01120	2/26/2008	Indeno(1,2,3-cd)pyrene	0.047	U	NA	3.92
UK56SL01120	2/26/2008	Isophorone	0.0464	U	NA	3,012.21
UK56SL01120	2/26/2008	Naphthalene	0.0409	U	NA	20,440
UK56SL01120	2/26/2008	Nitrobenzene	0.0393	U	NA	511
UK56SL01120	2/26/2008	N-Nitrosodi-n-propylamine	0.0307	U	NA	0.41
UK56SL01120	2/26/2008	N-Nitrosodiphenylamine	0.0554	U	NA	584
UK56SL01120	2/26/2008	Pentachlorophenol	0.385	U	NA	23.85
UK56SL01120	2/26/2008	Phenanthrene	0.0603	J	NA	NA
UK56SL01120	2/26/2008	Phenol	0.0265	U	NA	306,600
UK56SL01120	2/26/2008	Pyrene	0.0591	J	NA	30,660

Table 4-79

**Summary of Analytical Results
UK-56 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK56SL01120	2/26/2008	Pyridine	0.0582	U	NA	1,022
UK56SL01120	2/26/2008	4,4'-DDD	0.00139	U	NA	11.92
UK56SL01120	2/26/2008	4,4'-DDE	0.00168	U	NA	8.42
UK56SL01120	2/26/2008	4,4'-DDT	0.00052	U	NA	8.42
UK56SL01120	2/26/2008	Aldrin	0.001	U	NA	0.17
UK56SL01120	2/26/2008	alpha-BHC	0.00072	U	NA	0.45
UK56SL01120	2/26/2008	alpha-Chlordane	0.00121	U	NA	NA
UK56SL01120	2/26/2008	beta-BHC	0.00078	U	NA	1.59
UK56SL01120	2/26/2008	Chlordane	0.00813	U	NA	8.18
UK56SL01120	2/26/2008	delta-BHC	0.00139	U	NA	NA
UK56SL01120	2/26/2008	Dieldrin	0.0016	U	NA	0.18
UK56SL01120	2/26/2008	Endosulfan I	0.00109	U	NA	6,132
UK56SL01120	2/26/2008	Endosulfan II	0.00073	U	NA	6,132
UK56SL01120	2/26/2008	Endosulfan sulfate	0.00081	U	NA	NA
UK56SL01120	2/26/2008	Endrin	0.00121	U	NA	306.6
UK56SL01120	2/26/2008	Endrin Aldehyde	0.00185	U	NA	NA
UK56SL01120	2/26/2008	Endrin ketone	0.00235	U	NA	NA
UK56SL01120	2/26/2008	gamma-BHC (Lindane)	0.00141	U	NA	2.20
UK56SL01120	2/26/2008	gamma-Chlordane	0.002	U	NA	NA
UK56SL01120	2/26/2008	Heptachlor	0.00064	U	NA	0.64
UK56SL01120	2/26/2008	Heptachlor epoxide	0.00104	U	NA	0.31
UK56SL01120	2/26/2008	Methoxychlor	0.00158	U	NA	5110
UK56SL01120	2/26/2008	Toxaphene	0.0224	U	NA	2.60
UK56SL01120	2/26/2008	% Solids	98.4		NA	NA
UK56SL01120	2/26/2008	Aroclor 1016	0.00207	U	NA	40.88
UK56SL01120	2/26/2008	Aroclor 1221	0.00976	U	NA	1.43
UK56SL01120	2/26/2008	Aroclor 1232	0.00216	U	NA	1.43
UK56SL01120	2/26/2008	Aroclor 1242	0.00163	U	NA	1.43
UK56SL01120	2/26/2008	Aroclor 1248	0.00366	U	NA	1.43
UK56SL01120	2/26/2008	Aroclor 1254	0.0692		NA	1.43
UK56SL01120	2/26/2008	Aroclor 1260	0.00636	U	NA	1.43
UK56SL01120	2/26/2008	PCBs(total)	0.0692		10	1.43
UK56SL01120	2/26/2008	Aluminum	2,860		NA	1,022,000
UK56SL01120	2/26/2008	Antimony	0.2	U	NA	408.8
UK56SL01120	2/26/2008	Arsenic	0.34	U	NA	1.91
UK56SL01120	2/26/2008	Barium	24.6		NA	204,400
UK56SL01120	2/26/2008	Beryllium	0.02	U	NA	2,044
UK56SL01120	2/26/2008	Cadmium	0.03	U	10	511
UK56SL01120	2/26/2008	Calcium	236		NA	NA
UK56SL01120	2/26/2008	Chromium	15.7		143	3,066
UK56SL01120	2/26/2008	Cobalt	0.04	U	NA	NA
UK56SL01120	2/26/2008	Copper	7.32		NA	40,880
UK56SL01120	2/26/2008	Iron	6,730		NA	715,400
UK56SL01120	2/26/2008	Lead	12.4		NA	NA
UK56SL01120	2/26/2008	Magnesium	492		NA	NA
UK56SL01120	2/26/2008	Manganese	19.4		NA	20,440
UK56SL01120	2/26/2008	Mercury	0.041		NA	NA
UK56SL01120	2/26/2008	Nickel	2.18		NA	20,440
UK56SL01120	2/26/2008	Potassium	5.22	U	NA	NA
UK56SL01120	2/26/2008	Selenium	0.43	U	NA	5,110

Table 4-79

**Summary of Analytical Results
UK-56 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK56SL01120	2/26/2008	Silver	10.3		NA	5,110
UK56SL01120	2/26/2008	Sodium	2.17	U	NA	NA
UK56SL01120	2/26/2008	Thallium	0.2	U	NA	71.54
UK56SL01120	2/26/2008	Vanadium	12.4		NA	1,022
UK56SL01120	2/26/2008	Zinc	13.9		NA	306,600
UK56SL01120	2/26/2008	Cyanide	0.19	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-56 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-80

**Summary of Analytical Results
UK-56 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK56B01140	2/26/2008	c-1,2-Dichloroethene	0.00047	U	0.25	10,220
UK56B01140	2/26/2008	TCE	0.00051	U	0.7	7.15
UK56B01140	2/26/2008	Tetrachloroethene	0.00047	U	1.4	5.30
UK56B01140	2/26/2008	Benzo(a)pyrene	0.0553	J	0.29	0.392
UK56B01140	2/26/2008	Dibenz(a,h)anthracene	0.0582	U	0.29	0.392
UK56B01140	2/26/2008	Aroclor 1016	0.00213	U	NA	40.88
UK56B01140	2/26/2008	Aroclor 1221	0.01	U	NA	1.43
UK56B01140	2/26/2008	Aroclor 1232	0.00222	U	NA	1.43
UK56B01140	2/26/2008	Aroclor 1242	0.00167	U	NA	1.43
UK56B01140	2/26/2008	Aroclor 1248	0.00376	U	NA	1.43
UK56B01140	2/26/2008	Aroclor 1254	0.00569	U	NA	1.43
UK56B01140	2/26/2008	Aroclor 1260	0.00653	U	NA	1.43
UK56B01140	2/26/2008	PCBs(total)	0.01	U	10	1.43
UK56B01140	2/26/2008	Aluminum	3,030		NA	1,022,000
UK56B01140	2/26/2008	Cadmium	0.031	U	10	511
UK56B01140	2/26/2008	Chromium	4.39		143	3,066
UK56B01140	2/26/2008	Iron	7,560		NA	715,400
UK56B01140	2/26/2008	Cyanide	0.19	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) UK-56 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-81

**Summary of Analytical Results
UK-57 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK57SL01120	2/26/2008	1,1,1-Trichloroethane	0.00054	U	NA	286,160
UK57SL01120	2/26/2008	1,1,2,2-Tetrachloroethane	0.00062	U	NA	14
UK57SL01120	2/26/2008	1,1,2-Trichloroethane	0.00065	U	NA	50
UK57SL01120	2/26/2008	1,1-Dichloroethane	0.00059	U	NA	204,400
UK57SL01120	2/26/2008	1,1-Dichloroethene	0.00038	U	NA	51,100
UK57SL01120	2/26/2008	1,2-Dichloroethane	0.0006	U	NA	31
UK57SL01120	2/26/2008	1,2-Dichloroethene (total)	0.00047	U	0.25	9,198
UK57SL01120	2/26/2008	1,2-Dichloropropane	0.00061	U	NA	42
UK57SL01120	2/26/2008	2-Butanone	0.00229	U	NA	613,200
UK57SL01120	2/26/2008	2-Hexanone	0.00204	U	NA	NA
UK57SL01120	2/26/2008	4-Methyl-2-pentanone	0.00221	U	NA	NA
UK57SL01120	2/26/2008	Acetone	0.00268	U	NA	919,800
UK57SL01120	2/26/2008	Benzene	0.00055	U	NA	52
UK57SL01120	2/26/2008	Bromodichloromethane	0.00048	U	NA	46
UK57SL01120	2/26/2008	Bromoform	0.00049	U	NA	362
UK57SL01120	2/26/2008	Bromomethane	0.0005	U	NA	1430.8
UK57SL01120	2/26/2008	c-1,2-Dichloroethene	0.00046	U	0.25	10,220
UK57SL01120	2/26/2008	c-1,3-Dichloropropene	0.00053	U	NA	NA
UK57SL01120	2/26/2008	Carbon disulfide	0.00048	U	NA	102,200
UK57SL01120	2/26/2008	Carbon Tetrachloride	0.00058	U	NA	22
UK57SL01120	2/26/2008	Chlorobenzene	0.00063	U	NA	20,440
UK57SL01120	2/26/2008	Chloroethane	0.00072	U	NA	987
UK57SL01120	2/26/2008	Chloroform	0.00061	U	NA	10,220
UK57SL01120	2/26/2008	Chloromethane	0.00051	U	NA	NA
UK57SL01120	2/26/2008	Dibromochloromethane	0.00047	U	NA	34
UK57SL01120	2/26/2008	Ethylbenzene	0.00054	U	NA	102,200
UK57SL01120	2/26/2008	m,p-xylene	0.00093	U	NA	NA
UK57SL01120	2/26/2008	Methylene Chloride	0.00208	J	NA	382
UK57SL01120	2/26/2008	o-xylene	0.0004	U	NA	NA
UK57SL01120	2/26/2008	Styrene	0.00044	U	NA	204,400
UK57SL01120	2/26/2008	t-1,2-Dichloroethene	0.00047	U	NA	20,440
UK57SL01120	2/26/2008	t-1,3-Dichloropropene	0.00043	U	NA	NA
UK57SL01120	2/26/2008	TCE	0.0005	U	0.7	7
UK57SL01120	2/26/2008	Tetrachloroethene	0.00046	U	1.4	5
UK57SL01120	2/26/2008	Toluene	0.00049	U	NA	81,760
UK57SL01120	2/26/2008	Vinyl Chloride	0.0007	U	NA	4
UK57SL01120	2/26/2008	Xylene (Total)	0.00093	U	NA	204,400
UK57SL01120	2/26/2008	1,2,4-Trichlorobenzene	0.0429	U	NA	10,220
UK57SL01120	2/26/2008	1,2-Dichlorobenzene	0.0319	U	NA	91,980
UK57SL01120	2/26/2008	1,3-Dichlorobenzene	0.0347	U	NA	3,066
UK57SL01120	2/26/2008	1,4-Dichlorobenzene	0.0336	U	NA	119
UK57SL01120	2/26/2008	2,4,5-Trichlorophenol	0.0224	U	NA	102,200
UK57SL01120	2/26/2008	2,4,6-Trichlorophenol	0.0388	U	NA	260
UK57SL01120	2/26/2008	2,4-Dichlorophenol	0.0338	U	NA	3,066
UK57SL01120	2/26/2008	2,4-Dimethylphenol	0.0431	U	NA	20,440
UK57SL01120	2/26/2008	2,4-Dinitrophenol	0.363	U	NA	2,044
UK57SL01120	2/26/2008	2,4-Dinitrotoluene	0.0619	U	NA	2,044
UK57SL01120	2/26/2008	2,6-Dinitrotoluene	0.0425	U	NA	1,022
UK57SL01120	2/26/2008	2-Chloronaphthalene	0.0497	U	NA	81,760
UK57SL01120	2/26/2008	2-Chlorophenol	0.0497	U	NA	5,110

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**Summary of Analytical Results
UK-57 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK57SL01120	2/26/2008	2-Methylnaphthalene	0.0671	J	NA	4,088
UK57SL01120	2/26/2008	2-Methylphenol	0.0369	U	NA	51,100
UK57SL01120	2/26/2008	2-Nitroaniline	0.0538	U	NA	NA
UK57SL01120	2/26/2008	2-Nitrophenol	0.0314	U	NA	NA
UK57SL01120	2/26/2008	3,3'-Dichlorobenzidine	0.0497	U	NA	6
UK57SL01120	2/26/2008	3+4-Methylphenol	0.0319	U	NA	5,110
UK57SL01120	2/26/2008	3-Nitroaniline	0.0178	U	NA	NA
UK57SL01120	2/26/2008	4,6-Dinitro-2-methylphenol	0.451	U	NA	NA
UK57SL01120	2/26/2008	4-Bromophenyl phenyl ether	0.0469	U	NA	NA
UK57SL01120	2/26/2008	4-Chloro-3-methylphenol	0.0385	U	NA	NA
UK57SL01120	2/26/2008	4-Chloroaniline	0.0393	U	NA	4,088
UK57SL01120	2/26/2008	4-Chlorophenyl phenyl ether	0.0401	U	NA	NA
UK57SL01120	2/26/2008	4-Nitroaniline	0.101	U	NA	NA
UK57SL01120	2/26/2008	4-Nitrophenol	0.688	U	NA	NA
UK57SL01120	2/26/2008	Acenaphthene	0.0434	U	NA	61,320
UK57SL01120	2/26/2008	Acenaphthylene	0.0355	U	NA	NA
UK57SL01120	2/26/2008	Anthracene	0.0459	U	NA	306,600
UK57SL01120	2/26/2008	Benzo(a)anthracene	0.0437	U	NA	3.92
UK57SL01120	2/26/2008	Benzo(a)pyrene	0.0538	U	0.29	0.392
UK57SL01120	2/26/2008	Benzo(b)fluoranthene	0.0428	U	NA	3.92
UK57SL01120	2/26/2008	Benzo(g,h,i)perylene	0.0788	U	NA	NA
UK57SL01120	2/26/2008	Benzo(k)fluoranthene	0.0785	U	NA	39.2
UK57SL01120	2/26/2008	bis(2-Chloroethoxy)methane	0.0427	U	NA	NA
UK57SL01120	2/26/2008	bis(2-Chloroethyl)ether	0.0488	U	NA	3
UK57SL01120	2/26/2008	bis(2-Chloroisopropyl)ether	0.0379	U	NA	40.88
UK57SL01120	2/26/2008	bis(2-Ethylhexyl)phthalate	0.0676	U	NA	204.4
UK57SL01120	2/26/2008	Butyl benzyl phthalate	0.0545	U	NA	204,400
UK57SL01120	2/26/2008	Carbazole	0.0594	U	NA	143.08
UK57SL01120	2/26/2008	Chrysene	0.0546	U	NA	392
UK57SL01120	2/26/2008	Dibenz(a,h)anthracene	0.0576	U	0.29	0.392
UK57SL01120	2/26/2008	Dibenzofuran	0.0345	U	NA	1,022
UK57SL01120	2/26/2008	Diethyl phthalate	0.0675	U	NA	817,600
UK57SL01120	2/26/2008	Dimethyl phthalate	0.0498	U	NA	NA
UK57SL01120	2/26/2008	Di-n-butyl phthalate	0.0581	U	NA	102,200
UK57SL01120	2/26/2008	Di-n-octyl phthalate	0.0508	U	NA	NA
UK57SL01120	2/26/2008	Fluoranthene	0.0569	U	NA	40,880
UK57SL01120	2/26/2008	Fluorene	0.0415	U	NA	40,880
UK57SL01120	2/26/2008	Hexachlorobenzene	0.0442	U	NA	1.7885
UK57SL01120	2/26/2008	Hexachlorobutadiene	0.0413	U	NA	37
UK57SL01120	2/26/2008	Hexachlorocyclopentadiene	0.319	U	NA	6,132
UK57SL01120	2/26/2008	Hexachloroethane	0.0459	U	NA	204.4
UK57SL01120	2/26/2008	Indeno(1,2,3-cd)pyrene	0.0477	U	NA	3.92
UK57SL01120	2/26/2008	Isophorone	0.0472	U	NA	3,012
UK57SL01120	2/26/2008	Naphthalene	0.0415	U	NA	20,440
UK57SL01120	2/26/2008	Nitrobenzene	0.0399	U	NA	511
UK57SL01120	2/26/2008	N-Nitrosodi-n-propylamine	0.0312	U	NA	0
UK57SL01120	2/26/2008	N-Nitrosodiphenylamine	0.0562	U	NA	584
UK57SL01120	2/26/2008	Pentachlorophenol	0.391	U	NA	23.85
UK57SL01120	2/26/2008	Phenanthrene	0.047	U	NA	NA
UK57SL01120	2/26/2008	Phenol	0.0269	U	NA	306,600

Table 4-81

**Summary of Analytical Results
UK-57 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK57SL01120	2/26/2008	Pyrene	0.0382	U	NA	30,660
UK57SL01120	2/26/2008	Pyridine	0.0591	U	NA	1,022
UK57SL01120	2/26/2008	4,4'-DDD	0.00141	U	NA	11.92
UK57SL01120	2/26/2008	4,4'-DDE	0.0017	U	NA	8.42
UK57SL01120	2/26/2008	4,4'-DDT	0.00053	U	NA	8.42
UK57SL01120	2/26/2008	Aldrin	0.00101	U	NA	0.17
UK57SL01120	2/26/2008	alpha-BHC	0.00073	U	NA	0.45
UK57SL01120	2/26/2008	alpha-Chlordane	0.00123	U	NA	NA
UK57SL01120	2/26/2008	beta-BHC	0.00079	U	NA	1.59
UK57SL01120	2/26/2008	Chlordane	0.00826	U	NA	8.18
UK57SL01120	2/26/2008	delta-BHC	0.00141	U	NA	NA
UK57SL01120	2/26/2008	Dieldrin	0.00162	U	NA	0.18
UK57SL01120	2/26/2008	Endosulfan I	0.0011	U	NA	6,132
UK57SL01120	2/26/2008	Endosulfan II	0.00074	U	NA	6,132
UK57SL01120	2/26/2008	Endosulfan sulfate	0.00083	U	NA	NA
UK57SL01120	2/26/2008	Endrin	0.00123	U	NA	306.6
UK57SL01120	2/26/2008	Endrin Aldehyde	0.00188	U	NA	NA
UK57SL01120	2/26/2008	Endrin ketone	0.00238	U	NA	NA
UK57SL01120	2/26/2008	gamma-BHC (Lindane)	0.00143	U	NA	2.20
UK57SL01120	2/26/2008	gamma-Chlordane	0.00203	U	NA	NA
UK57SL01120	2/26/2008	Heptachlor	0.00065	U	NA	0.64
UK57SL01120	2/26/2008	Heptachlor epoxide	0.00105	U	NA	0.31
UK57SL01120	2/26/2008	Methoxychlor	0.0016	U	NA	5110
UK57SL01120	2/26/2008	Toxaphene	0.0227	U	NA	2.60
UK57SL01120	2/26/2008	% Solids	96.9		NA	NA
UK57SL01120	2/26/2008	Aroclor 1016	0.00211	U	NA	40.88
UK57SL01120	2/26/2008	Aroclor 1221	0.00991	U	NA	1.43
UK57SL01120	2/26/2008	Aroclor 1232	0.0022	U	NA	1.43
UK57SL01120	2/26/2008	Aroclor 1242	0.00165	U	NA	1.43
UK57SL01120	2/26/2008	Aroclor 1248	0.00372	U	NA	1.43
UK57SL01120	2/26/2008	Aroclor 1254	0.0613		NA	1.43
UK57SL01120	2/26/2008	Aroclor 1260	0.00646	U	NA	1.43
UK57SL01120	2/26/2008	PCBs(total)	0.0613		10	1.43
UK57SL01120	2/26/2008	Aluminum	1,360		NA	1,022,000
UK57SL01120	2/26/2008	Antimony	0.21	U	NA	408.8
UK57SL01120	2/26/2008	Arsenic	0.35	U	NA	1.91
UK57SL01120	2/26/2008	Barium	26.2		NA	204,400
UK57SL01120	2/26/2008	Beryllium	0.021	U	NA	2,044
UK57SL01120	2/26/2008	Cadmium	0.031	U	10	511
UK57SL01120	2/26/2008	Calcium	2.68	U	NA	NA
UK57SL01120	2/26/2008	Chromium	11.3		143	3,066
UK57SL01120	2/26/2008	Cobalt	0.041	U	NA	NA
UK57SL01120	2/26/2008	Copper	0.3	U	NA	40,880
UK57SL01120	2/26/2008	Iron	2,860		NA	715,400
UK57SL01120	2/26/2008	Lead	12.3		NA	NA
UK57SL01120	2/26/2008	Magnesium	256		NA	NA
UK57SL01120	2/26/2008	Manganese	9.67		NA	20,440
UK57SL01120	2/26/2008	Mercury	0.03		NA	NA
UK57SL01120	2/26/2008	Nickel	0.052	U	NA	20,440
UK57SL01120	2/26/2008	Potassium	5.41	U	NA	NA

Table 4-81

**Summary of Analytical Results
UK-57 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK57SL01120	2/26/2008	Selenium	0.44	U	NA	5,110
UK57SL01120	2/26/2008	Silver	9.7		NA	5,110
UK57SL01120	2/26/2008	Sodium	2.24	U	NA	NA
UK57SL01120	2/26/2008	Thallium	0.21	U	NA	71.54
UK57SL01120	2/26/2008	Vanadium	4.3		NA	1,022
UK57SL01120	2/26/2008	Zinc	5.95		NA	306,600
UK57SL01120	2/26/2008	Cyanide	0.16	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-57 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-82

**Summary of Analytical Results
UK-57 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK57B01140	2/27/2008	c-1,2-Dichloroethene	0.00046	U	0.25	10,220
UK57B01140	2/27/2008	TCE	0.0005	U	0.7	7.15
UK57B01140	2/27/2008	Tetrachloroethene	0.00046	U	1.4	5.30
UK57B01140	2/27/2008	Benzo(a)pyrene	0.0529	U	0.29	0.392
UK57B01140	2/27/2008	Dibenz(a,h)anthracene	0.0566	U	0.29	0.392
UK57B01140	2/27/2008	Aroclor 1016	0.00207	U	NA	40.88
UK57B01140	2/27/2008	Aroclor 1221	0.00975	U	NA	1.43
UK57B01140	2/27/2008	Aroclor 1232	0.00216	U	NA	1.43
UK57B01140	2/27/2008	Aroclor 1242	0.00162	U	NA	1.43
UK57B01140	2/27/2008	Aroclor 1248	0.00365	U	NA	1.43
UK57B01140	2/27/2008	Aroclor 1254	0.00553	U	NA	1.43
UK57B01140	2/27/2008	Aroclor 1260	0.00636	U	NA	1.43
UK57B01140	2/27/2008	PCBs(total)	0.00975	U	10	1.43
UK57B01140	2/27/2008	Cadmium	0.031	U	10	511
UK57B01140	2/27/2008	Chromium	0.16	U	143	3,066
UK57B01140	2/27/2008	Iron	712		NA	715,400
UK57B01140	2/27/2008	Cyanide	0.17	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-57 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-83

Summary of Analytical Results
 UK-58 Solid Characterization Sample
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK58SL01120	2/26/2008	1,1,1-Trichloroethane	0.00053	U	NA	286,160
UK58SL01120	2/26/2008	1,1,2,2-Tetrachloroethane	0.00061	U	NA	14.31
UK58SL01120	2/26/2008	1,1,2-Trichloroethane	0.00064	U	NA	50.20
UK58SL01120	2/26/2008	1,1-Dichloroethane	0.00058	U	NA	204,400
UK58SL01120	2/26/2008	1,1-Dichloroethene	0.00037	U	NA	51,100
UK58SL01120	2/26/2008	1,2-Dichloroethane	0.00059	U	NA	31.45
UK58SL01120	2/26/2008	1,2-Dichloroethene (total)	0.00046	U	0.25	9,198
UK58SL01120	2/26/2008	1,2-Dichloropropane	0.0006	U	NA	42.08
UK58SL01120	2/26/2008	2-Butanone	0.00224	U	NA	613,200
UK58SL01120	2/26/2008	2-Hexanone	0.002	U	NA	NA
UK58SL01120	2/26/2008	4-Methyl-2-pentanone	0.00217	U	NA	NA
UK58SL01120	2/26/2008	Acetone	0.00263	U	NA	919,800
UK58SL01120	2/26/2008	Benzene	0.00054	U	NA	52.03
UK58SL01120	2/26/2008	Bromodichloromethane	0.00047	U	NA	46.15
UK58SL01120	2/26/2008	Bromoform	0.00048	U	NA	362.23
UK58SL01120	2/26/2008	Bromomethane	0.00049	U	NA	1,430.8
UK58SL01120	2/26/2008	c-1,2-Dichloroethene	0.00045	U	0.25	10,220
UK58SL01120	2/26/2008	c-1,3-Dichloropropene	0.00052	U	NA	NA
UK58SL01120	2/26/2008	Carbon disulfide	0.00047	U	NA	102,200
1) All analytical res	2/26/2008	Carbon Tetrachloride	0.00057	U	NA	22.01
UK58SL01120	2/26/2008	Chlorobenzene	0.00062	U	NA	20,440
UK58SL01120	2/26/2008	Chloroethane	0.00071	U	NA	986.76
UK58SL01120	2/26/2008	Chloroform	0.0006	U	NA	10,220
UK58SL01120	2/26/2008	Chloromethane	0.0005	U	NA	NA
UK58SL01120	2/26/2008	Dibromochloromethane	0.00046	U	NA	34.07
UK58SL01120	2/26/2008	Ethylbenzene	0.00053	U	NA	102,200
UK58SL01120	2/26/2008	m,p-xylene	0.00091	U	NA	NA
UK58SL01120	2/26/2008	Methylene Chloride	0.00204	J	NA	381.55
UK58SL01120	2/26/2008	o-xylene	0.00039	U	NA	NA
UK58SL01120	2/26/2008	Styrene	0.00043	U	NA	204,400
UK58SL01120	2/26/2008	t-1,2-Dichloroethene	0.00046	U	NA	20,440
UK58SL01120	2/26/2008	t-1,3-Dichloropropene	0.00042	U	NA	NA
UK58SL01120	2/26/2008	TCE	0.00049	U	0.7	7.15
UK58SL01120	2/26/2008	Tetrachloroethene	0.00045	U	1.4	5.30
UK58SL01120	2/26/2008	Toluene	0.00048	U	NA	81,760
UK58SL01120	2/26/2008	Vinyl Chloride	0.00069	U	NA	3.97
UK58SL01120	2/26/2008	Xylene (Total)	0.00091	U	NA	204,400
UK58SL01120	2/26/2008	1,2,4-Trichlorobenzene	0.0421	U	NA	10,220
UK58SL01120	2/26/2008	1,2-Dichlorobenzene	0.0312	U	NA	91,980
UK58SL01120	2/26/2008	1,3-Dichlorobenzene	0.034	U	NA	3,066
UK58SL01120	2/26/2008	1,4-Dichlorobenzene	0.033	U	NA	119.23
UK58SL01120	2/26/2008	2,4,5-Trichlorophenol	0.0219	U	NA	102,200
UK58SL01120	2/26/2008	2,4,6-Trichlorophenol	0.038	U	NA	260.15
UK58SL01120	2/26/2008	2,4-Dichlorophenol	0.0332	U	NA	3,066
UK58SL01120	2/26/2008	2,4-Dimethylphenol	0.0423	U	NA	20,440
UK58SL01120	2/26/2008	2,4-Dinitrophenol	0.356	U	NA	2,044
UK58SL01120	2/26/2008	2,4-Dinitrotoluene	0.0607	U	NA	2,044
UK58SL01120	2/26/2008	2,6-Dinitrotoluene	0.0417	U	NA	1,022
UK58SL01120	2/26/2008	2-Chloronaphthalene	0.0487	U	NA	81,760
UK58SL01120	2/26/2008	2-Chlorophenol	0.0487	U	NA	5,110
UK58SL01120	2/26/2008	2-Methylnaphthalene	0.0401	U	NA	4,088
UK58SL01120	2/26/2008	2-Methylphenol	0.0362	U	NA	51,100
UK58SL01120	2/26/2008	2-Nitroaniline	0.0527	U	NA	NA
UK58SL01120	2/26/2008	2-Nitrophenol	0.0307	U	NA	NA
UK58SL01120	2/26/2008	3,3'-Dichlorobenzidine	0.0487	U	NA	6.36
UK58SL01120	2/26/2008	3+4-Methylphenol	0.0312	U	NA	5,110
UK58SL01120	2/26/2008	3-Nitroaniline	0.0174	U	NA	NA
UK58SL01120	2/26/2008	4,6-Dinitro-2-methylphenol	0.442	U	NA	NA

Table 4-83

**Summary of Analytical Results
UK-58 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK58SL01120	2/26/2008	4-Bromophenyl phenyl ether	0.0459	U	NA	NA
UK58SL01120	2/26/2008	4-Chloro-3-methylphenol	0.0377	U	NA	NA
UK58SL01120	2/26/2008	4-Chloroaniline	0.0385	U	NA	4,088
UK58SL01120	2/26/2008	4-Chlorophenyl phenyl ether	0.0393	U	NA	NA
UK58SL01120	2/26/2008	4-Nitroaniline	0.0989	U	NA	NA
UK58SL01120	2/26/2008	4-Nitrophenol	0.674	U	NA	NA
UK58SL01120	2/26/2008	Acenaphthene	0.0426	U	NA	61,320
UK58SL01120	2/26/2008	Acenaphthylene	0.0348	U	NA	NA
UK58SL01120	2/26/2008	Anthracene	0.045	U	NA	306,600
UK58SL01120	2/26/2008	Benzo(a)anthracene	0.0428	U	NA	3.92
UK58SL01120	2/26/2008	Benzo(a)pyrene	0.0527	U	0.29	0.392
UK58SL01120	2/26/2008	Benzo(b)fluoranthene	0.042	U	NA	3.92
UK58SL01120	2/26/2008	Benzo(g,h,i)perylene	0.0772	U	NA	NA
UK58SL01120	2/26/2008	Benzo(k)fluoranthene	0.0769	U	NA	39.2
UK58SL01120	2/26/2008	bis(2-Chloroethoxy)methane	0.0419	U	NA	NA
UK58SL01120	2/26/2008	bis(2-Chloroethyl)ether	0.0478	U	NA	2.60
UK58SL01120	2/26/2008	bis(2-Chloroisopropyl)ether	0.0371	U	NA	40.88
UK58SL01120	2/26/2008	bis(2-Ethylhexyl)phthalate	0.0662	U	NA	204.4
UK58SL01120	2/26/2008	Butyl benzyl phthalate	0.0534	U	NA	204,400
UK58SL01120	2/26/2008	Carbazole	0.0582	U	NA	143.08
UK58SL01120	2/26/2008	Chrysene	0.0535	U	NA	392
UK58SL01120	2/26/2008	Dibenz(a,h)anthracene	0.0564	U	0.29	0.392
UK58SL01120	2/26/2008	Dibenzofuran	0.0338	U	NA	1,022
UK58SL01120	2/26/2008	Diethyl phthalate	0.0661	U	NA	817,600
UK58SL01120	2/26/2008	Dimethyl phthalate	0.0488	U	NA	NA
UK58SL01120	2/26/2008	Di-n-butyl phthalate	0.0569	U	NA	102,200
UK58SL01120	2/26/2008	Di-n-octyl phthalate	0.0497	U	NA	NA
UK58SL01120	2/26/2008	Fluoranthene	0.0557	U	NA	40,880
UK58SL01120	2/26/2008	Fluorene	0.0406	U	NA	40,880
UK58SL01120	2/26/2008	Hexachlorobenzene	0.0433	U	NA	1.79
UK58SL01120	2/26/2008	Hexachlorobutadiene	0.0404	U	NA	36.69
UK58SL01120	2/26/2008	Hexachlorocyclopentadiene	0.312	U	NA	6,132
UK58SL01120	2/26/2008	Hexachloroethane	0.045	U	NA	204.4
UK58SL01120	2/26/2008	Indeno(1,2,3-cd)pyrene	0.0467	U	NA	3.92
UK58SL01120	2/26/2008	Isophorone	0.0462	U	NA	3,012.21
UK58SL01120	2/26/2008	Naphthalene	0.0406	U	NA	20,440
UK58SL01120	2/26/2008	Nitrobenzene	0.0391	U	NA	511
UK58SL01120	2/26/2008	N-Nitrosodi-n-propylamine	0.0305	U	NA	0.41
UK58SL01120	2/26/2008	N-Nitrosodiphenylamine	0.0551	U	NA	584
UK58SL01120	2/26/2008	Pentachlorophenol	0.383	U	NA	23.85
UK58SL01120	2/26/2008	Phenanthrene	0.046	U	NA	NA
UK58SL01120	2/26/2008	Phenol	0.0264	U	NA	306,600
UK58SL01120	2/26/2008	Pyrene	0.0374	U	NA	30,660
UK58SL01120	2/26/2008	Pyridine	0.0579	U	NA	1,022
UK58SL01120	2/26/2008	4,4'-DDD	0.00139	U	NA	11.92
UK58SL01120	2/26/2008	4,4'-DDE	0.00167	U	NA	8.42
UK58SL01120	2/26/2008	4,4'-DDT	0.00052	U	NA	8.42
UK58SL01120	2/26/2008	Aldrin	0.00099	U	NA	0.17
UK58SL01120	2/26/2008	alpha-BHC	0.00072	U	NA	0.45
UK58SL01120	2/26/2008	alpha-Chlordane	0.0012	U	NA	NA
UK58SL01120	2/26/2008	beta-BHC	0.00078	U	NA	1.59
UK58SL01120	2/26/2008	Chlordane	0.00809	U	NA	8.18
UK58SL01120	2/26/2008	delta-BHC	0.00139	U	NA	NA
UK58SL01120	2/26/2008	Dieldrin	0.00159	U	NA	0.18
UK58SL01120	2/26/2008	Endosulfan I	0.00108	U	NA	6,132
UK58SL01120	2/26/2008	Endosulfan II	0.00073	U	NA	6,132
UK58SL01120	2/26/2008	Endosulfan sulfate	0.00081	U	NA	NA
UK58SL01120	2/26/2008	Endrin	0.0012	U	NA	306.6

Table 4-83

Summary of Analytical Results
UK-58 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK58SL01120	2/26/2008	Endrin Aldehyde	0.00184	U	NA	NA
UK58SL01120	2/26/2008	Endrin ketone	0.00234	U	NA	NA
UK58SL01120	2/26/2008	gamma-BHC (Lindane)	0.00141	U	NA	2.20
UK58SL01120	2/26/2008	gamma-Chlordane	0.00199	U	NA	NA
UK58SL01120	2/26/2008	Heptachlor	0.00064	U	NA	0.64
UK58SL01120	2/26/2008	Heptachlor epoxide	0.00103	U	NA	0.31
UK58SL01120	2/26/2008	Methoxychlor	0.00157	U	NA	5,110
UK58SL01120	2/26/2008	Toxaphene	0.0222	U	NA	2.60
UK58SL01120	2/26/2008	% Solids	98.9		NA	NA
UK58SL01120	2/26/2008	Aroclor 1016	0.00206	U	NA	40.88
UK58SL01120	2/26/2008	Aroclor 1221	0.00971	U	NA	1.43
UK58SL01120	2/26/2008	Aroclor 1232	0.00215	U	NA	1.43
UK58SL01120	2/26/2008	Aroclor 1242	0.00162	U	NA	1.43
UK58SL01120	2/26/2008	Aroclor 1248	0.00364	U	NA	1.43
UK58SL01120	2/26/2008	Aroclor 1254	0.00551	U	NA	1.43
UK58SL01120	2/26/2008	Aroclor 1260	0.00633	U	NA	1.43
UK58SL01120	2/26/2008	PCBs(total)	0.00971	U	10	1.43
UK58SL01120	2/26/2008	Aluminum	787		NA	1,022,000
UK58SL01120	2/26/2008	Antimony	0.2	U	NA	408.8
UK58SL01120	2/26/2008	Arsenic	0.34	U	NA	1.91
UK58SL01120	2/26/2008	Barium	14.3		NA	204,400
UK58SL01120	2/26/2008	Beryllium	0.02	U	NA	2,044
UK58SL01120	2/26/2008	Cadmium	0.03	U	10	511
UK58SL01120	2/26/2008	Calcium	2.58	U	NA	NA
UK58SL01120	2/26/2008	Chromium	10.1		143	3,066
UK58SL01120	2/26/2008	Cobalt	0.04	U	NA	NA
UK58SL01120	2/26/2008	Copper	3.91		NA	40,880
UK58SL01120	2/26/2008	Iron	1,460		NA	715,400
UK58SL01120	2/26/2008	Lead	7.94		NA	NA
UK58SL01120	2/26/2008	Magnesium	151		NA	NA
UK58SL01120	2/26/2008	Manganese	5.5		NA	20,440
UK58SL01120	2/26/2008	Mercury	0.03		NA	NA
UK58SL01120	2/26/2008	Nickel	0.05	U	NA	20,440
UK58SL01120	2/26/2008	Potassium	117		NA	NA
UK58SL01120	2/26/2008	Selenium	0.43	U	NA	5,110
UK58SL01120	2/26/2008	Silver	10		NA	5,110
UK58SL01120	2/26/2008	Sodium	2.16	U	NA	NA
UK58SL01120	2/26/2008	Thallium	0.2	U	NA	71.54
UK58SL01120	2/26/2008	Vanadium	1.78		NA	1,022
UK58SL01120	2/26/2008	Zinc	6.19		NA	306,600
UK58SL01120	2/26/2008	Cyanide	0.18	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 8) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 9) UK-58 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-84

**Summary of Analytical Results
UK-58 Post-Removal Confirmation Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK58B01140	2/27/2008	c-1,2-Dichloroethene	0.00046	U	0.25	10,220
UK58B01140	2/27/2008	TCE	0.0005	U	0.7	7.15
UK58B01140	2/27/2008	Tetrachloroethene	0.00046	U	1.4	5.30
UK58B01140	2/27/2008	Benzo(a)pyrene	0.0534	U	0.29	0.392
UK58B01140	2/27/2008	Dibenz(a,h)anthracene	0.0572	U	0.29	0.392
UK58B01140	2/27/2008	Aroclor 1016	0.00209	U	NA	40.88
UK58B01140	2/27/2008	Aroclor 1221	0.00984	U	NA	1.43
UK58B01140	2/27/2008	Aroclor 1232	0.00218	U	NA	1.43
UK58B01140	2/27/2008	Aroclor 1242	0.00164	U	NA	1.43
UK58B01140	2/27/2008	Aroclor 1248	0.00369	U	NA	1.43
UK58B01140	2/27/2008	Aroclor 1254	0.00558	U	NA	1.43
UK58B01140	2/27/2008	Aroclor 1260	0.00641	U	NA	1.43
UK58B01140	2/27/2008	PCBs(total)	0.00984	U	10	1.43
UK58B01140	2/27/2008	Cadmium	0.03	U	10	511
UK58B01140	2/27/2008	Chromium	2.81		143	3,066
UK58B01140	2/27/2008	Cyanide	0.16	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 6) UK-58 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-85

Summary of Analytical Results
UK-59 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK59SL01040	3/3/2008	1,1,1-Trichloroethane	0.00057	U	NA	286,160
UK59SL01040	3/3/2008	1,1,2,2-Tetrachloroethane	0.00065	U	NA	14.31
UK59SL01040	3/3/2008	1,1,2-Trichloroethane	0.00069	U	NA	50.20
UK59SL01040	3/3/2008	1,1-Dichloroethane	0.00062	U	NA	204,400
UK59SL01040	3/3/2008	1,1-Dichloroethene	0.0004	U	NA	51,100
UK59SL01040	3/3/2008	1,2-Dichloroethane	0.00063	U	NA	31.45
UK59SL01040	3/3/2008	1,2-Dichloroethene (total)	0.0005	U	0.25	9,198
UK59SL01040	3/3/2008	1,2-Dichloropropane	0.00064	U	NA	42.08
UK59SL01040	3/3/2008	2-Butanone	0.00242	U	NA	613,200
UK59SL01040	3/3/2008	2-Hexanone	0.00216	U	NA	NA
UK59SL01040	3/3/2008	4-Methyl-2-pentanone	0.00234	U	NA	NA
UK59SL01040	3/3/2008	Acetone	0.00283	U	NA	919,800
UK59SL01040	3/3/2008	Benzene	0.00058	U	NA	52.03
UK59SL01040	3/3/2008	Bromodichloromethane	0.00051	U	NA	46.15
UK59SL01040	3/3/2008	Bromoform	0.00052	U	NA	362.23
UK59SL01040	3/3/2008	Bromomethane	0.00053	U	NA	1,430.8
UK59SL01040	3/3/2008	c-1,2-Dichloroethene	0.00049	U	0.25	10,220
UK59SL01040	3/3/2008	c-1,3-Dichloropropene	0.00056	U	NA	NA
UK59SL01040	3/3/2008	Carbon disulfide	0.00051	U	NA	102,200
UK59SL01040	3/3/2008	Carbon Tetrachloride	0.00061	U	NA	22.01
UK59SL01040	3/3/2008	Chlorobenzene	0.00066	U	NA	20,440
UK59SL01040	3/3/2008	Chloroethane	0.00076	U	NA	986.76
UK59SL01040	3/3/2008	Chloroform	0.00064	U	NA	10,220
UK59SL01040	3/3/2008	Chloromethane	0.00055	U	NA	NA
UK59SL01040	3/3/2008	Dibromochloromethane	0.0005	U	NA	34.07
UK59SL01040	3/3/2008	Ethylbenzene	0.00057	U	NA	102,200
UK59SL01040	3/3/2008	m,p-xylene	0.00098	U	NA	NA
UK59SL01040	3/3/2008	Methylene Chloride	0.00102	U	NA	381.55
UK59SL01040	3/3/2008	o-xylene	0.00043	U	NA	NA
UK59SL01040	3/3/2008	Styrene	0.00047	U	NA	204,400
UK59SL01040	3/3/2008	t-1,2-Dichloroethene	0.0005	U	NA	20,440
UK59SL01040	3/3/2008	t-1,3-Dichloropropene	0.00046	U	NA	NA
UK59SL01040	3/3/2008	TCE	0.00053	U	0.7	7.15
UK59SL01040	3/3/2008	Tetrachloroethene	0.00049	U	1.4	5.30
UK59SL01040	3/3/2008	Toluene	0.00052	U	NA	81,760
UK59SL01040	3/3/2008	Vinyl Chloride	0.00074	U	NA	3.97
UK59SL01040	3/3/2008	Xylene (Total)	0.00098	U	NA	204,400
UK59SL01040	3/3/2008	1,2,4-Trichlorobenzene	0.0454	U	NA	10,220
UK59SL01040	3/3/2008	1,2-Dichlorobenzene	0.0337	U	NA	91,980
UK59SL01040	3/3/2008	1,3-Dichlorobenzene	0.0366	U	NA	3,066
UK59SL01040	3/3/2008	1,4-Dichlorobenzene	0.0356	U	NA	119.23
UK59SL01040	3/3/2008	2,4,5-Trichlorophenol	0.0237	U	NA	102,200
UK59SL01040	3/3/2008	2,4,6-Trichlorophenol	0.041	U	NA	260.15
UK59SL01040	3/3/2008	2,4-Dichlorophenol	0.0358	U	NA	3,066
UK59SL01040	3/3/2008	2,4-Dimethylphenol	0.0456	U	NA	20,440
UK59SL01040	3/3/2008	2,4-Dinitrophenol	0.384	U	NA	2,044
UK59SL01040	3/3/2008	2,4-Dinitrotoluene	0.0654	U	NA	2,044
UK59SL01040	3/3/2008	2,6-Dinitrotoluene	0.0449	U	NA	1,022
UK59SL01040	3/3/2008	2-Chloronaphthalene	0.0526	U	NA	81,760
UK59SL01040	3/3/2008	2-Chlorophenol	0.0526	U	NA	5,110
UK59SL01040	3/3/2008	2-Methylnaphthalene	0.0433	U	NA	4,088
UK59SL01040	3/3/2008	2-Methylphenol	0.039	U	NA	51,100
UK59SL01040	3/3/2008	2-Nitroaniline	0.0568	U	NA	NA
UK59SL01040	3/3/2008	2-Nitrophenol	0.0332	U	NA	NA
UK59SL01040	3/3/2008	3,3'-Dichlorobenzidine	0.0526	U	NA	6.36
UK59SL01040	3/3/2008	3+4-Methylphenol	0.0337	U	NA	5,110
UK59SL01040	3/3/2008	3-Nitroaniline	0.0188	U	NA	NA

Table 4-85

Summary of Analytical Results
UK-59 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK59SL01040	3/3/2008	4,6-Dinitro-2-methylphenol	0.477	U	NA	NA
UK59SL01040	3/3/2008	4-Bromophenyl phenyl ether	0.0495	U	NA	NA
UK59SL01040	3/3/2008	4-Chloro-3-methylphenol	0.0407	U	NA	NA
UK59SL01040	3/3/2008	4-Chloroaniline	0.0415	U	NA	4,088
1) All analytical r	3/3/2008	4-Chlorophenyl phenyl ether	0.0424	U	NA	NA
UK59SL01040	3/3/2008	4-Nitroaniline	0.107	U	NA	NA
UK59SL01040	3/3/2008	4-Nitrophenol	0.727	U	NA	NA
UK59SL01040	3/3/2008	Acenaphthene	0.0459	U	NA	61,320
UK59SL01040	3/3/2008	Acenaphthylene	0.0375	U	NA	NA
UK59SL01040	3/3/2008	Anthracene	0.0485	U	NA	306,600
UK59SL01040	3/3/2008	Benzo(a)anthracene	0.0461	U	NA	3.92
UK59SL01040	3/3/2008	Benzo(a)pyrene	0.0568	U	0.29	0.392
UK59SL01040	3/3/2008	Benzo(b)fluoranthene	0.0453	U	NA	3.92
UK59SL01040	3/3/2008	Benzo(g,h,i)perylene	0.0833	U	NA	NA
UK59SL01040	3/3/2008	Benzo(k)fluoranthene	0.083	U	NA	39.2
UK59SL01040	3/3/2008	bis(2-Chloroethoxy)methane	0.0451	U	NA	NA
UK59SL01040	3/3/2008	bis(2-Chloroethyl)ether	0.0516	U	NA	2.60
UK59SL01040	3/3/2008	bis(2-Chloroisopropyl)ether	0.04	U	NA	40.88
UK59SL01040	3/3/2008	bis(2-Ethylhexyl)phthalate	0.0714	U	NA	204.4
UK59SL01040	3/3/2008	Butyl benzyl phthalate	0.0576	U	NA	204,400
UK59SL01040	3/3/2008	Carbazole	0.0628	U	NA	143.08
UK59SL01040	3/3/2008	Chrysene	0.0577	U	NA	392
UK59SL01040	3/3/2008	Dibenz(a,h)anthracene	0.0609	U	0.29	0.392
UK59SL01040	3/3/2008	Dibenzofuran	0.0364	U	NA	1,022
UK59SL01040	3/3/2008	Diethyl phthalate	0.0713	U	NA	817,600
UK59SL01040	3/3/2008	Dimethyl phthalate	0.0527	U	NA	NA
UK59SL01040	3/3/2008	Di-n-butyl phthalate	0.0614	U	NA	102,200
UK59SL01040	3/3/2008	Di-n-octyl phthalate	0.0537	U	NA	NA
UK59SL01040	3/3/2008	Fluoranthene	0.0601	U	NA	40,880
UK59SL01040	3/3/2008	Fluorene	0.0438	U	NA	40,880
UK59SL01040	3/3/2008	Hexachlorobenzene	0.0467	U	NA	1,7885
UK59SL01040	3/3/2008	Hexachlorobutadiene	0.0436	U	NA	36.69
UK59SL01040	3/3/2008	Hexachlorocyclopentadiene	0.337	U	NA	6132
UK59SL01040	3/3/2008	Hexachloroethane	0.0485	U	NA	204.4
UK59SL01040	3/3/2008	Indeno(1,2,3-cd)pyrene	0.0504	U	NA	3.92
UK59SL01040	3/3/2008	Isophorone	0.0498	U	NA	3,012.21
UK59SL01040	3/3/2008	Naphthalene	0.0438	U	NA	20,440
UK59SL01040	3/3/2008	Nitrobenzene	0.0422	U	NA	511
UK59SL01040	3/3/2008	N-Nitrosodi-n-propylamine	0.0329	U	NA	0.41
UK59SL01040	3/3/2008	N-Nitrosodiphenylamine	0.0594	U	NA	584
UK59SL01040	3/3/2008	Pentachlorophenol	0.413	U	NA	23.85
UK59SL01040	3/3/2008	Phenanthrene	0.0496	U	NA	NA
UK59SL01040	3/3/2008	Phenol	0.0285	U	NA	306,600
UK59SL01040	3/3/2008	Pyrene	0.0403	U	NA	30,660
UK59SL01040	3/3/2008	Pyridine	0.0625	U	NA	1,022
UK59SL01040	3/3/2008	4,4'-DDD	0.00149	U	NA	11.92
UK59SL01040	3/3/2008	4,4'-DDE	0.0018	U	NA	8.42
UK59SL01040	3/3/2008	4,4'-DDT	0.00056	U	NA	8.42
UK59SL01040	3/3/2008	Aldrin	0.00107	U	NA	0.17
UK59SL01040	3/3/2008	alpha-BHC	0.00077	U	NA	0.45
UK59SL01040	3/3/2008	alpha-Chlordane	0.0013	U	NA	NA
UK59SL01040	3/3/2008	beta-BHC	0.00084	U	NA	1.59
UK59SL01040	3/3/2008	Chlordane	0.00872	U	NA	8.18
UK59SL01040	3/3/2008	delta-BHC	0.00149	U	NA	NA
UK59SL01040	3/3/2008	Dieldrin	0.00171	U	NA	0.18
UK59SL01040	3/3/2008	Endosulfan I	0.00117	U	NA	6,132
UK59SL01040	3/3/2008	Endosulfan II	0.00079	U	NA	6,132

Table 4-85

Summary of Analytical Results
UK-59 Solid Characterization Sample
Liberty Industrial Finishing Superfund Site
Farmingdale, New York

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK59SL01040	3/3/2008	Endosulfan sulfate	0.00087	U	NA	NA
UK59SL01040	3/3/2008	Endrin	0.0013	U	NA	306.6
UK59SL01040	3/3/2008	Endrin Aldehyde	0.00198	U	NA	NA
UK59SL01040	3/3/2008	Endrin ketone	0.00252	U	NA	NA
UK59SL01040	3/3/2008	gamma-BHC (Lindane)	0.00152	U	NA	2.20
UK59SL01040	3/3/2008	gamma-Chlordane	0.00215	U	NA	NA
UK59SL01040	3/3/2008	Heptachlor	0.00069	U	NA	0.64
UK59SL01040	3/3/2008	Heptachlor epoxide	0.00111	U	NA	0.31
UK59SL01040	3/3/2008	Methoxychlor	0.00169	U	NA	5,110
UK59SL01040	3/3/2008	Toxaphene	0.024	U	NA	2.60
UK59SL01040	3/3/2008	Aroclor 1016	0.00222	U	NA	40.88
UK59SL01040	3/3/2008	Aroclor 1221	0.0105	U	NA	1.43
UK59SL01040	3/3/2008	Aroclor 1232	0.00232	U	NA	1.43
UK59SL01040	3/3/2008	Aroclor 1242	0.00174	U	NA	1.43
UK59SL01040	3/3/2008	Aroclor 1248	0.00393	U	NA	1.43
UK59SL01040	3/3/2008	Aroclor 1254	0.00594	U	NA	1.43
UK59SL01040	3/3/2008	Aroclor 1260	0.00683	U	NA	1.43
UK59SL01040	3/3/2008	PCBs(total)	0.0105	U	10	1.43
UK59SL01040	3/3/2008	Aluminum	1,450		NA	1,022,000
UK59SL01040	3/3/2008	Antimony	0.22	U	NA	408.8
UK59SL01040	3/3/2008	Arsenic	0.38	U	NA	1.91
UK59SL01040	3/3/2008	Barium	6.01		NA	204,400
UK59SL01040	3/3/2008	Beryllium	0.022	U	NA	2,044
UK59SL01040	3/3/2008	Cadmium	0.033	U	10	511
UK59SL01040	3/3/2008	Calcium	2.88		NA	NA
UK59SL01040	3/3/2008	Chromium	8.23		143	3,066
UK59SL01040	3/3/2008	Cobalt	0.044	U	NA	NA
UK59SL01040	3/3/2008	Copper	0.32	U	NA	40,880
UK59SL01040	3/3/2008	Iron	2,890		NA	715,400
UK59SL01040	3/3/2008	Lead	0.19	U	NA	NA
UK59SL01040	3/3/2008	Magnesium	282		NA	NA
UK59SL01040	3/3/2008	Manganese	25.2		NA	20,440
UK59SL01040	3/3/2008	Mercury	0.0064		NA	NA
UK59SL01040	3/3/2008	Nickel	2.1		NA	20,440
UK59SL01040	3/3/2008	Potassium	5.81	U	NA	NA
UK59SL01040	3/3/2008	Selenium	0.48	U	NA	5,110
UK59SL01040	3/3/2008	Silver	0.11	U	NA	5,110
UK59SL01040	3/3/2008	Sodium	2.41	U	NA	NA
UK59SL01040	3/3/2008	Thallium	0.22	U	NA	71.54
UK59SL01040	3/3/2008	Vanadium	4.5		NA	1,022
UK59SL01040	3/3/2008	Zinc	8.32		NA	306,600
UK59SL01040	3/3/2008	Cyanide	0.17	U	35	20,440

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) TCE - trichloroethene.
- 5) PCBs - polychlorinated biphenyls.
- 6) U - not detected at a concentration equal to or exceeding the method detection limit.
- 7) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 8) UK-59 solid characterization sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Table 4-86

**Summary of Analytical Results
UK-59 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK59B01080	3/4/2008	1,1,1-Trichloroethane	0.00058	U	NA	286,160
UK59B01080	3/4/2008	1,1,2,2-Tetrachloroethane	0.00067	U	NA	14.31
UK59B01080	3/4/2008	1,1,2-Trichloroethane	0.0007	U	NA	50.20
UK59B01080	3/4/2008	1,1-Dichloroethane	0.00063	U	NA	204,400
UK59B01080	3/4/2008	1,1-Dichloroethene	0.00041	U	NA	51,100
UK59B01080	3/4/2008	1,2-Dichloroethane	0.00064	U	NA	31.45
UK59B01080	3/4/2008	1,2-Dichloroethene (total)	0.00051	U	0.25	9,198
UK59B01080	3/4/2008	1,2-Dichloropropane	0.00065	U	NA	42.08
UK59B01080	3/4/2008	2-Butanone	0.00246	U	NA	613,200
UK59B01080	3/4/2008	2-Hexanone	0.0022	U	NA	NA
UK59B01080	3/4/2008	4-Methyl-2-pentanone	0.00239	U	NA	NA
UK59B01080	3/4/2008	Acetone	0.00289	U	NA	919,800
UK59B01080	3/4/2008	Benzene	0.00059	U	NA	52.03
UK59B01080	3/4/2008	Bromodichloromethane	0.00052	U	NA	46.15
UK59B01080	3/4/2008	Bromoform	0.00053	U	NA	362.23
UK59B01080	3/4/2008	Bromomethane	0.00054	U	NA	1,430.8
UK59B01080	3/4/2008	c-1,2-Dichloroethene	0.0005	U	0.25	10,220
UK59B01080	3/4/2008	c-1,3-Dichloropropene	0.00057	U	NA	NA
UK59B01080	3/4/2008	Carbon disulfide	0.00052	U	NA	102,200
UK59B01080	3/4/2008	Carbon Tetrachloride	0.00062	U	NA	22.01
UK59B01080	3/4/2008	Chlorobenzene	0.00068	U	NA	20,440
UK59B01080	3/4/2008	Chloroethane	0.00078	U	NA	986.76
UK59B01080	3/4/2008	Chloroform	0.00065	U	NA	10,220
UK59B01080	3/4/2008	Chloromethane	0.00056	U	NA	NA
UK59B01080	3/4/2008	Dibromochloromethane	0.00051	U	NA	34.07
UK59B01080	3/4/2008	Ethylbenzene	0.00058	U	NA	102,200
UK59B01080	3/4/2008	m,p-xylene	0.001	U	NA	NA
UK59B01080	3/4/2008	Methylene Chloride	0.00104	U	NA	381.55
UK59B01080	3/4/2008	o-xylene	0.00043	U	NA	NA
UK59B01080	3/4/2008	Styrene	0.00048	U	NA	204,400
UK59B01080	3/4/2008	t-1,2-Dichloroethene	0.00051	U	NA	20,440
UK59B01080	3/4/2008	t-1,3-Dichloropropene	0.00047	U	NA	NA
UK59B01080	3/4/2008	TCE	0.00142	J	0.7	7.154
UK59B01080	3/4/2008	Tetrachloroethene	0.0005	U	1.4	5.30
UK59B01080	3/4/2008	Toluene	0.00053	U	NA	81,760
UK59B01080	3/4/2008	Vinyl Chloride	0.00075	U	NA	3.97
UK59B01080	3/4/2008	Xylene (Total)	0.001	U	NA	204,400
UK59B01080	3/4/2008	Benzo(a)pyrene	10.9		0.29	0.392
UK59B01080	3/4/2008	Dibenz(a,h)anthracene	2.47	J	0.29	0.392
UK59B01080	3/4/2008	Aroclor 1016	0.00227	U	NA	40.88
UK59B01080	3/4/2008	Aroclor 1221	0.0107	U	NA	1.43
UK59B01080	3/4/2008	Aroclor 1232	0.00237	U	NA	1.43
UK59B01080	3/4/2008	Aroclor 1242	0.00178	U	NA	1.43
UK59B01080	3/4/2008	Aroclor 1248	0.00401	U	NA	1.43
UK59B01080	3/4/2008	Aroclor 1254	1.14		NA	1.43
UK59B01080	3/4/2008	Aroclor 1260	0.00698	U	NA	1.43

Table 4-86

**Summary of Analytical Results
UK-59 Post-Removal Confirmation Samples
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Sample ID	Sample Date	Analytical Constituent	Result	Qualifier	ROD Cleanup Goal	USEPA Region III Risk-based Concentration for Industrial Soil
UK59B01080	3/4/2008	PCBs(total)	1.14		10	1.43
UK59B01080	3/4/2008	Cadmium	0.034	U	10	511
UK59B01080	3/4/2008	Chromium	30.9		143	3,066
UK59B01080	3/4/2008	Iron	5,920		NA	715,400
UK59B01080	3/4/2008	Cyanide	0.17	U	35	20,440
UK59B02100	3/26/2008	Benzo(a)pyrene	0.0476	U	0.29	0.392
UK59B02100	3/26/2008	Dibenz(a,h)anthracene	0.0388	U	0.29	0.392

Notes:

- 1) All analytical results, cleanup goals, and USEPA Risk-based Concentrations presented in milligrams per kilogram.
- 2) ROD - Record of Decision.
- 3) USEPA - United States Environmental Protection Agency.
- 4) U - not detected at a concentration equal to or exceeding the method detection limit.
- 5) J - compound detected at a concentration below the reporting limit. Value presented is an estimate.
- 6) NA - not applicable. ROD Cleanup Goal or Region III Risk-based soil criterion not established for this constituent.
- 7) UK-59 post-removal confirmation sample was collected by AMO during the 2008 Subsurface Feature Removal Action and was analyzed by ETL of Farmingdale, New York.

Explanation:

Reported concentration exceeds the ROD *Cleanup Goal* and the USEPA Region III *Risk-based Soil Concentration*.

Table 7-1

**Summary of Subsurface Feature Remediation Status
Phase I Demolition Area
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Feature	Feature Interpretation	Status	Remedial Activity Complete?	Notes
SF-01	Storm water catch basin	Removed	Yes	
SF-02	Slab-mounted utility junction box	Not removed	Yes	One confirmation sample was collected below feature (active electrical junction box) for AOC target parameters; Feature delisted based on results less than applicable criteria
SF-03	Storm water catch basin	Removed	Yes	
SF-04	Storm water catch basin	Removed	Yes	
SF-05	Storm water catch basin	Removed; SF-05 & SF-06 were removed together based on connecting drainage pipe; samples were analyzed for target parameters associated with both features	No	Additional soil remediation is necessary based on post-removal analytical results
SF-06	Storm water catch basin	Removed; SF-05 & SF-06 were removed together based on connecting drainage pipe; samples were analyzed for target parameters associated with both features	No	Additional soil remediation is necessary based on post-removal analytical results
SF-07	Storm water catch basin	Removed	No	Additional soil remediation is necessary based on post-removal analytical results
SF-08	Storm water catch basin/roof drain	Removed	Yes	
SF-13	Fire water main access vault	Removed. Appeared to have been removed during water main replacement	Yes	Soil excavated from around pipes and confirmation samples collected for analysis of targeted COCs
SF-14	South Farmingdale Water District water main access vault	Not removed	Yes	Feature delisted on 04/19/06 based on soil sample collected immediately down gradient of vault at depth below base; results less than applicable criteria; solids within feature removed and concrete pressure washed; removal not possible prior to demolition of buildings
SF-15	Former storm or sanitary sewer access sump	Not removed	Yes	Feature delisted on 04/19/06 based on 2 soil samples collected immediately adjacent to manway at depth beneath base; results less than applicable criteria; solids within feature removed and vault pressure washed; featured sealed with concrete; removal not possible prior to demolition of buildings

Table 7-1

**Summary of Subsurface Feature Remediation Status
Phase I Demolition Area
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Feature	Feature Interpretation	Status	Remedial Activity Complete?	Notes
SF-16	Former storm or sanitary sewer access sump	Removed	Yes	
SF-17	Former storm or sanitary sewer access sump	Removed	Yes	
SF-18	Former gas main access	Removed	Yes	
SF-19	Slab-mounted electrical junction boxes	Removed	Yes	
SF-20	Former machine foundations and pits	Removed	Yes	
SF-21	Former septic clean-out access sump	Removed	Yes	
SF-25	Fire water main shut-off valve access vault	Not removed	Yes	Feature delisted on 05/05/06 based on 5 soil samples collected immediately adjacent to vault at depth below base; results less than applicable criteria; solids within feature removed and concrete pressure washed; removal not possible prior to demolition of buildings
SF-27	Electrical access vault	Removed	Yes	
SF-41	Former steel pressure UST	Removed	Yes	
SF-42	Blind floor sump	Removed	Yes	
SF-43	Blind floor sump	Removed	Yes	
SF-44	Floor drain in former electrical room	Removed	No	Additional soil remediation is necessary based on post-removal analytical results
SF-45	Blind floor sump	Removed	Yes	
SF-46	Floor drains and water supply piping of former lavatory	Removed	No	Additional soil remediation is necessary based on post-removal analytical results
SF-47	Former machine foundation and pit	Removed	Yes	
SF-48	No interpretation prior to excavation. SF-48 was a series of fill ports and rail structures	Removed	Yes	No subsurface feature related to SF-48 was exposed. SF-48 piping was used as electrical conduit.
SF-49	Former machine foundation and pit	Removed	Yes	
SF-51	Former septic clean-out access sump	Removed	Yes	
SF-55	Vault housing former production water well and pressure UST	Removed	No	Additional soil remediation is necessary based on post-removal analytical results

Table 7-1

**Summary of Subsurface Feature Remediation Status
Phase I Demolition Area
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Feature	Feature Interpretation	Status	Remedial Activity Complete?	Notes
UK-01	Storm water catch basin & drywell	Removed	Yes	
UK-05	No interpretation. Depression in ground investigated due to location near Northern Leaching Chamber Field	Not removed. Feature was delisted on 4/21/06 based on observations that pipes in area were fragments; approximately 800 square ft were excavated to 8 ft bgs; no indication of soil impacts were observed; no features were encountered	Yes	
UK-06	Resin spill on concrete slab (no subsurface feature)	Not removed. Feature was delisted on 3/30/06 based on observations that resin was contained on slab and no feature was present; resin placed with waste from SF-44	Yes	
UK-07	Blind floor sump	Removed	Yes	
UK-08	Interior loading dock with storm water drainage to subsurface	Not removed	Yes	TCL & TAL results for characterization sample collected from drainage structure did not identify concentrations of parameters requiring removal or remediation; feature delisted based on age and analytical results
UK-09	Blind floor sump	Removed	Yes	
UK-10	Blind floor sump	Removed	Yes	
UK-33/UST-13A	Vault of unknown use with associated 275-gallon fuel oil UST	Removed	Yes	
UK-37	Three drywells/catch basins believed to be a portion of the Northern Leaching Chamber Field	Removed	Yes	
UK-42	Vault associated with Site water supply valves and piping	Removed	Yes	
UK-43	Vaults associated with drains and water supply piping of former lavatory	Removed	Yes	
UK-44	Stormwater catch basin	Removed	Yes	

Table 7-1

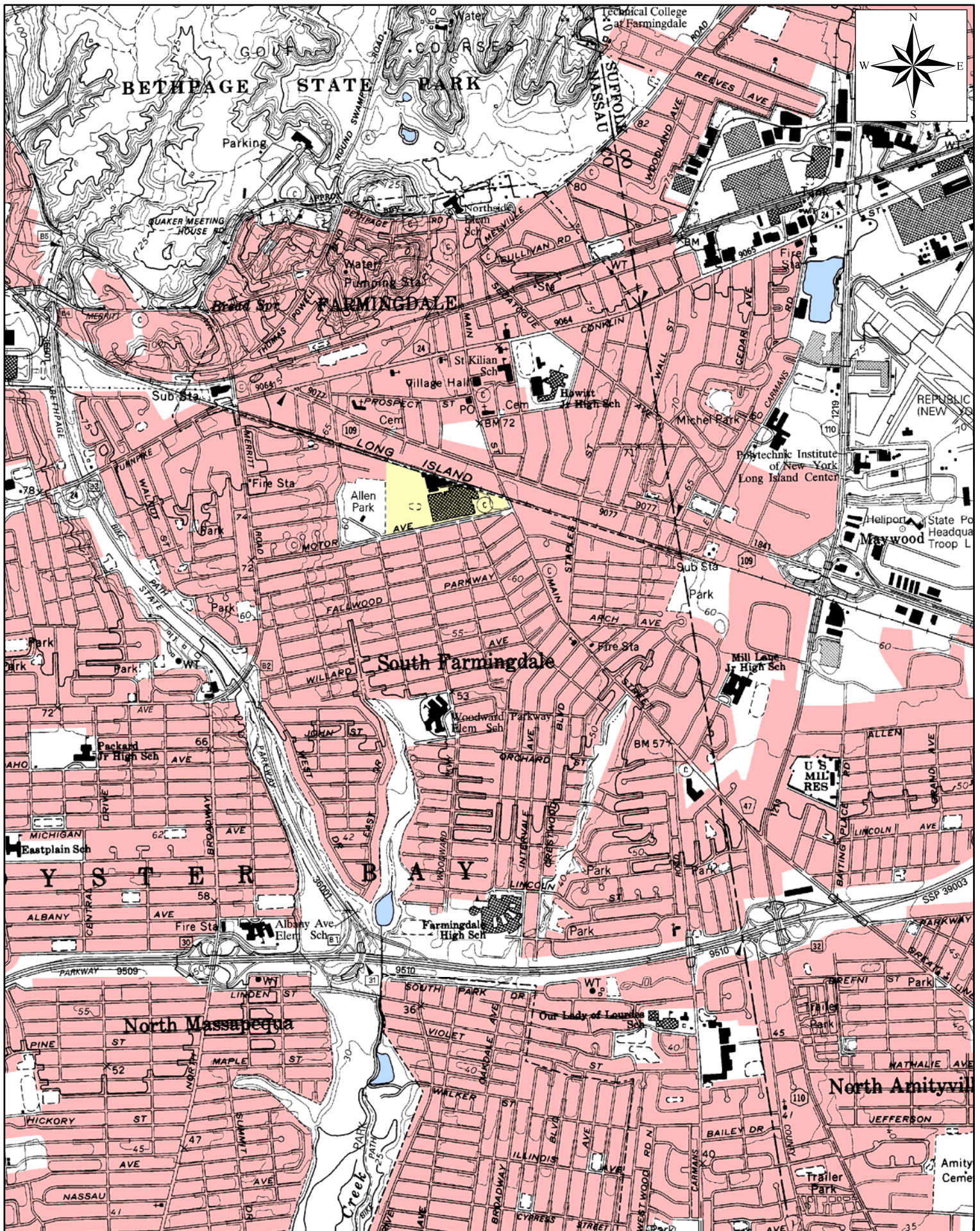
**Summary of Subsurface Feature Remediation Status
Phase I Demolition Area
Liberty Industrial Finishing Superfund Site
Farmingdale, New York**

Feature	Feature Interpretation	Status	Remedial Activity Complete?	Notes
UK-45	Stormwater catch basin	Removed	Yes	
UK-46	Stormwater catch basin	Removed	Yes	
UK-54	Drywell/catch basin believed to be a feature of the Eastern Leaching Chamber Field	Removed	Yes	
UK-55	Drywell/catch basin believed to be a feature of the Eastern Leaching Chamber Field	Removed	Yes	
UK-56	Drywell/catch basin believed to be a feature of the Eastern Leaching Chamber Field	Removed	Yes	
UK-57	Drywell/catch basin believed to be a feature of the Eastern Leaching Chamber Field	Removed	Yes	
UK-58	Drywell/catch basin believed to be a feature of the Eastern Leaching Chamber Field	Removed	Yes	
UK-59	Stormwater drainage piping cleanout basin	Removed	Yes	

Notes:

- 1) TCL -Target Compound List; parameters includes VOCs, SVOCs, PCBs & Pesticides
- 2) TAL - Target Analyte List; parameters include metals & cyanide
- 3) TCLP - Toxicity Characteristics Leaching Procedure analytes
- 4) RCI - RCRA Characteristics
- 5) AOC - Administrative Order on Consent
- 6) SVOCs - Semivolatile Organic Compounds
- 7) PCBs- Polychlorinated Biphenyls
- 8) VOCs - Volatile Organic Compounds

FIGURES



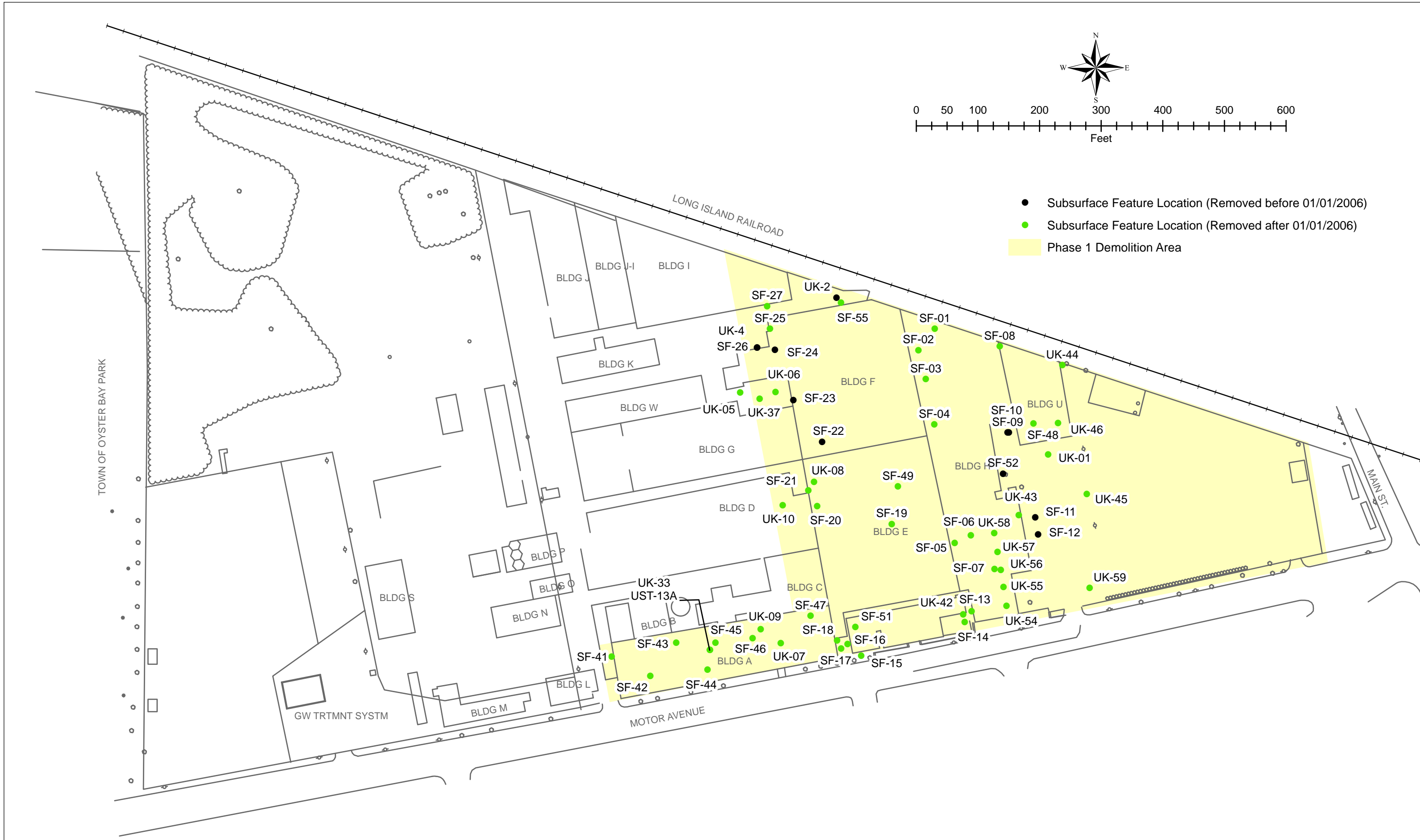
Reference: Portion of Amityville, New York
Topographic Quadrangle (USGS, 1996)

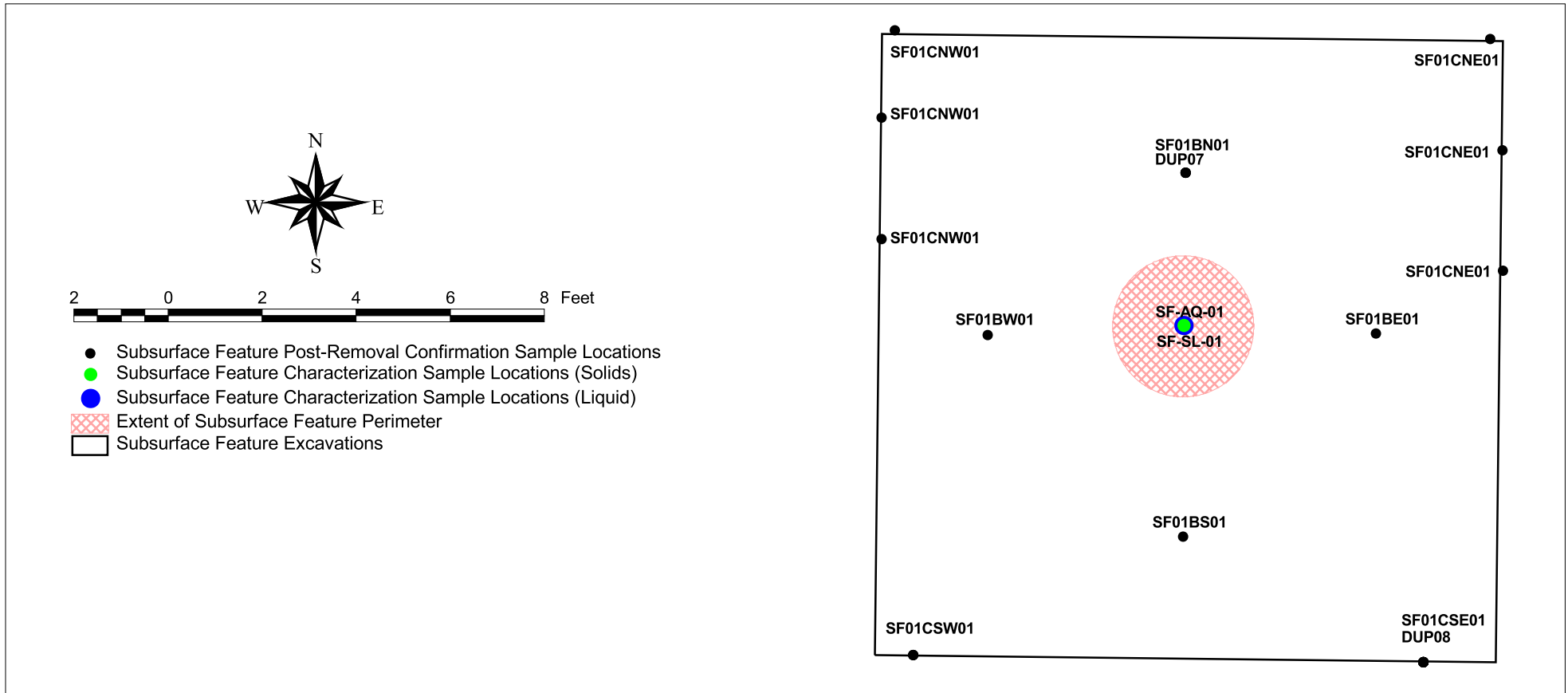
1 inch equals 2,000 feet
Contour Interval = 10 feet

FIGURE 1-1
Site Location Map

AMO Environmental Decisions
July 2008

Liberty Industrial Finishing Superfund Site
Farmingdale, New York

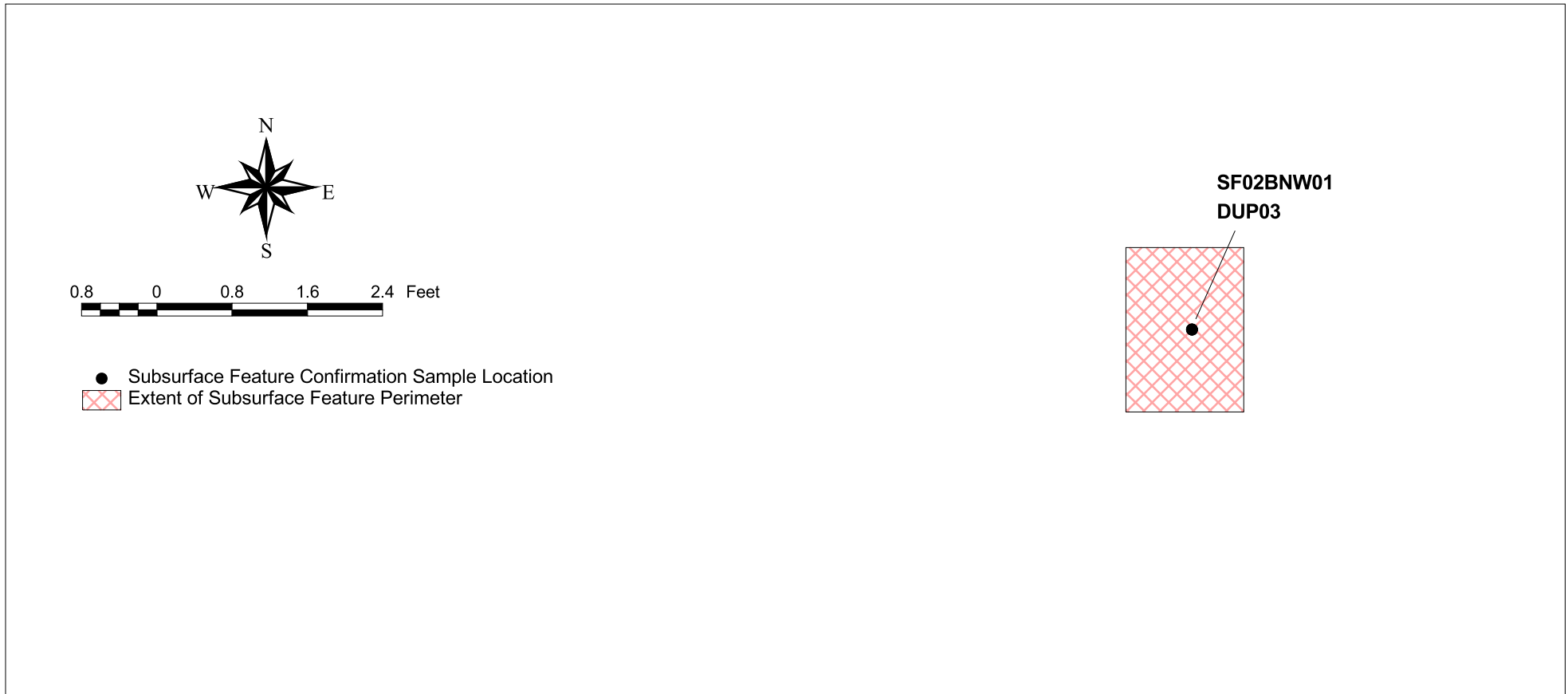




FEATURE LOCATION MAP



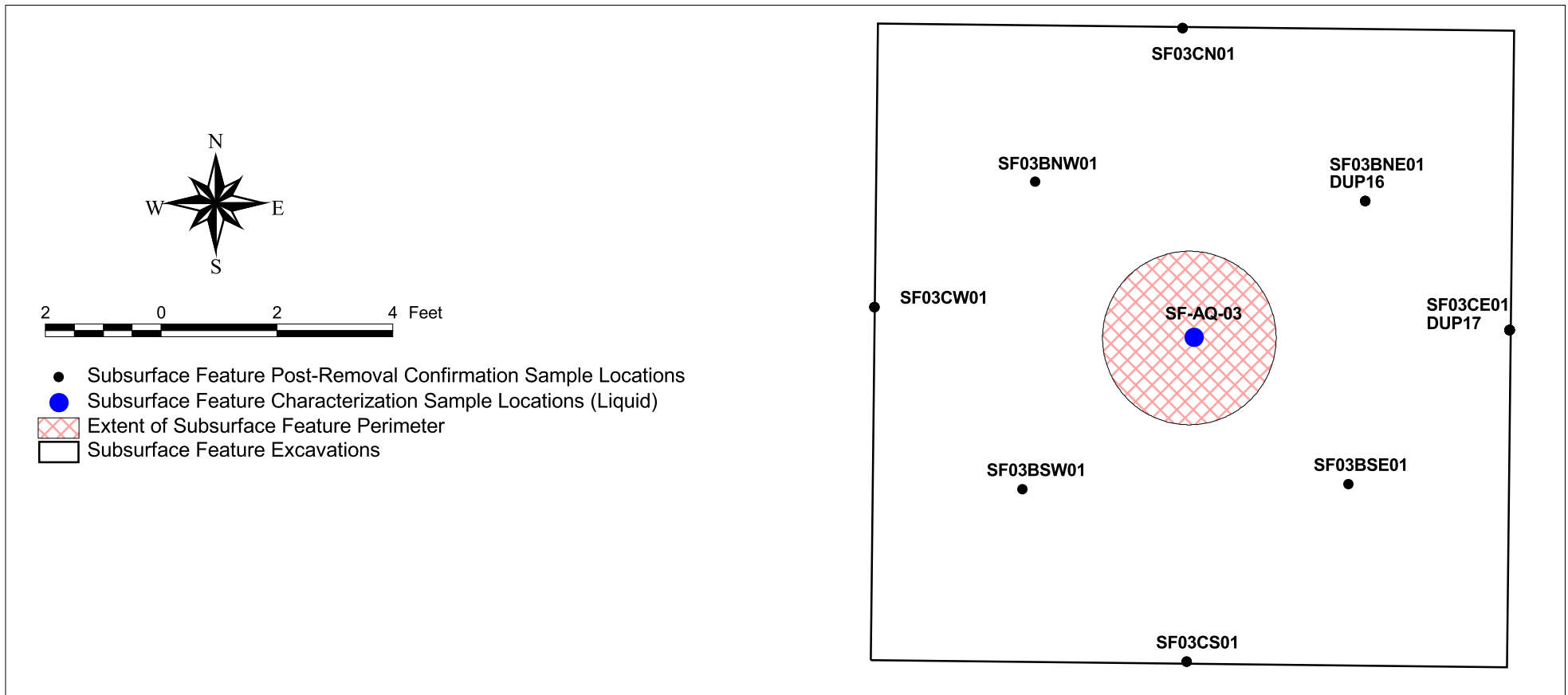
Figure 4-1
SF-01 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



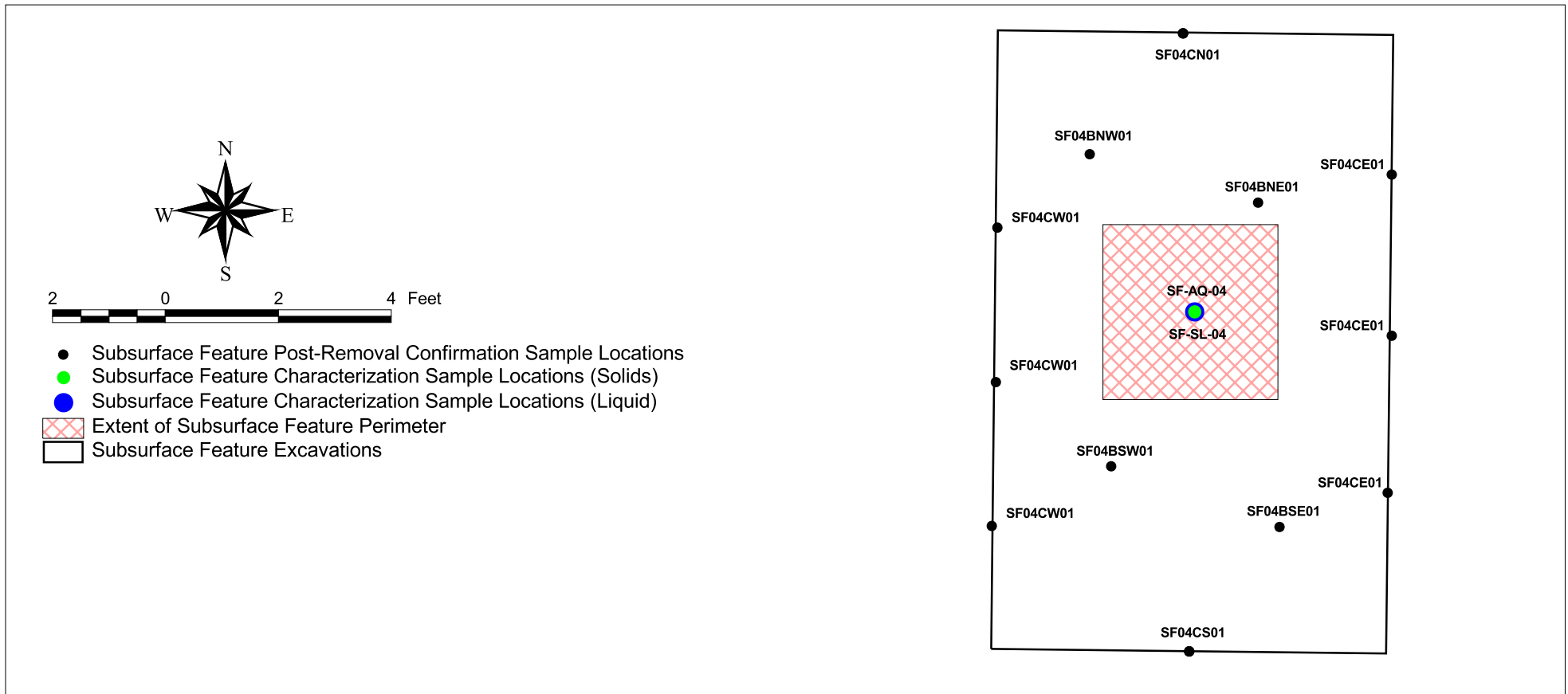
Figure 4-2
SF-02 Confirmation Sample Location
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



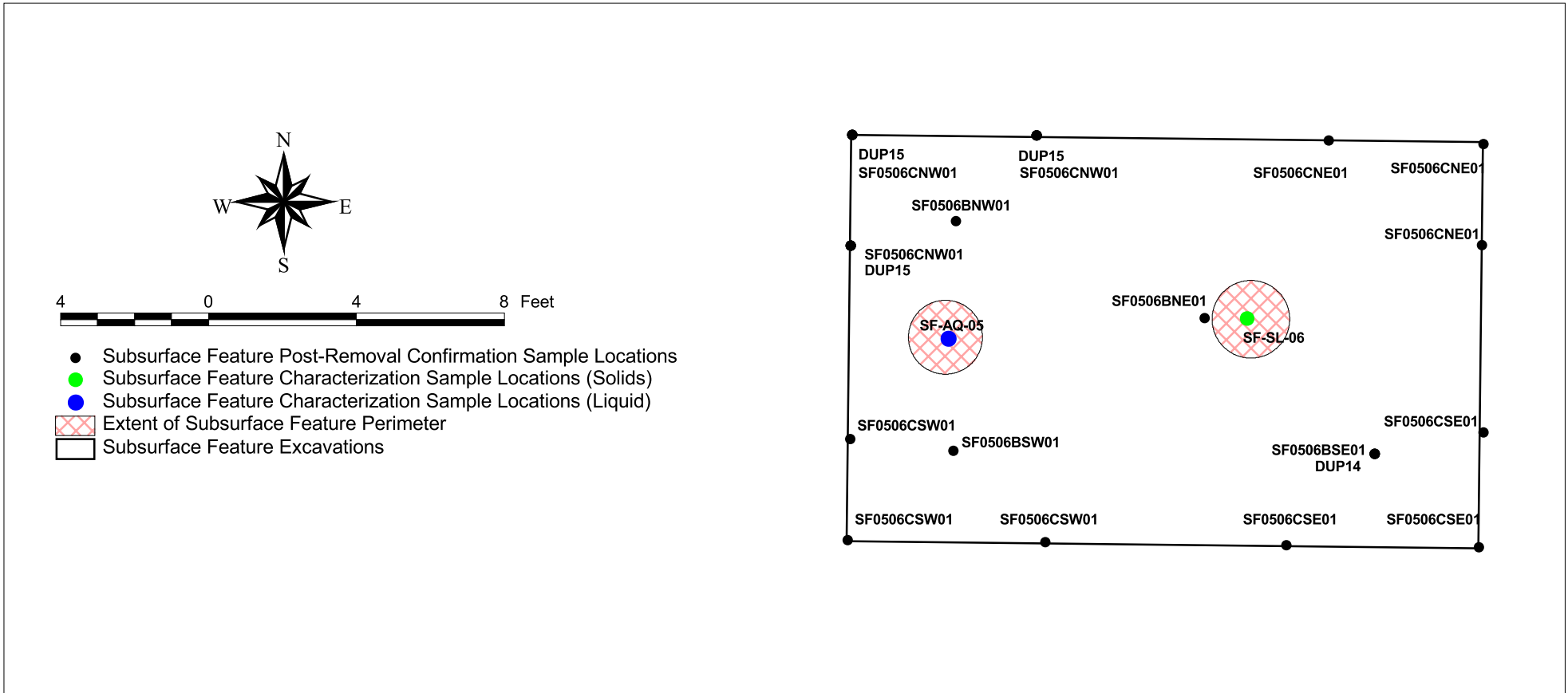
Figure 4-3
SF-03 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



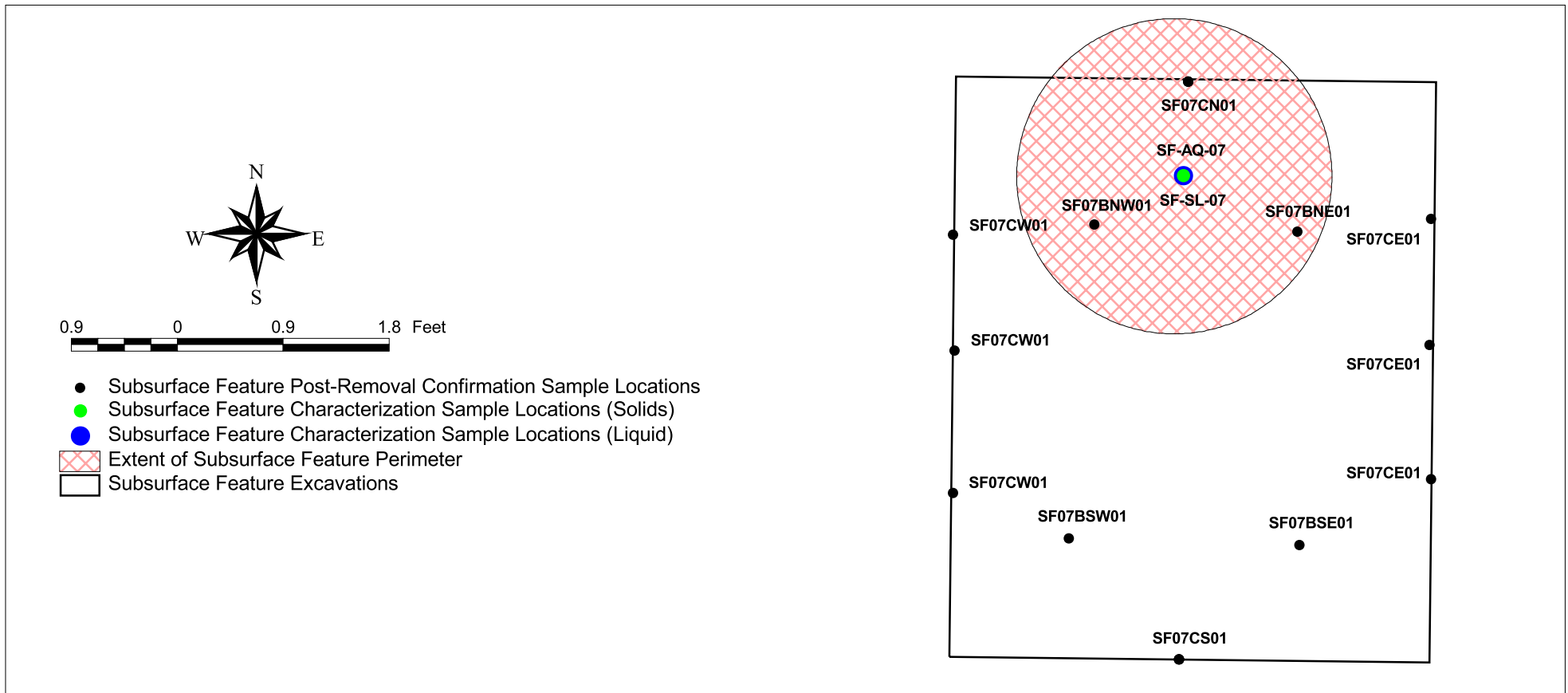
Figure 4-4
SF-04 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



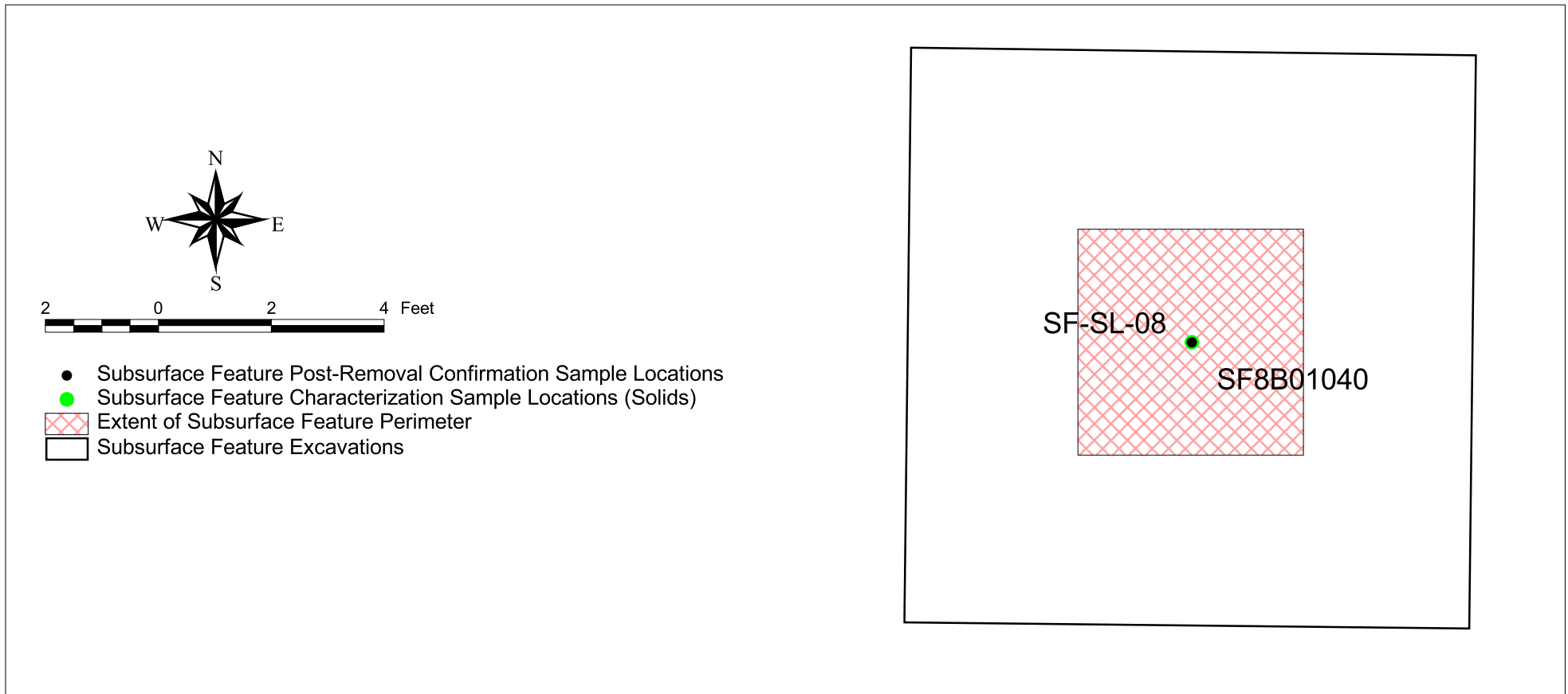
Figure 4-5
SF-05 and SF-06 Characterization & Post-Removal Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-6
SF-07 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

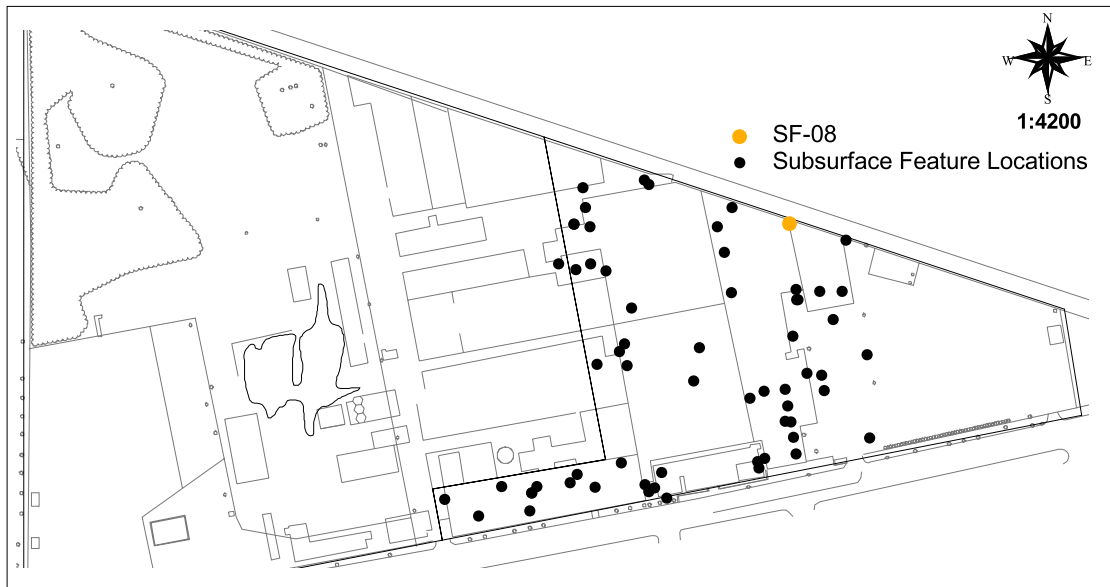
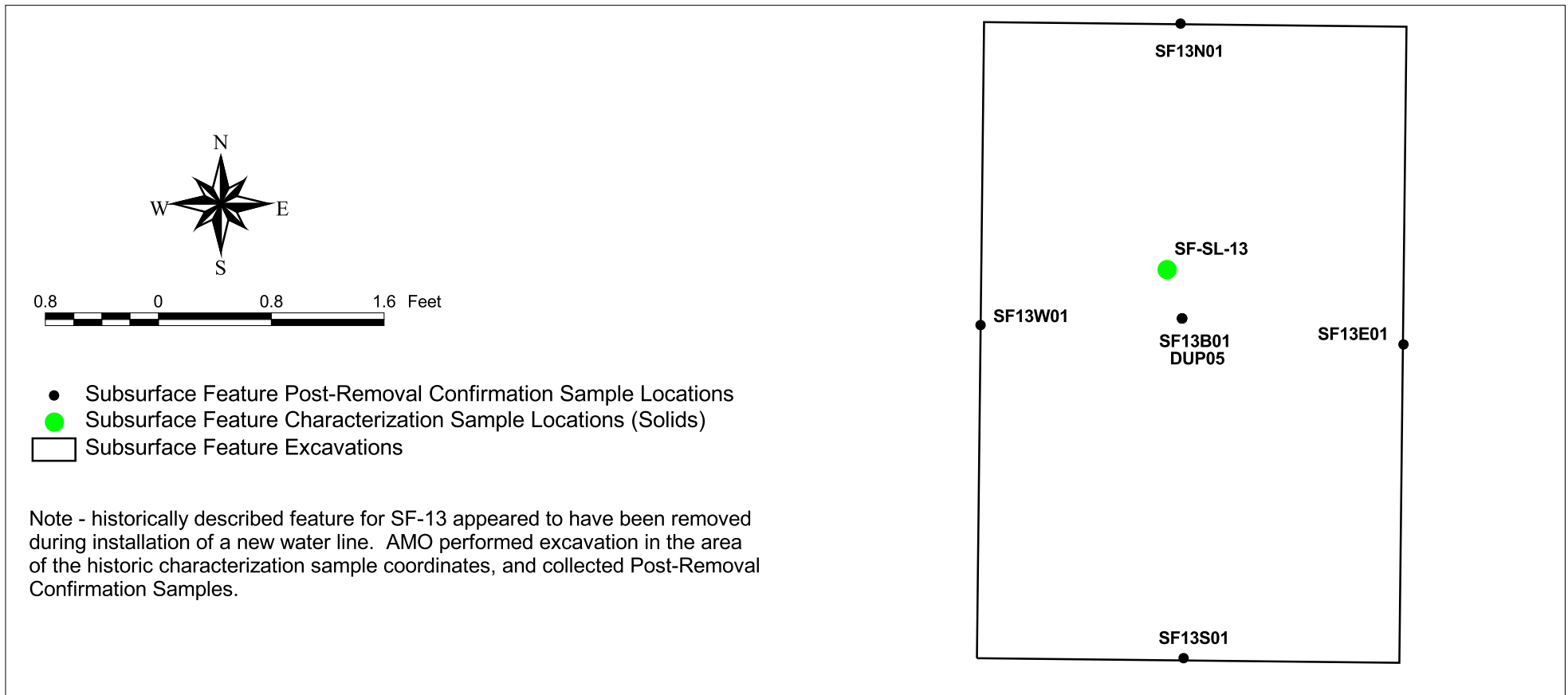


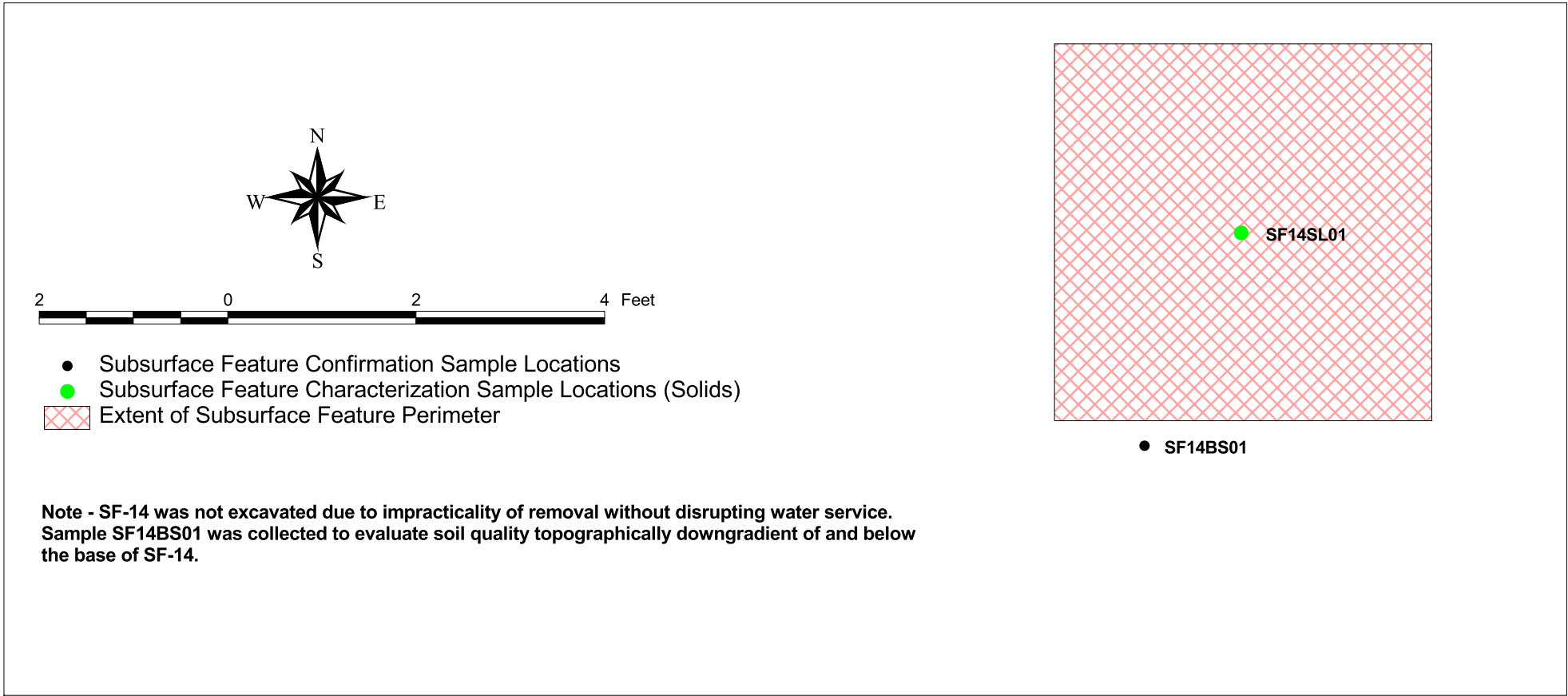
Figure 4-7
SF-08 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



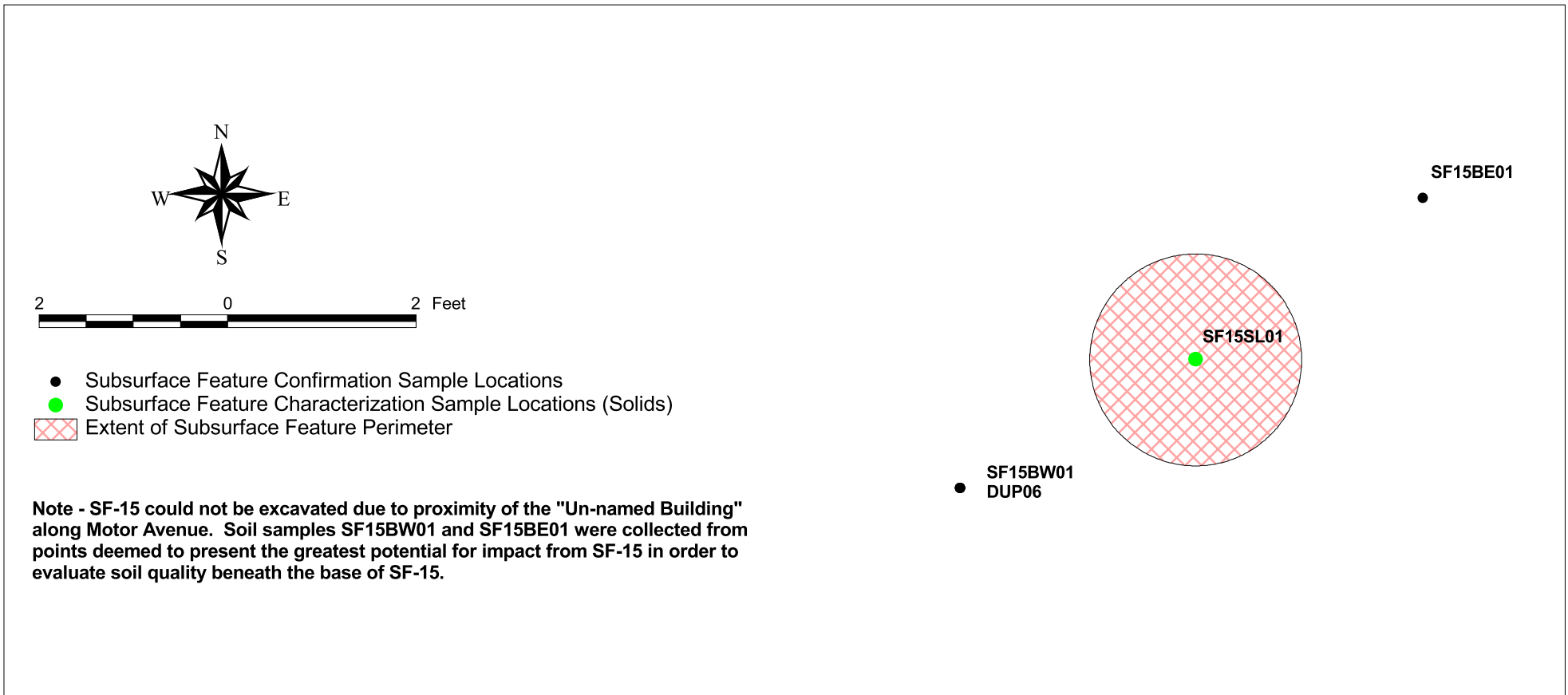
Figure 4-8
SF-13 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-9
SF-14 Characterization & Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

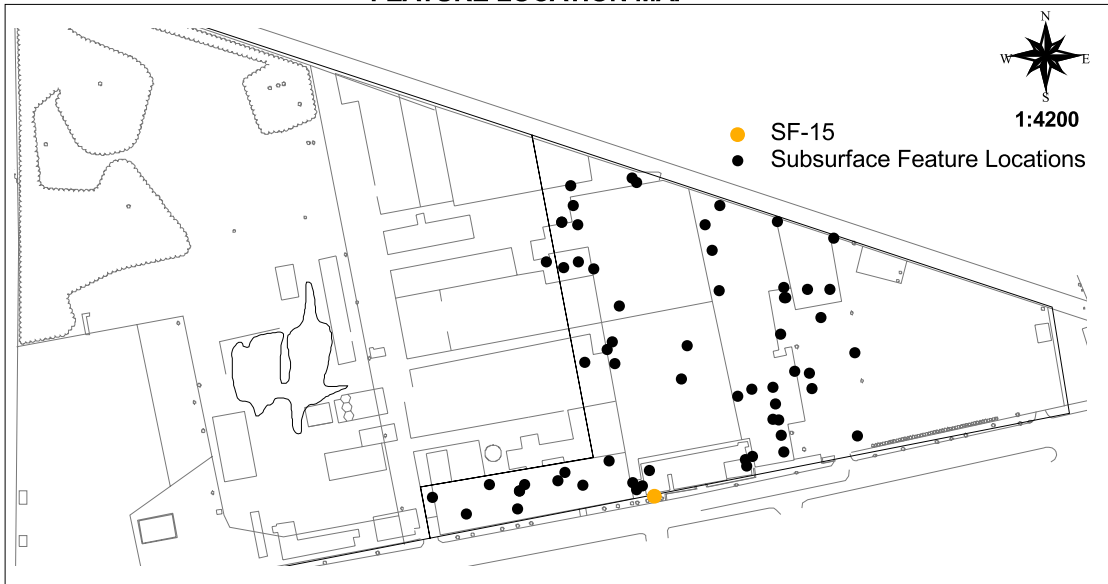
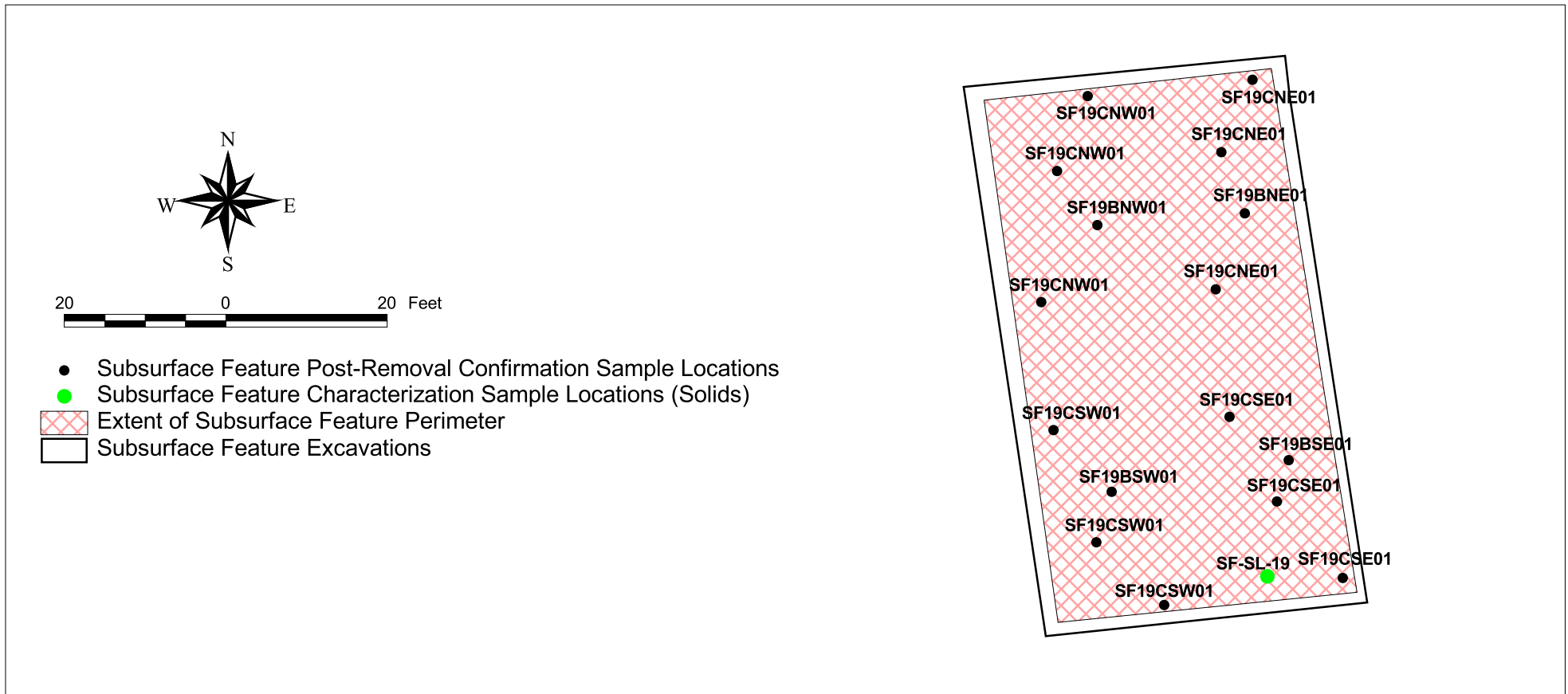


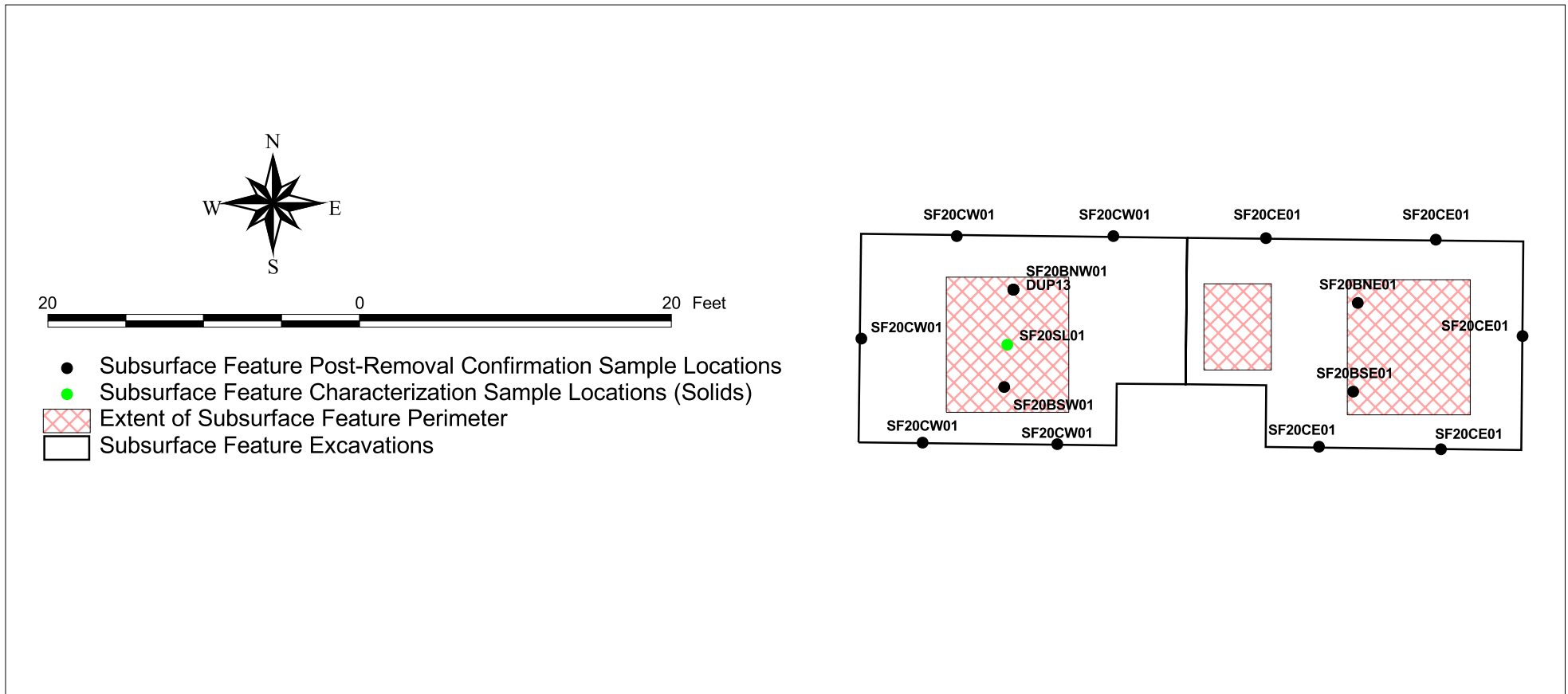
Figure 4-10
SF-15 Characterization & Confirmation Sample Locations
Liberty Industrial Finishing Superfund Site
Farmingdale, New York



FEATURE LOCATION MAP



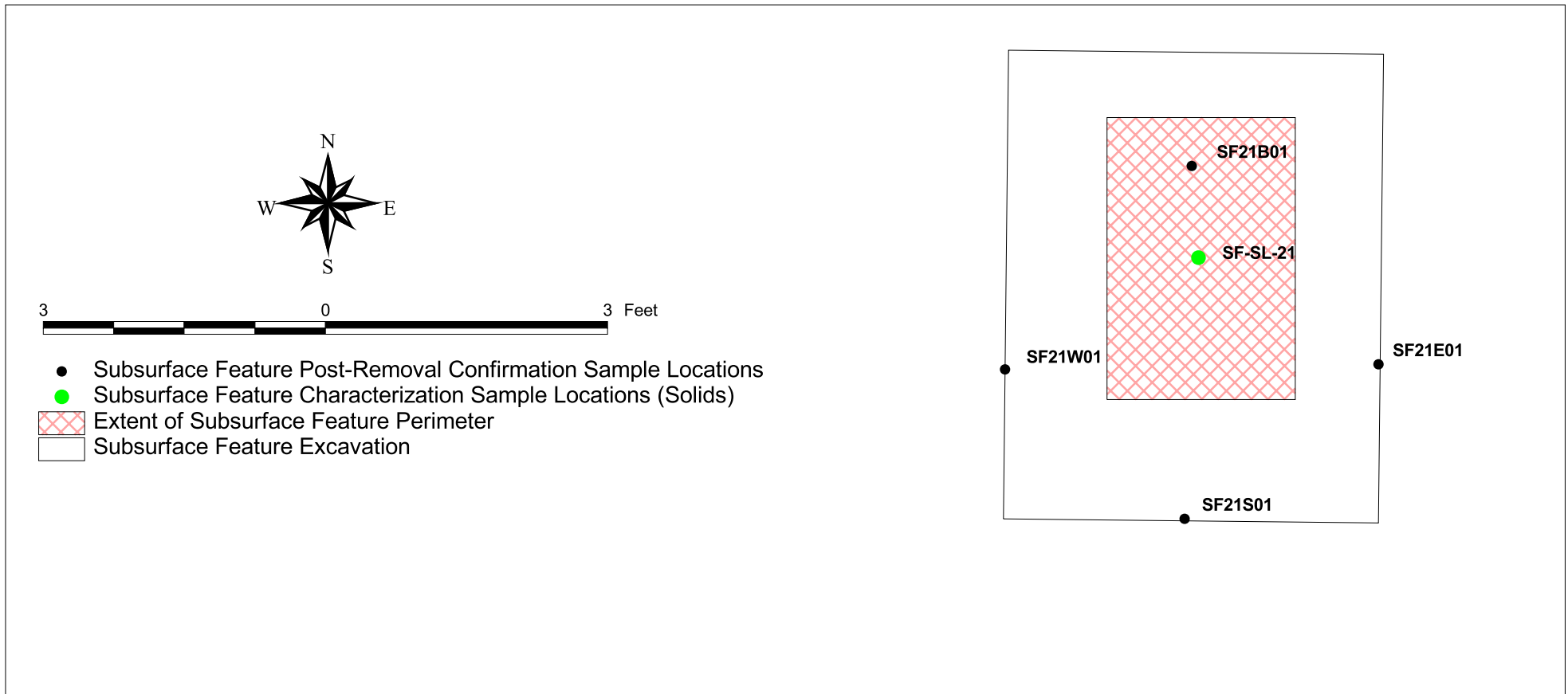
Figure 4-12
SF-19 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-13
SF-20 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

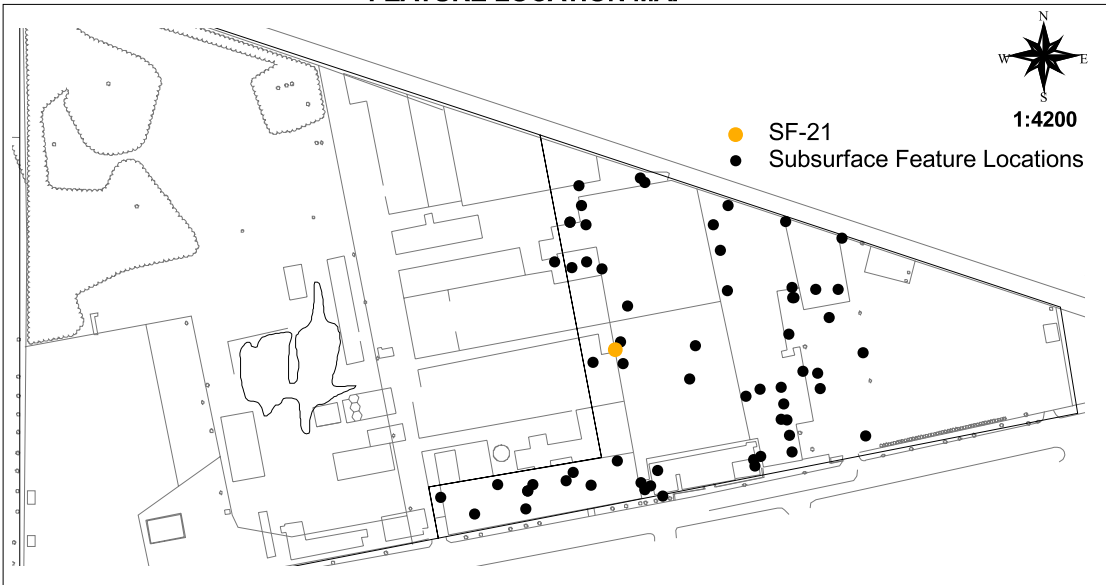
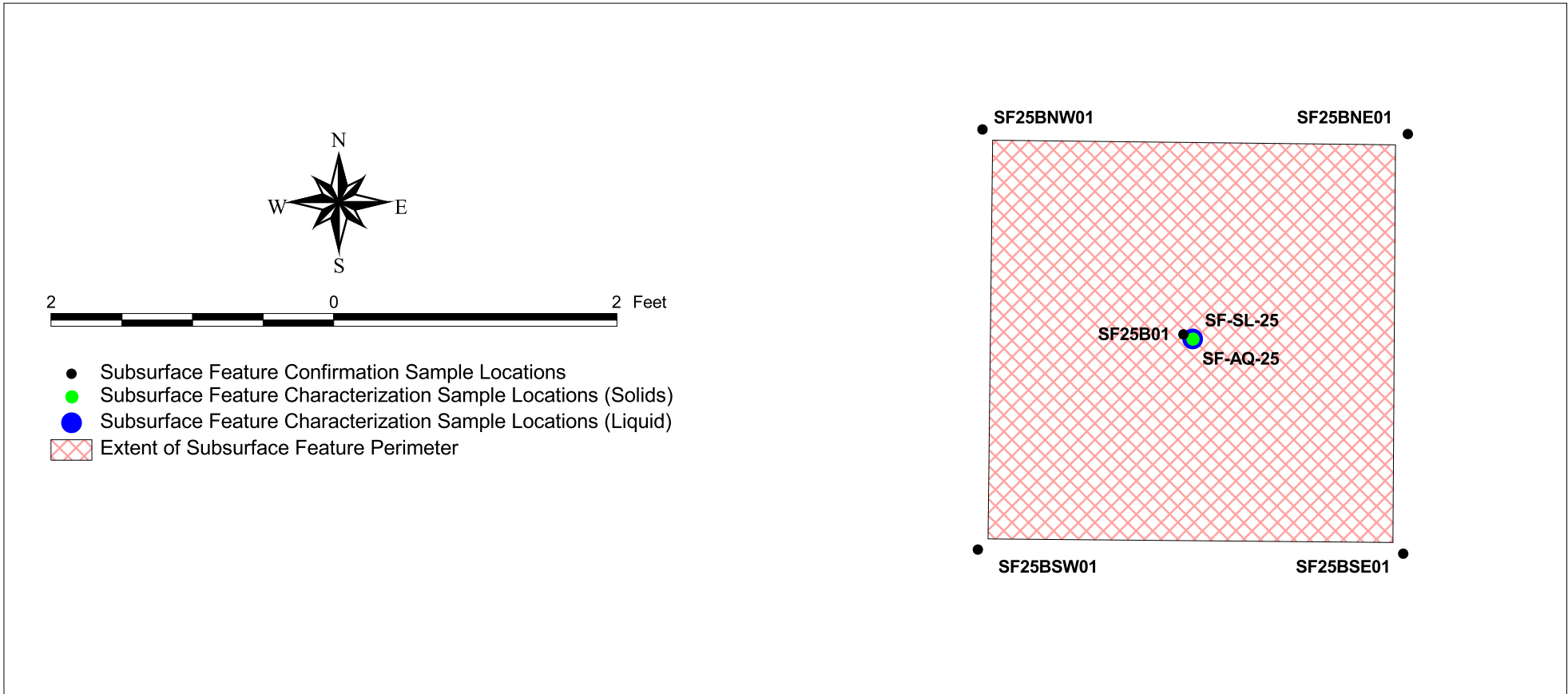


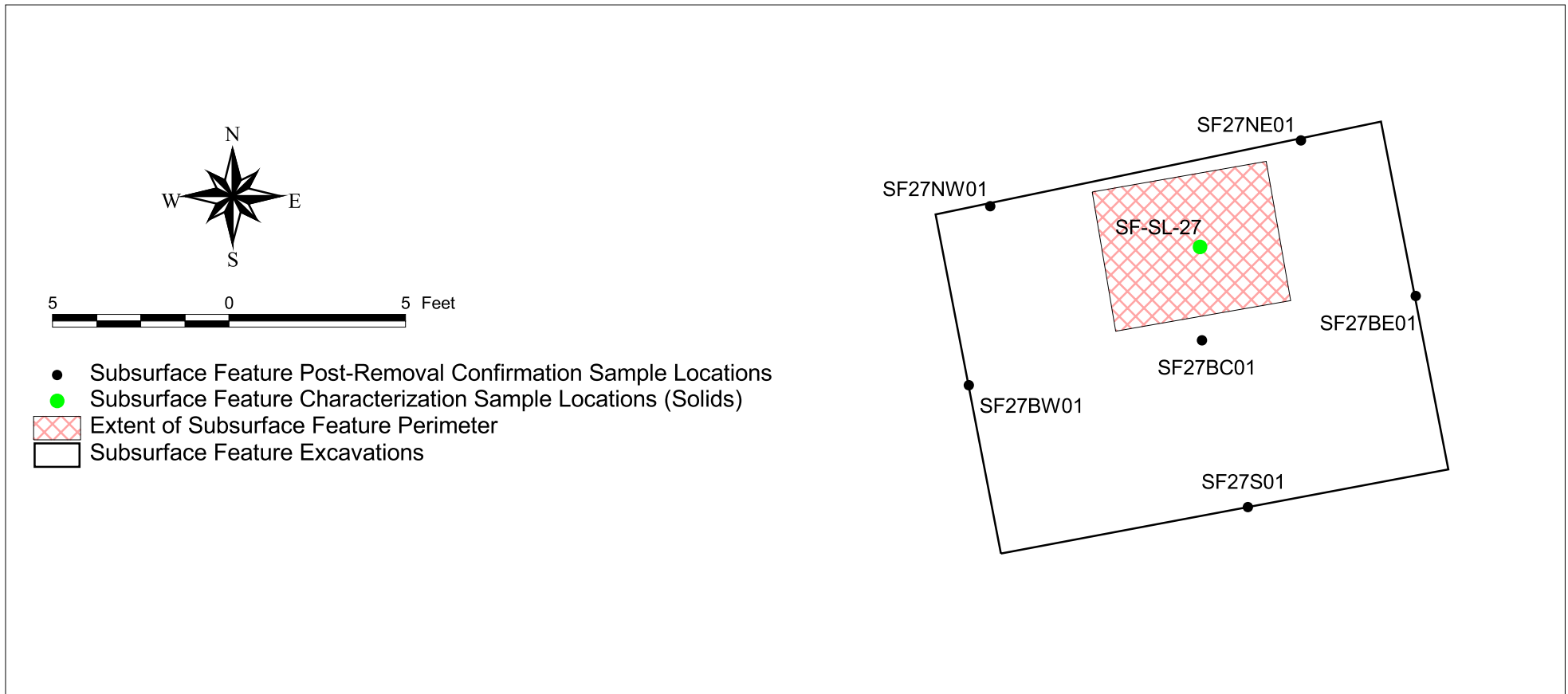
Figure 4-14
SF-21 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-15
SF-25 Characterization & Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

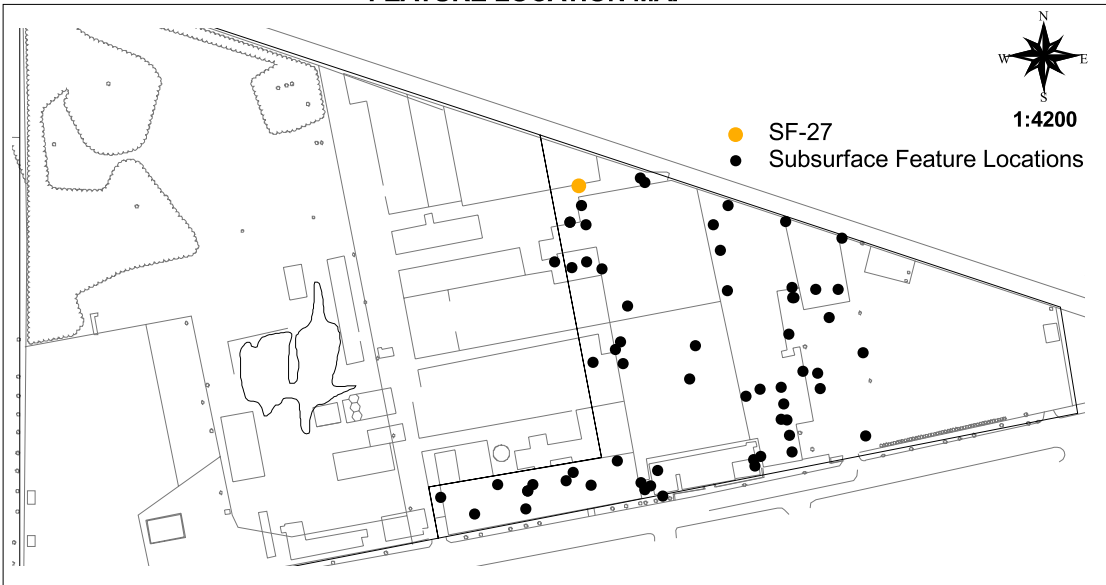
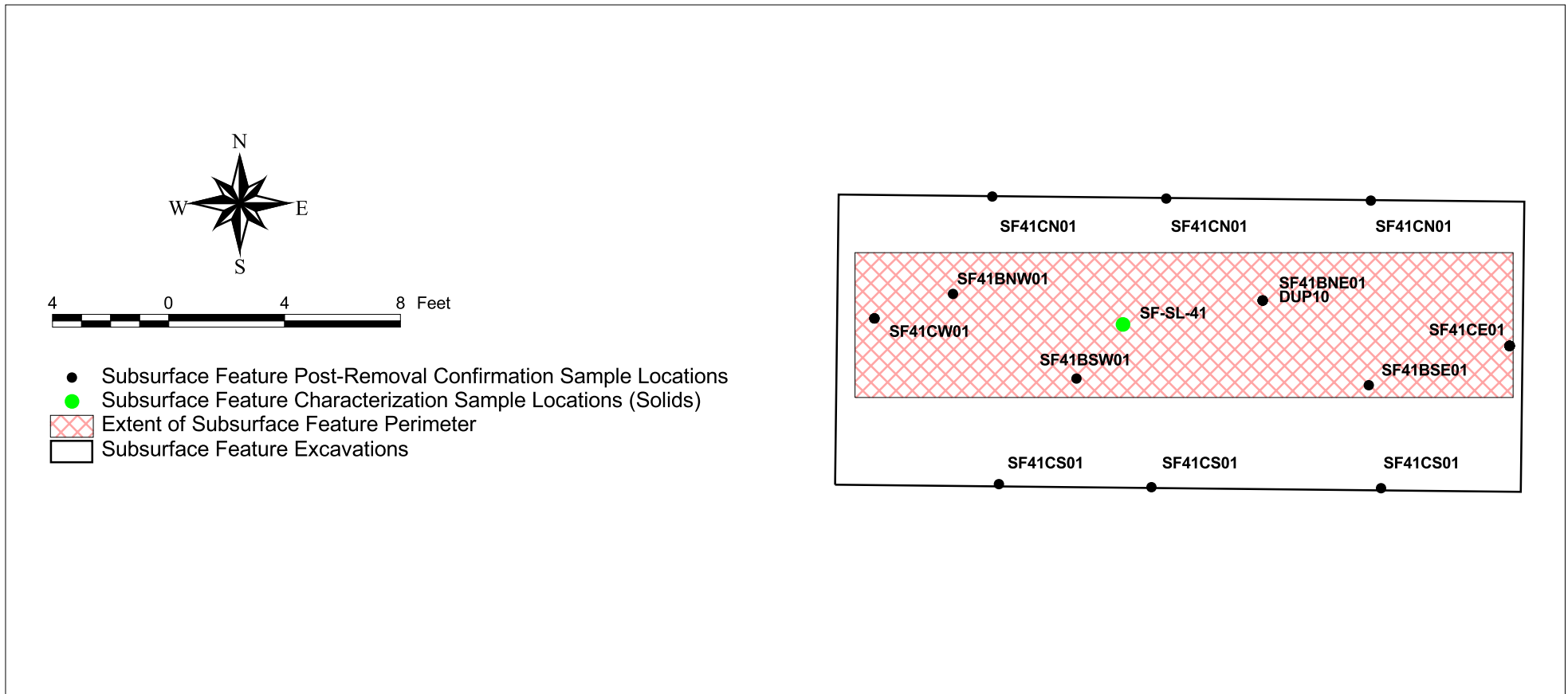


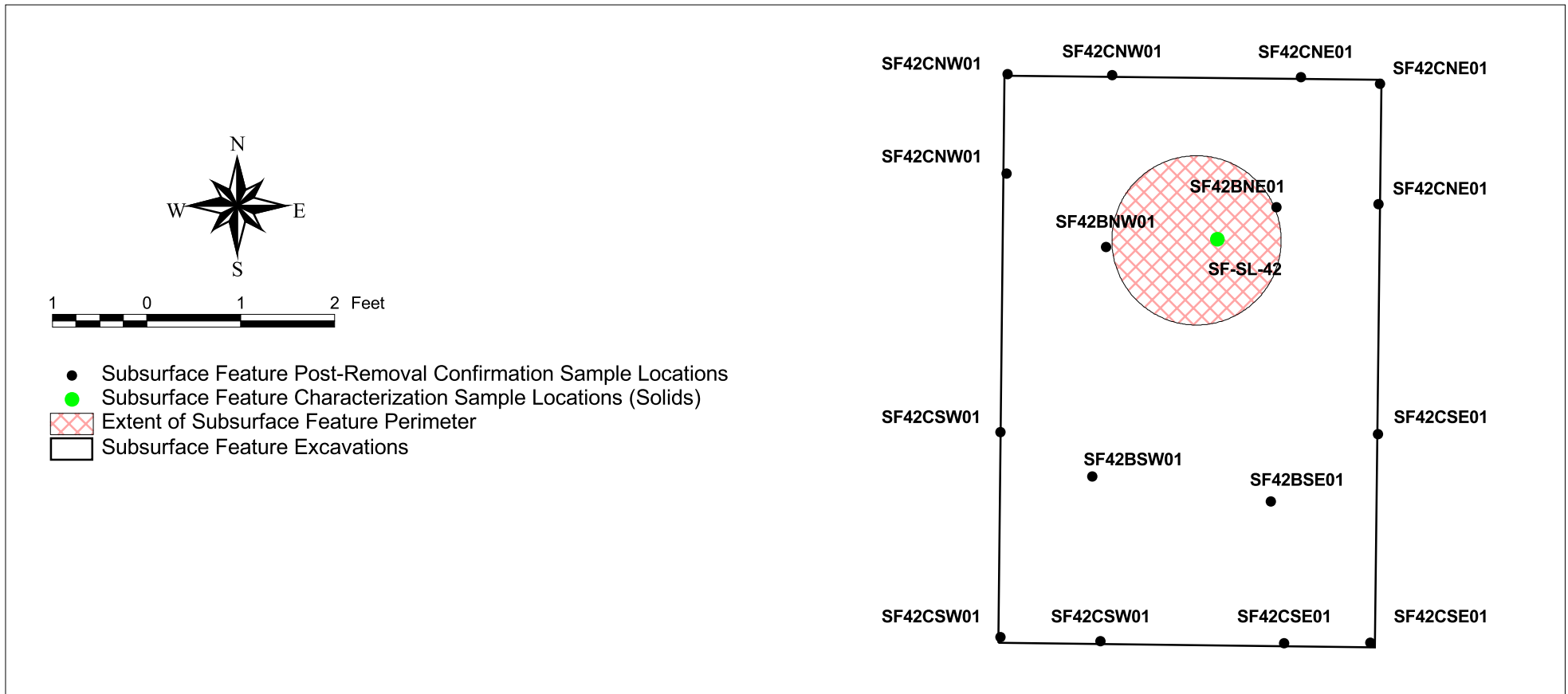
Figure 4-16
SF-27 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-17
SF-41 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

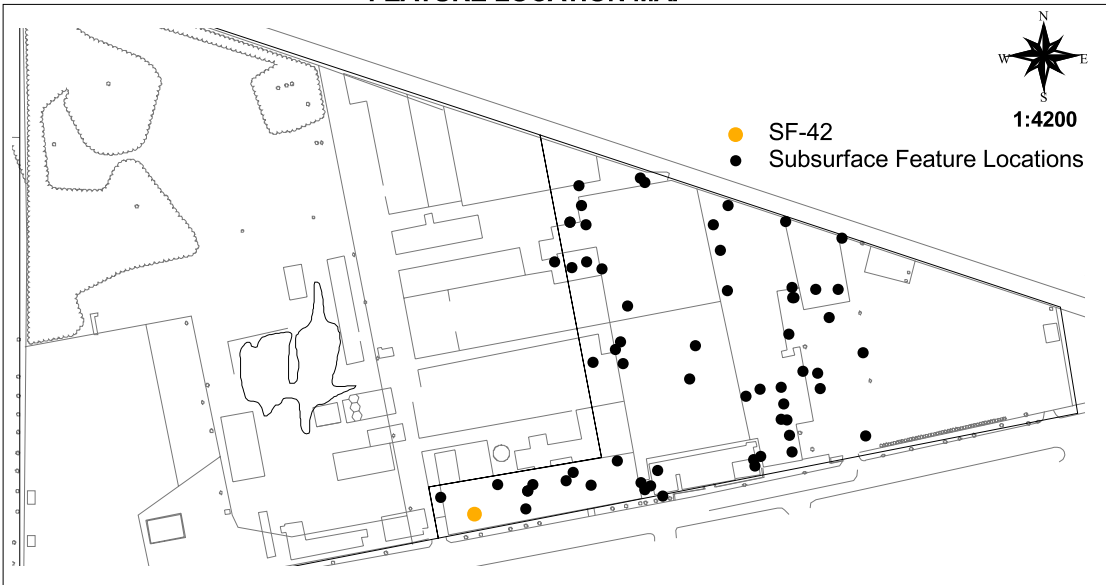
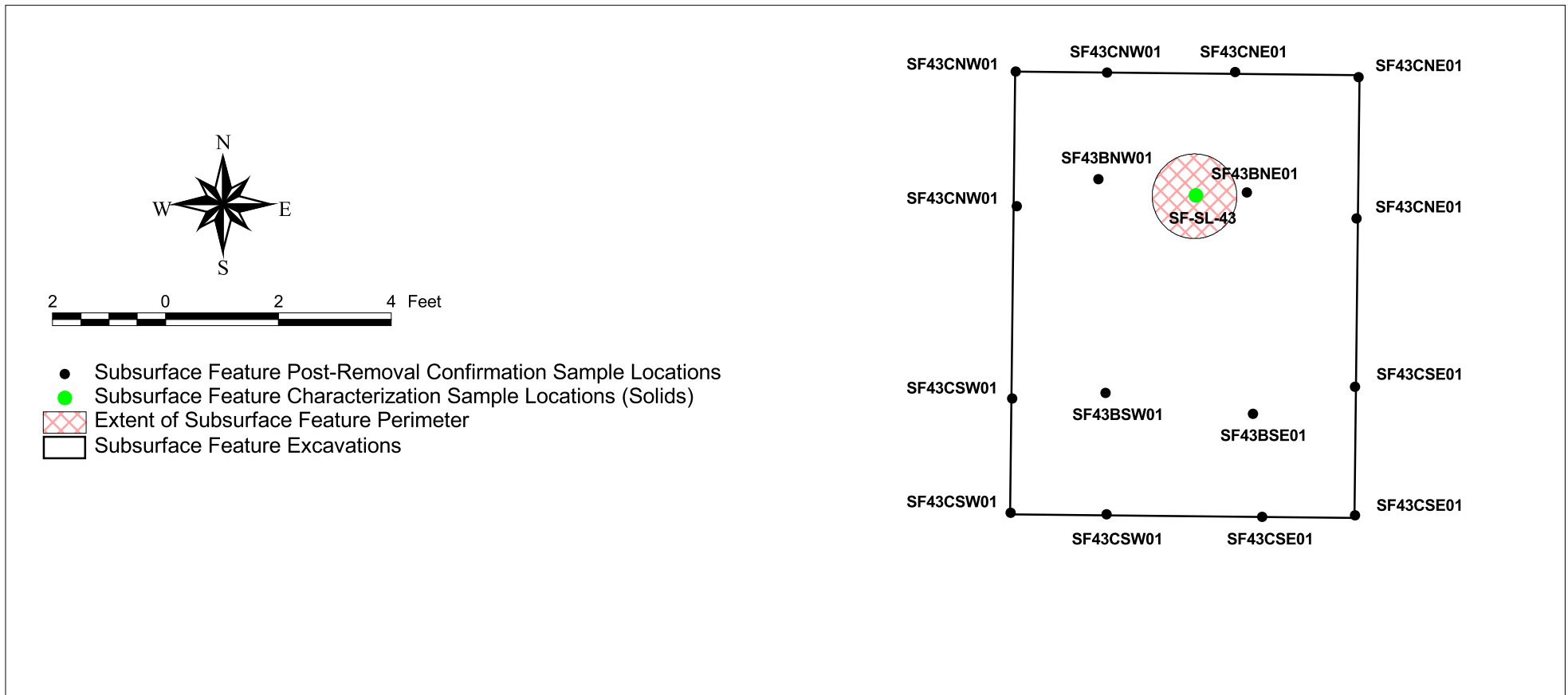


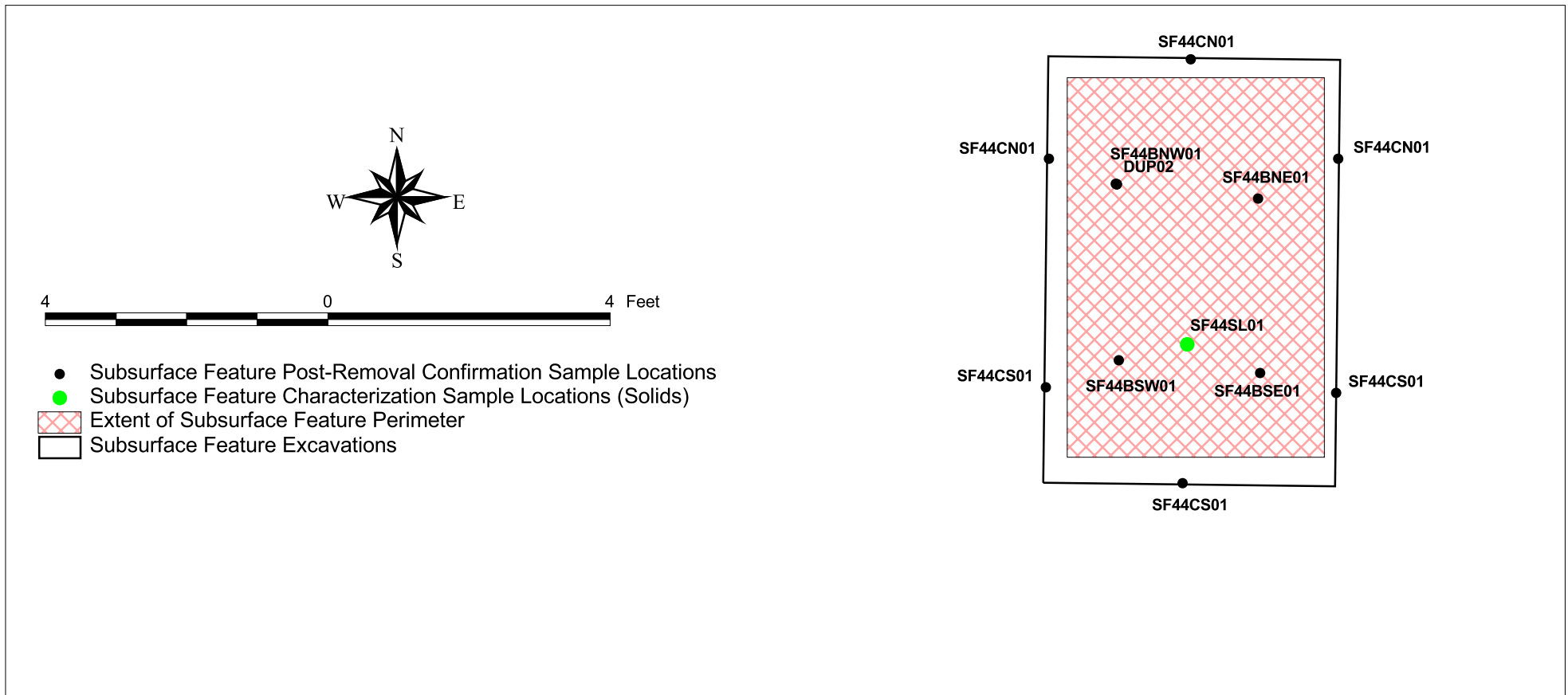
Figure 4-18
SF-42 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



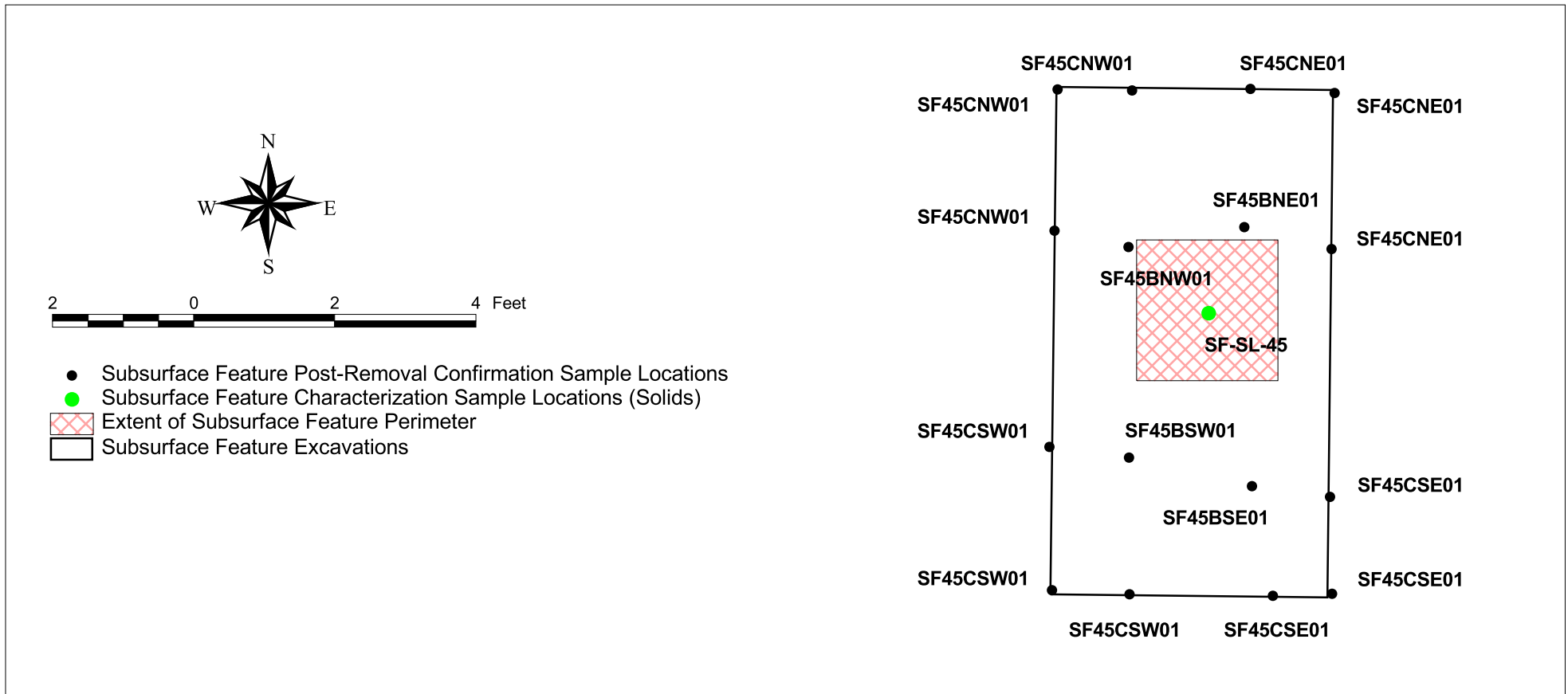
Figure 4-19
SF-43 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



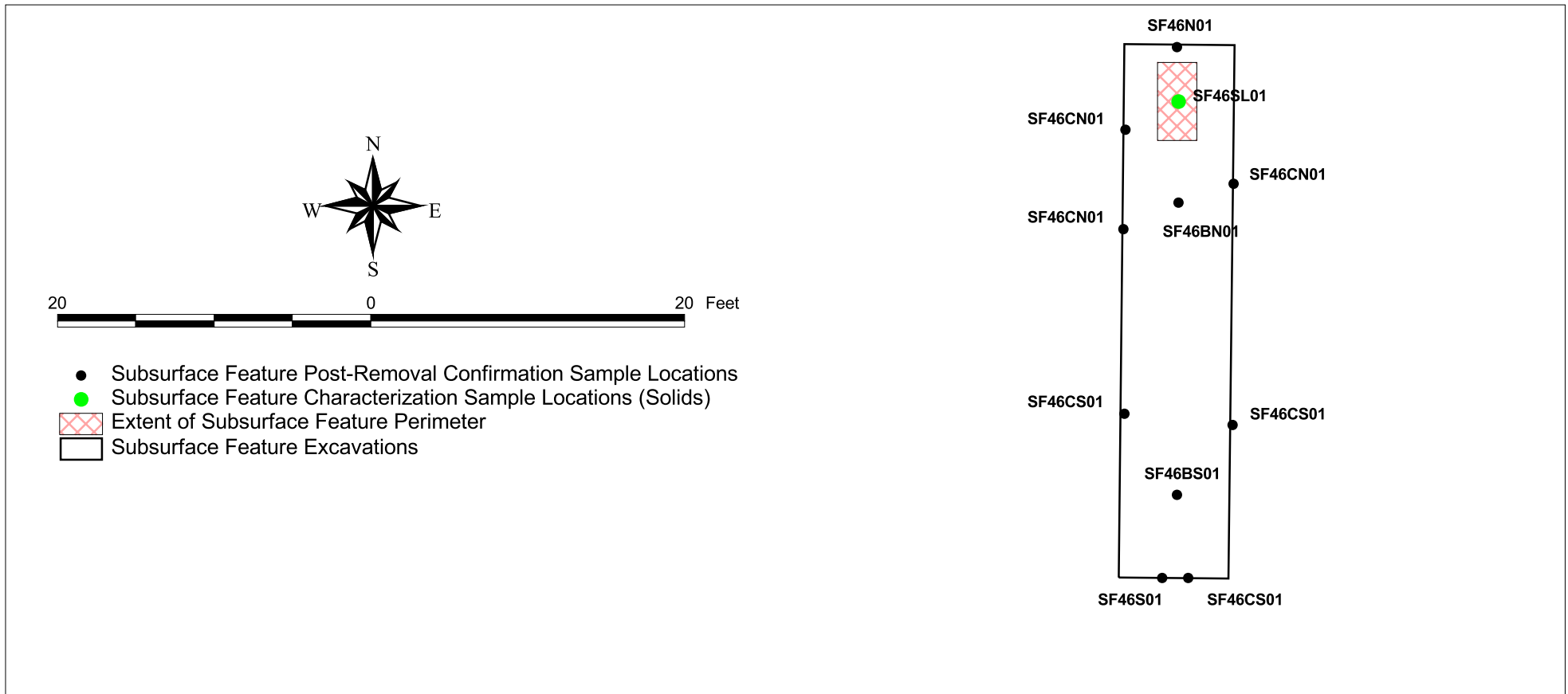
Figure 4-20
SF-44 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



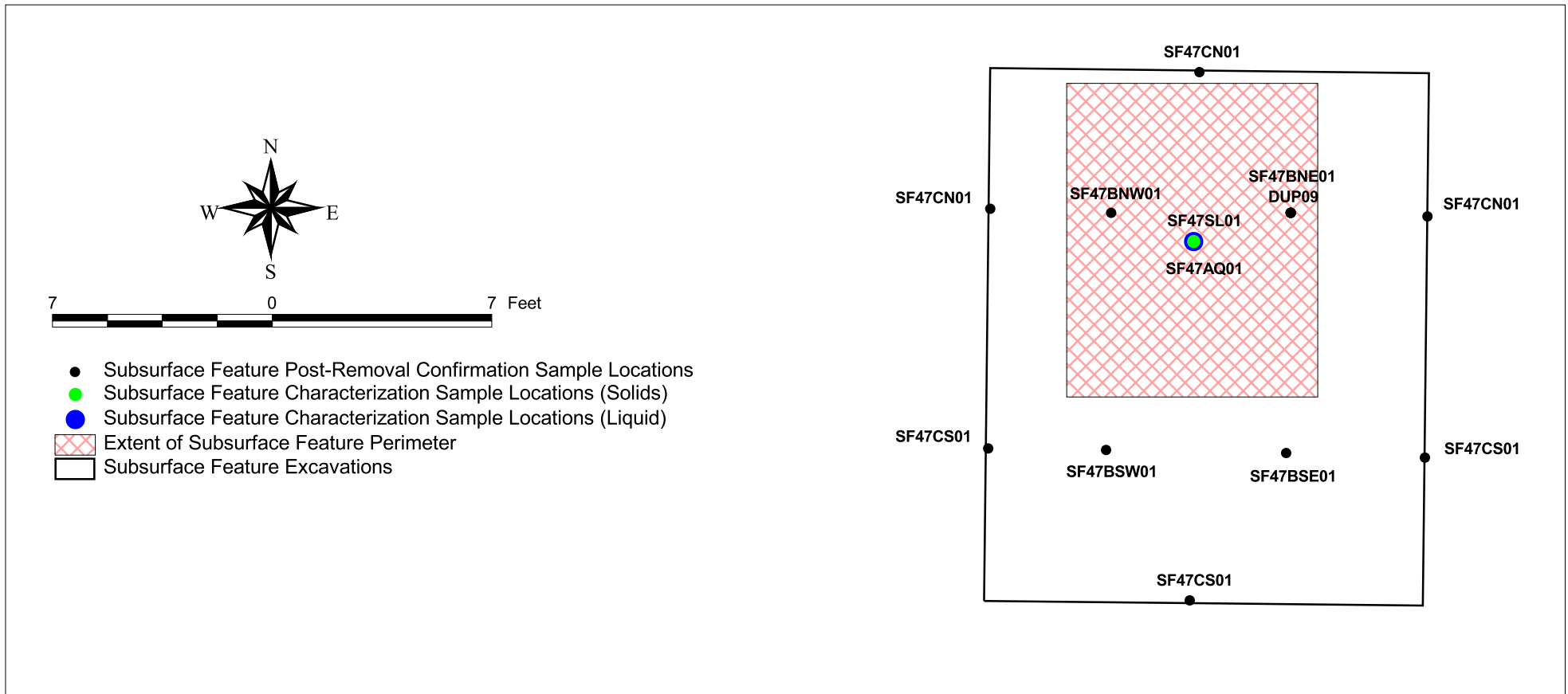
Figure 4-21
SF-45 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



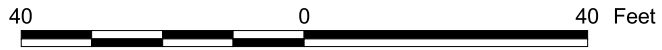
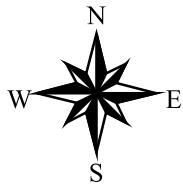
Figure 4-22
SF-46 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

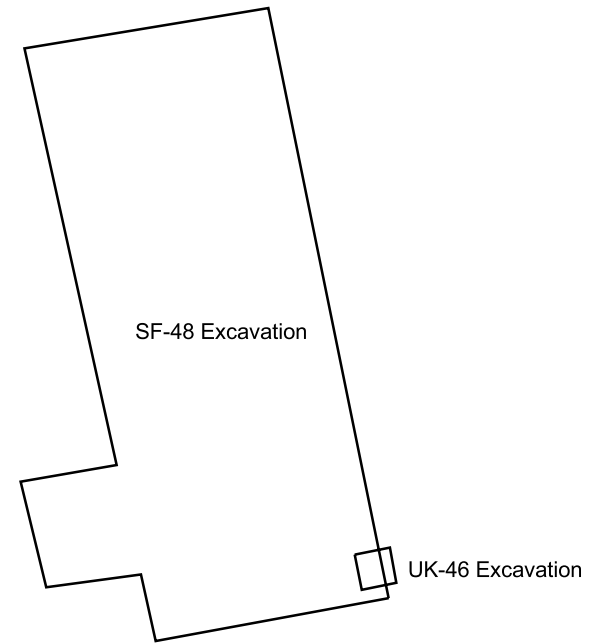


Figure 4-23
SF-47 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



 Subsurface Feature Excavations

Note: No subsurface feature was observed after excavating what had been identified as SF-48.



FEATURE LOCATION MAP

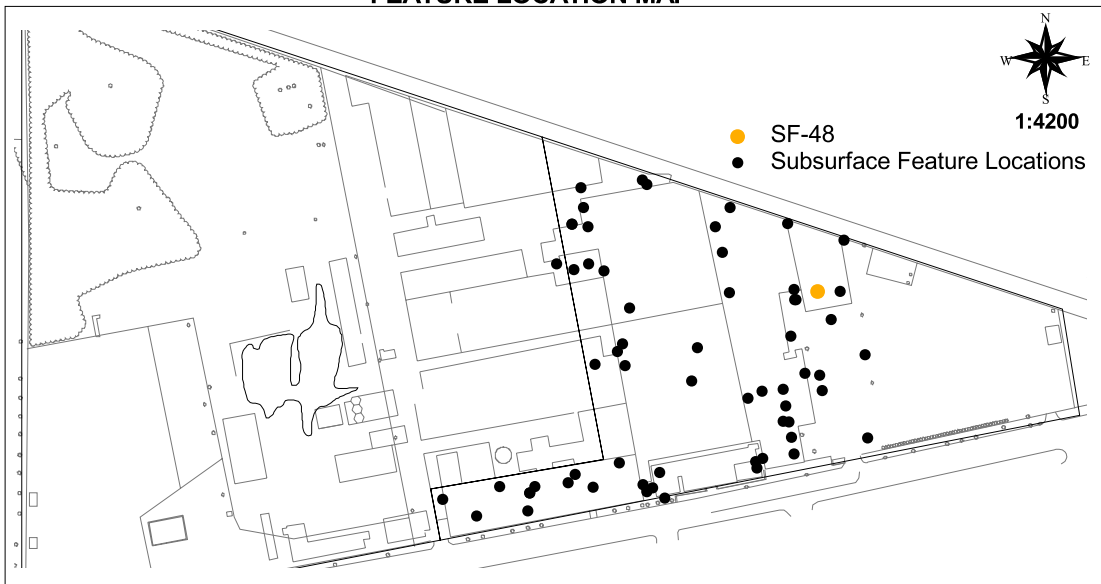
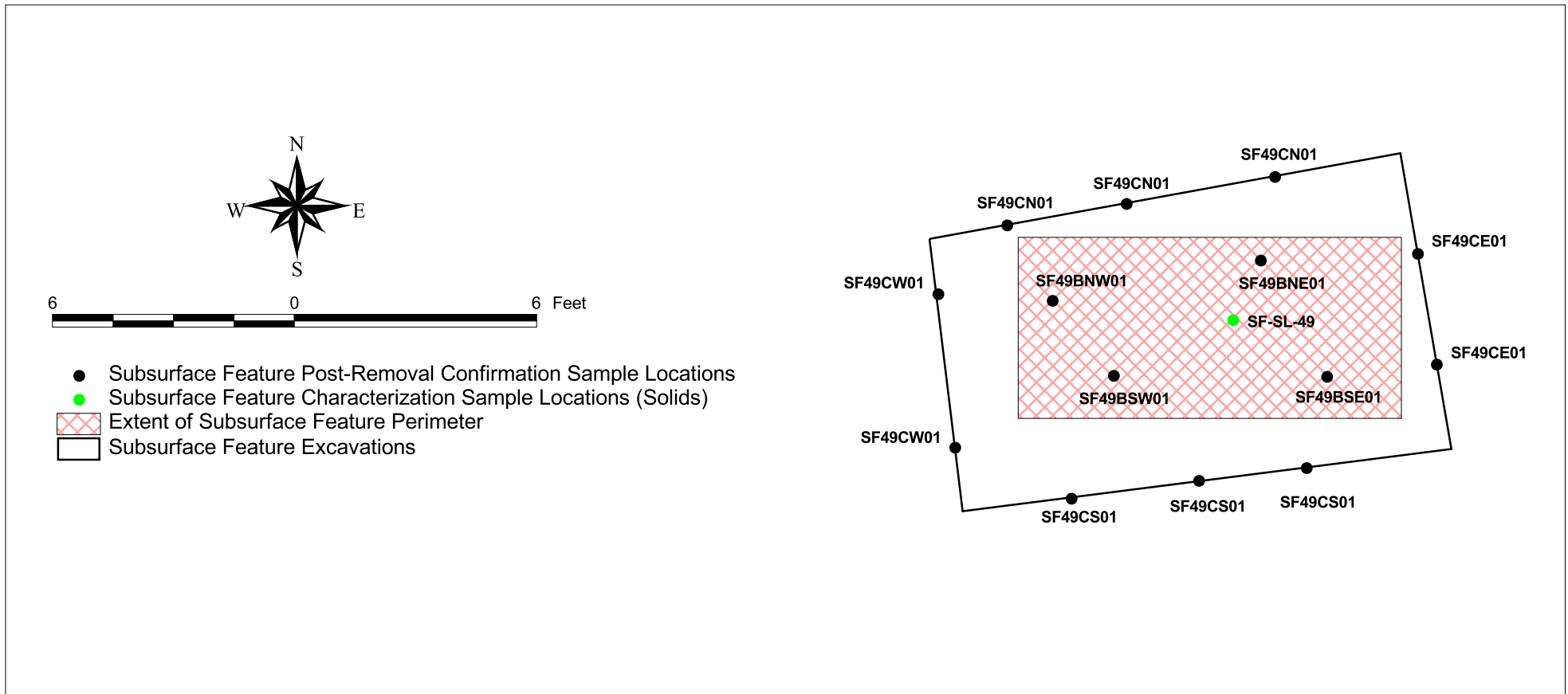


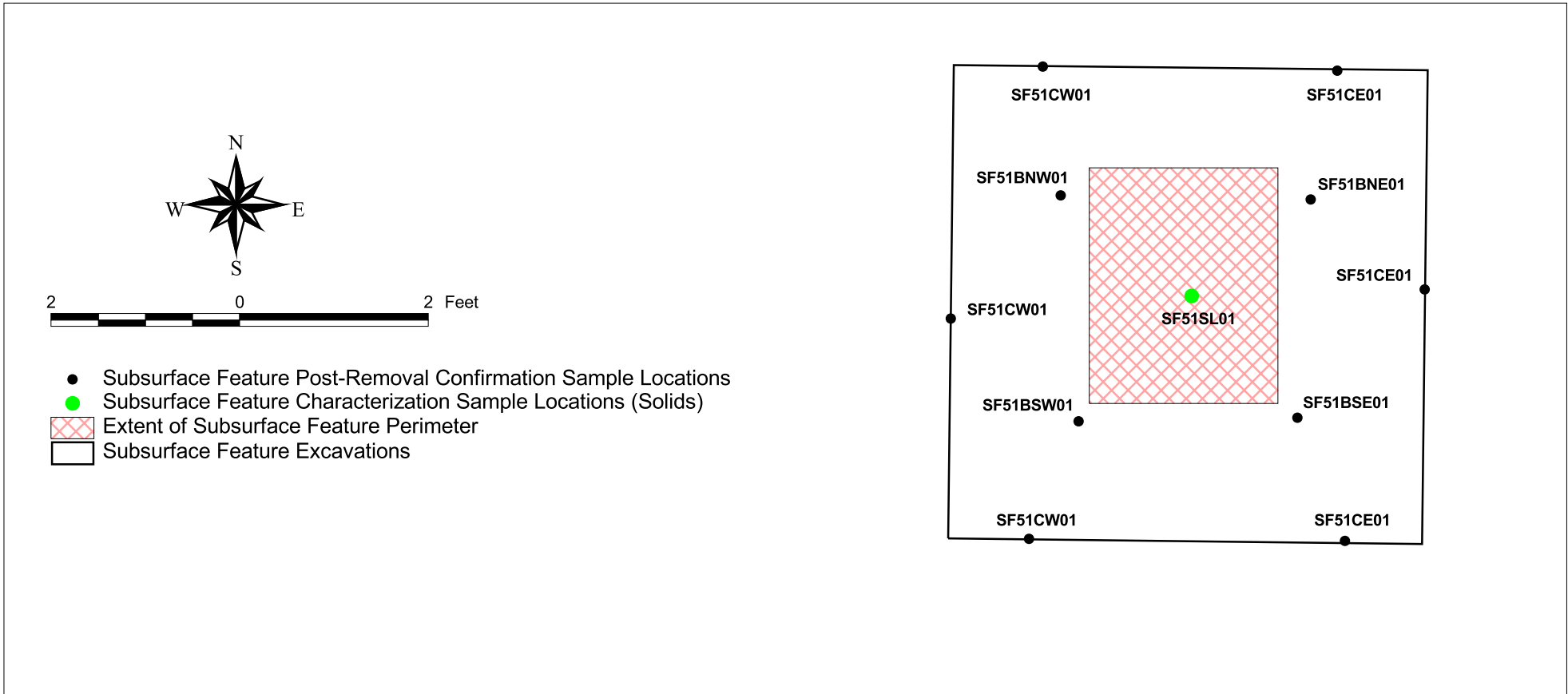
Figure 4-24
SF-48 Excavation Area
Liberty Industrial Finishing Superfund Site
Farmingdale, New York



FEATURE LOCATION MAP



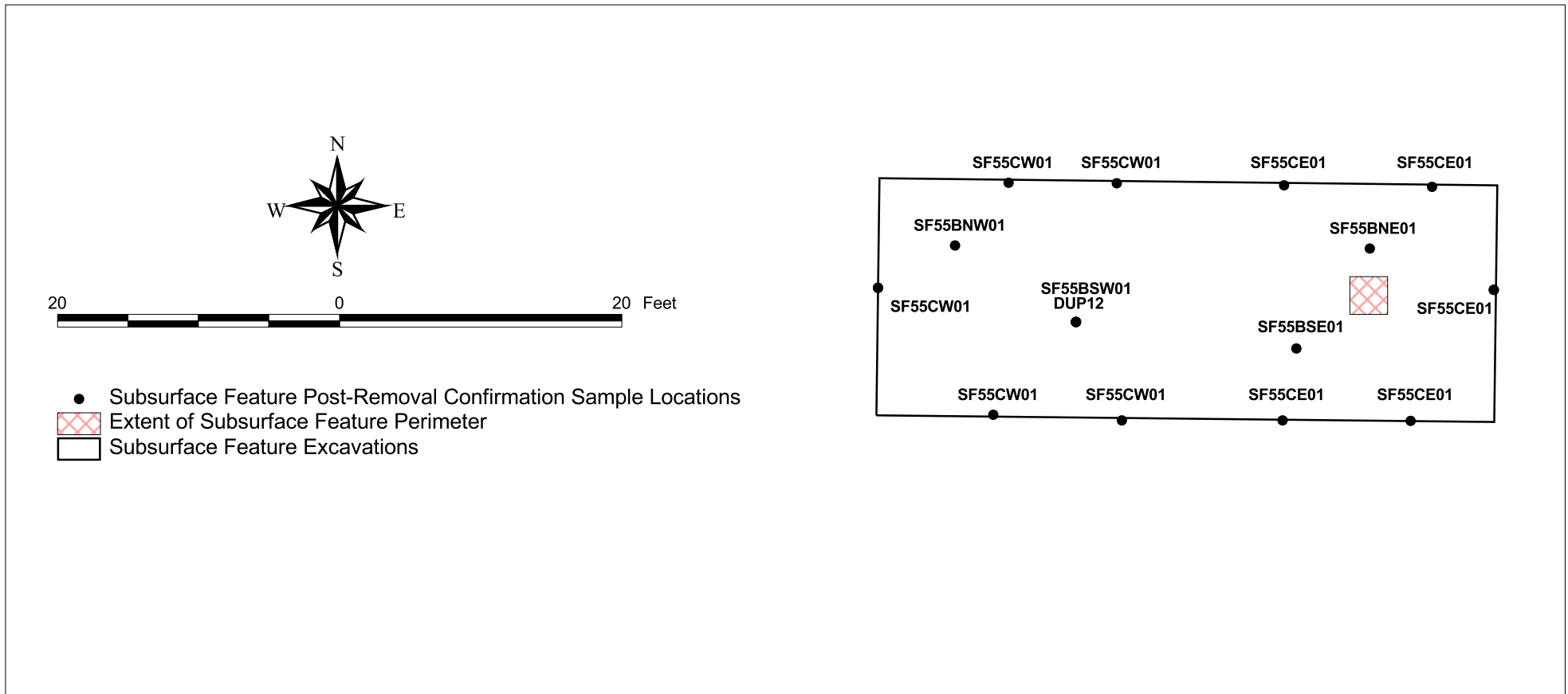
Figure 4-25
SF-49 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-26
SF-51 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-27
SF-55 Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

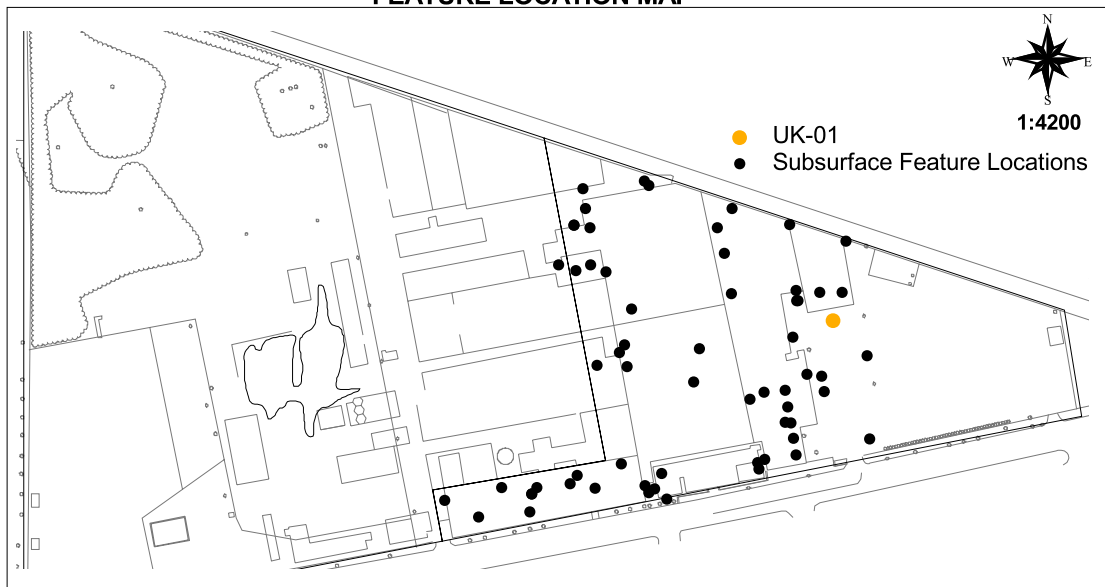
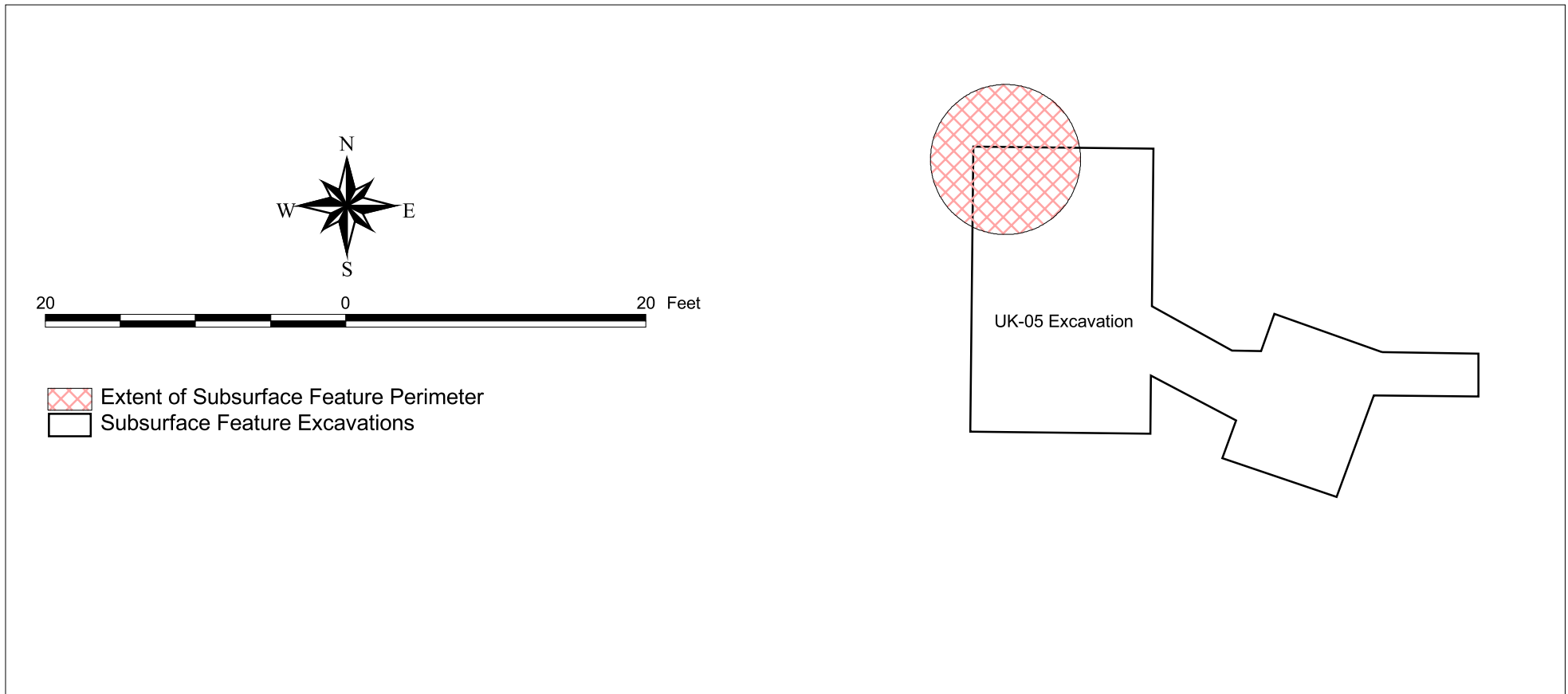


Figure 4-28
UK-01 Characterization
Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

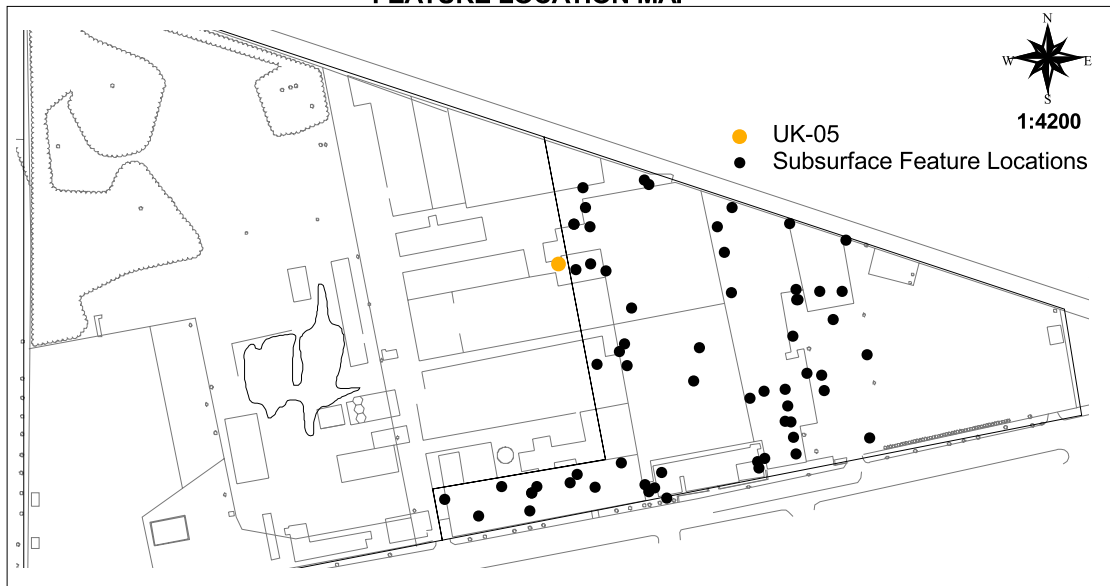
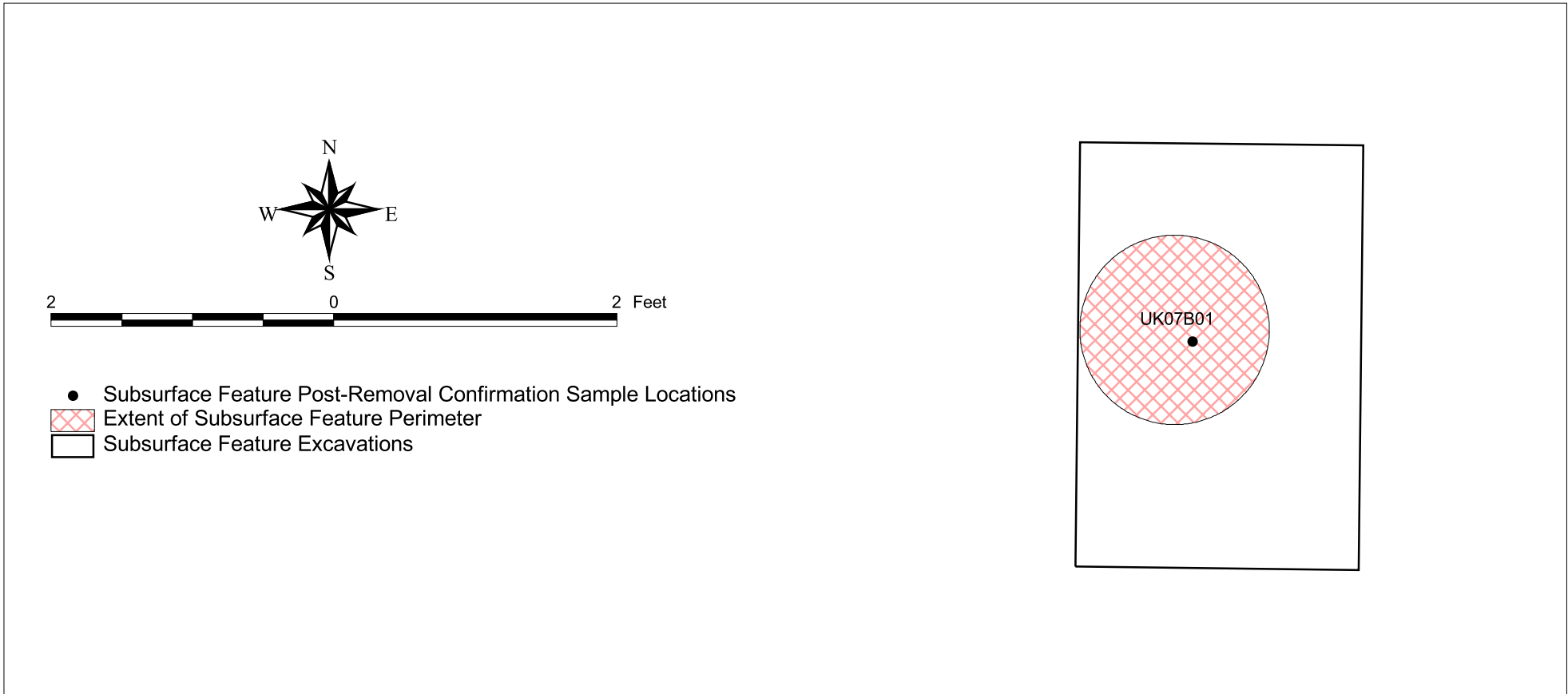


Figure 4-29
UK-05 Excavation Area
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

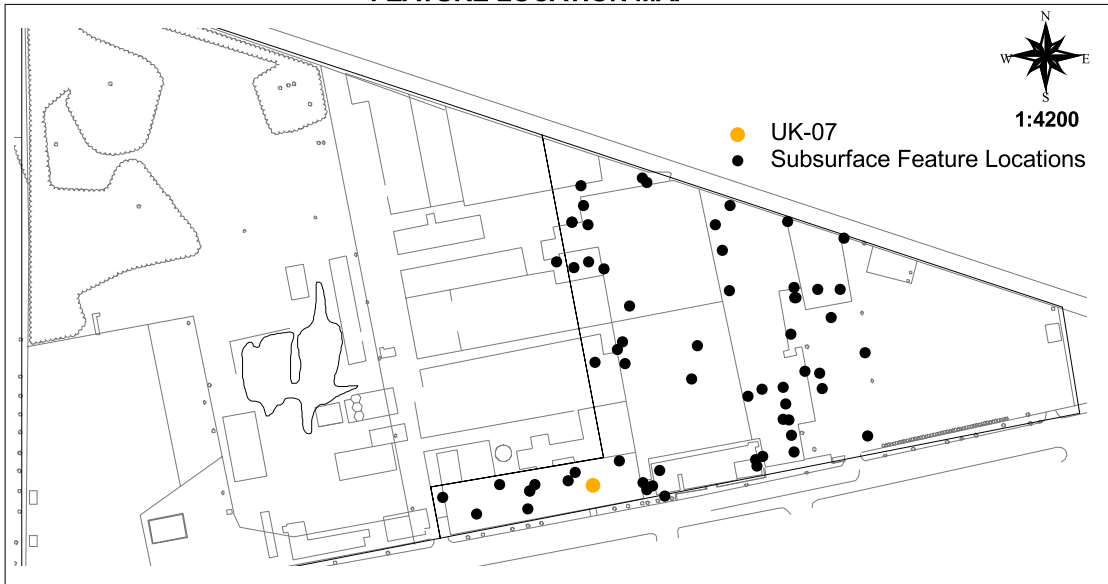
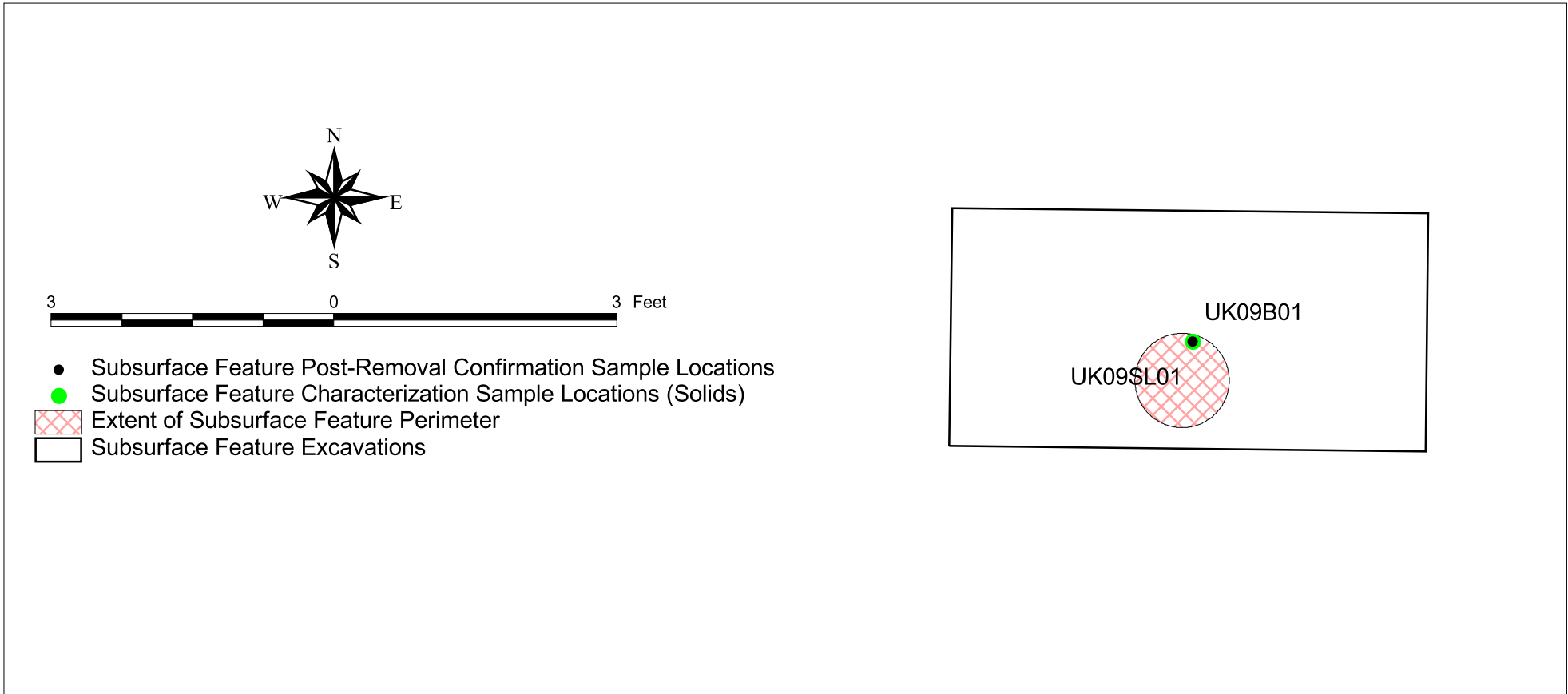


Figure 4-30
UK-07 Post-Removal
Confirmation Sample Location
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

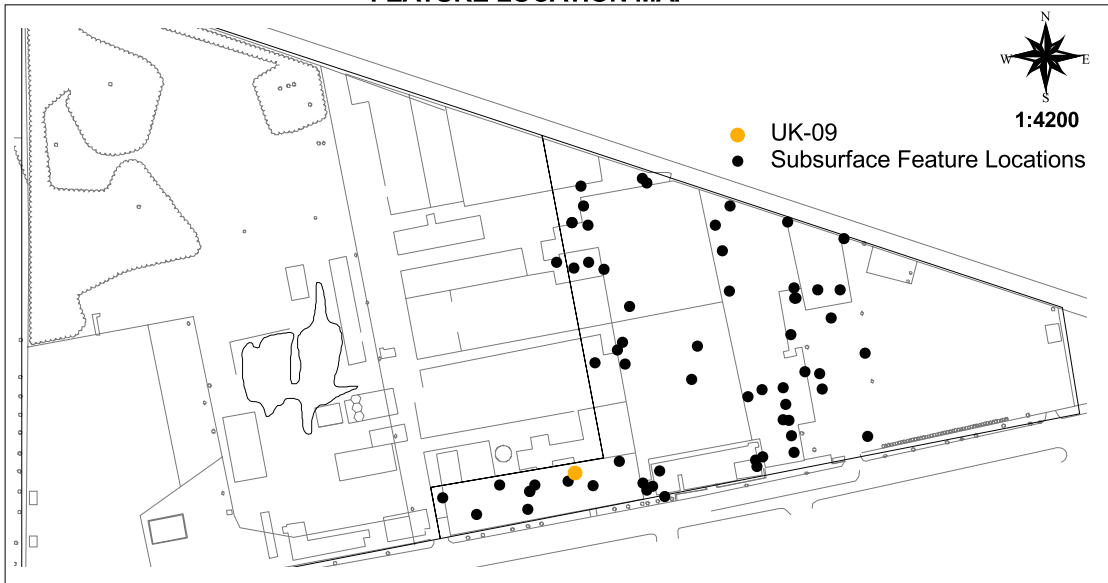
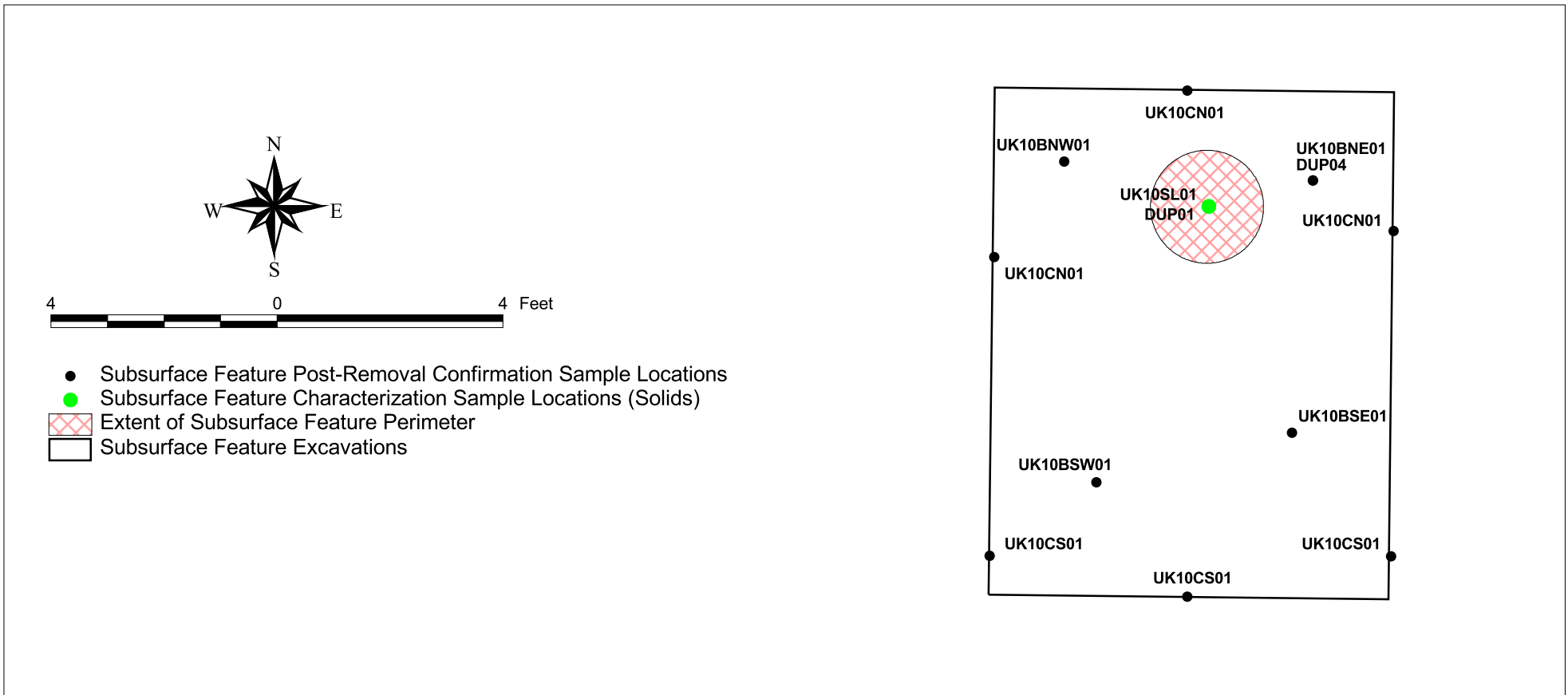


Figure 4-31
UK-09 Characterization & Post-Removal Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

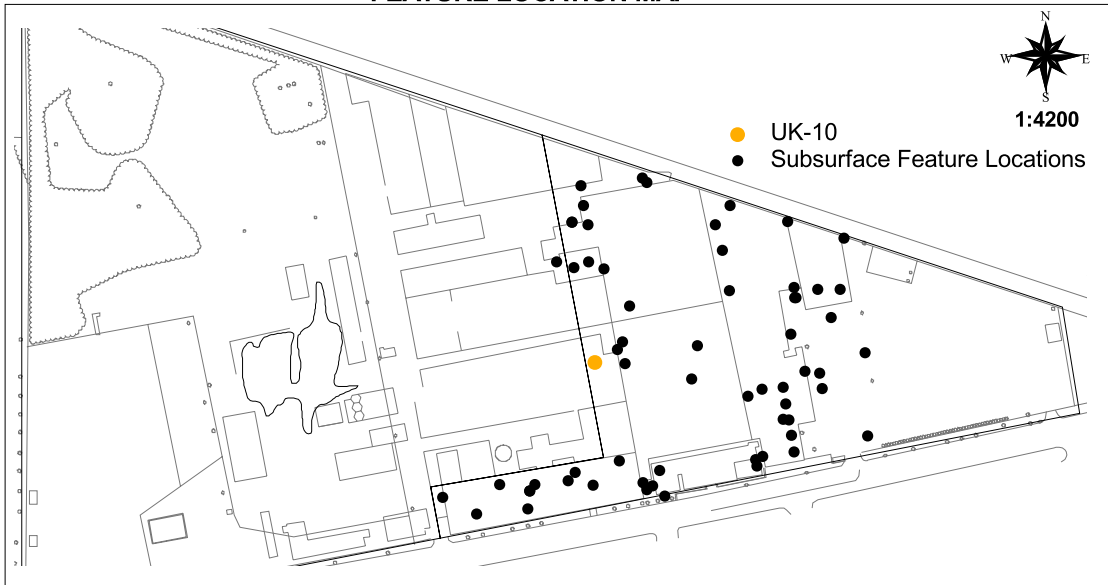
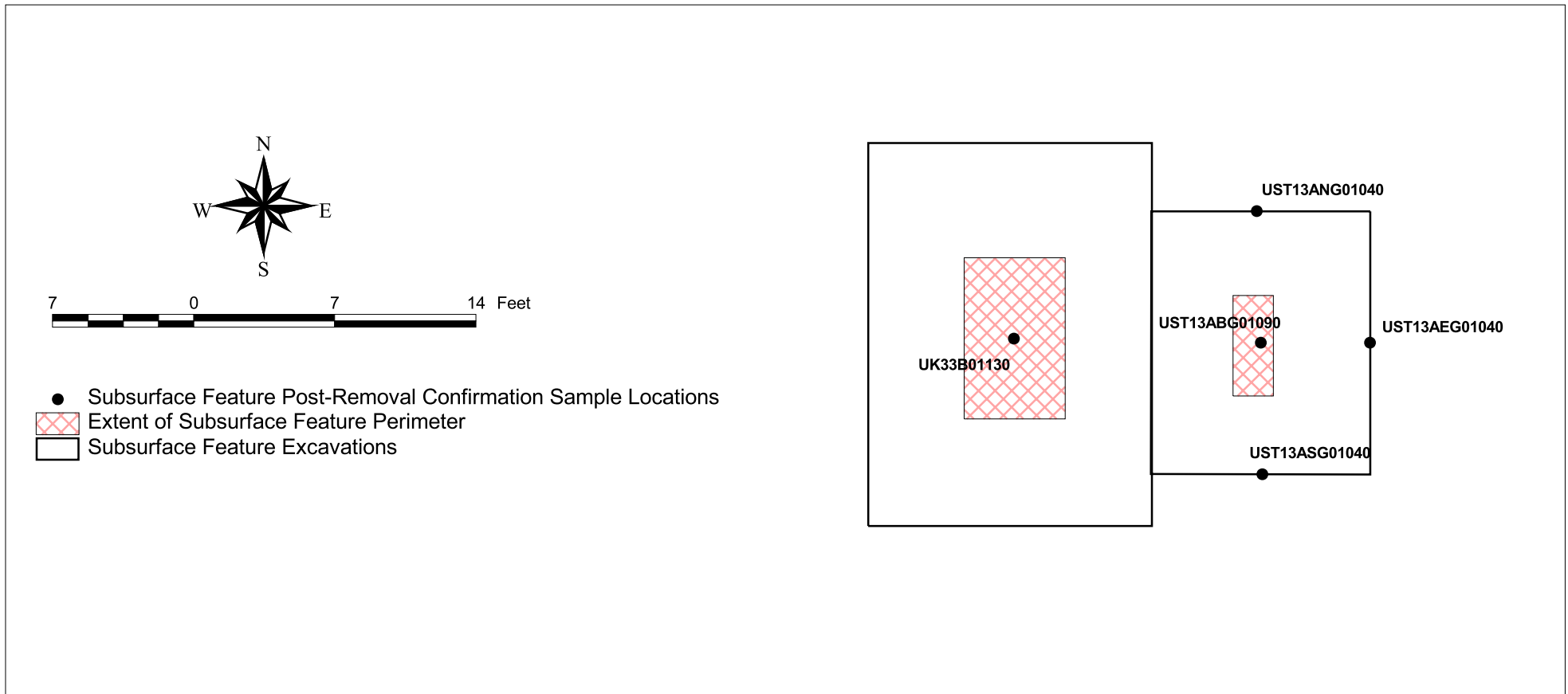


Figure 4-32
UK-10 Characterization & Post-Removal Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

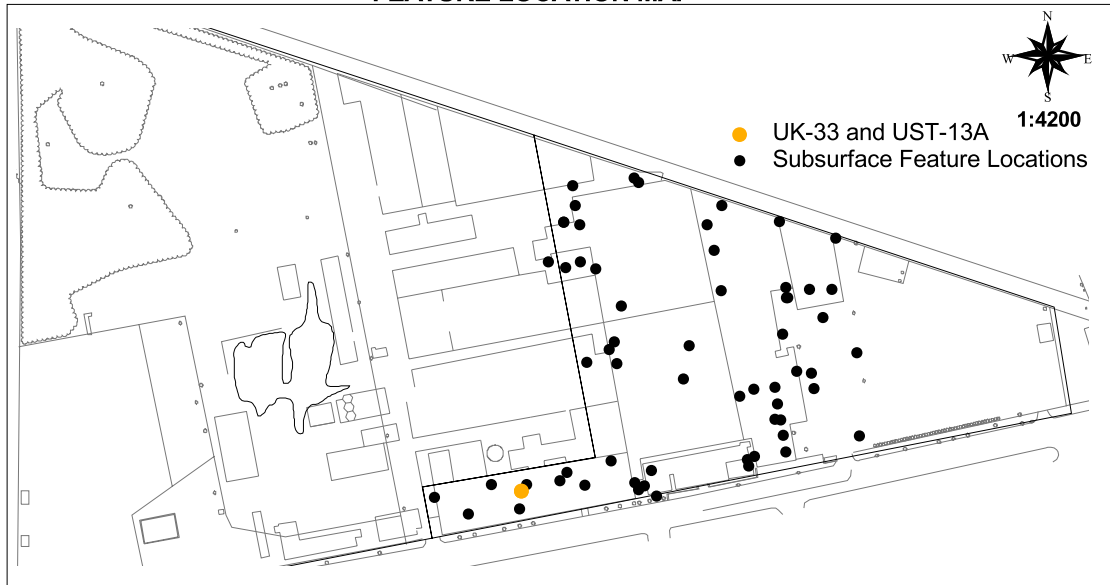
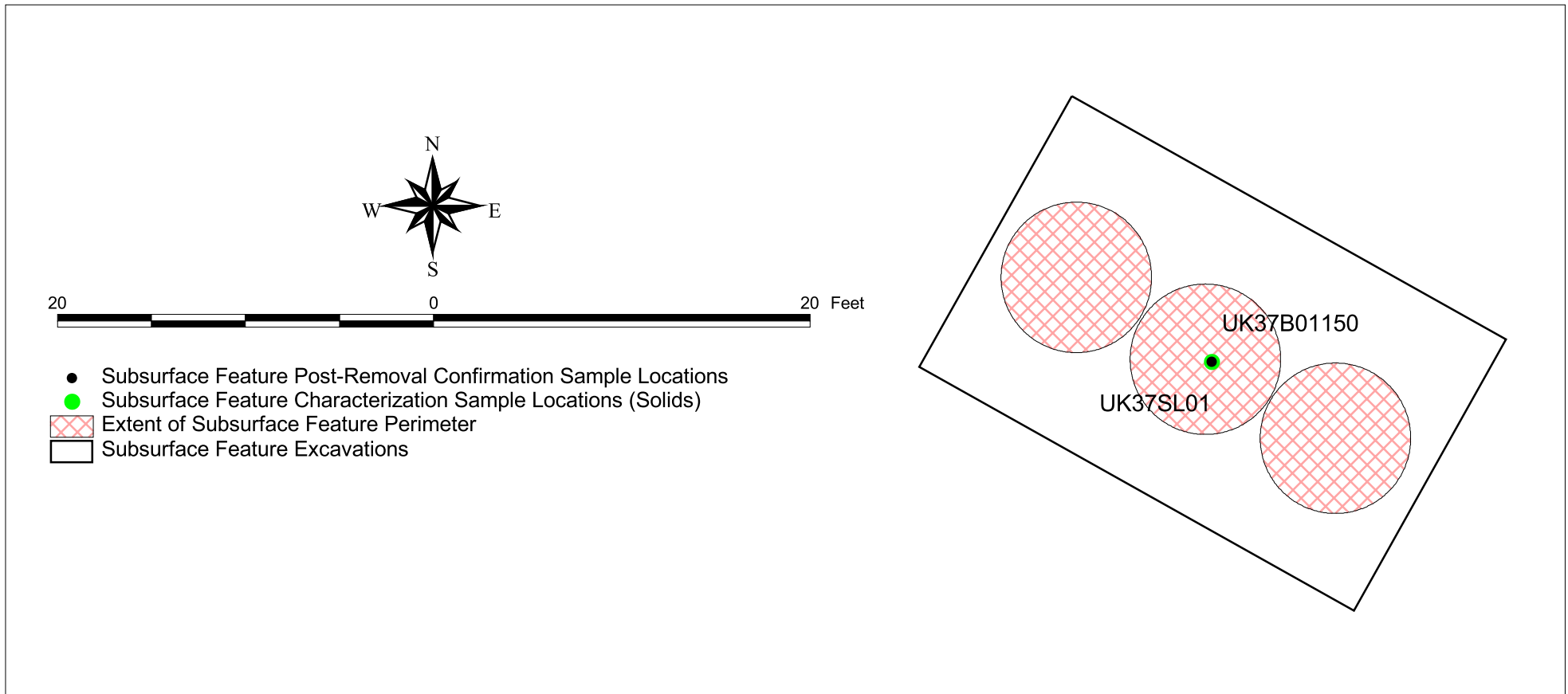


Figure 4-33
UK-33 & UST-13A Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

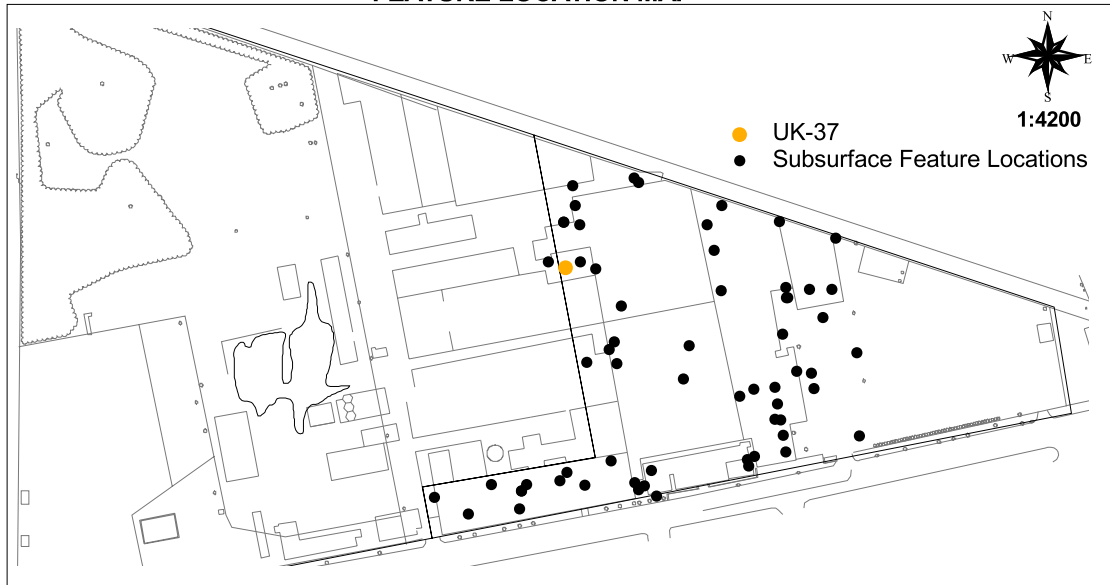
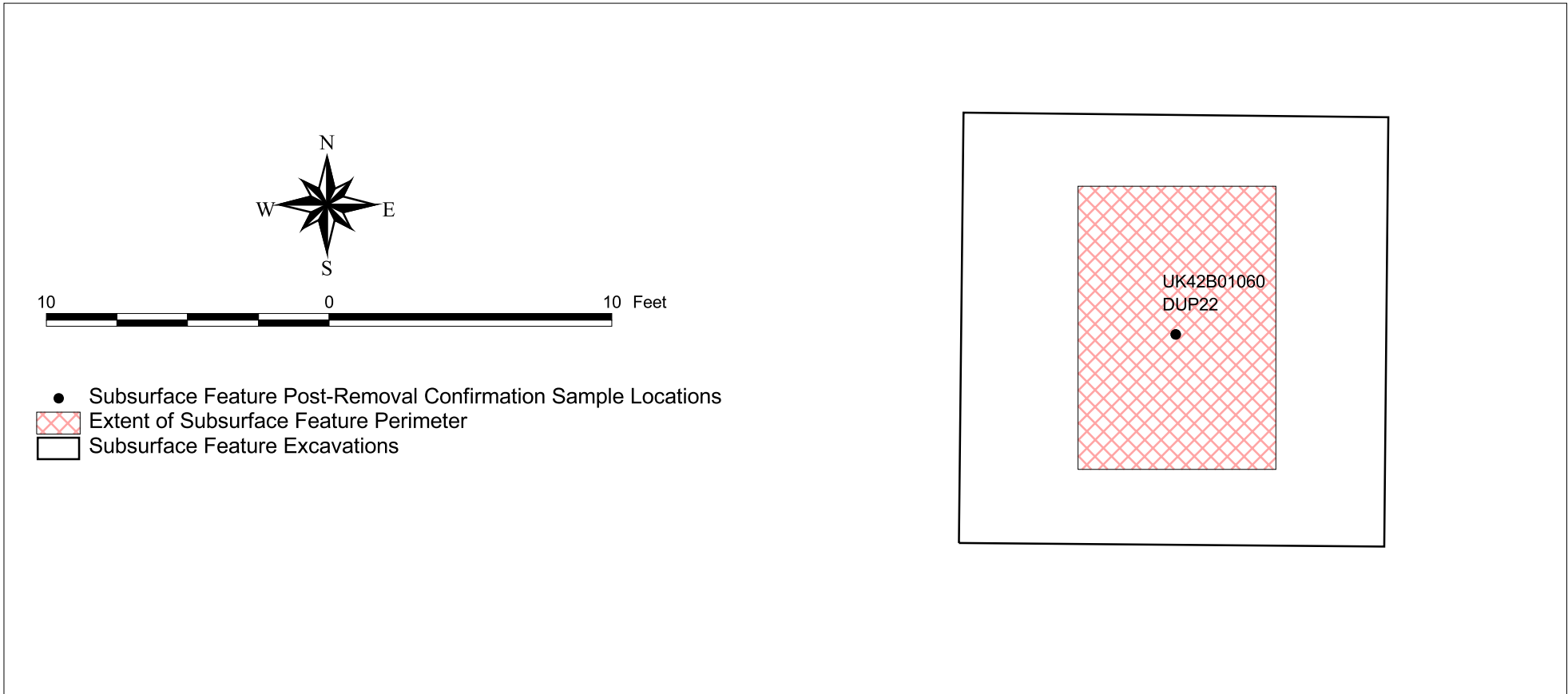


Figure 4-34
UK-37 Characterization & Post-Removal Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

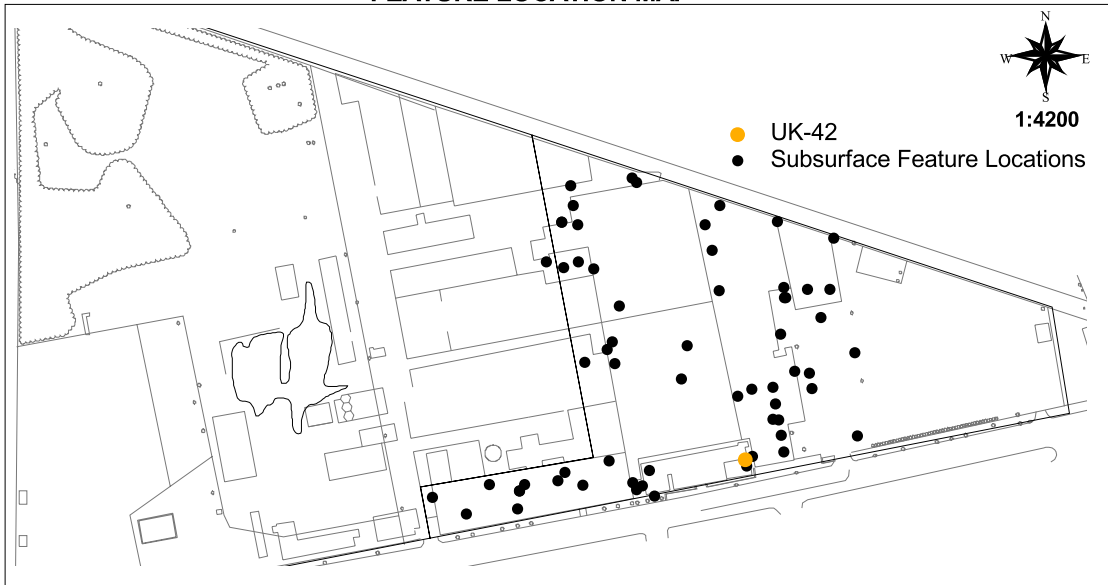
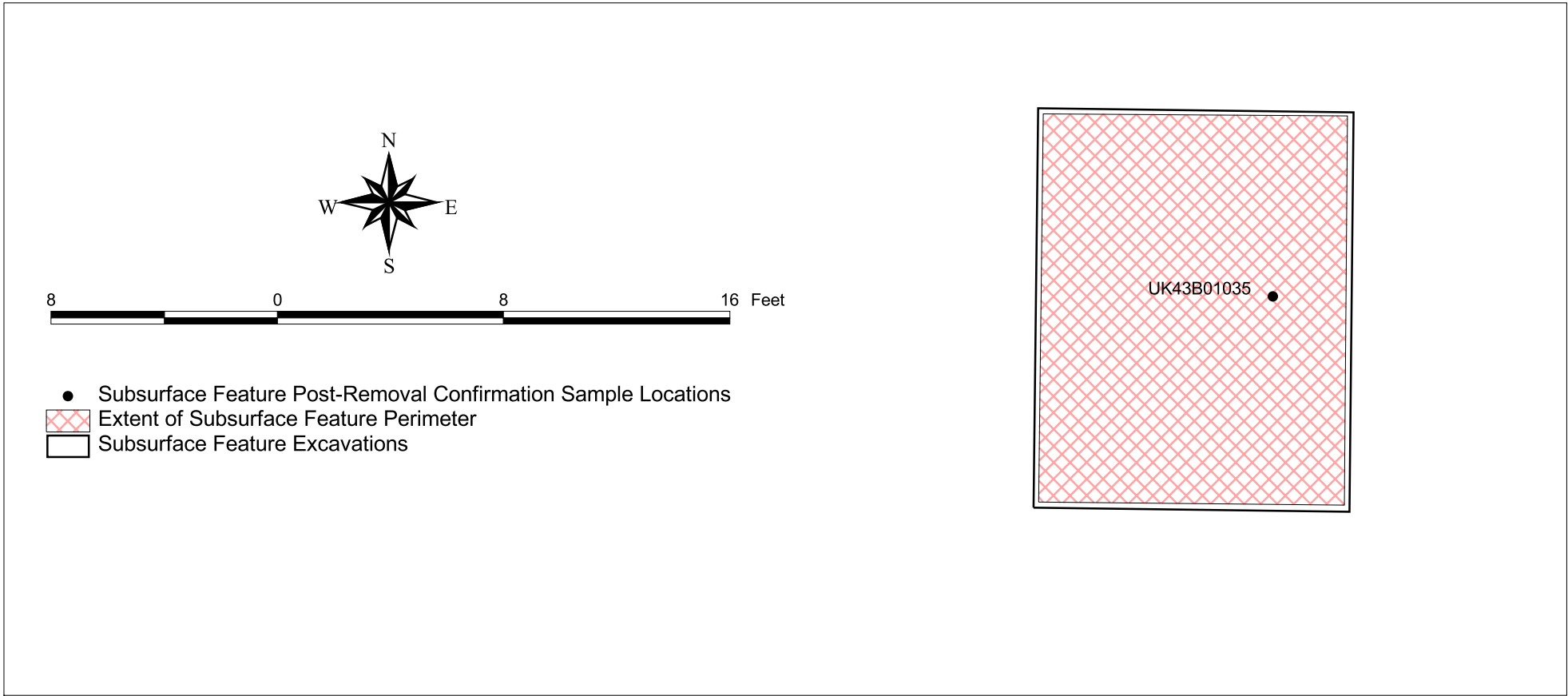


Figure 4-35
UK-42 Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

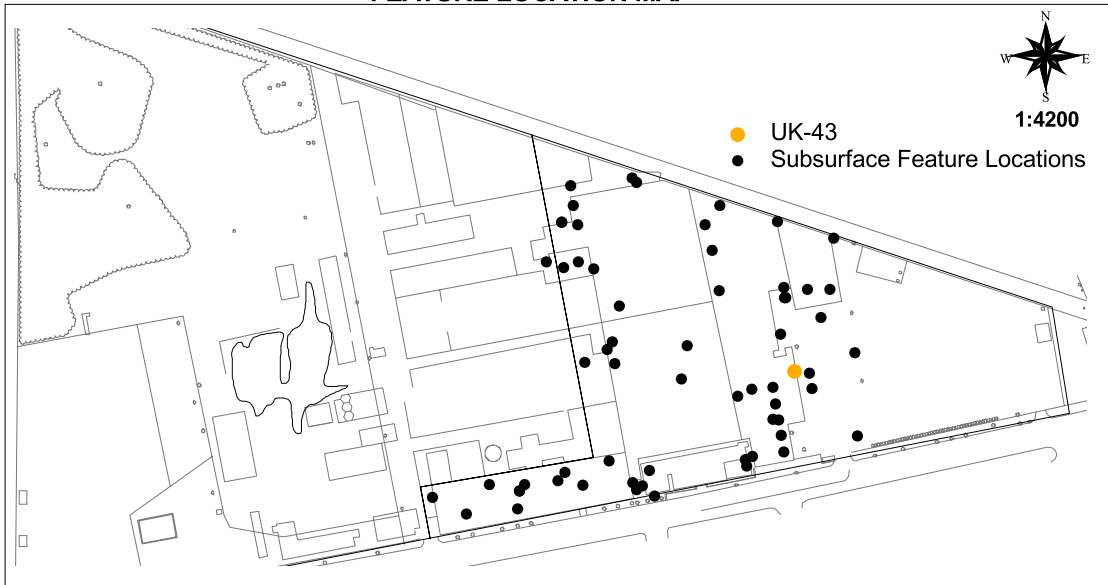
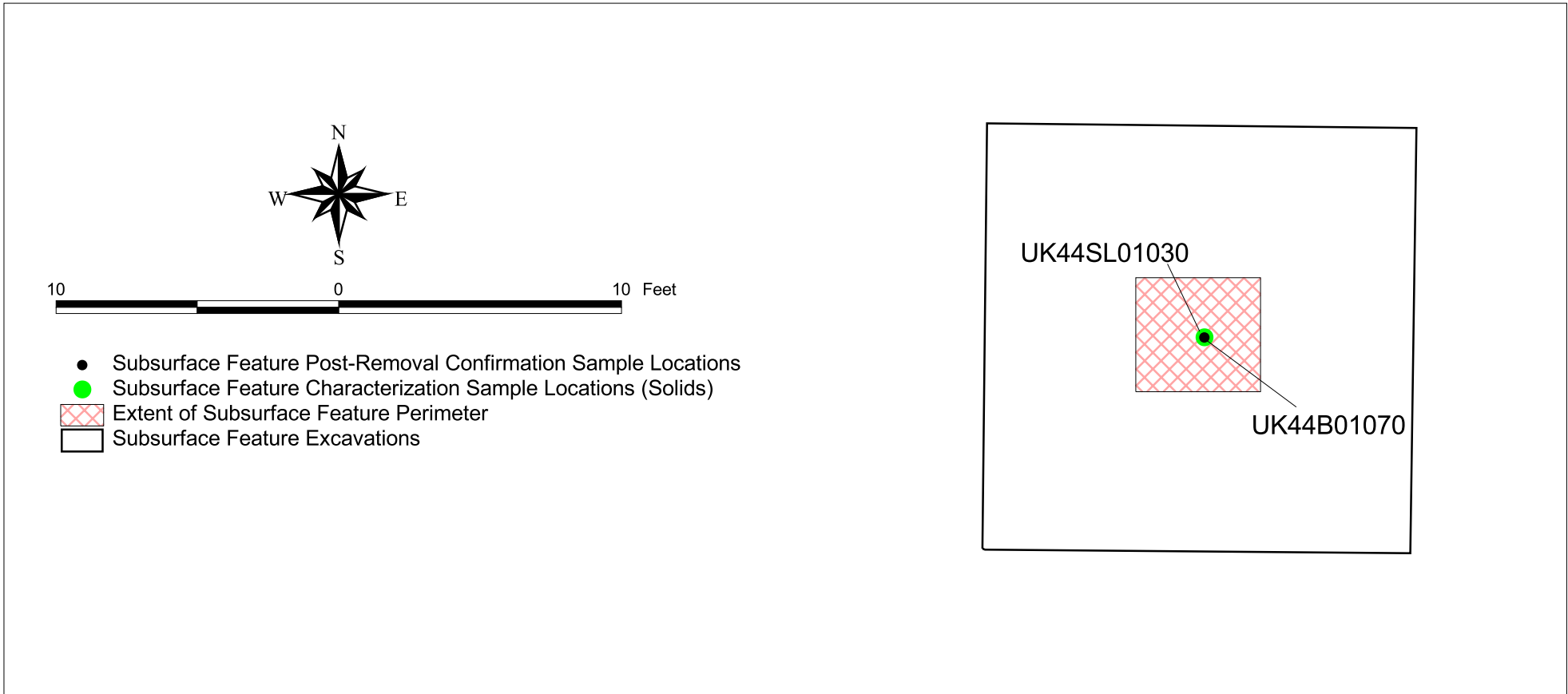


Figure 4-36
UK-43 Post-Removal
Confirmation Sample Location
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

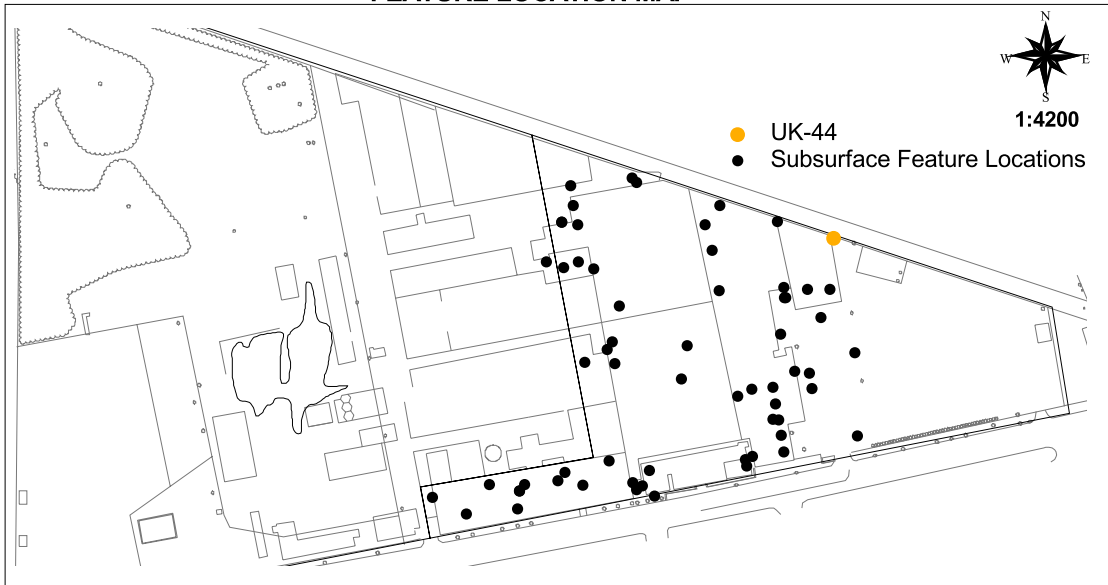
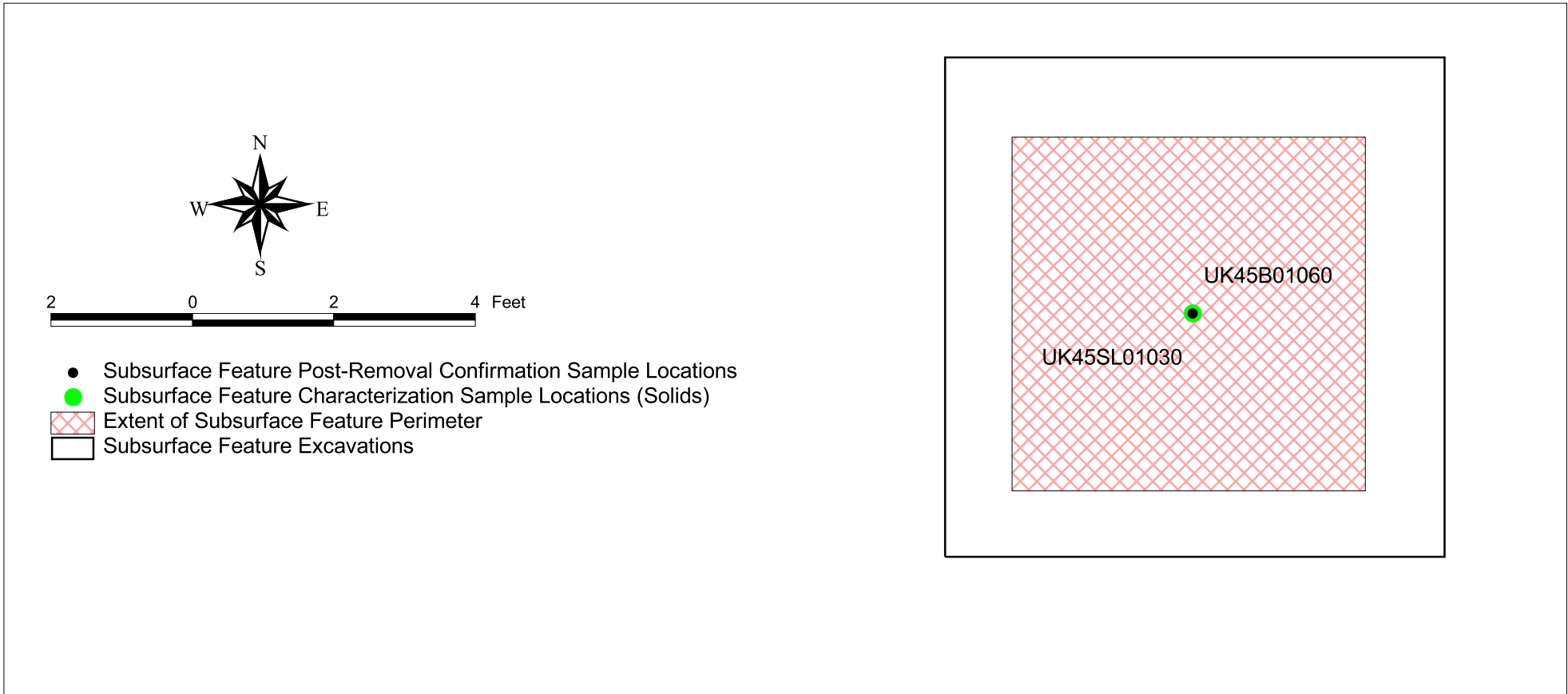


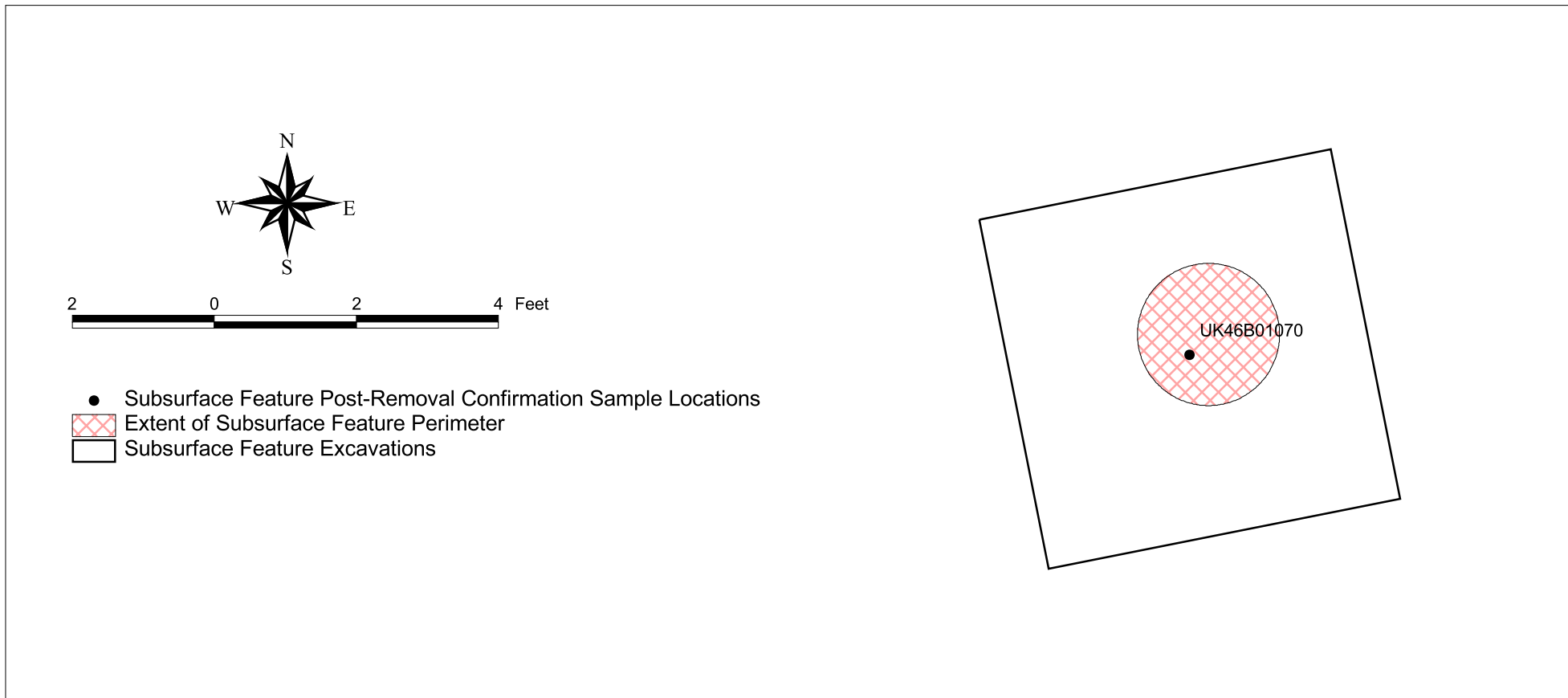
Figure 4-37
UK-44 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP



Figure 4-38
UK-45 Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

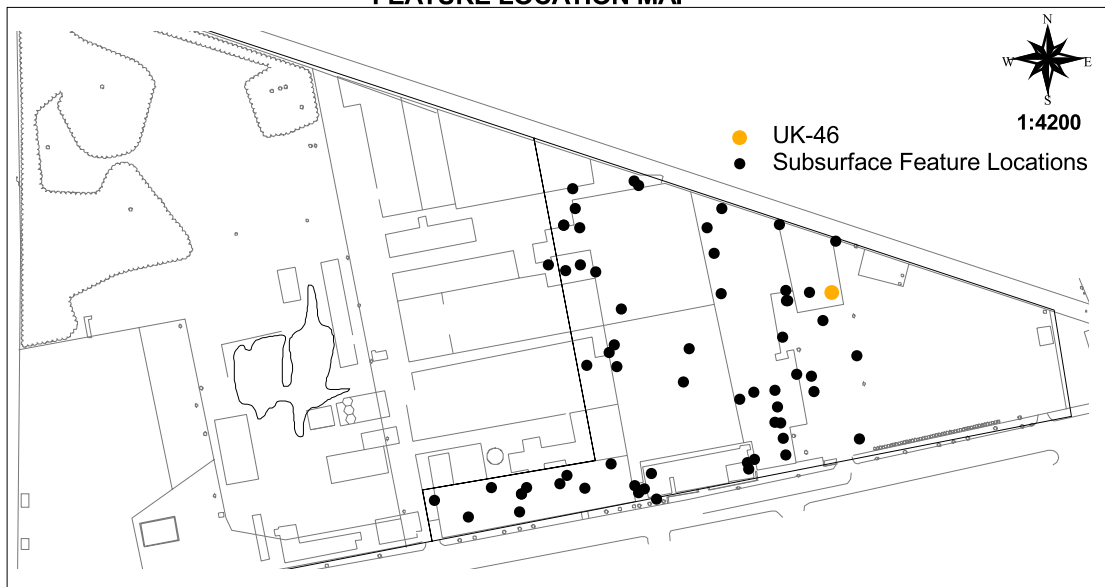
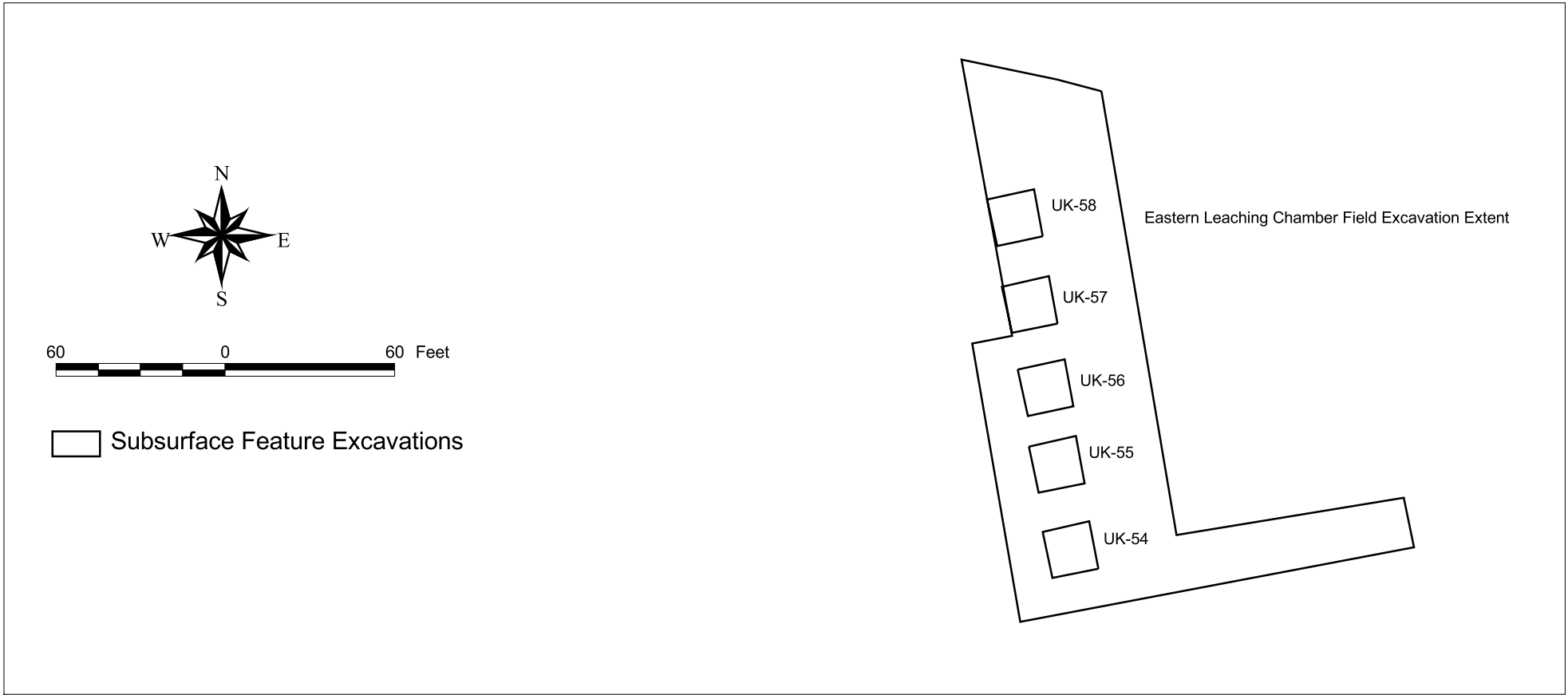


Figure 4-39
UK-46 Post-Removal
Confirmation Sample Location
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

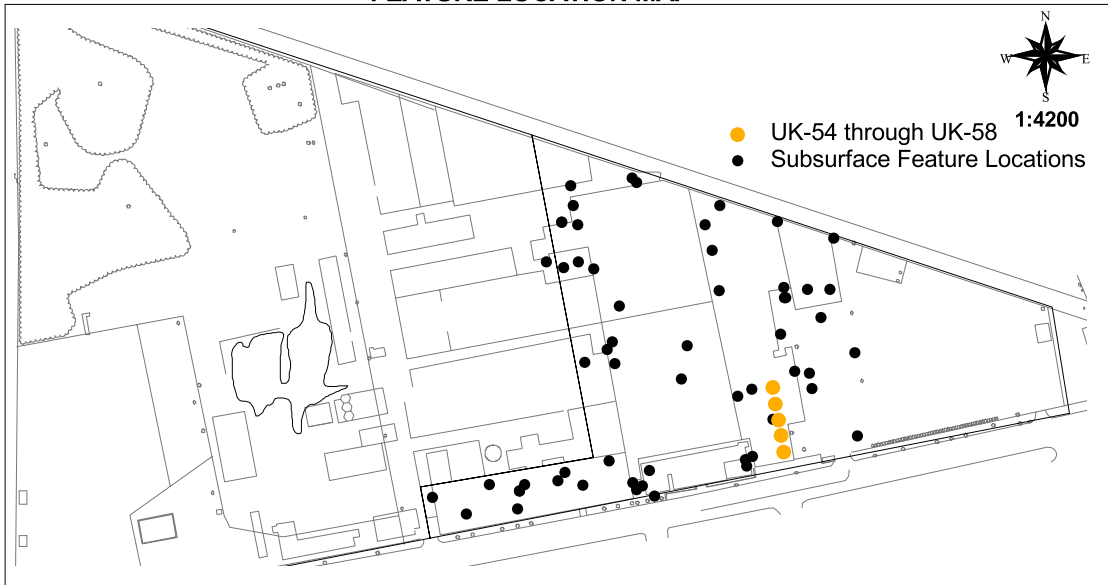
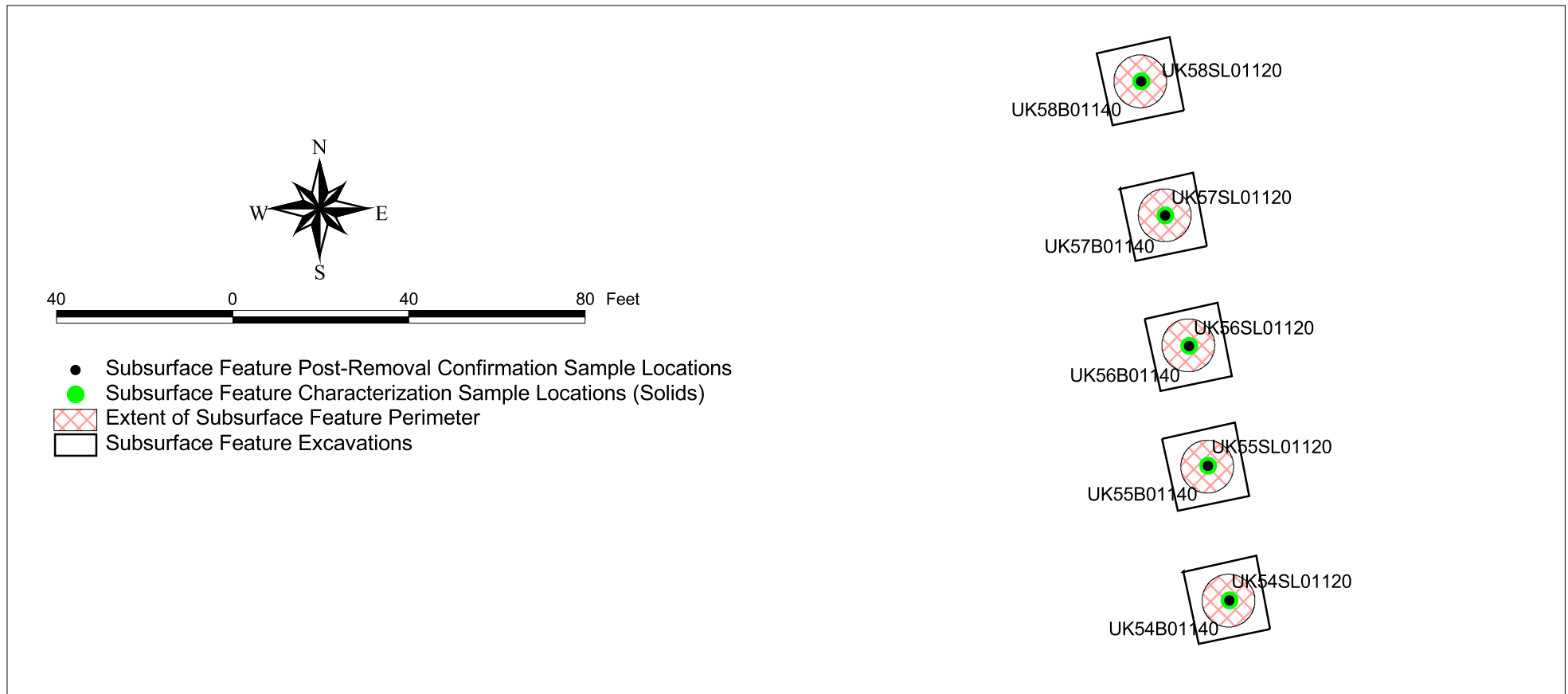


Figure 4-40
Extent of Excavation to Locate Eastern
Leaching Chamber Field Subsurface Features
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

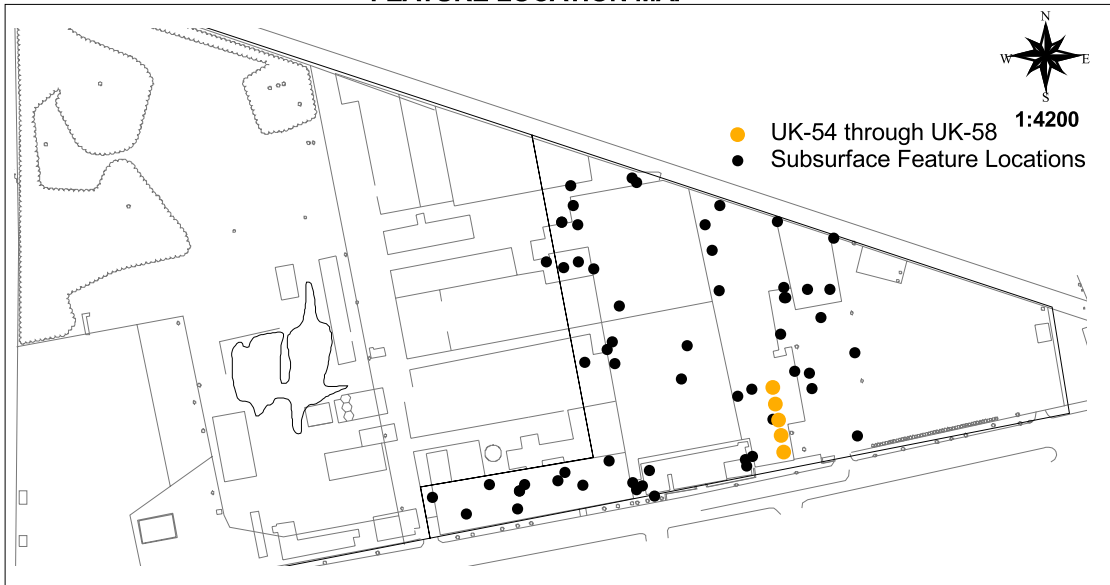
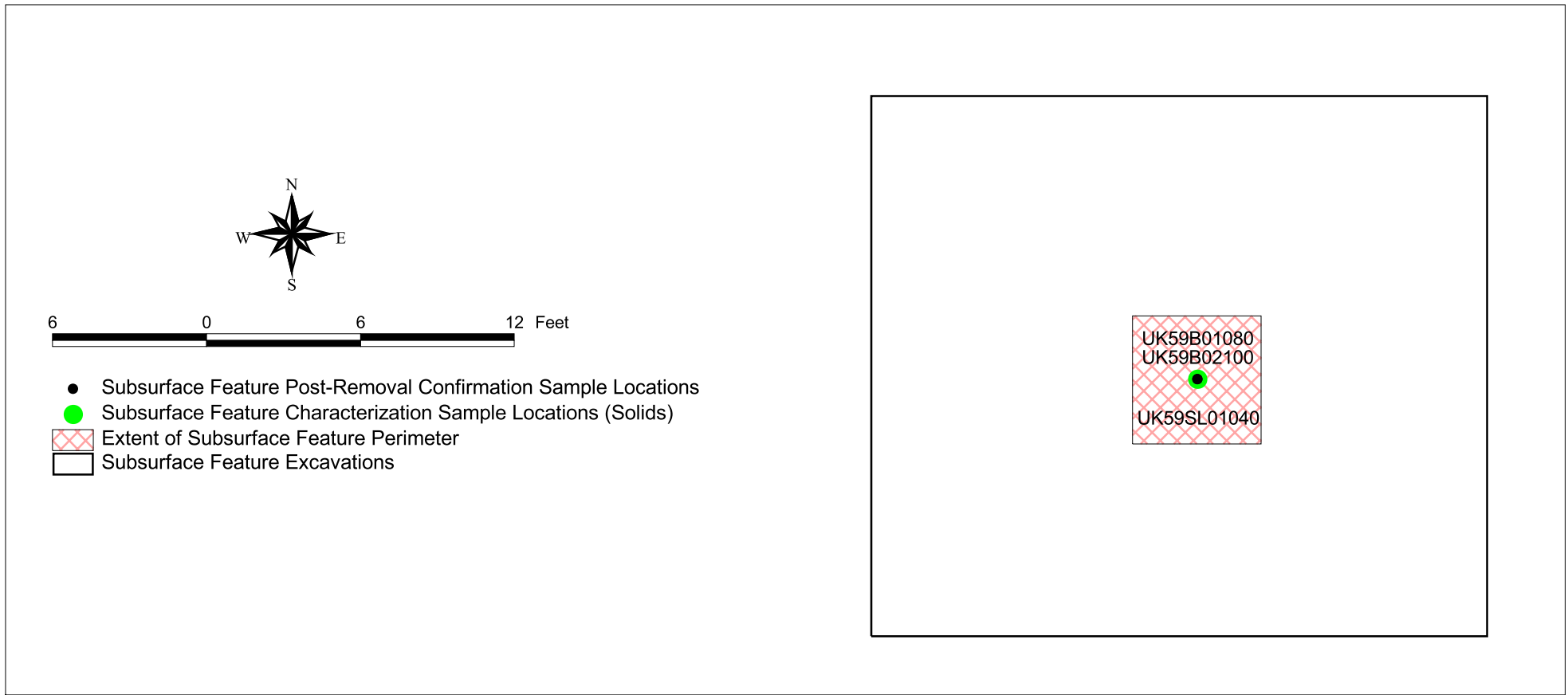


Figure 4-41
Eastern Leaching Chamber Field
(UK-54 through UK-58) Solid
Characterization & Post-Removal
Confirmation Sample Locations
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



FEATURE LOCATION MAP

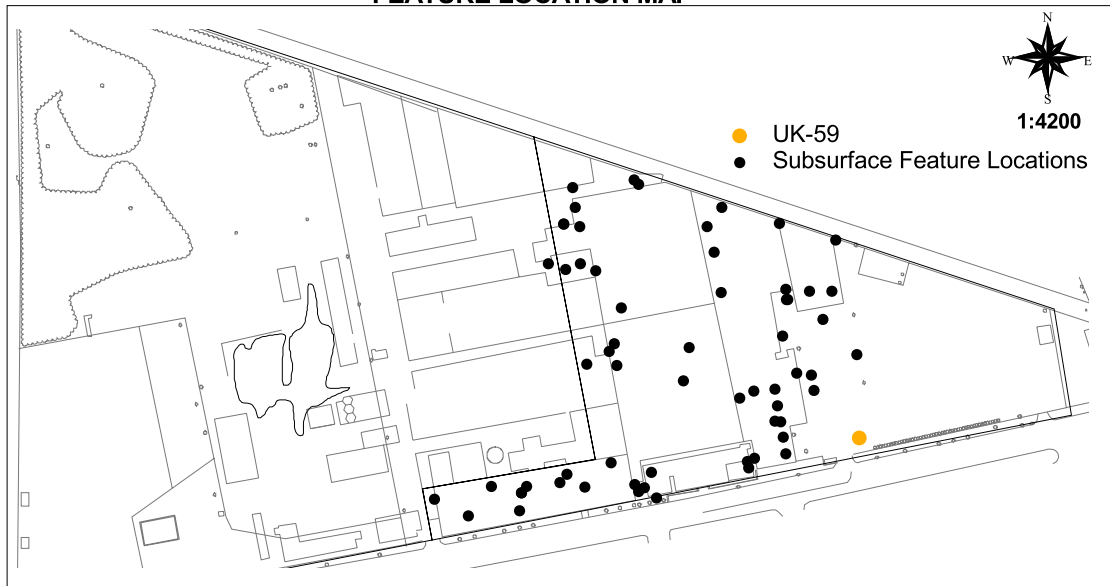
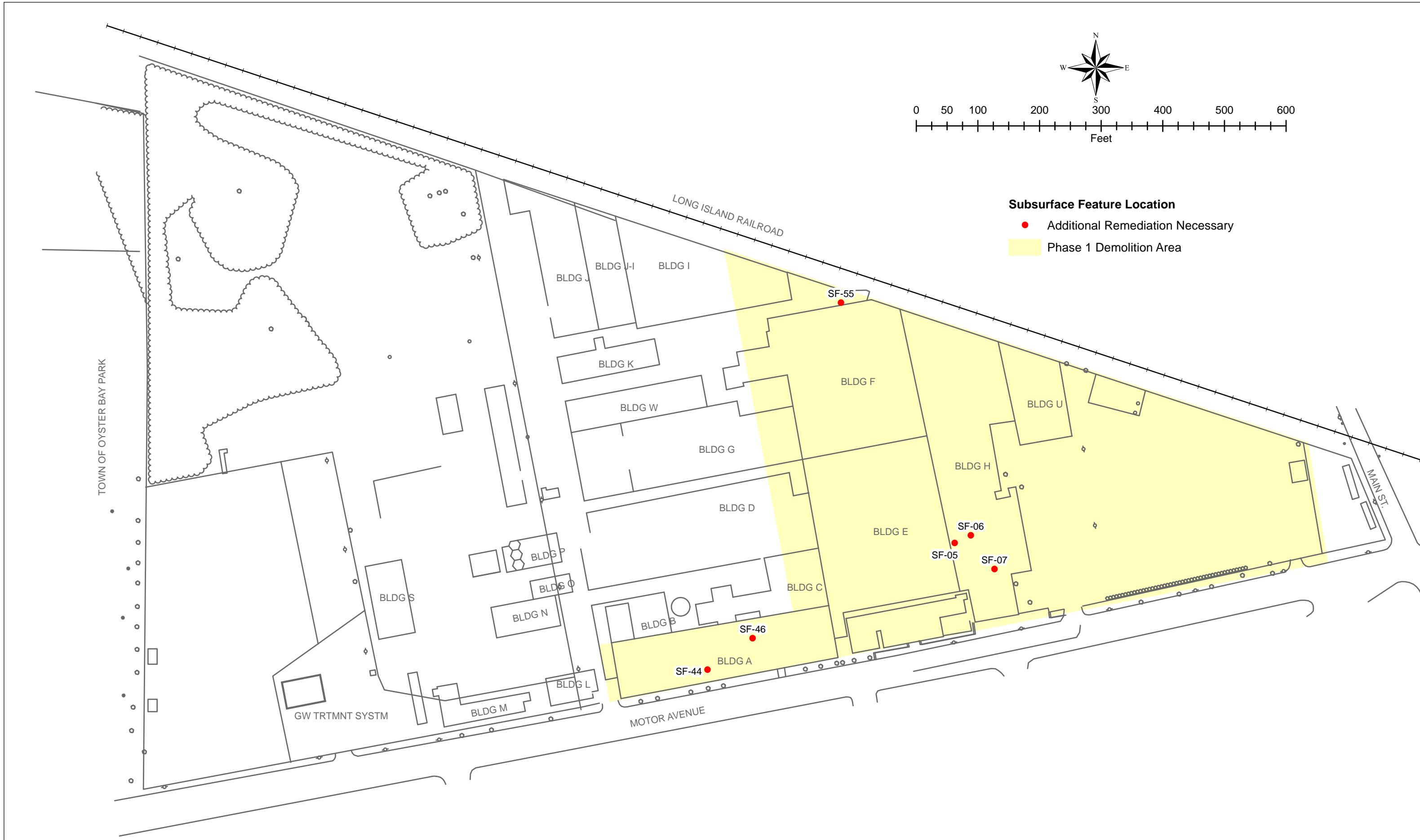


Figure 4-42
UK-59 Characterization & Post-Removal
Confirmation Sample Location
 Liberty Industrial Finishing Superfund Site
 Farmingdale, New York



Subsurface Feature Location

- Additional Remediation Necessary
- Phase 1 Demolition Area

FIGURE 7-1

**Phase 1 Demolition Area Subsurface Features
Additional Remediation Necessary**

Liberty Industrial Finishing Superfund Site
Farmingdale, New York

APPENDIX A

Data Validation Reports for Characterization and Post-Removal Confirmation Samples

APPENDIX A

A-1 Liberty Industrial Finishing Site – Sample Delivery Group P635



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF51SL01	3/28/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
UK07B01	3/29/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF47AQ01	3/28/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
SF47SL01	3/28/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
FB0328	3/28/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
TB0329	3/28/2006	TCL VOCs
UK09SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
SF14SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
UK10SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
DUP01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
UK08SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
SF46SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
SF15SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
UK01SL01	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
FB0329	3/29/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
FB0330	3/30/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
SF44SL01	3/30/2006	TCL VOCs, SVOCs, and Pesticides, PCBs, TAL Metals, Cyanide
UK09B01	3/29/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF44BNE01	3/30/2006	Select List VOCs, Select List SVOCs, PCBs, Cyanide
SF44BSW01	3/30/2006	Select List VOCs, Select List SVOCs, PCBs, Cyanide
SF44BNW01	3/30/2006	Select List VOCs, Select List SVOCs, PCBs, Cyanide
DUP02	3/30/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF46BS01	3/30/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF46BN01	3/30/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF46N01	3/30/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF46S01	3/30/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF44BSE01	3/30/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF44CS01	3/30/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF46CS01	3/30/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF44CN01	3/30/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF46CN01	3/30/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF51SL01	3/28/2006	TCL VOCs	Acetone	R
SF51SL01	3/28/2006	TCL VOCs	2-Butanone	R
SF51SL01	3/28/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
SF51SL01	3/28/2006	TCL SVOCs	Fluoranthene	J
SF51SL01	3/28/2006	TCL SVOCs	Benzo(b)fluoranthene	J
SF51SL01	3/28/2006	TCL SVOCs	Benzo(k)fluoranthene	J



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF51SL01	3/28/2006	TCL SVOCs	Benzo(a)pyrene	J
SF51SL01	3/28/2006	TCL SVOCs	Benzaldehyde	R
SF51SL01	3/28/2006	TCL Pesticides	4,4'-DDT	J
SF51SL01	3/28/2006	TCL Pesticides	Endrin ketone	UJ
SF51SL01	3/28/2006	TAL Metals	Antimony	UJ
SF51SL01	3/28/2006	TAL Metals	Beryllium	0.43 U
SF51SL01	3/28/2006	TAL Metals	Calcium	J
SF51SL01	3/28/2006	TAL Metals	Chromium	J
SF51SL01	3/28/2006	TAL Metals	Copper	J
SF51SL01	3/28/2006	TAL Metals	Manganese	J
SF51SL01	3/28/2006	TAL Metals	Mercury	J
SF51SL01	3/28/2006	TAL Metals	Nickel	J
SF51SL01	3/28/2006	TAL Metals	Potassium	1068 U
SF47AQ01	3/28/2006	TCL VOCs	Chloroethane	UJ
SF47AQ01	3/28/2006	TCL VOCs	Acetone	J
SF47AQ01	3/28/2006	TCL VOCs	2-Butanone	R
SF47AQ01	3/28/2006	TCL VOCs	Tetrachloroethene	J
SF47AQ01	3/28/2006	TCL SVOCs	Fluoranthene	UJ
SF47AQ01	3/28/2006	TCL SVOCs	Benzaldehyde	R
SF47AQ01	3/28/2006	TCL Pesticides	Endrin ketone	UJ
SF47AQ01	3/28/2006	TCL Pesticides	Methoxychlor	J
SF47AQ01	3/28/2006	TAL Metals	Zinc	J
SF47SL01	3/28/2006	TCL VOCs	Bromomethane	UJ
SF47SL01	3/28/2006	TCL VOCs	2-Butanone	R
SF47SL01	3/28/2006	TCL VOCs	Trichloroethene	UJ
SF47SL01	3/28/2006	TCL VOCs	Toluene	J
SF47SL01	3/28/2006	TCL SVOCs	Benzo(a)anthracene	J
SF47SL01	3/28/2006	TCL SVOCs	Di-n-octyl phthalate	R
SF47SL01	3/28/2006	TCL SVOCs	Benzo(b)fluoranthene	J
SF47SL01	3/28/2006	TCL SVOCs	Benzo(k)fluoranthene	J
SF47SL01	3/28/2006	TCL SVOCs	Benzo(a)pyrene	J
SF47SL01	3/28/2006	TCL SVOCs	Indeno(1,2,3-cd)pyrene	J
SF47SL01	3/28/2006	TCL SVOCs	Dibenz(a,h)anthracene	R
SF47SL01	3/28/2006	TCL SVOCs	Benzo(g,h,i)perylene	J
SF47SL01	3/28/2006	TCL SVOCs	Benzaldehyde	R
SF47SL01	3/28/2006	TCL Pesticides	4,4'-DDE	J
SF47SL01	3/28/2006	TCL Pesticides	4,4'-DDT	J
SF47SL01	3/28/2006	TCL Pesticides	Endrin ketone	UJ
SF47SL01	3/28/2006	TCL Pesticides	Methoxychlor	J
SF47SL01	3/28/2006	TAL Metals	Antimony	UJ
SF47SL01	3/28/2006	TAL Metals	Beryllium	0.51 U
SF47SL01	3/28/2006	TAL Metals	Calcium	J
SF47SL01	3/28/2006	TAL Metals	Chromium	J
SF47SL01	3/28/2006	TAL Metals	Copper	J
SF47SL01	3/28/2006	TAL Metals	Manganese	J
SF47SL01	3/28/2006	TAL Metals	Mercury	J
SF47SL01	3/28/2006	TAL Metals	Potassium	1264 U
FB0328	3/28/2006	TCL VOCs	Chloroethane	UJ



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
FB0328	3/28/2006	TCL VOCs	Acetone	R
FB0328	3/28/2006	TCL VOCs	2-Butanone	R
FB0328	3/28/2006	TCL SVOCs	Phenol	UJ
FB0328	3/28/2006	TCL SVOCs	Hexachlorocyclopentadiene	UJ
FB0328	3/28/2006	TCL SVOCs	Benzaldehyde	R
FB0328	3/28/2006	TAL Metals	Potassium	R
TB0328	3/29/2006	TCL VOCs	Chloroethane	UJ
TB0328	3/29/2006	TCL VOCs	Acetone	R
TB0328	3/29/2006	TCL VOCs	2-Butanone	R
UK09SL01	3/29/2006	TCL VOCs	Bromomethane	UJ
UK09SL01	3/29/2006	TCL VOCs	2-Butanone	R
UK09SL01	3/29/2006	TCL VOCs	Trichloroethene	UJ
UK09SL01	3/29/2006	TCL VOCs	Toluene	J
UK09SL01	3/29/2006	TCL VOCs	Total Xylenes	J
UK09SL01	3/29/2006	TCL SVOCs	Hexachlorocyclopentadiene	UJ
UK09SL01	3/29/2006	TCL SVOCs	Benzaldehyde	R
UK09SL01	3/29/2006	TCL SVOCs	Atrazine	UJ
UK09SL01	3/29/2006	TCL Pesticides	4,4'-DDD	J
UK09SL01	3/29/2006	TCL Pesticides	4,4'-DDE	J
UK09SL01	3/29/2006	TCL Pesticides	4,4'-DDT	J
UK09SL01	3/29/2006	TCL Pesticides	Endrin ketone	UJ
UK09SL01	3/29/2006	TAL Metals	Antimony	UJ
UK09SL01	3/29/2006	TAL Metals	Beryllium	0.45 U
UK09SL01	3/29/2006	TAL Metals	Chromium	J
UK09SL01	3/29/2006	TAL Metals	Copper	J
UK09SL01	3/29/2006	TAL Metals	Manganese	J
UK09SL01	3/29/2006	TAL Metals	Mercury	J
UK09SL01	3/29/2006	TAL Metals	Potassium	1136 U
SF14SL01	3/29/2006	TCL VOCs	Acetone	R
SF14SL01	3/29/2006	TCL VOCs	2-Butanone	R
SF14SL01	3/29/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
SF14SL01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
SF14SL01	3/29/2006	TCL SVOCs	Di-n-octyl phthalate	UJ
SF14SL01	3/29/2006	TCL SVOCs	Benzo(b)fluoranthene	J
SF14SL01	3/29/2006	TCL SVOCs	Benzo(k)fluoranthene	J
SF14SL01	3/29/2006	TCL SVOCs	Benzo(a)pyrene	J
SF14SL01	3/29/2006	TCL SVOCs	Indeno(1,2,3-cd)pyrene	J
SF14SL01	3/29/2006	TCL SVOCs	Dibenz(a,h)anthracene	J
SF14SL01	3/29/2006	TCL SVOCs	Benzo(g,h,i)perylene	J
SF14SL01	3/29/2006	TCL SVOCs	Benzaldehyde	R
SF14SL01	3/29/2006	TCL Pesticides	4,4'-DDT	J
SF14SL01	3/29/2006	TCL Pesticides	Dieldrin	J
SF14SL01	3/29/2006	TCL Pesticides	Endosulfan sulfate	J
SF14SL01	3/29/2006	TCL Pesticides	Endrin ketone	UJ
SF14SL01	3/29/2006	TCL Pesticides	Methoxychlor	J
SF14SL01	3/29/2006	TCL Pesticides	alpha-Chlordane	J
SF14SL01	3/29/2006	TAL Metals	Antimony	UJ
SF14SL01	3/29/2006	TAL Metals	Beryllium	0.44 U



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF14SL01	3/29/2006	TAL Metals	Calcium	J
SF14SL01	3/29/2006	TAL Metals	Chromium	J
SF14SL01	3/29/2006	TAL Metals	Copper	J
SF14SL01	3/29/2006	TAL Metals	Manganese	J
SF14SL01	3/29/2006	TAL Metals	Potassium	1094 U
UK10SL01	3/29/2006	TCL VOCs	Bromomethane	UJ
UK10SL01	3/29/2006	TCL VOCs	2-Butanone	R
UK10SL01	3/29/2006	TCL VOCs	Trichloroethene	J
UK10SL01	3/29/2006	TCL VOCs	Toluene	J
UK10SL01	3/29/2006	TCL VOCs	Total Xylenes	J
UK10SL01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
UK10SL01	3/29/2006	TCL SVOCs	Di-n-octyl phthalate	J
UK10SL01	3/29/2006	TCL SVOCs	Benzo(b)fluoranthene	J
UK10SL01	3/29/2006	TCL SVOCs	Benzo(k)fluoranthene	J
UK10SL01	3/29/2006	TCL SVOCs	Benzo(a)pyrene	J
UK10SL01	3/29/2006	TCL SVOCs	Indeno(1,2,3-cd)pyrene	J
UK10SL01	3/29/2006	TCL SVOCs	Dibenz(a,h)anthracene	UJ
UK10SL01	3/29/2006	TCL SVOCs	Benzo(g,h,i)perylene	J
UK10SL01	3/29/2006	TCL SVOCs	Benzaldehyde	R
UK10SL01	3/29/2006	TCL Pesticides	4,4'-DDD	J
UK10SL01	3/29/2006	TCL Pesticides	4,4'-DDE	J
UK10SL01	3/29/2006	TCL Pesticides	4,4'-DDT	J
UK10SL01	3/29/2006	TCL Pesticides	Endrin aldehyde	J
UK10SL01	3/29/2006	TCL Pesticides	Endrin ketone	J
UK10SL01	3/29/2006	TCL Pesticides	Methoxychlor	J
UK10SL01	3/29/2006	TCL Pesticides	gamma-Chlordane	J
UK10SL01	3/29/2006	PCBs	Aroclor 1260	J
UK10SL01	3/29/2006	TAL Metals	Antimony	UJ
UK10SL01	3/29/2006	TAL Metals	Beryllium	0.55 U
UK10SL01	3/29/2006	TAL Metals	Calcium	J
UK10SL01	3/29/2006	TAL Metals	Chromium	J
UK10SL01	3/29/2006	TAL Metals	Copper	J
UK10SL01	3/29/2006	TAL Metals	Manganese	J
UK10SL01	3/29/2006	TAL Metals	Mercury	J
UK10SL01	3/29/2006	TAL Metals	Nickel	J
UK10SL01	3/29/2006	TAL Metals	Potassium	1364 U
DUP01	3/29/2006	TCL VOCs	Bromomethane	UJ
DUP01	3/29/2006	TCL VOCs	2-Butanone	R
DUP01	3/29/2006	TCL VOCs	Trichloroethene	J
DUP01	3/29/2006	TCL VOCs	Toluene	J
DUP01	3/29/2006	TCL VOCs	Total Xylenes	J
DUP01	3/29/2006	TCL SVOCs	Hexachlorocyclopentadiene	UJ
DUP01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
DUP01	3/29/2006	TCL SVOCs	Benzo(b)fluoranthene	J
DUP01	3/29/2006	TCL SVOCs	Benzo(k)fluoranthene	J
DUP01	3/29/2006	TCL SVOCs	Benzo(a)pyrene	J
DUP01	3/29/2006	TCL SVOCs	Benzaldehyde	R
DUP01	3/29/2006	TCL SVOCs	Atrazine	UJ



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
DUP01	3/29/2006	TCL Pesticides	4,4'-DDD	J
DUP01	3/29/2006	TCL Pesticides	4,4'-DDE	J
DUP01	3/29/2006	TCL Pesticides	4,4'-DDT	J
DUP01	3/29/2006	TCL Pesticides	Endosulfan sulfate	J
DUP01	3/29/2006	TCL Pesticides	Endrin aldehyde	J
DUP01	3/29/2006	TCL Pesticides	Endrin ketone	UJ
DUP01	3/29/2006	TCL Pesticides	Heptachlor epoxide	J
DUP01	3/29/2006	TCL Pesticides	Methoxychlor	J
DUP01	3/29/2006	TCL Pesticides	gamma-Chlordane	J
DUP01	3/29/2006	PCBs	Aroclor 1260	UJ
DUP01	3/29/2006	TAL Metals	Antimony	UJ
DUP01	3/29/2006	TAL Metals	Beryllium	0.53 U
DUP01	3/29/2006	TAL Metals	Calcium	J
DUP01	3/29/2006	TAL Metals	Chromium	J
DUP01	3/29/2006	TAL Metals	Manganese	J
DUP01	3/29/2006	TAL Metals	Mercury	J
DUP01	3/29/2006	TAL Metals	Nickel	J
DUP01	3/29/2006	TAL Metals	Potassium	1332 U
UK08SL01	3/29/2006	TCL VOCs	Acetone	J
UK08SL01	3/29/2006	TCL VOCs	2-Butanone	R
UK08SL01	3/29/2006	TCL VOCs	1,1,2,2-Tetrachloroethane	UJ
UK08SL01	3/29/2006	TCL VOCs	1,2-Dichlorobenzene	UJ
UK08SL01	3/29/2006	TCL VOCs	1,3-Dichlorobenzene	UJ
UK08SL01	3/29/2006	TCL VOCs	1,4-Dichlorobenzene	UJ
UK08SL01	3/29/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
UK08SL01	3/29/2006	TCL VOCs	1,2-Dibromo-3-chloropropane	UJ
UK08SL01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
UK08SL01	3/29/2006	TCL SVOCs	Benzaldehyde	R
UK08SL01	3/29/2006	TCL Pesticides	Endrin ketone	UJ
UK08SL01	3/29/2006	TCL Pesticides	Methoxychlor	UJ
UK08SL01	3/29/2006	TAL Metals	Antimony	UJ
UK08SL01	3/29/2006	TAL Metals	Beryllium	0.46 U
UK08SL01	3/29/2006	TAL Metals	Chromium	J
UK08SL01	3/29/2006	TAL Metals	Copper	J
UK08SL01	3/29/2006	TAL Metals	Lead	J
UK08SL01	3/29/2006	TAL Metals	Manganese	J
UK08SL01	3/29/2006	TAL Metals	Mercury	J
UK08SL01	3/29/2006	TAL Metals	Potassium	1155 U
SF46SL01	3/29/2006	TCL VOCs	Acetone	J
SF46SL01	3/29/2006	TCL VOCs	2-Butanone	R
SF46SL01	3/29/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
SF46SL01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
SF46SL01	3/29/2006	TCL SVOCs	Di-n-octyl phthalate	J
SF46SL01	3/29/2006	TCL SVOCs	Benzo(b)fluoranthene	J
SF46SL01	3/29/2006	TCL SVOCs	Benzo(k)fluoranthene	J
SF46SL01	3/29/2006	TCL SVOCs	Benzo(a)pyrene	J
SF46SL01	3/29/2006	TCL SVOCs	Indeno(1,2,3-cd)pyrene	J
SF46SL01	3/29/2006	TCL SVOCs	Dibenz(a,h)anthracene	J



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF46SL01	3/29/2006	TCL SVOCs	Benzo(g,h,i)perylene	J
SF46SL01	3/29/2006	TCL SVOCs	Benzaldehyde	J
SF46SL01	3/29/2006	TCL SVOCs	Atrazine	UJ
SF46SL01	3/29/2006	TCL Pesticides	4,4'-DDD	J
SF46SL01	3/29/2006	TCL Pesticides	4,4'-DDE	J
SF46SL01	3/29/2006	TCL Pesticides	4,4'-DDT	J
SF46SL01	3/29/2006	TCL Pesticides	Endosulfan sulfate	J
SF46SL01	3/29/2006	TCL Pesticides	Endrin aldehyde	J
SF46SL01	3/29/2006	TCL Pesticides	Endrin ketone	J
SF46SL01	3/29/2006	TAL Metals	Antimony	J
SF46SL01	3/29/2006	TAL Metals	Beryllium	0.73 U
SF46SL01	3/29/2006	TAL Metals	Calcium	J
SF46SL01	3/29/2006	TAL Metals	Chromium	J
SF46SL01	3/29/2006	TAL Metals	Copper	J
SF46SL01	3/29/2006	TAL Metals	Manganese	J
SF46SL01	3/29/2006	TAL Metals	Mercury	J
SF46SL01	3/29/2006	TAL Metals	Nickel	J
SF46SL01	3/29/2006	TAL Metals	Potassium	1821 U
SF15SL01	3/29/2006	TCL VOCs	Acetone	J
SF15SL01	3/29/2006	TCL VOCs	2-Butanone	R
SF15SL01	3/29/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
SF15SL01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
SF15SL01	3/29/2006	TCL SVOCs	Di-n-octyl phthalate	UJ
SF15SL01	3/29/2006	TCL SVOCs	Benzo(b)fluoranthene	J
SF15SL01	3/29/2006	TCL SVOCs	Benzo(k)fluoranthene	J
SF15SL01	3/29/2006	TCL SVOCs	Benzo(a)pyrene	J
SF15SL01	3/29/2006	TCL SVOCs	Indeno(1,2,3-cd)pyrene	J
SF15SL01	3/29/2006	TCL SVOCs	Dibenz(a,h)anthracene	UJ
SF15SL01	3/29/2006	TCL SVOCs	Benzo(g,h,i)perylene	J
SF15SL01	3/29/2006	TCL SVOCs	Benzaldehyde	R
SF15SL01	3/29/2006	TCL Pesticides	4,4'-DDD	J
SF15SL01	3/29/2006	TCL Pesticides	4,4'-DDE	J
SF15SL01	3/29/2006	TCL Pesticides	4,4'-DDT	J
SF15SL01	3/29/2006	TCL Pesticides	Endrin aldehyde	J
SF15SL01	3/29/2006	TCL Pesticides	Endrin ketone	UJ
SF15SL01	3/29/2006	TCL Pesticides	gamma-Chlordane	J
SF15SL01	3/29/2006	TCL Pesticides	alpha-Chlordane	J
SF15SL01	3/29/2006	PCBs	Aroclor 1254	J
SF15SL01	3/29/2006	TAL Metals	Antimony	UJ
SF15SL01	3/29/2006	TAL Metals	Beryllium	0.52 U
SF15SL01	3/29/2006	TAL Metals	Calcium	J
SF15SL01	3/29/2006	TAL Metals	Chromium	J
SF15SL01	3/29/2006	TAL Metals	Copper	J
SF15SL01	3/29/2006	TAL Metals	Manganese	J
SF15SL01	3/29/2006	TAL Metals	Mercury	J
SF15SL01	3/29/2006	TAL Metals	Nickel	J
SF15SL01	3/29/2006	TAL Metals	Potassium	1294 U
UK01SL01	3/29/2006	TCL VOCs	Acetone	J



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
UK01SL01	3/29/2006	TCL VOCs	2-Butanone	R
UK01SL01	3/29/2006	TCL VOCs	Toluene	J
UK01SL01	3/29/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
UK01SL01	3/29/2006	TCL SVOCs	Benzo(a)anthracene	J
UK01SL01	3/29/2006	TCL SVOCs	Di-n-octyl phthalate	J
UK01SL01	3/29/2006	TCL SVOCs	Benzo(b)fluoranthene	J
UK01SL01	3/29/2006	TCL SVOCs	Benzo(k)fluoranthene	J
UK01SL01	3/29/2006	TCL SVOCs	Benzo(a)pyrene	J
UK01SL01	3/29/2006	TCL SVOCs	Indeno(1,2,3-cd)pyrene	J
UK01SL01	3/29/2006	TCL SVOCs	Dibenz(a,h)anthracene	UJ
UK01SL01	3/29/2006	TCL SVOCs	Benzo(g,h,i)perylene	UJ
UK01SL01	3/29/2006	TCL SVOCs	Benzaldehyde	R
UK01SL01	3/29/2006	TCL Pesticides	4,4'-DDE	J
UK01SL01	3/29/2006	TCL Pesticides	4,4'-DDT	J
UK01SL01	3/29/2006	TCL Pesticides	Endosulfan II	J
UK01SL01	3/29/2006	TCL Pesticides	Endrin ketone	UJ
UK01SL01	3/29/2006	TCL Pesticides	Methoxychlor	J
UK01SL01	3/29/2006	TCL Pesticides	alpha-Chlordane	J
UK01SL01	3/29/2006	TAL Metals	Antimony	UJ
UK01SL01	3/29/2006	TAL Metals	Beryllium	0.61 U
UK01SL01	3/29/2006	TAL Metals	Calcium	J
UK01SL01	3/29/2006	TAL Metals	Chromium	J
UK01SL01	3/29/2006	TAL Metals	Copper	J
UK01SL01	3/29/2006	TAL Metals	Manganese	J
UK01SL01	3/29/2006	TAL Metals	Potassium	1513 U
FB0329	3/29/2006	TCL VOCs	Chloroethane	UJ
FB0329	3/29/2006	TCL VOCs	Acetone	R
FB0329	3/29/2006	TCL VOCs	2-Butanone	R
FB0329	3/29/2006	TCL SVOCs	Phenol	UJ
FB0329	3/29/2006	TCL SVOCs	Hexachlorocyclopentadiene	UJ
FB0329	3/29/2006	TCL SVOCs	Benzaldehyde	R
FB0329	3/29/2006	TAL Metals	Potassium	R
FB0330	3/30/2006	TCL VOCs	Bromomethane	UJ
FB0330	3/30/2006	TCL VOCs	Acetone	UJ
FB0330	3/30/2006	TCL VOCs	Trichlorofluoromethane	UJ
FB0330	3/30/2006	TCL VOCs	2-Butanone	R
FB0330	3/30/2006	TCL VOCs	2-Hexanone	UJ
FB0330	3/30/2006	TCL VOCs	Tetrachloroethene	UJ
FB0330	3/30/2006	TCL VOCs	1,1,2,2-Tetrachloroethane	UJ
FB0330	3/30/2006	TCL VOCs	1,2-Dibromo-3-chloropropane	UJ
FB0330	3/30/2006	TCL SVOCs	Fluoranthene	UJ
FB0330	3/30/2006	TCL SVOCs	Benzaldehyde	R
SF44SL01	3/30/2006	TCL VOCs	Acetone	J
SF44SL01	3/30/2006	TCL VOCs	2-Butanone	R
SF44SL01	3/30/2006	TCL VOCs	1,1,2,2-Tetrachloroethane	UJ
SF44SL01	3/30/2006	TCL VOCs	1,3-Dichlorobenzene	UJ
SF44SL01	3/30/2006	TCL VOCs	1,2-Dichlorobenzene	UJ
SF44SL01	3/30/2006	TCL VOCs	1,4-Dichlorobenzene	UJ



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF44SL01	3/30/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
SF44SL01	3/30/2006	TCL VOCs	1,2-Dibromo-3-chloropropane	UJ
SF44SL01	3/30/2006	TCL SVOCs	Fluoranthene	J
SF44SL01	3/30/2006	TCL SVOCs	Benzo(k)fluoranthene	J
SF44SL01	3/30/2006	TCL SVOCs	Dibenz(a,h)anthracene	UJ
SF44SL01	3/30/2006	TCL SVOCs	Benzaldehyde	R
SF44SL01	3/30/2006	TCL Pesticides	beta-BHC	J
SF44SL01	3/30/2006	TCL Pesticides	Endosulfan sulfate	J
SF44SL01	3/30/2006	TCL Pesticides	Endrin aldehyde	J
SF44SL01	3/30/2006	TCL Pesticides	Endrin ketone	UJ
SF44SL01	3/30/2006	TCL Pesticides	Methoxychlor	J
SF44SL01	3/30/2006	TAL Metals	Antimony	UJ
SF44SL01	3/30/2006	TAL Metals	Beryllium	J
SF44SL01	3/30/2006	TAL Metals	Calcium	J
SF44SL01	3/30/2006	TAL Metals	Chromium	J
SF44SL01	3/30/2006	TAL Metals	Copper	J
SF44SL01	3/30/2006	TAL Metals	Nickel	J
SF44SL01	3/30/2006	TAL Metals	Potassium	J
SF46BS01	3/30/2006	Select List VOCs	Acetone	R
SF46BS01	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF46BS01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF46BS01	3/30/2006	Select List Metals	Chromium	J
SF46BS01	3/30/2006	Select List Metals	Copper	J
SF46BS01	3/30/2006	Select List Metals	Zinc	J
SF46BN01	3/30/2006	Select List VOCs	Acetone	J
SF46BN01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF46BN01	3/30/2006	Select List Metals	Chromium	J
SF46BN01	3/30/2006	Select List Metals	Copper	J
SF46BN01	3/30/2006	Select List Metals	Nickel	J
SF46BN01	3/30/2006	Select List Metals	Zinc	J
SF46N01	3/30/2006	Select List VOCs	Acetone	J
SF46N01	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF46N01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF46N01	3/30/2006	Select List Metals	Chromium	J
SF46N01	3/30/2006	Select List SVOCs	Copper	J
SF46N01	3/30/2006	Select List SVOCs	Zinc	J
SF46S01	3/30/2006	Select List VOCs	Acetone	J
SF46S01	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF46S01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	J
SF46S01	3/30/2006	Select List Metals	Chromium	J
SF46S01	3/30/2006	Select List Metals	Copper	J
SF46S01	3/30/2006	Select List Metals	Nickel	J
SF46S01	3/30/2006	Select List Metals	Zinc	J
UK07B01	3/29/2006	Select List SVOCs	Benzo(a)pyrene	J
UK07B01	3/29/2006	Select List Metals	Chromium	J
SF44BNE01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF44BSW01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF44BNW01	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF44BNW01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF44CS01	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF44CS01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	J
SF44CS01	3/30/2006	Select List Metals	Chromium	J
SF44CS01	3/30/2006	Select List Metals	Zinc	J
SF46CS01	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF46CS01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF46CS01	3/30/2006	Select List Metals	Chromium	J
SF46CS01	3/30/2006	Select List Metals	Copper	J
SF46CS01	3/30/2006	Select List Metals	Zinc	J
SF44BSE01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF44BSE01	3/30/2006	Select List Metals	Chromium	J
SF44BSE01	3/30/2006	Select List Metals	Zinc	J
SF44CN01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF44CN01	3/30/2006	Select List Metals	Chromium	J
SF44CN01	3/30/2006	Select List Metals	Zinc	J
DUP02	3/30/2006	Select List SVOCs	Benzo(k)fluoranthene	J
DUP02	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	J
DUP02	3/30/2006	Select List Metals	Chromium	J
DUP02	3/30/2006	Select List Metals	Zinc	J
SF46CN01	3/30/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF46CN01	3/30/2006	Select List Metals	Chromium	J
SF46CN01	3/30/2006	Select List Metals	Copper	J
SF46CN01	3/30/2006	Select List Metals	Zinc	J
UK09B01	3/29/2006	Select List Metals	Chromium	J

Major

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS9 on 3/21/2006 displayed a relative response factor (RRF) less than the control limit (i.e., 0.050) for 2-butanone at 0.023. Associated sample results were non-detect and were flagged “R”.
- ◇ The continuing calibration analyzed on 4/3/2006 at 11:39 displayed an RRF less than the control limit for acetone at 0.045. Associated sample results with positive detections were flagged “J”; non-detects were flagged “R”.
- ◇ The continuing calibration analyzed on 4/4/2006 at 10:53 displayed an RRF less than the control limit for acetone at 0.041. Associated sample results with positive detections were flagged “J”; non-detects were flagged “R”.
- ◇ The continuing calibration analyzed on 4/11/2006 at 12:10 displayed an RRF less than the control limit for acetone at 0.045. Associated sample results with positive detections were flagged “J”; non-detects were flagged “R”.



DATA VALIDATION REPORT

- ◇ The initial calibration analyzed on instrument VOAMS2 on 3/1/2006 displayed an RRF less than the control limit for 2-butanone at 0.031. Associated sample results were non-detect and were flagged “R”.
- ◇ The initial calibration analyzed on instrument VOAMS10 on 3/15/2006 displayed RRFs less than the control limit for acetone at 0.043 and 2-butanone at 0.024. Associated sample results were non-detect and were flagged “R”.
- ◇ The initial calibration analyzed on instrument VOAMS10 on 4/10/2006 displayed an RRF less than the control limit for 2-butanone at 0.034. Associated sample results were non-detect and were flagged “R”.

SVOC analyses by SW8270C:

- ◇ The initial calibration analyzed on instrument BNAMS2 on 3/28/2006 displayed a r^2 value less than the control limit (i.e., 0.990) for benzaldehyde at 0.475. An r^2 value is used when the %RSD value exceeds the control limit of 15.0%. Associated sample results were non-detect and were flagged “R”.
- ◇ The initial calibration analyzed on instrument BNAMS4 on 3/27/2006 displayed a r^2 value less than the control limit for benzaldehyde at 0.526. An r^2 value is used when the %RSD value exceeds the control limit of 15.0%. Associated sample results were non-detect and were flagged “R”.
- ◇ The initial calibration analyzed on instrument BNAMS4 on 4/4/2006 displayed a r^2 value less than the control limit for benzaldehyde at 0.786. An r^2 value is used when the %RSD value exceeds the control limit of 15.0%. Associated sample results were non-detect and were flagged “R”.
- ◇ Internal standard perylene-d12 displayed a percent recovery (%R) less than the lower control limit (i.e., 50%) in sample SF47SL01 at 24.3%. Analytes associated with the internal standard with positive detections were flagged “J”; non-detects were flagged “R”.

Metals by SW6010B:

- ◇ The preparation blank and continuing calibration blanks (batch # 20316) displayed positive detections for potassium at 141.872 $\mu\text{g/L}$, 167.5 $\mu\text{g/L}$, and 175.7 $\mu\text{g/L}$, respectively. Associated sample results less than the blank concentrations were flagged “R”.



DATA VALIDATION REPORT

Minor

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS9 on 3/21/2006 displayed percent relative standard deviations (RSDs) greater than the control limit (i.e., 15.0%) for acetone at 24.4% and 1,2,4-trichlorobenzene at 18.6%. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”; unless previously flagged for RRF anomalies.
- ◇ The initial calibration analyzed on instrument VOAMS2 on 3/1/2006 displayed a %RSD greater than the control limit for trichloroethene at 16.9%. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/4/2006 at 5:38 displayed a %D greater than the control limit with a negative bias for bromomethane at 29.1%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument VOAMS10 on 3/15/2006 displayed a %RSD greater than the control limit for chloroethane at 18.4%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument VOAMS10 on 4/10/2006 displayed %RSDs greater than the control limit for bromomethane at 15.9%, acetone at 19.8%, 2-hexanone at 23.3%, tetrachloroethene at 15.9%, and 1,1,2,2-tetrachloroethane at 15.6%. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/12/2006 at 15:57 displayed %Ds greater than the control limit with negative biases for trichlorofluoromethane at 23.4% and 1,2-dibromo-3-chloropropane at 26.0%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ Sample UK08SL01 displayed an internal standard recovery less than the lower control limit (i.e., 50%) for 1,4-dichlorobenzene-d4 at 49%. The reanalysis confirmed the low internal standard recovery. Analytes associated with the internal standard with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ Sample SF44SL01 displayed an internal standard recovery less than the lower control limit for 1,4-dichlorobenzene-d4 at 17.6%. The reanalysis confirmed the low internal standard recovery. Analytes associated with the internal standard with positive detections were flagged “J”; non-detects were flagged “UJ”.



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- ◇ The field duplicate (UK10SL01/DUP01) displayed relative percent differences (%RPDs) greater than the control limit (i.e., 35%) for toluene at 57.1% and total xylenes at 40.7%. Associated sample results with positive detections were flagged “J”.

SVOC analyses by SW8270C:

- ◇ The continuing calibration analyzed on 4/4/2006 at 10:00 displayed %Ds greater than the control limit (i.e., $\pm 20.0\%$) with negative biases for hexachlorocyclopentadiene at 28% and atrazine at 28%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument BNAMS4 on 3/27/2006 displayed a %RSD greater than the control limit (i.e., 15.0%) for phenol at 15.6%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/1/2006 at 15:59 displayed a %D greater than the control limit with a negative bias for hexachlorocyclopentadiene at 34%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument BNAMS4 on 4/4/2006 displayed a %RSD greater than the control limit for fluoranthene at 17.4%. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument BNAMS6 on 3/27/2006 displayed a %RSD greater than the control limit for benzaldehyde at 42.8%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/4/2006 at 8:41 displayed %Ds greater than the control limit with positive biases for indeno(1,2,3-cd)pyrene at 22% and benzo(g,h,i)perylene at 22% and a %D with a negative bias for atrazine at 26%. Associated sample results with positive detections were flagged “J”; non-detect atrazine results were flagged “UJ”.
- ◇ Internal standard perylene-d12 displayed %Rs less than the lower control limit in sample UK01SL01 at 26.4%, SF15SL01 at 37.0%, UK10SL01 at 42.4%, SF14SL01 at 26.3%, and SF46SI01 at 33.7%. reanalysis confirmed the low internal standard recoveries. Analytes associated with the internal standard anomaly with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ The field duplicate pair (UK10SL01/DUP01) displayed %RPDs greater than the control limit (i.e., 35%) for benzo(a)anthracene at 50.6%, benzo(b)fluoranthene at 36.6%, benzo(k)fluoranthene at 73.9%, and benzo(a)pyrene at 55.1%. Associated



DATA VALIDATION REPORT

sample results collected on 3/28/2006 and 3/29/2006 with positive detections were flagged “J”.

- ◇ The field duplicate pair (SF44BNW01/DUP02) displayed a %RPD greater than the control limit for benzo(k)fluoranthene at 54.8% and an absolute difference greater than the control limit (i.e., 2x RL or 70 µg/kg) for dibenz(a,h)anthracene at 405 µg/kg. Associated sample results collected on 3/30/2006 with positive detections were flagged “J”; non-detect dibenz(a,h)anthracene results were flagged “UJ”; unless previously flagged for internal standard anomalies.

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/3/2006 at 22:33 displayed a %D greater than the control limit (i.e., ±15.0%) on the front column with a positive bias for methoxychlor at 17.191%. Associated sample results with positive detections were flagged “J”.
- ◇ The continuing calibration analyzed on 4/5/2006 at 14:02 displayed a %D greater than the control limit with a negative bias on the front column for methoxychlor at 18.324%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The following table describes any dual column imprecision greater than the control limit (i.e., 25.0%). The following results were flagged “J”:

<i>Sample</i>	<i>Analyte</i>	<i>Result from front column (ppb)</i>	<i>Result from rear column (ppb)</i>	<i>%RPD</i>
SF47AQ01	Methoxychlor	0.219	0.122	56.9%
SF47SL01	Methoxychlor	11.579	120.283	164.9%
SF14SL01	Dieldrin	12.522	18.63	39.2%
SF14SL01	Endosulfan sulfate	22.491	114.496	134.3%
SF14SL01	Methoxychlor	7.966	60.465	153.4%
SF14SL01	alpha-Chlordane	42.314	26.082	47.5%
UK01SL01	Endrin aldehyde	77.817	167.097	72.9%
UK01SL01	Methoxychlor	41.839	293.507	150.1%
UK01SL01	gamma-Chlordane	24.546	54.026	75.0%
DUP01	Endosulfan sulfate	56.534	226.933	120.2%
DUP01	Heptachlor epoxide	14.738	71.611	131.7%
DUP01	Methoxychlor	57.287	356.828	144.7%
DUP01	gamma-Chlordane	36.134	96.601	91.1%
SF46SL01	4,4’-DDE	38.182	12.816	99.5%
SF46SL01	Endosulfan sulfate	99.98	31.597	103.9%
SF46SL01	Endrin aldehyde	46.809	172.964	114.8%
SF46SL01	Endrin ketone	90.005	12.679	150.6%



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<i>Sample</i>	<i>Analyte</i>	<i>Result from front column (ppb)</i>	<i>Result from rear column (ppb)</i>	<i>%RPD</i>
SF15SL01	4,4'-DDT	83.584	129.502	43.1%
SF15SL01	Endrin aldehyde	11.218	63.83	140.2%
SF15SL01	gamma-Chlordane	24.809	43.694	55.1%
SF15SL01	alpha-Chlordane	15.765	33.324	71.5%
UK01SL01	4,4'-DDE	67.49	10.836	144.6%
UK01SL01	Endosulfan II	20.082	13.379	40.1%
UK01SL01	Methoxychlor	94.994	30.155	103.6%
UK01SL01	alpha-Chlordane	39.785	20.809	62.6%
SF44SL01	beta-BHC	25.619	11.322	77.4%
SF44SL01	Endosulfan sulfate	16.574	50.919	101.8%
SF44SL01	Endrin aldehyde	24.935	10.752	79.5%
SF44SL01	Methoxychlor	34.958	59.888	52.6%

- ◇ The field duplicate pair (UK10SL01/DUP01) displayed %RPDs greater than the control limit for 4,4'-DDD at 62.5%, 4,4'-DDE at 69.4%, 4,4'-DDT at 52.3%, and endrin aldehyde at 74.2% and an absolute difference greater than the control limit (i.e., 2x RL or 18.2 µg/kg) for endrin ketone at 121.1 µg/kg. Associated sample results with positive detections were flagged "J"; non-detect endrin ketone results were flagged "UJ".

PCB analyses by SW8082:

- ◇ The continuing calibration analyzed on 4/1/2006 at 3:14 displayed %Ds greater than the control limit (i.e., 15.0%) with positive biases for seven of the eight Aroclor 1260 peaks. The average of the eight peaks was 21.875%. Associated sample results with positive detections were flagged "J".
- ◇ Surrogate decachlorobiphenyl displayed %Rs greater than the upper control limit (i.e., 159%) on both columns in sample SF15SL01 at 244% and 349%. The positive Aroclor 1254 result was flagged "J".
- ◇ The field duplicate pair (UK10SL01/DUP01) displayed an absolute difference greater than the control limit (i.e., 2x RL or 360 µg/kg) for Aroclor 1260 at 3,420 µg/kg. Since another field duplicate pair was within control, only the parent and duplicate sample were qualified. The parent sample result was flagged "J" and the duplicate result was flagged "UJ".

Metals by SW6010B:

- ◇ The continuing calibration blanks (batch # 20310) displayed positive detections for beryllium ranging from 0.4 µg/L to 0.5 µg/L and potassium ranging from



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351.5 µg/L to 366.1 µg/L. Associated sample results less than the reporting limit were raised to the reporting limit and flagged “U”.

- ◇ The matrix spike (MS) (parent sample SF51SL01, batch # 20310) displayed %Rs outside the control limits (i.e., 75%-125%) for antimony at 70.7% and manganese at 160.4%. Associated sample results with positive detections were flagged “J”; non-detect antimony results were flagged “UJ”.
- ◇ The MS (laboratory sample ID 721492, batch # 20315) displayed %Rs less than the lower control limit for antimony at 39.0%, beryllium at 73.2%, chromium at 51.4%, copper at 23.1%, nickel at 74.8%, and potassium at 71.5%. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”; unless previously flagged for other anomalies.
- ◇ The MS (parent sample SF44BNW01, batch # 20354) displayed %Rs outside the control limits for antimony at 56.3%, lead at 210.0%, and zinc at 24.4%. Associated sample results with positive detections were flagged “J”; non-detect antimony and zinc results were flagged “UJ”.
- ◇ Laboratory duplicate pair (laboratory sample ID 721492, batch # 20315) displayed %RPDs greater than the control limit (i.e., 35%) for beryllium at 80.9% and calcium at 61.8%. Associated sample results with positive detections were flagged “J”; unless previously flagged for other anomalies.
- ◇ The laboratory duplicate pair (SF51SL01, batch # 20310) displayed %RPDs greater than the control limit for chromium at 64.2% and mercury at 55.2%. Associated sample results with positive detections were flagged “J”; unless previously flagged for other anomalies.
- ◇ The field duplicate pair (UK10SL01/DUP01) displayed %RPDs greater than the control limit (i.e., 35%) for calcium at 47.6%, chromium at 66.5%, copper at 49.5%, and nickel at 115.3%. Associated sample results with detections greater than the reporting limit were flagged “J”.
- ◇ Field blank FB0328 displayed a positive detection for zinc at 16 µg/L. The positive zinc result in SF47AQ01 was flagged “J”.

Other

Deficiencies: VOC analyses by SW8260B:

- ◇ The continuing calibration analyzed on 4/3/2006 at 11:39 displayed a RRF less than the control limit for 2-butanone at 0.018. The continuing calibration also displayed %Ds greater than the control limit with negative biases for acetone at 23.7% and 2-butanone at 21.7%. Since the associated sample results were

previously flagged for other calibration anomalies, no further data qualification was necessary.

- ◇ Method blank KV093 displayed a positive detection for methylene chloride at 1.3 µg/kg. Since associated sample results were non-detect, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/4/2006 at 10:53 displayed an RRF less than the control limit for 2-butanone at 0.018. The continuing calibration also displayed %Ds greater than the control limit with negative biases for acetone at 30.5% and 2-butanone at 21.7%. Since the associated sample results were previously flagged for other calibration anomalies, no further data qualification was necessary.
- ◇ Method blank KV094 displayed a positive detection for methylene chloride at 2.0 µg/kg. Since associated sample results were non-detect, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/11/2006 at 12:10 displayed an RRF less than the control limit for 2-butanone at 0.020. The continuing calibration also displayed a %D greater than the control limit with a negative bias for acetone at 23.7%. Since the associated sample results were previously flagged for other calibration anomalies, no further data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/4/2006 at 5:38 displayed an RRF less than the control limit for 2-butanone at 0.031. The continuing calibration also displayed a %D greater than the control limit with a positive bias for dichlorodifluoromethane at 27.3%. Since associated sample results for 2-butanone were previously flagged for other calibration anomalies and associated sample results for dichlorodifluoromethane were non-detect, no further data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/3/2006 at 9:39 displayed RRFs less than the control limit for acetone at 0.043 and 2-butanone at 0.026. The continuing calibration also displayed %Ds greater than the control limit with positive biases for trichlorofluoromethane at 24.9%, bromoform at 36.2%, tetrachloroethene at 24.1%, and dichlorodifluoromethane at 23.4%. Since associated sample results for 2-butanone and acetone were previously flagged for other calibration anomalies and associated sample results for other compounds were non-detect, no further data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/4/2006 at 9:02 displayed RRFs less than the control limit for acetone at 0.040 and 2-butanone at 0.026. The continuing calibration also displayed %Ds greater than the control limit with positive biases for bromoform at 38.3%, tetrachloroethene at 26.1%, and 1,2,4-trichlorobenzene



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at 23.5%. Since associated sample results for 2-butanone and acetone were previously flagged for other calibration anomalies and associated sample results for other compounds were non-detect, no further data qualification was necessary.

- ◇ The continuing calibration analyzed on 4/12/2006 at 15:57 displayed an RRF less than the control limit for 2-butanone at 0.027. The continuing calibration also displayed %Ds greater than the control limit with negative biases for acetone at 31.3% and 2-butanone at 20.6%. Since associated sample results were previously flagged for other anomalies, no further data qualification was necessary.
- ◇ Surrogate bromofluorobenzene displayed a percent recovery (%R) greater than the upper control limit (i.e., 154%) in sample SF44SL01 at 224%. No data qualification is necessary when a surrogate recovery is greater than the upper control limit.

SVOC analyses by SW8270C:

- ◇ The continuing calibration analyzed on 4/4/2006 at 10:00 displayed a %D greater than the control limit with a negative bias for benzaldehyde at 100%. Since the associated sample result was previously flagged for initial calibration anomalies, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/1/2006 at 15:59 displayed a %D greater than the control limit with a positive bias for nitrobenzene at 26% and a %D greater than the control limit with a negative bias for benzaldehyde at 32%. Since associated sample results for nitrobenzene were non-detect and associated sample results for benzaldehyde were previously flagged for initial calibration anomalies, no data qualification was taken.
- ◇ The continuing calibration analyzed on 4/6/2006 at 9:39 displayed %Ds greater than the control limit with positive biases for 2,4-dinitrophenol at 28%, 3,3'-dichlorobenzidine at 34%, and benzaldehyde at 84%. Since associated sample results for 3,3'-dichlorobenzidine and 2,4-dinitrophenol were non-detect and associated sample results for benzaldehyde were previously flagged for initial calibration anomalies, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/4/2006 at 8:41 displayed %Ds greater than the control limit with positive biases for 2,4-dinitrophenol at 25% and benzaldehyde at 30%. Since associated sample results were non-detect, no data qualification as necessary.
- ◇ The preparation blank displayed a positive detection for bis(2-ethylhexyl)phthalate at 77 µg/kg. Since associated sample results were greater than 10x the blank concentration, no data qualification was necessary.



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- ◇ Surrogate terphenyl-d14 displayed a %R greater than the upper control limit (i.e., 142%) in sample SF14SL01 at 155%. No qualification is taken based on one surrogate outlier.
- ◇ Surrogate 2-fluorobiphenyl did not recover (i.e., 0%) in sample SF44SL01 due to a high dilution factor. No data qualifying action was taken.
- ◇ Benzaldehyde did not recover in blank spike (BS) 3716BS. Since associated sample results were previously flagged for initial calibration anomalies, no further data qualification was necessary.
- ◇ Matrix spike/matrix spike duplicate (MS/MSD) pair (SF51SL01) displayed %Rs less than the lower control limit (i.e., 64%) for 2,4-dinitrotoluene at 56% and 58%, respectively. No data qualification is taken based solely on MS/MSD anomalies.
- ◇ Benzaldehyde did not recover in BS 3728. Since associated sample results were previously flagged for initial calibration anomalies, no further data qualification was necessary.
- ◇ BS 3349 displayed a %R greater than the upper control limit (i.e., 174%) for benzaldehyde at 180%. Since associated sample results were non-detect or previously flagged for other anomalies, no further data qualification was necessary.

Pesticides by SW8081A:

- ◇ Surrogate decachlorobiphenyl displayed %Rs greater than the upper control limit (i.e., 159%) on the rear column for samples UK10SL01 at 546%, DUP01 at 697%, and SF46SL01 at 281% and a %R less than the lower control limit (i.e., 62%) on the front column for sample SF15SL01 at 61%. No data qualification is taken based on one surrogate anomaly.
- ◇ The MS/MSD pair (SF51SL01) displayed a %RPD greater than the control limit (i.e., 23%) for endrin aldehyde at 24%. No data qualification is taken based solely on MS/MSD anomalies.
- ◇ BS SP094BS displayed %Rs greater than the upper control limit (i.e., 130%) for alpha-chlordane at 131% and gamma-chlordane at 138%. Since associated sample results were non-detect, no data qualifying action was taken.

Polychlorinated Biphenyls by SW8082:

- ◇ The continuing calibration analyzed on 4/2/2006 at 20:55 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 19.42%.



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The average of the eight Aroclor peaks was 12.25%. No data qualification is taken based on one peak.

- ◇ The continuing calibration analyzed on 4/3/2006 at 20:53 displayed a %D greater than the control limit with a negative bias for one Aroclor 1016 peak at 19.77%. The average of the eight Aroclor peaks was 5.83%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/4/2006 at 3:17 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 16.33%. The average of the eight Aroclor peaks was 1.79%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/4/2006 at 10:09 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 16.14%. The average of the eight Aroclor peaks was -1.44% (negative bias). No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/5/2006 at 1:40 displayed %Ds greater than the control limit with positive biases for one Aroclor 1260 peak on the rear column at 16.14% and on the front column at 15.89%. The average of the eight Aroclor peaks on the rear column was 6.77% and on the front column was 11.07%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 3/31/2006 at 21:14 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 27.97%. The average of the eight Aroclor peaks was 7.28%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/1/2006 at 3:14 displayed %Ds greater than the control limit with positive biases for three Aroclor 1016 peaks at 21.02%, 22.08%, and 20.34%. The average of the eight Aroclor peaks was 14.19%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/3/2006 at 5:54 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 29.46%. The average of the eight Aroclor peaks was 7.78%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/3/2006 at 11:46 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 24.97%. The average of the eight Aroclor peaks was 8.03%. No data qualification is taken based on one peak.



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- ◇ The continuing calibration analyzed on 4/4/2006 at 5:22 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 21.66%. The average of the eight Aroclor peaks was -0.49% (negative bias). No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/4/2006 at 9:25 displayed a %D greater than the control limit with a positive bias for one Aroclor 1260 peak at 31.18%. The average of the eight Aroclor peaks was 9.27%. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/10/2006 at 10:01 displayed a %D greater than the control limit with a negative bias for one Aroclor 1016 peak at 22.5%. The average of the eight Aroclor peaks was 8.46%. No data qualification is taken based on one peak.
- ◇ The MS/MSD pair (SF51SL01) displayed a %RPD greater than the control limit (i.e., 17%) for Aroclor 1016 at 19%. No data qualification is taken solely based on MS/MSD anomalies.
- ◇ Surrogate decachlorobiphenyl displayed a %R greater than the upper control limit (i.e., 159%) on the rear column in sample SF46SL01 at 212%. No data qualification is taken based on one surrogate outlier.

Metals by SW6010B:

- ◇ The continuing calibration blanks (batch # 20310) displayed negative detections for calcium at -57.1 µg/L and lead at -3.2 µg/L. Since associated sample results for lead were greater than the absolute reporting limit, no data qualification was necessary. Associated sample results for calcium were either greater than the absolute reporting limit or previously flagged for other anomalies, no further data qualification was taken.
- ◇ The MS (parent sample SF51SL01, batch # 20310) displayed %Rs outside the control limits for aluminum at 347.6%, copper at 37.7%, iron at 4217.1%, and lead at 38.9%. Since the amount found in the parent sample was greater than 4x the spiking amount, no data qualification was necessary.
- ◇ The MS (laboratory sample ID 721492, batch # 20315) displayed %Rs less than the lower control limits for calcium at -212.0%, iron at -619.7%, lead at 66.5%, manganese at -113.0%, and zinc at -162.9%. Since the amount found in the parent sample was greater than 4x the spiking amount, no data qualification was necessary.
- ◇ The MS (laboratory sample ID 720202, batch # 20316) displayed a %R greater than the upper control limit for manganese at 164.2%. Since the amount found in



DATA VALIDATION REPORT

the parent sample was greater than 4x the spiking amount, no data qualification was necessary.

- ◇ The MS (SF44BNW01, batch # 20354) displayed %Rs outside the control limits for aluminum at 174.1% and iron at -496.4%. Since the amount found in the parent sample was greater than 4x the spiking amount, no data qualification was necessary.
- ◇ Field blank FB0328 displayed positive detections for calcium at 76.1 µg/L and potassium at 130 µg/L. Since associated sample results were either greater than 10x the blank concentration or previously flagged for other anomalies, no data qualification was necessary.
- ◇ Field blank FB0329 displayed positive detections for calcium at 77.5 µg/L, potassium at 134 µg/L, and zinc at 8.5 µg/L. Since associated sample results were either greater than 10x the blank concentration or previously flagged for other anomalies, no data qualification was necessary.
- ◇ Field blank FB0330 displayed positive detections for calcium at 84.7 µg/L, iron at 79.5 µg/L, and zinc at 7.2 µg/L. Since associated sample results were greater than 10x the blank concentration, no data qualification was necessary.

Comments: On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: 

R. Michael Shadle

APPENDIX A

A-2 Liberty Industrial Finishing Site – Sample Delivery Group P696



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF02BNW01	3/31/06	VOCs, BNAs, PCBs, Metals, CN ⁻
DUP03	3/31/06	VOCs, BNAs, PCBs, Metals, CN ⁻
FB0331	3/31/06	VOCs, BNAs, PCBs, Metals, CN ⁻
TB0331	3/31/06	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF02BNW01	3/31/06	Metals	Chromium	R
DUP03	3/31/06	Metals	Chromium	R

Major

Deficiencies: Metals by SW-846 6010B:

The RPD between field duplicate pair SF02BNW01 and DUP03 was greater than the control limit for chromium at 111.4%. Associated sample results were qualified as “R”.

Minor

Deficiencies: No minor deficiencies were identified.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank sample KV095 at a concentration of 0.9 µg/kg. Methylene chloride was not reported in the investigative samples; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB092 displayed a positive detection for an unknown aldol condensate at 14,000 µg/kg and a degradation product of 2,4,6-tribromophenol at 320 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The matrix spike (MS) recovery for 4-nitrophenol and 1,2,4-trichlorobenzene associated with sample SF02BNW01 were less than their lower control limits at 41% and 59%, respectively. The spike duplicate (SD) recovery of 4-nitrophenol was less than the lower control limit at 35%. 4-Nitrophenol and 1,2,4-trichlorobenzene were not reported in the spiked sample; no



DATA VALIDATION REPORT

qualification was required.

Metals by SW-846 6010B and 7471A:

The laboratory duplicate sample relative percent difference (RPD) for chromium was greater than the control limit (i.e., 35%) at 122.3%. Samples were previously qualified on the basis field duplicate anomalies; no further action was required.

The matrix spike recovery of chromium associated with spiked sample SF02BNW01 was less than the lower control limit (i.e., 75%) at 18.4%. Samples were previously qualified on the basis field duplicate anomalies; no further action was required.

PCBs by SW-846 8082:

The continuing calibration analyzed on 4/4/06 at 0522 displayed an aroclor-1260 peak greater than the control limit (i.e., 15.0%) on the rear chromatography column at 21.66%. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF02BNW01	3/31/06	VOCs, BNAs, PCBs, Metals, CN ⁻
DUP03	3/31/06	VOCs, BNAs, PCBs, Metals, CN ⁻
FB0331	3/31/06	VOCs, BNAs, PCBs, Metals, CN ⁻
TB0331	3/31/06	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF02BNW01	3/31/06	Metals	Chromium	J
DUP03	3/31/06	Metals	Chromium	J

Major

Deficiencies: No major deficiencies were observed.

Minor

Deficiencies: Metals by SW-846 6010B:

The RPD between field duplicate pair SF02BNW01 and DUP03 was greater than the control limit for chromium at 111.4%. Associated sample results were qualified as "J".

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank sample KV095 at a concentration of 0.9 µg/kg. Methylene chloride was not reported in the investigative samples; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB092 displayed a positive detection for an unknown aldol condensate at 14,000 µg/kg and a degradation product of 2,4,6-tribromophenol at 320 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The matrix spike (MS) recovery for 4-nitrophenol and 1,2,4-trichlorobenzene associated with sample SF02BNW01 were less than their lower control limits at 41% and 59%, respectively. The spike duplicate (SD) recovery of 4-nitrophenol was less than the lower control limit at 35%. 4-Nitrophenol and 1,2,4-trichlorobenzene were not reported in the spiked sample; no



DATA VALIDATION REPORT

qualification was required.

Metals by SW-846 6010B and 7471A:

The laboratory duplicate sample relative percent difference (RPD) for chromium was greater than the control limit (i.e., 35%) at 122.3%. Samples were previously qualified on the basis field duplicate anomalies; no further action was required.

The matrix spike recovery of chromium associated with spiked sample SF02BNW01 was less than the lower control limit (i.e., 75%) at 18.4%. Samples were previously qualified on the basis field duplicate anomalies; no further action was required.

PCBs by SW-846 8082:

The continuing calibration analyzed on 4/4/06 at 0522 displayed an aroclor-1260 peak greater than the control limit (i.e., 15.0%) on the rear chromatography column at 21.66%. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-3 Liberty Industrial Finishing Site – Sample Delivery Group P778



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF45BNE01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF45BNW01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF45BSE01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF45BSW01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF43BNE01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF43BNW01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF43BSE01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF43BSW01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF42BNE01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF42BNW01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF42BSE01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
SF42BSW01	4/3/2006	Select List VOCs, SVOCs, and Metals, PCBs, Cyanide
UK10BNE01	4/3/2006	Select List VOCs, SVOCs, and Metals, Dieldrin, PCBs, Cyanide
UK10BNW01	4/3/2006	Select List VOCs, SVOCs, and Metals, Dieldrin, PCBs, Cyanide
UK10BSE01	4/3/2006	Select List VOCs, SVOCs, and Metals, Dieldrin, PCBs, Cyanide
UK10BSW01	4/3/2006	Select List VOCs, SVOCs, and Metals, Dieldrin, PCBs, Cyanide
DUP04	4/3/2006	Select List VOCs, SVOCs, and Metals, Dieldrin, PCBs, Cyanide
FB0403	4/3/2006	TCL VOCs, TCL SVOCs, TCL Pesticides, PCBs, TAL Metals, Cyanide
TB0403	4/3/2006	TCL VOCs
SF42CNE01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF42CNW01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF42CSE01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF42CSW01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF45CNE01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF45CNW01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF45CSE01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF45CSW01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF43CNE01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF43CNW01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF43CSE01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF43CSW01	4/3/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
UK10CN01	4/3/2006	Select List SVOCs, Dieldrin, PCBs, Select List Metals, Cyanide
UK10CS01	4/3/2006	Select List SVOCs, Dieldrin, PCBs, Select List Metals, Cyanide

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0403	4/3/2006	TCL VOCs	Chloroethane	UJ
FB0403	4/3/2006	TCL VOCs	Acetone	R
FB0403	4/3/2006	TCL VOCs	2-Butanone	R
FB0403	4/3/2006	TCL SVOCs	Pentachlorophenol	UJ
FB0403	4/3/2006	TCL SVOCs	Benzaldehyde	R
FB0403	4/3/2006	TCL Pesticides	4,4'-DDD	UJ



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
FB0403	4/3/2006	TAL Metals	Barium	UJ
TB0405	4/3/2006	TCL VOCs	Chloroethane	UJ
TB0405	4/3/2006	TCL VOCs	Acetone	R
TB0405	4/3/2006	TCL VOCs	2-Butanone	R
SF43BNE01	4/3/2006	Select List SVOCs	Benzo(b)fluoranthene	UJ
SF43BNE01	4/3/2006	Select List SVOCs	Benzo(k)fluoranthene	UJ
SF43BNE01	4/3/2006	Select List SVOCs	Benzo(a)pyrene	UJ
SF43BNE01	4/3/2006	Select List SVOCs	Indeno(1,2,3-cd)pyrene	UJ
SF43BNE01	4/3/2006	Select List SVOCs	Dibenz(a,h)anthracene	UJ
SF43BNE01	4/3/2006	Select List Metals	Mercury	UJ
SF42BSE01	4/3/2006	Select List Metals	Zinc	J
SF42BSW01	4/3/2006	Select List Metals	Zinc	J
SF42CNE01	4/3/2006	Select List Metals	Chromium	J
SF42CNW01	4/3/2006	Select List Metals	Chromium	J
SF42CSE01	4/3/2006	Select List Metals	Chromium	J
SF42CSW01	4/3/2006	Select List Metals	Chromium	J
SF45CNE01	4/3/2006	Select List Metals	Chromium	J
SF45CNW01	4/3/2006	Select List Metals	Chromium	J
SF45CSE01	4/3/2006	Select List Metals	Chromium	J
SF45CSW01	4/3/2006	Select List Metals	Chromium	J
UK10BNE01	4/3/2006	Select List Metals	Copper	J
UK10BNW01	4/3/2006	Select List Metals	Copper	J
UK10BSE01	4/3/2006	Select List Metals	Copper	J
UK10BSE01	4/3/2006	Select List Metals	Zinc	J
UK10BSW01	4/3/2006	Select List Metals	Copper	J
UK10CN01	4/3/2006	Select List Metals	Copper	J
UK10CN01	4/3/2006	Select List Metals	Zinc	J
UK10CS01	4/3/2006	Select List Metals	Copper	J
UK10CS01	4/3/2006	Select List Metals	Zinc	J
DUP04	4/3/2006	Select List Metals	Copper	J
SF43BNW01	4/3/2006	Select List Metals	Mercury	UJ
SF43BSE01	4/3/2006	Select List Metals	Mercury	UJ
SF43BSW01	4/3/2006	Select List Metals	Mercury	UJ
SF43CNE01	4/3/2006	Select List Metals	Chromium	J
SF43CNE01	4/3/2006	Select List Metals	Copper	J
SF43CNW01	4/3/2006	Select List Metals	Chromium	J
SF43CNW01	4/3/2006	Select List Metals	Copper	J
SF43CSE01	4/3/2006	Select List Metals	Chromium	J
SF43CSE01	4/3/2006	Select List Metals	Copper	J
SF43CSW01	4/3/2006	Select List Metals	Chromium	J
SF43CSW01	4/3/2006	Select List Metals	Copper	J



DATA VALIDATION REPORT

Major

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS10 on 3/15/2006 displayed relative response factors (RRFs) less than the control limit (i.e., 0.050) for acetone at 0.043 and 2-butanone at 0.024. The non-detect acetone and 2-butanone results in FB0403 and TB0403 were flagged “R”.

SVOC analyses by SW8270C:

- ◇ The initial calibration displayed an r^2 value less than the control limit (i.e., 0.990) for benzaldehyde at 0.786. An r^2 value is used when the %RSD value exceeds the control limit of 15.0%. The non-detect result in FB0403 was flagged “R”.

Minor

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS10 on 3/15/2006 displayed a percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for chloroethane at 18.4%. The non-detect results in FB0406 was flagged “UJ”.

SVOC analyses by SW8270C:

- ◇ Internal standard perylene-d12 displayed a percent recovery (%R) less than the lower control limit (i.e., 50%) in sample SF43BNE01 at 27.4%. The reanalysis confirmed the low internal standard recovery. Analytes associated with the internal standard were non-detect and were flagged “UJ”.
- ◇ The blank spike (batch # 3355) analyzed on 4/7/2006 at 16:29 displayed a %R less than the lower control limit (i.e., 72%) for pentachlorophenol at 70%. The non-detect result in FB0403 was flagged “UJ”.

Pesticides by SW8081A:

- ◇ The laboratory control sample (LCS) (batch # 3573) displayed a %R less than the lower control limit (i.e., 77%) for 4,4'-DDD at 75%. The non-detect endrin result in FB0403 was flagged “UJ”.

Metals by SW6010B:

- ◇ The continuing calibration (batch # 20347) displayed a negative detection for barium at -1.5 µg/L. The non-detect barium result in FB0403 was flagged “UJ”.
- ◇ The preparation blank (batch # 20356) displayed a negative concentration for zinc



DATA VALIDATION REPORT

at -0.596 mg/kg. The continuing calibrations displayed negative detections for zinc ranging from -6.5 µg/L to -6.6 µg/L. Associated sample results with positive detections less than 10x the absolute blank concentration were flagged “J”.

- ◇ The preparation blank and continuing calibration blank (batch # 20359) displayed a negative detection for mercury at -0.028 mg/kg and -0.1 µg/L, respectively. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The matrix spike (MS) (laboratory sample ID 722689) displayed a %R less than the lower control limit (i.e., 75%) for chromium at 74.3%. Associated sample results were flagged “J”.
- ◇ The MS (parent sample SF15BW01) displayed a %R greater than the upper control limit for copper at 160.9%. Associated sample results with positive detections were flagged “J”.
- ◇ The laboratory duplicate pair (laboratory sample ID 722689) displayed relative percent differences greater than the control limit (i.e., 35%) for chromium at 41.7% and copper at 41.2%. Associated sample results greater than the reporting limit with positive detections were flagged “J”.

Other

Deficiencies: VOC analyses by SW8260B:

- ◇ The continuing calibration analyzed on 4/07/2006 at 9:48 displayed RRFs less than the control limit for acetone at 0.039 and 2-butanone at 0.023. The continuing calibration also displayed a %D greater than the control limit with a positive bias for bromoform at 25.5%. Since the associated sample results for acetone and 2-butanone were previously flagged for initial calibration anomalies and the bromoform results were non-detect, no further data qualification was necessary.

SVOC analyses by SW8270C:

- ◇ The MS/MSD pair (SF45CNE01) displayed %Rs less than the lower control limits in the MSD for 4-chloro-3-methylphenol at 64%, 1,4-dichlorobenzene at 45%, n-nitroso-di-n-propylamine at 55%, and 1,2,4-trichlorobenzene at 58%. No data qualification is taken based solely on MS/MSD anomalies.
- ◇ The blank spike (batch # 3355) displayed a %R greater than the upper control limit (i.e., 174%) for benzaldehyde at 210%. Since the non-detect benzaldehyde result in FB0403 was previously flagged for initial calibration anomalies, no further data qualifying action was taken.



DATA VALIDATION REPORT

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/6/2006 at 14:56 displayed a %D greater than the control limit (i.e., $\pm 15.0\%$) on the front column with a positive bias for gamma-chlordane at 19.675%. Since the associated sample result was non-detect, no data qualification was necessary.

Polychlorinated Biphenyls by SW8082:

- ◇ The continuing calibration analyzed on 4/8/2006 at 3:17 displayed a %D greater than the control limit (i.e., $\pm 15.0\%$) for one Aroclor 1260 peak at 21.37%. The average of the eight peaks was 11.21%, which is in control. No qualifying action is taken on one peak.
- ◇ The continuing calibration analyzed on 4/6/2006 at 10:57 displayed a %D greater than the control limit for one Aroclor 1260 peak at 17.21%. The average of the eight peaks was 4.77%, which is in control. No qualifying action is taken on one peak.
- ◇ The continuing calibration analyzed on 4/12/2006 at 4:13 displayed a %D greater than the control limit for one Aroclor 1016 peak at 20.21%. The average of the eight peaks was 2.61%, which is in control. No qualifying action is taken on one peak.
- ◇ The continuing calibration analyzed on 4/5/2006 at 17:24 displayed a %D greater than the control limit for one Aroclor 1016 peak at 16.42% and one Aroclor 1260 peak at 32.28%. The average of the eight Aroclor 1016 peaks was 8.03% and the average of the eight Aroclor 1260 peaks was 12.57%, which is in control. No qualifying action is taken on one peak.
- ◇ The continuing calibration analyzed on 4/5/2006 at 10:26 displayed a %D greater than the control limit for one Aroclor 1260 peak at 24.64%. The average of the eight peaks was 6.92%, which is in control. No qualifying action is taken on one peak.
- ◇ The MS/MSD pair (laboratory sample ID 720901) displayed a %R greater than the upper control limit (i.e., 158%) in the MSD for Aroclor 1016 at 192% and a relative percent deviation greater than the control limit (i.e., 17%) for Aroclor 1260 at 29%. No data qualifying action is taken solely based on MS/MSD anomalies.

Metals by SW6010B:

- ◇ The MS (batch # 20336) displayed a %R less than the lower control limit for zinc at 43.1%. Since the amount found in the parent sample was greater than 4x the




DATA VALIDATION REPORT

spiking concentration, no data qualification was necessary.

- ◇ FB0403 displayed a positive detection for iron at 225 µg/L. Since associated sample results were not analyzed for iron, no data qualification was necessary.

Comments: On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: 
R. Michael Shadle

APPENDIX A

A-4 Liberty Industrial Finishing Site – Sample Delivery Group P945



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF13N01	4/4/06	VOCs, SVOCs, PCBs, Metals, CN ⁻
SF13S01	4/4/06	VOCs, SVOCs, PCBs, Metals, CN ⁻
SF13E01	4/4/06	VOCs, SVOCs, PCBs, Metals, CN ⁻
SF13W01	4/4/06	VOCs, SVOCs, PCBs, Metals, CN ⁻
SF13B01	4/4/06	VOCs, SVOCs, PCBs, Metals, CN ⁻
DUP05	4/4/06	VOCs, SVOCs, PCBs, Metals, CN ⁻
FB0404	4/4/06	VOCs, SVOCs, Pesticides, PCBs, Metals, CN ⁻
TB0404	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0404	4/4/06	VOCs	Bromomethane	UJ
FB0404	4/4/06	VOCs	2-Butanone	R
FB0404	4/4/06	VOCs	Trichloroethene	UJ
FB0404	4/4/06	VOCs	2-Hexanone	UJ
FB0404	4/4/06	SVOCs	4-Chloroaniline	R
TB0404	4/4/06	VOCs	Bromomethane	UJ
TB0404	4/4/06	VOCs	2-Butanone	R
TB0404	4/4/06	VOCs	Trichloroethene	UJ
TB0404	4/4/06	VOCs	2-Hexanone	UJ

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 3/1/06 on instrument VOAMS2 displayed a relative response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.031. The associated sample results were non-detect and were qualified as “R”.

SVOCs by SW-846 8270C:

The laboratory control sample (LCS) associated with sample batch 3776 displayed a recovery of 4-chloroaniline less than the lower control limit (i.e., 27%) at 21%. The associated non-detect result was qualified as “R”.

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 3/1/06 on instrument VOAMS2 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for trichloroethene



DATA VALIDATION REPORT

(16.9%) and 2-hexanone (15.2%). Associated sample results were non-detect and were qualified as "UJ".

The continuing calibrations analyzed on 4/7/06 at 0636 and 4/10/06 at 0950 displayed percent deviations (%Ds) greater than the control limit (i.e., 20.0%) with negative biases for bromomethane at 22.8% and 21.2%, respectively. Associated sample results were non-detect and were qualified as "UJ".

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV099 and KV102 at concentrations of 0.9 µg/kg and 0.7 µg/kg, respectively. Associated sample results were non-detect; no qualification was required.

The continuing calibrations analyzed on 4/7/06 at 0636 and 4/10/06 at 0950 displayed RRFs less than the control limit for 2-butanone at 0.031 and 0.032, respectively. Sample results were previously qualified on the basis of initial calibration RRFs; no further action was required.

SVOCs by SW-846 8270C:

Method blank samples SB101C and SB097 displayed positive detections for an unknown aldol condensate at 6,100 µg/kg and 14,000 µg/kg, respectively. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The LCS associated with sample batch 3776 displayed a recovery of 4-bromophenyl-phenylether greater than the upper control limit (i.e., 112%) at 120%. The associated sample result was non-detect; no qualification was required.

PCBs by SW-846 8082:

The matrix spike/spike duplicate (MS/SD) recoveries for aroclor-1016 were greater than the upper control limit (i.e., 158%) at 164% and 192%, respectively. The MS/SD relative percent difference (RPD) for aroclor-1260 was greater than the control limit at 29%. The spiked sample did not originate from the Liberty Industrial Site; no qualification was required.

The continuing calibrations analyzed on 4/11/06 at 2126 and 4/8/06 at 0404 each displayed one aroclor-1016 peak on the rear chromatography column that was greater than the control limit (i.e., 15.0%) at 27.98% and 23.83%, respectively. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

The continuing calibrations analyzed on 4/12/06 at 0100, 4/8/06 at 0317, and 4/8/06 at 0404 displayed aroclor-1260 peaks on the rear chromatography column that were greater than the



DATA VALIDATION REPORT

control limit. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Metals by SW-846 6010B and 7471A:

Aluminum was detected in field blank sample FB0404 at 87.7 µg/L. Aluminum was not requested in the investigative samples; no qualification was required.

Thallium was detection in the initial and continuing calibration blanks associated with sample batch 20365 at concentrations ranging from 4.7 µg/L to 6.9 µg/L. Thallium was non-detect in the field blank sample; no qualification was required.

Mercury was detected in a continuing calibration blank analyzed in conjunction with sample batch 20365 at a concentration of 0.1 µg/L. Mercury was not detected in the associated sample; no qualification was required. Lead was detected at -3.0 µg/L in a continuing calibration blank that did not bracket any investigative analyses; no qualification was required.

The laboratory duplicate sample analyzed in conjunction with sample batch 20365 displayed a RPD greater than the control limit (i.e., 35%) for arsenic at 54.8%, but the absolute difference was less than 2X the reporting limit; no qualification was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-5 Liberty Industrial Finishing Site – Sample Delivery Group Q028



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

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- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

Sample	Sample Date	Analyses Requested
SF25BSE01	4/5/2006	Select List VOCs, SVOCs, Pesticides, and Metals, PCBs, Metals, Cyanide
SF25BNE01	4/5/2006	Select List VOCs, SVOCs, Pesticides, and Metals, PCBs, Metals, Cyanide
SF25BNW01	4/5/2006	Select List VOCs, SVOCs, Pesticides, and Metals, PCBs, Metals, Cyanide
SF25BSW01	4/5/2006	Select List VOCs, SVOCs, Pesticides, and Metals, PCBs, Metals, Cyanide
SF15BW01	4/5/2006	Select List VOCs, Select List SVOCs, PCBs, Select List Metals, Cyanide
DUP06	4/5/2006	Select List VOCs, Select List SVOCs, PCBs, Select List Metals, Cyanide
SF15BE01	4/5/2006	Select List VOCs, Select List SVOCs, PCBs, Select List Metals, Cyanide
SF14BS01	4/5/2006	Select List VOCs, Select List SVOCs, PCBs, Select List Metals, Cyanide
FB0405	4/5/2006	TCL VOCs, TCL SVOCs, TCL Pesticides, PCBs, Select List Metals, Cyanide
TB0405	4/5/2006	TCL VOCs

The following table represents all validator applied data qualification:

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
TB0405	4/5/2006	TCL VOCs	Bromomethane	UJ
TB0405	4/5/2006	TCL VOCs	2-Butanone	R
TB0405	4/5/2006	TCL VOCs	Trichloroethene	UJ
FB0405	4/5/2006	TCL VOCs	Bromomethane	UJ
FB0405	4/5/2006	TCL VOCs	2-Butanone	R
FB0405	4/5/2006	TCL VOCs	Trichloroethene	UJ
FB0405	4/5/2006	TCL SVOCs	Benzaldehyde	R
FB0405	4/5/2006	TCL Pesticides	4,4'-DDT	UJ
FB0405	4/5/2006	TCL Pesticides	Endrin	UJ
FB0405	4/5/2006	TCL Pesticides	Heptachlor	UJ
FB0405	4/5/2006	TCL Pesticides	Methoxychlor	UJ
SF25BSE01	4/5/2006	Select List Metals	Copper	J
SF25BNE01	4/5/2006	Select List Metals	Copper	J
SF25BNW01	4/5/2006	Select List Metals	Copper	J
SF25BSW01	4/5/2006	Select List Metals	Copper	J
SF15BW01	4/5/2006	Select List Metals	Copper	J
DUP06	4/5/2006	Select List Metals	Copper	J
SF15BE01	4/5/2006	Select List Metals	Copper	J
SF14BS01	4/5/2006	Select List Metals	Copper	J

Major

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS2 on 3/01/2006 displayed a relative response factor (RRF) less than the control limit (i.e., 0.050) for 2-butanone at 0.031. The non-detect 2-butanone results in FB0405 and TB0405 were flagged "R".



DATA VALIDATION REPORT

SVOC analyses by SW8270C:

- ◇ The initial calibration displayed an r^2 value less than the control limit (i.e., 0.990) for benzaldehyde at 0.286. An r^2 value is used when the %RSD value exceeds the control limit. The non-detect result in FB0406 was flagged “R”.

Minor

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS2 on 3/01/2006 displayed a percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for trichloroethene at 16.9%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/10/2006 at 9:50 displayed a percent deviation (%D) greater than the control limit (i.e., $\pm 20.0\%$) with a negative bias for bromomethane at 21.2%. The non-detect results in FB0405 and TB0405 were flagged “UJ”.

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/10/2006 at 9:01 displayed %Ds greater than the control limit (i.e., $\pm 15.0\%$) on the front column with negative biases for 4,4'-DDT at 24.071%, heptachlor at 25.905%, and methoxychlor at 38.865%. The continuing calibration analyzed on 4/10/2006 at 12:25 displayed a %D greater than the control limit with a negative bias for methoxychlor at 28.62%. The non-detect results in FB0405 were flagged “UJ”.
- ◇ The laboratory control sample (LCS) (batch # 3581) displayed a %R less than the lower control limit (i.e., 78%) for endrin at 75%. The non-detect endrin result in FB0405 was flagged “UJ”.

Metals by SW6010B:

- ◇ The field duplicate pair (SF15BW01/DUP06) displayed a relative percent difference %RPD greater than the control limit (i.e., 35%) for copper at 39.4%. Associated sample results with positive detections were flagged “J”.



DATA VALIDATION REPORT

Other

Deficiencies: VOC analyses by SW8260B:

- ◇ The continuing calibration analyzed on 4/10/2006 at 9:50 displayed a RRF less than the control limit for 2-butanone at 0.032. The continuing calibration also displayed a %D greater than the control limit with a positive bias for methyl acetate at 23.3%. Since the associated sample results for 2-butanone were previously flagged for initial calibration anomalies and the methyl acetate results were non-detect, no further data qualification was necessary.

SVOC analyses by SW8270C:

- ◇ The continuing calibration analyzed on 4/10/2006 at 11:43 displayed a %D greater than the control limit (i.e., $\pm 20.0\%$) with a positive bias for nitrobenzene at 22.0%. Since the associated sample result was non-detect, no data qualification was necessary.
- ◇ Field blank FB0405 displayed a positive detection for acetophenone at 0.4 $\mu\text{g/L}$. Since acetophenone was not analyzed for in any field samples, no data qualification was necessary.

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/18/2006 at 00:23 displayed %Ds greater than the control limit (i.e., $\pm 15.0\%$) on both columns with positive biases for 4,4'-DDD at 17.366% and 18.255%, respectively. Since associated sample results were non-detect, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 4/18/2006 at 17:31 displayed %Ds greater than the control limit with positive biases on both columns for 4,4'-DDD at 15.549% and 16.25%, respectively and one the front column for heptachlor at 15.867% and methoxychlor at 16.164%. The continuing calibration analyzed on 4/18/2006 at 22:12 displayed a %D greater than the control limit with a positive bias for 4,4'-DDD at 17.95%. Since associated sample results bracketed by these calibrations were non-detect, no data qualification was necessary.

Polychlorinated Biphenyls by SW8082:

- ◇ The continuing calibration analyzed on 4/8/2006 at 7:04 displayed %Ds greater than the control limit (i.e., $\pm 15.0\%$) for two Aroclor 1260 peaks at 21.26% and 20.58%. The average of the eight peaks was 8.96%, which is in control. No qualifying action is taken on one peak.
- ◇ The continuing calibration analyzed on 4/11/2006 at 21:26 displayed a %D greater than the control limit for one Aroclor 1016 peak at -27.98%. The average of the



DATA VALIDATION REPORT

eight peaks was -2.28%, which is in control. No qualifying action is taken on one peak.

- ◇ The continuing calibration analyzed on 4/12/2006 at 1:00 displayed %Ds greater than the control limit for two Aroclor 1260 peaks at 15.18% and 20.63%. The average of the eight peaks was 12.1%, which is in control. No qualifying action is taken on one peak.

Metals by SW6010B:

- ◇ The matrix spike (MS) (parent sample, SF15BW01) displayed a %R greater than the upper control limit (i.e., 125%) for copper at 160.9%. Since associated sample results were previously flagged for field duplicate imprecision, no further data qualification was necessary.
- ◇ The preparation blank displayed a negative detection for zinc at -0.596 mg/kg. The initial and continuing calibration blanks displayed negative detections for zinc ranging from -6.0 µg/L to -6.6 µg/L. Since the associated sample results were greater than 10x the absolute blank concentrations, no data qualification was necessary.

Comments: On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: 
R. Michael Shadle

APPENDIX A

A-6 Liberty Industrial Finishing Site – Sample Delivery Group Q136



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF01BN01	4/6/2006	Select List VOCs
DUP07	4/6/2006	Select List VOCs
SF01BS01	4/6/2006	Select List VOCs
SF01BW01	4/6/2006	Select List VOCs
SF01BE01	4/6/2006	Select List VOCs
FB0406	4/6/2006	TCL VOCs, TCL SVOCs, TCL Pesticides, PCBs, TAL Metals, Cyanide
TP0406	4/6/2006	TCL VOCs
SF01CNE01	4/6/2006	Select List SVOCs, Select List Pesticides, PCBs, Select List Metals, Cyanide
SF01CNW01	4/6/2006	Select List SVOCs, Select List Pesticides, PCBs, Select List Metals, Cyanide
SF01CSW01	4/6/2006	Select List SVOCs, Select List Pesticides, PCBs, Select List Metals, Cyanide
SF01CSE01	4/6/2006	Select List SVOCs, Select List Pesticides, PCBs, Select List Metals, Cyanide
DUP08	4/6/2006	Select List SVOCs, Select List Pesticides, PCBs, Select List Metals, Cyanide

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
TB0406	4/6/2006	TCL VOCs	Chloroethane	R
TB0406	4/6/2006	TCL VOCs	Acetone	UJ
TB0406	4/6/2006	TCL VOCs	Carbon disulfide	UJ
TB0406	4/6/2006	TCL VOCs	Trichlorofluoromethane	R
TB0406	4/6/2006	TCL VOCs	2-Butanone	R
TB0406	4/6/2006	TCL VOCs	1,1,2,2-Tetrachloroethane	UJ
TB0406	4/6/2006	TCL VOCs	1,3-Dichlorobenzene	UJ
TB0406	4/6/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
TB0406	4/6/2006	TCL VOCs	1,2-Dibromo-3-chloropropane	UJ
FB0406	4/6/2006	TCL SVOCs	Pentachlorophenol	UJ
FB0406	4/6/2006	TCL SVOCs	Benzaldehyde	R
SF01CNE01	4/6/2006	Select List Pesticides	4,4'-DDT	UJ
SF01CNE01	4/6/2006	Select List Metals	Copper	J
SF01CNE01	4/6/2006	Select List Metals	Lead	J
SF01CNE01	4/6/2006	Select List Metals	Mercury	UJ
SF01CNE01	4/6/2006	Select List Metals	Nickel	J
SF01CNE01	4/6/2006	Select List Metals	Zinc	J
SF01CNW01	4/6/2006	Select List Pesticides	4,4'-DDT	UJ
SF01CNW01	4/6/2006	Select List Metals	Copper	J
SF01CNW01	4/6/2006	Select List Metals	Lead	J
SF01CNW01	4/6/2006	Select List Metals	Mercury	UJ
SF01CNW01	4/6/2006	Select List Metals	Nickel	J
SF01CNW01	4/6/2006	Select List Metals	Zinc	J
SF01CSW01	4/6/2006	Select List Pesticides	4,4'-DDT	UJ
SF01CSW01	4/6/2006	Select List Metals	Copper	J
SF01CSW01	4/6/2006	Select List Metals	Lead	J
SF01CSW01	4/6/2006	Select List Metals	Mercury	UJ



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF01CSW01	4/6/2006	Select List Metals	Nickel	J
SF01CSW01	4/6/2006	Select List Metals	Zinc	J
SF01CSE01	4/6/2006	Select List Pesticides	4,4'-DDT	UJ
SF01CSE01	4/6/2006	Select List Metals	Copper	J
SF01CSE01	4/6/2006	Select List Metals	Lead	J
SF01CSE01	4/6/2006	Select List Metals	Mercury	UJ
SF01CSE01	4/6/2006	Select List Metals	Nickel	J
SF01CSE01	4/6/2006	Select List Metals	Zinc	J
DUP08	4/6/2006	Select List Pesticides	4,4'-DDT	UJ
DUP08	4/6/2006	Select List Metals	Copper	J
DUP08	4/6/2006	Select List Metals	Lead	J
DUP08	4/6/2006	Select List Metals	Mercury	UJ
DUP08	4/6/2006	Select List Metals	Nickel	J
DUP08	4/6/2006	Select List Metals	Zinc	J
SF01BN01	4/6/2006	Select List Metals	Arsenic	UJ
SF01BN01	4/6/2006	Select List Metals	Mercury	UJ
DUP07	4/6/2006	Select List Metals	Arsenic	J
DUP07	4/6/2006	Select List Metals	Mercury	UJ
SF01BS01	4/6/2006	Select List Metals	Arsenic	J
SF01BS01	4/6/2006	Select List Metals	Mercury	UJ
SF01BW01	4/6/2006	Select List Metals	Arsenic	UJ
SF01BW01	4/6/2006	Select List Metals	Mercury	UJ
SF01BE01	4/6/2006	Select List Metals	Arsenic	UJ
SF01BE01	4/6/2006	Select List Metals	Mercury	UJ

Major

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS3 on 4/11/2006 displayed relative response factors (RRFs) less than the control limit (i.e., 0.050) for chloroethane at 0.0347, trichlorofluoromethane at 0.0247, and 2-butanone at 0.0419. The non-detect results in FB0406 and TB0406 for these compounds were flagged "R".

SVOC analyses by SW8270C:

- ◇ The initial calibration displayed an r^2 value less than the control limit (i.e., 0.990) for benzaldehyde at 0.786. An r^2 value is used when the %RSD value exceeds the control limit. The non-detect result in FB0406 was flagged "R".



DATA VALIDATION REPORT

Minor

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS3 on 4/11/2006 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for acetone at 18.8%, 1,1,2,2-tetrachloroethane at 15.7%, 1,3-dichlorobenzene at 20.3%, and 1,2,4-trichlorobenzene at 16.3%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/12/2006 at 7:47 displayed percent deviations greater than the control limit (i.e., $\pm 20.0\%$) with negative biases for acetone at 21.9%, carbon disulfide at 26.0%, and 1,2-dibromo-3-chloropropane at 21.3%. Associated sample results in TB0406 were flagged “UJ”

SVOCs by SW8270C:

- ◇ The laboratory control sample (LCS) (batch #3369) displayed a percent recovery (%R) less than the lower control limit (i.e., 72%) for pentachlorophenol at 65%. The non-detect result in FB0406 was flagged “UJ”.

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/12/2006 at 14:44 displayed a %D greater than the control limit (i.e., $\pm 15.0\%$) on the front column with a negative bias for 4,4'-DDT at 18.924%. Associated sample results were non-detect and were flagged “UJ”.

Metals by SW6010B:

- ◇ The preparation blank (batch # 20359) displayed a negative detection for mercury at -0.028 mg/kg. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial and continuing calibration blanks (batch # 20359) displayed positive detections for lead in the initial calibration blank at 3.2 $\mu\text{g/L}$ and one continuing calibration blank at 2.8 $\mu\text{g/L}$. Associated sample results with detections less than 10x the blank concentration were flagged “J”.
- ◇ The initial and continuing calibration blank (batch # 20385) displayed negative detections for mercury in the initial calibration blank at -0.1 $\mu\text{g/L}$ and in one continuing calibration blank at -0.2 $\mu\text{g/L}$. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The laboratory duplicate pair (parent sample SF01CSE01) displayed %RPDs greater than the control limit (i.e., 35%) for copper at 49.4%, nickel at 47.8%, and



DATA VALIDATION REPORT

zinc at 46.8%. Associated sample results with positive detections were flagged “J”.

- ◇ The laboratory duplicate pair (parent sample SF01BN01) displayed an absolute difference greater than the control limit (i.e., 2x RL or 1.32 mg/kg) for arsenic at 2.1162 mg/kg. Associated sample results less than 5x the RL were flagged “J”; non-detects were flagged “UJ”.

Other

Deficiencies: VOC analyses by SW8260B:

- ◇ The continuing calibration analyzed on 4/12/2006 at 7:47 displayed RRFs less than the control limit for chloroethane at 0.032, trichlorofluoromethane at 0.024, and 2-butanone at 0.038. Since the associated sample results were previously flagged for initial calibration RRF anomalies, no further data qualification was necessary.

SVOCs by SW8270C:

- ◇ The continuing calibration analyzed on 4/11/2006 at 19:20 displayed %Ds greater than the control limit (i.e., $\pm 20.0\%$) with positive biases for nitrobenzene at 22.0%, 3,3'-dichlorobenzidine at 44.0%, and benzaldehyde at 92.0%. Since associated sample results were either non-detect or previously flagged for calibration anomalies, no data qualification was necessary.
- ◇ The LCS (batch # 3369) displayed a %R greater than the upper control limit (i.e., 174%) for benzaldehyde at 180%. Since the non-detect result was previously flagged for initial calibration anomalies, no further data qualification was necessary.

Pesticides by SW8081A:

- ◇ The matrix spike/matrix spike duplicate (MS/MSD) pair (SF01CSE01) displayed a relative percent difference (%RPD) greater than the control limit (i.e., 31%) for 4,4'-DDT at 32%. Since associated sample results were previously flagged for calibration anomalies, no further data qualification was necessary.

Polychlorinated Biphenyls by SW8082:

- ◇ The continuing calibration analyzed on 4/12/2006 at 4:13 displayed a %D greater than the control limit (i.e., $\pm 15.0\%$) for one peak in Aroclor 1016 at 20.21%. The average of the eight peaks was 2.61%, which is in control. No qualifying action is taken on one peak.



DATA VALIDATION REPORT

Metals by SW6010B:

- ◇ The initial and continuing calibration blanks (batch # 20359) displayed negative detections for mercury ranging from -0.1 µg/L to -0.2 µg/L. Since associated sample results were previously flagged for preparation blank anomalies, no further data qualification was necessary.

Comments: Field blank FB0406 was marked on the chain of custody for analysis by TCL VOCs. However, the laboratory never analyzed the sample not did they give a reason for not analyzing it. Since associated sample results were non-detect, it is safe to assume that any potential field contamination did not transfer from one sample to another.

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: 
R. Michael Shadle

APPENDIX A

A-7 Liberty Industrial Finishing Site – Sample Delivery Group Q149



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF47BNE01	4/6/06	VOCs, BNAs, PCBs, Metals, CN ⁻
DUP09	4/6/06	VOCs, BNAs, PCBs, Metals, CN ⁻
SF47BSW01	4/6/06	VOCs, BNAs, PCBs, Metals, CN ⁻
SF47BNW01	4/6/06	VOCs,
SF47BSE01	4/6/06	VOCs
SF47CN01	4/6/06	BNAs, PCBs, Metals, CN ⁻
SF47CS01	4/6/06	BNAs, PCBs, Metals, CN ⁻

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF47BNE01	4/6/06	VOCs	Acetone	R
SF47BNE01	4/6/06	Metals	Chromium	R
DUP09	4/6/06	VOCs	Acetone	R
DUP09	4/6/06	Metals	Chromium	R
SF47BSW01	4/6/06	VOCs	Acetone	R
SF47BSW01	4/6/06	Metals	Chromium	R
SF47BNW01	4/6/06	VOCs	Acetone	R
SF47BSE01	4/6/06	VOCs	Acetone	R
SF47CN01	4/6/06	Metals	Chromium	R
SF47CS01	4/6/06	Metals	Chromium	R

Major

Deficiencies: Metals by SW-846 6010B and 7471A:

The laboratory duplicate sample analyzed in conjunction with sample batch 20371 displayed a RPD greater than the control limit (i.e., 35%) for chromium at 125.6%. Associated sample results were positive detections and were qualified as “R”.

VOCs by SW-846 8260B:

The continuing calibrations analyzed on 4/12/06 at 1133 and 4/13/06 at 1210 displayed relative response factors (RRFs) for acetone less than the control limit (0.05) at 0.048 and 0.048, respectively. Associated sample results were non-detect and were qualified as “R”.

Minor

Deficiencies: No minor deficiencies were identified.



DATA VALIDATION REPORT

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV102 and KV103 at concentrations of 0.7 µg/kg and 1.6 µg/kg, respectively. Acetone was detected in KV103 at 3.9 µg/kg. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 3/21/06 on instrument VOAMS9 displayed a percent relative standard deviation (%RSD) greater than the control limit (i.e., 15.0%) for acetone at 24.4%. The associated sample results were previously qualified on the basis of continuing calibration RRF anomalies; no further action was required.

SVOCs by SW-846 8270C:

Method blank sample SB101B displayed a positive detection for an unknown aldol condensate at 7,900 µg/kg and an unknown compound at 550 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

Metals by SW-846 6010B and 7471A:

The matrix spike (MS) recovery for chromium associated with spiked sample SF47BNE01 was less than the lower control limit (i.e., 75%) at 73.1%. All associated sample results were previously qualified on the basis of laboratory duplicate anomalies; no further action was required.

PCBs by SW-846 8082:

The matrix spike duplicate recovery for aroclor-1260 associated with sample batch 3616 was greater than the upper control limit (i.e., 150%) at 156%. The aroclor-1016 and aroclor-1260 matrix spike / spike duplicate (MS/SD) relative percent differences (RPDs) were greater than the control limit (i.e., 17%) at 30% and 28%, respectively. No action is taken directly as a result of MS/SD anomalies.

The continuing calibration analyzed on 4/12/06 at 0620 displayed two aroclor-1260 peaks on the rear chromatography column that were greater than the control limit (i.e., 15.0%) at 16.265% and 15.35%. The continuing calibration analyzed on 4/12/06 at 1150 displayed one aroclor-1260 peak greater than the upper control limit on the rear chromatography column at 17.81%. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Comments:

A trip blank sample was not submitted with this SDG.

SDG: Q149

Liberty Industrial Finishing Site
Soil Data Validation



DATA VALIDATION REPORT

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

A handwritten signature in black ink that reads "Emily Strake". The signature is written in a cursive style and is positioned above a horizontal line.

APPENDIX A

A-8 Liberty Industrial Finishing Site – Sample Delivery Group Q150



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF1617AQ01	4/7/06	VOCs, Metals
SF1617AQ02	4/7/06	VOCs, Metals

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF1617AQ02	4/7/06	VOCs	2-Butanone	R
SF1617AQ02	4/7/06	VOCs	Bromomethane	UJ
SF1617AQ02	4/7/06	VOCs	Acetone	UJ
SF1617AQ02	4/7/06	VOCs	1,1,2-Trichloroethane	UJ
SF1617AQ02	4/7/06	VOCs	trans-1,3-Dichloropropene	UJ
SF1617AQ02	4/7/06	VOCs	2-Hexanone	UJ
SF1617AQ02	4/7/06	VOCs	Tetrachloroethene	J
SF1617AQ02	4/7/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
SF1617AQ01	4/7/06	VOCs	Acetone	UJ
SF1617AQ01	4/7/06	VOCs	Chloroethane	R
SF1617AQ01	4/7/06	VOCs	Trichlorofluoromethane	R
SF1617AQ01	4/7/06	VOCs	2-Butanone	R
SF1617AQ01	4/7/06	VOCs	Trichloroethene	UJ
SF1617AQ01	4/7/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
SF1617AQ01	4/7/06	VOCs	Cyclohexane	UJ

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/10/06 on instrument VOAMS10 displayed a relative response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.034. The associated sample result was non-detect and was qualified as "R".

The initial calibration analyzed on 4/11/06 on instrument VOAMS3 displayed RRFs less than the control limit for chloroethane (0.035), trichlorofluoromethane (0.025) and 2-butanone (0.042). Associated sample results were non-detect and were qualified as "R".

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/10/06 on instrument VOAMS10 displayed percent relative standard deviations (%RSDs) greater than the upper control limit (i.e., 15.0%) for bromomethane (15.9%), acetone (19.8%), 2-hexanone (23.3%), tetrachloroethene (15.9%), and 1,1,2,2-tetrachloroethane (15.6%). Associated positive detections were qualified as "J" and non-detects

SDG: Q150

Liberty Industrial Finishing Site
Aqueous Data Validation



DATA VALIDATION REPORT

were qualified "UJ".

The continuing calibration analyzed on 4/13/06 at 0731 displayed percent deviations (%Ds) greater than the control limit (i.e., 20.0%) with negative biases for 1,1,2-trichloroethane (23.1%) and trans-1,3-dichloropropene (23.8%). Associated sample results were non-detect and were qualified as "UJ".

The initial calibration analyzed on 4/11/06 on instrument VOAMS3 displayed %RSDs greater than the control limit for acetone (18.8%), trichloroethene (15.4%), and 1,1,2,2-tetrachloroethane (15.7%). Associated sample results were non-detect and were qualified as "UJ".

The continuing calibration analyzed on 4/12/06 at 2100 displayed a %D greater than the control limit with negative bias for cyclohexane at 25%. The associated non-detect sample result was qualified as "UJ".

Other

Deficiencies: VOCs by SW-846 8260B:

The continuing calibration analyzed on 4/11/06 at 1350 displayed a RRF less than the control limit for 2-butanone. Acetone, 2-butanone, and 1,1,2,2-tetrachloroethane also displayed %Ds greater than the control limit with negative biases. Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The continuing calibration analyzed on 4/13/06 at 0731 displayed a RRF less than the control limit for 2-butanone. Acetone, 2-hexanone, and 1,1,2,2-tetrachloroethane also displayed %Ds greater than the control limit with negative biases. Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The initial calibration analyzed on 4/14/06 on instrument VOAMS3 displayed multiple %RSDs greater than the control limit. This calibration did not bracket any investigative analyses; no qualification was required.

The continuing calibration analyzed on 4/12/06 at 2100 displayed RRFs less than the control limit for trichlorofluoromethane, chloroethane, and 2-butanone. Acetone also displayed a %D greater than the control limit with negative bias at 24.6%. Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The matrix spike (MS) recovery associated with sample batch 1723 displayed a recovery for benzene greater than the upper control limit at 132%. The spiked sample did not originate from the Liberty Industrial Site; no qualification was required.

Metals by SW-846 6010B and 7471A:

The initial calibration blank associated with sample batch 20373 displayed a positive detection



DATA VALIDATION REPORT

for thallium at 4.8 $\mu\text{g/L}$. Sample results were non-detect; no qualification was required.

Comments:

A trip blank sample was not submitted with this SDG.

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-9 Liberty Industrial Finishing Site – Sample Delivery Group Q153



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
FB0407	4/7/2006	TCL VOCs, Select List SVOCs, TCL Pesticides, PCBs, TAL Metals, Cyanide
TB0407	4/7/2006	TCL VOCs
SF07BNE01	4/7/2006	Select List VOCs, Select List Metals,
SF07BNW01	4/7/2006	Select List VOCs, Select List Metals,
SF07BSE01	4/7/2006	Select List VOCs, Select List Metals,
SF07BSW01	4/7/2006	Select List VOCs, Select List Metals,
SF07CN01	4/7/2006	Select List SVOCs, Pesticides, and Metals PCBs, Cyanide
SF07CW01	4/7/2006	Select List SVOCs, Pesticides, and Metals PCBs, Cyanide
SF07CS01	4/7/2006	Select List SVOCs, Pesticides, and Metals PCBs, Cyanide
SF07CE01	4/7/2006	Select List SVOCs, Pesticides, and Metals PCBs, Cyanide

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0407	4/7/2006	TCL VOCs	Chloroethane	R
FB0407	4/7/2006	TCL VOCs	Acetone	J
FB0407	4/7/2006	TCL VOCs	Carbon Disulfide	UJ
FB0407	4/7/2006	TCL VOCs	Trichlorofluoromethane	R
FB0407	4/7/2006	TCL VOCs	2-Butanone	R
FB0407	4/7/2006	TCL VOCs	1,1,2,2-Tetrachloroethane	UJ
FB0407	4/7/2006	TCL VOCs	Cyclohexane	UJ
FB0407	4/7/2006	TCL VOCs	1,3-Dichlorobenzene	UJ
FB0407	4/7/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
FB0407	4/7/2006	Select List SVOCs	Fluoranthene	UJ
TB0407	4/7/2006	TCL VOCs	Chloroethane	R
TB0407	4/7/2006	TCL VOCs	Acetone	UJ
TB0407	4/7/2006	TCL VOCs	Carbon Disulfide	UJ
TB0407	4/7/2006	TCL VOCs	Trichlorofluoromethane	R
TB0407	4/7/2006	TCL VOCs	2-Butanone	R
TB0407	4/7/2006	TCL VOCs	1,1,2,2-Tetrachloroethane	UJ
TB0407	4/7/2006	TCL VOCs	Cyclohexane	UJ
TB0407	4/7/2006	TCL VOCs	1,3-Dichlorobenzene	UJ
TB0407	4/7/2006	TCL VOCs	1,2,4-Trichlorobenzene	UJ
SF07BNE01	4/7/2006	Select List Metals	Arsenic	J
SF07BNE01	4/7/2006	Select List Metals	Mercury	UJ
SF07BNW01	4/7/2006	Select List Metals	Arsenic	J
SF07BNW01	4/7/2006	Select List Metals	Mercury	UJ
SF07BSE01	4/7/2006	Select List Metals	Arsenic	J
SF07BSE01	4/7/2006	Select List Metals	Mercury	J
SF07BSW01	4/7/2006	Select List Metals	Arsenic	J
SF07BSW01	4/7/2006	Select List Metals	Mercury	J
SF07CN01	4/7/2006	Select List Metals	Arsenic	UJ
SF07CN01	4/7/2006	Select List Metals	Mercury	UJ
SF07CS01	4/7/2006	Select List Metals	Arsenic	J



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
SF07CS01	4/7/2006	Select List Metals	Mercury	UJ
SF07CE01	4/7/2006	Select List Metals	Arsenic	J
SF07CE01	4/7/2006	Select List Metals	Mercury	UJ
SF07CW01	4/7/2006	Select List Metals	Arsenic	J
SF07CW01	4/7/2006	Select List Metals	Mercury	UJ

Major

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS3 on 4/11/2006 displayed relative response factors (RRFs) less than the control limit (i.e., 0.050) for chloroethane at 0.035, trichlorofluoromethane at 0.025, and 2-butanone at 0.042. Associated sample results were non-detect and were flagged “R”.

Minor

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS3 on 4/11/2006 displayed percent relative standard deviations (RSDs) greater than the control limit (i.e., 15.0%) for acetone at 18.8%, 1,1,2,2-tetrachlorethane at 15.7%, 1,3-dichlorobenzene at 20.3%, and 1,2,4-trichlorobenzene at 16.3%. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ The continuing calibration analyzed on 4/12/2006 at 21:00 displayed percent deviations (%Ds) greater than the control limit (i.e., $\pm 20.0\%$) with negative biases for carbon disulfide at 24.6% and cyclohexane at 25.0%. The non-detect results in FB0407 and TB0407 were flagged “UJ”.

SVOC analyses by SW8270C:

- ◇ The initial calibration analyzed on instrument BNAMS4 on 4/4/2006 displayed a %RSD greater than the control limit (i.e., 15.0%) for fluoranthene at 17.4%. The non-detect result in FB0407 was flagged “UJ”.

Metals by SW6010B:

- ◇ The laboratory duplicate pair (SF01BN01) displayed absolute differences greater than the control limit (i.e., 2x RL) for arsenic at 2.115 mg/kg and chromium at 8.2115 mg/kg. Associated sample results less than 5x the RL with positive detections were flagged “J”; non-detects were flagged “UJ”.



DATA VALIDATION REPORT

- ◇ The continuing calibration blanks (batch # 20385) displayed negative detections for mercury at $-0.2 \mu\text{g/L}$. Associated sample results with positive detections less than 10x the absolute blank concentration were flagged “J”; non-detects were flagged “UJ”.

Other

Deficiencies: VOC analyses by SW8260B:

- ◇ The continuing calibration analyzed on 4/12/2006 at 21:00 displayed RRFs less than the control limit for chloroethane at 0.035, trichlorofluoromethane at 0.024, and 2-butanone at 0.042. Since the associated sample results were previously flagged for other calibration anomalies, no further data qualification was necessary.
- ◇ Field blank FB0407 displayed positive detections for methylene chloride at $4.7 \mu\text{g/L}$ and acetone at $7.2 \mu\text{g/L}$. Since associated field samples were not analyzed for methylene chloride or acetone, no data qualification was necessary.

Polychlorinated Biphenyls by SW8082:

- ◇ The continuing calibration analyzed on 4/10/2006 at 6:25 displayed a %D greater than the control limit with a negative bias for one Aroclor 1016 peak at 19.07%. The average of the eight Aroclor peaks was -1.29% , which is in control. No data qualification is taken based on one peak.
- ◇ The continuing calibration analyzed on 4/11/2006 at 00:41 displayed a %D greater than the control limit with a negative bias for one Aroclor 1016 peak at 28.85%. The average of the eight Aroclor peaks was -5.50% , which was in control. No data qualification is taken based on one peak.

Metals by SW6010B:

- ◇ The MS (parent sample SF01BN01) displayed a percent recovery less than the lower control limit (i.e., 75%) for iron at 0.2%. Since the amount found in the parent sample was greater than 4x the spiking amount, no data qualification was necessary.
- ◇ The continuing calibration blank (batch # 20365) displayed a positive detection for thallium at $6.9 \mu\text{g/L}$. Since the associated sample result was non-detect, no data qualifying action was necessary.
- ◇ Field blank FB0407 displayed a positive detection for aluminum at $68.8 \mu\text{g/L}$. Since associated field samples were not analyzed for aluminum, no data qualification was necessary.



DATA VALIDATION REPORT

Comments: On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: 
R. Michael Shadle

APPENDIX A

A-10 Liberty Industrial Finishing Site – Sample Delivery Group Q221



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF41BNE01	4/8/06	VOCs
DUP10	4/8/06	VOCs
SF41BNW01	4/8/06	VOCs
SF41BSE01	4/8/06	VOCs
SF41BSW01	4/8/06	VOCs
SF41CN01	4/8/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF41CS01	4/8/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF41CW01	4/8/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF41CE01	4/8/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
DUP11	4/8/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
FB0408	4/8/06	VOCs, BNAs, PCBs, Pesticides, Metals, CN ⁻
TB0408	4/8/06	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0408	4/8/06	VOCs	Acetone	UJ
FB0408	4/8/06	VOCs	Trichloroethene	UJ
FB0408	4/8/06	VOCs	Tetrachloroethene	UJ
FB0408	4/8/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
FB0408	4/8/06	Metals	Mercury	UJ
TB0408	4/8/06	VOCs	Acetone	UJ
TB0408	4/8/06	VOCs	Trichloroethene	UJ
TB0408	4/8/06	VOCs	Tetrachloroethene	UJ
TB0408	4/8/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
SF41CN01	4/8/06	Metals	Chromium	J
SF41CS01	4/8/06	Metals	Chromium	J
SF41CW01	4/8/06	Metals	Chromium	J
SF41CE01	4/8/06	Metals	Chromium	J
DUP11	4/8/06	Metals	Chromium	J

Major

Deficiencies: No major deficiencies were identified.

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/14/06 on instrument VOAMS3 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for acetone (33.4%), trichloroethane (18.2%), tetrachloroethene (16.1%), and 1,1,2,2-tetrachloroethane (15.5%).. The associated sample results were non-detect and were qualified as “UJ”.

SDG: Q221

Liberty Industrial Finishing Site
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DATA VALIDATION REPORT

Metals by SW-846 6010B and 7471A:

Initial and continuing calibration blanks displayed negative detections for mercury ranging from $-0.1 \mu\text{g/L}$ to $-0.2 \mu\text{g/L}$. The non-detect result in the field blank sample was qualified as "UJ".

The laboratory duplicate sample analyzed in conjunction with sample batch 20378 displayed a RPD greater than the control limit (i.e., 35%) for chromium at 39.4%. Associated sample results were positive detections and were qualified as "J".

The laboratory duplicate sample analyzed in conjunction with sample batch 20385 displayed a relative percent difference (RPD) greater than the control limit for (i.e., 35%) for aluminum, arsenic, chromium, iron, manganese, and zinc. Positive chromium results were qualified as "J". All other analytes were not reported from this batch.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV103, KV104, and KV108 at concentrations of $1.6 \mu\text{g/kg}$, $0.7 \mu\text{g/kg}$, and $2.0 \mu\text{g/kg}$, respectively. Acetone was detected in KV103 at $3.9 \mu\text{g/kg}$. Associated sample results were non-detect; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB102 displayed a positive detection for an unknown aldol condensate at $10,000 \mu\text{g/kg}$. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The matrix spike/spike duplicate (MS/SD) recoveries for pentachlorophenol associated with sample batch 3381 were less than the lower control limit (i.e., 72%) at 70% / 70%. The spiked sample was aqueous; field blank samples are not assessed on the basis of MS/SD results.

Metals by SW-846 6010B and 7471A:

The matrix spike (MS) recoveries for aluminum and iron analyzed in conjunction with sample batch 20385 were less than the lower control limit (i.e., 75%) at 62.3% and 0.2%, respectively. The spiked sample did not originate from the Liberty Industrial Finishing site; no qualification was required.

PCBs by SW-846 8082:

The continuing calibration analyzed on 4/12/06 at 17:46 displayed one aroclor-1260 peak on the rear chromatography column that was greater than the control limit (i.e., 15.0%) at 15.83%. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.



DATA VALIDATION REPORT

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

A handwritten signature in black ink that reads "Emily Strake". The signature is written in a cursive style and is positioned above a horizontal line.

APPENDIX A

A-11 Liberty Industrial Finishing Site – Sample Delivery Group Q299



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF55BNE01	4/11/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF55BNW01	4/11/06	VOCs
SF55BSE01	4/11/06	VOCs
SF55BSW01	4/11/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
DUP12	4/11/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SFSSCE01	4/11/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SFSSCW01	4/11/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
FB0411	4/11/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Pesticides, Metals, CN ⁻
TB0411	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0411	4/11/06	VOCs	Acetone	UJ
FB0411	4/11/06	VOCs	Trichloroethene	UJ
FB0411	4/11/06	VOCs	Tetrachloroethene	UJ
FB0411	4/11/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
FB0411	4/11/06	Pesticides	4,4'-DDE	UJ
FB0411	4/11/06	Metals	Mercury	UJ
TB0411	4/11/06	VOCs	Acetone	UJ
TB0411	4/11/06	VOCs	Trichloroethene	UJ
TB0411	4/11/06	VOCs	Tetrachloroethene	UJ
TB0411	4/11/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
SF55BNE01	4/11/06	SVOCs	Benzo(a)pyrene	J
SF55BNE01	4/11/06	SVOCs	Dibenz(a,h)anthracene	UJ
SF55BNE01	4/11/06	Metals	Chromium	J
SF55BSW01	4/11/06	Metals	Chromium	J
DUP12	4/11/06	Metals	Chromium	J
SFSSCE01	4/11/06	Metals	Chromium	J
SFSSCW01	4/11/06	Metals	Chromium	J

Major

Deficiencies: No major deficiencies were identified.

Minor

Deficiencies: Metals by SW-846 6010B and 7471A:

Initial and continuing calibration blanks displayed negative detections for mercury ranging from
SDG: Q299

Liberty Industrial Finishing Site
Soil Data Validation



DATA VALIDATION REPORT

-0.1 µg/L to -0.2 µg/L. The non-detect result in the field blank sample was qualified as “UJ”.

The laboratory duplicate sample analyzed in conjunction with sample batch 20390 displayed a RPD greater than the control limit (i.e., 35%) for chromium at 77.6%. Associated sample results were positive detections and were qualified as “J”.

The laboratory duplicate sample (SF01BN01) analyzed in conjunction with sample batch 20385 displayed an absolute difference greater than the control limit (i.e., 2x RL or 2.0 mg/kg) for chromium at 8.2115 mg/kg. Positive detections were qualified as “J”.

VOCs by SW-846 8260B:

The initial calibration analyzed on 4/14/06 on instrument VOAMS3 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for acetone (33.4%), trichloroethane (18.2%), tetrachloroethene (16.1%), and 1,1,2,2-tetrachloroethane (15.5%). Associated sample results were non-detect and were qualified as “UJ”.

SVOCs by SW-846 8270C:

The internal standard area count for perylene-d12 associated with sample SF55BNE01 was less than the lower control limit (i.e., 494420) at 341844. The reanalysis also displayed an area count less than the lower control limit (i.e., 559500) at 435691. Benzo(a)pyrene and dibenz(a,h)anthracene are quantitated from perylene-d12. The benzo(a)pyrene result was qualified as “J” and the non-detect dibenz(a,h)anthracene result was qualified as “UJ”.

Pesticides by SW-846 8081A:

The continuing calibration analyzed on 4/17/06 at 1636 displayed a percent deviation (%D) greater than the control limit (i.e., ±15.0%) with negative bias for 4,4'-DDE at 42.432%. The associated non-detect result was qualified as “UJ”.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV100 and KV105 at concentrations of 0.9 µg/kg and 1.0 µg/kg, respectively. Acetone was detected in KV100 at 3.6 µg/kg. Associated sample results were non-detect; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB103 displayed a positive detection for an unknown aldol condensate at 3,800 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.



DATA VALIDATION REPORT

Metals by SW-846 6010B and 7471A:

The matrix spike (MS) recoveries for aluminum and iron analyzed in conjunction with sample batch 20385 was less than the lower control limit (i.e., 75%) at 62.3% and 0.2%, respectively. The spiked sample did not originate from the Liberty Industrial Finishing site; no qualification was required.

Zinc was detected in field blank sample FB0411 at 11.0 µg/L. Zinc was not requested in the investigative samples; no qualification was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-12 Liberty Industrial Finishing Site – Sample Delivery Group Q425



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF19BNE01	4/12/06	VOCs
SF19BNW01	4/12/06	VOCs
SF19BSE01	4/12/06	VOCs
SF19BSW01	4/12/06	VOCs
SF19CNE01	4/12/06	SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF19CNW01	4/12/06	SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF19CSE01	4/12/06	SVOCs, Dieldrin, PCBs, Metals, CN ⁻
S19CSW01	4/12/06	SVOCs, Dieldrin, PCBs, Metals, CN ⁻
FB0412	4/12/06	VOCs, Pesticides, PCBs, Metals, CN ⁻
TB0412	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0412	4/12/06	VOCs	Acetone	UJ
FB0412	4/12/06	VOCs	2-Butanone	R
FB0412	4/12/06	VOCs	trans-1,3-Dichloropropene	UJ
FB0412	4/12/06	VOCs	2-Hexanone	UJ
FB0412	4/12/06	VOCs	Toluene	UJ
FB0412	4/12/06	VOCs	Chlorobenzene	UJ
FB0412	4/12/06	VOCs	Ethylbenzene	UJ
FB0412	4/12/06	VOCs	Styrene	UJ
FB0412	4/12/06	VOCs	Xylenes	UJ
FB0412	4/12/06	PCBs	Aroclor-	UJ
FB0412	4/12/06	PCBs	Aroclor-1016	UJ
FB0412	4/12/06	PCBs	Aroclor-1221	UJ
FB0412	4/12/06	PCBs	Aroclor-1232	UJ
FB0412	4/12/06	PCBs	Aroclor-1242	UJ
FB0412	4/12/06	PCBs	Aroclor-1248	UJ
FB0412	4/12/06	PCBs	Aroclor-1254	UJ
FB0412	4/12/06	PCBs	Aroclor-1260	UJ
FB0412	4/12/06	Metals	Chromium	UJ
FB0412	4/12/06	Metals	Nickel	UJ
TB0412	4/12/06	VOCs	Acetone	UJ
TB0412	4/12/06	VOCs	2-Butanone	R
TB0412	4/12/06	VOCs	trans-1,3-Dichloropropene	UJ
TB0412	4/12/06	VOCs	2-Hexanone	UJ
TB0412	4/12/06	VOCs	Toluene	UJ
TB0412	4/12/06	VOCs	Chlorobenzene	UJ
TB0412	4/12/06	VOCs	Ethylbenzene	UJ
TB0412	4/12/06	VOCs	Styrene	UJ
TB0412	4/12/06	VOCs	Xylenes	UJ



DATA VALIDATION REPORT

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed a relative response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.024. The associated sample results were non-detect and were qualified as “R”.

Minor

Deficiencies: Metals by SW-846 6010B and 7471A:

The initial calibration blank associated with sample batch 20401 displayed negative detections for chromium and nickel at $-4.0 \mu\text{g/L}$ and $-3.9 \mu\text{g/L}$, respectively. A continuing calibration blank also displayed negative detections for chromium at $-4.0 \mu\text{g/L}$ and nickel at $-3.5 \mu\text{g/L}$. The non-detect results in the field blank sample were qualified as “UJ”.

VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for acetone (23.0%), trans-1,3-dichloropropene (15.2%), 2-hexanone (17.8%), toluene (18.4%), chlorobenzene (16.4%), ethylbenzene (16.9%), styrene (17.0%), and xylenes (16.8%). Associated sample results were non-detect and were qualified as “UJ”.

PCBs by SW-846 8082:

The surrogate recoveries for decachlorobiphenyl (DCB) associated with sample FB0412 and its reanalysis were less than the lower control limit (i.e., 31%) at 30%. The associated sample results were non-detect and were qualified as “UJ”.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV107 and KV107A at concentrations of $1.0 \mu\text{g/kg}$ and $3.3 \mu\text{g/kg}$, respectively. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 4/10/06 on instrument VOAMS10 displayed multiple anomalies; the calibration did not bracket investigative sample analyses; no qualification was required.

The continuing calibrations analyzed on 4/14/06 at 0715 and 4/17/06 at 1956 displayed multiple anomalies; the calibrations did not bracket investigative sample analyses; no qualification was required.



DATA VALIDATION REPORT

The continuing calibration analyzed on 4/18/06 at 1928 displayed a RRF less than the control limit for 2-butanone and a percent deviation (%D) greater than the control limit with positive bias for bromoform. 2-Butanone was previously qualified on the basis of initial calibration RRFs and associated bromoform results were non-detect; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB105 displayed a positive detection for an unknown aldol condensate at 2,700 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

Pesticides by SW-846 8081A:

The surrogate recovery of DCB associated with sample FB0412 was less than the lower control limit (i.e., 32%) on the rear chromatography column at 30%. All other recoveries were within control limits; no qualification was required.

PCBs by SW-846 8082:

The matrix spike/spike duplicate (MS/SD) relative percent difference (RPD) associated with sample batch 3647 was greater than the control limit (i.e., 12%) at 27%. No action is taken directly as a result of MS/SD anomalies.

The continuing calibrations analyzed on 4/17/06 at 0911 and 4/17/06 at 1552 displayed a %D greater than the control limit (i.e., 15.0%) for one aroclor-1016 peak. The continuing calibration analyzed on 4/18/06 at 0503 displayed a %D greater than the control limit for one aroclor-1260 peak. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

The continuing calibration analyzed on 4/17/06 at 1341 displayed multiple aroclor-1260 peaks greater than the control limit. The associated sample results were previously qualified on the basis of surrogate recovery anomalies; no further action was required.

Metals by SW-846 6010B and 7471A:

The matrix spike (MS) recovery for aluminum, antimony, iron, and manganese analyzed in conjunction with sample batch 20401 was outside the control limits (i.e., [75%-125%]). The spiked sample did not originate from the Liberty Industrial Finishing site; no qualification was required.

Calcium and zinc were detected in field blank sample FB0412 at 52.4 µg/L and 9.4 µg/L, respectively. Calcium was not requested in the investigative samples and positive zinc detections were greater than 10X the blank contamination; no qualification was required.



DATA VALIDATION REPORT

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

A handwritten signature in black ink that reads "Emily Strake". The signature is written in a cursive style and is positioned above a horizontal line.

APPENDIX A

A-13 Liberty Industrial Finishing Site – Sample Delivery Group Q426



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF49BNE01	4/12/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF49BNW01	4/12/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF49BSE01	4/12/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF49BSW01	4/12/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF49BSW01	4/12/06	VOCs	cis-1,2-Dichloroethene	UJ
SF49BSW01	4/12/06	VOCs	Trichloroethene	UJ
SF49BSW01	4/12/06	VOCs	Tetrachloroethene	UJ
SF49BNW01	4/12/06	SVOCs	Benzo(a)pyrene	UJ
SF49BNW01	4/12/06	SVOCs	Dibenz(a,h)anthracene	UJ

Major

Deficiencies: No major deficiencies were identified.

Minor

Deficiencies: VOCs by SW-846 8260B:

Internal standard area counts for fluorobenzene, chlorobenzene-d5, and 1,4-dichlorobenzene-d4 associated with sample SF49BSW01 were less than their lower control limits at 947306, 747525, and 238237, respectively. Fluorobenzene is used to quantitate cis-1,2-dichloroethene and trichloroethane, and chlorobenzene-d5 is used to quantitate tetrachloroethene. Sample results were non-detect and were qualified as "UJ".

SVOCs by SW-846 8270C:

Sample SF49BNW01 displayed an internal standard area count less than the lower control limit (i.e., 361582) for perylene-d12 at 162517. The low area count was confirmed upon reanalysis. Perylene-d12 quantitates Benzo(a)pyrene and dibenz(a,h)anthracene; sample results were qualified as 'UJ'.



DATA VALIDATION REPORT

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV107, KV107A, and KV108 at concentrations of 1.0 µg/kg, 3.3 µg/kg, and 2.0 µg/kg. Methylene chloride was not reported in the associated samples; no qualification was required.

The reanalysis of sample SF49BSW01 displayed a recovery of surrogate bromofluorobenzene greater than the upper control limit (i.e., 154%) at 200%. The associated sample results were non-detect; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB105 displayed a positive detection for an unknown aldol condensate at 2,700 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

Comments:

A trip blank was not submitted with this SDG.

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-14 Liberty Industrial Finishing Site – Sample Delivery Group Q486



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF20SL01	4/13/06	VOCs, BNAs, PCBs, Pesticides, Metals, CN
FB0413	4/13/06	VOCs, BNAs, PCBs, Pesticides, Metals, CN
TB0413	---	VOCs
SF49CN01	4/13/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, Metals, CN
SF49CS01	4/13/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, Metals, CN
SF49CE01	4/13/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, Metals, CN
SF49CW01	4/13/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, Metals, CN

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
SF20SL01	4/13/06	VOCs	Acetone	R
SF20SL01	4/13/06	VOCs	2-Butanone	R
SF20SL01	4/13/06	VOCs	1,3-Dichlorobenzene	UJ
SF20SL01	4/13/06	VOCs	1,4-Dichlorobenzene	J
SF20SL01	4/13/06	VOCs	1,2-Dichlorobenzene	J
SF20SL01	4/13/06	VOCs	Cyclohexane	UJ
FB0413	4/13/06	VOCs	Chloromethane	UJ
FB0413	4/13/06	VOCs	Bromomethane	UJ
FB0413	4/13/06	VOCs	Acetone	UJ
FB0413	4/13/06	VOCs	2-Butanone	R
FB0413	4/13/06	VOCs	trans-1,3-Dichloropropene	UJ
FB0413	4/13/06	VOCs	2-Hexanone	UJ
FB0413	4/13/06	VOCs	Tetrachloroethene	UJ
FB0413	4/13/06	VOCs	1,1,2,2-Tetrachloroethane	UJ
TB0413	4/13/06	VOCs	Chloromethane	UJ
TB0413	4/13/06	VOCs	Bromomethane	UJ
TB0413	4/13/06	VOCs	Acetone	UJ
TB0413	4/13/06	VOCs	2-Butanone	R
TB0413	4/13/06	VOCs	trans-1,3-Dichloropropene	UJ
TB0413	4/13/06	VOCs	2-Hexanone	UJ
TB0413	4/13/06	VOCs	Tetrachloroethene	UJ
TB0413	4/13/06	VOCs	1,1,2,2-Tetrachloroethane	UJ

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 3/21/06 on instrument VOAMS9 displayed a relative response factor (RRF) less than the control limit (i.e., 0.050) at 0.023 for 2-butanone. The associated non-detect result was qualified as “R”.

The initial calibration analyzed on 4/10/06 on instrument VOAMS10 displayed a RRF less than the control limit at 0.034 for 2-butanone. The associated non-detects were qualified as “R”.



DATA VALIDATION REPORT

The continuing calibration analyzed on 4/11/06 at 1210 displayed a RRF less than the lower control limit for acetone at 0.045. The associated non-detect results were qualified as "R".

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/10/06 on instrument VOAMS10 displayed %RSDs greater than the control limit (i.e., 15.0%) for bromomethane (15.9%), acetone (19.8%), 2-hexanone (23.3%), tetrachloroethene (15.9%), and 1,1,2,2-tetrachloroethane (15.6%). Associated sample results were non-detect and were qualified as "UJ".

The continuing calibration analyzed on 4/17/06 at 1956 displayed percent differences (%Ds) greater than the control limit (i.e., $\pm 20.0\%$) with negative biases for chloromethane at 27.3% and trans-1,3-dichloropropene at 22.6%. Associated sample results were qualified as "UJ".

The internal standard area count for 1,4-dichlorobenzene-_{d4} associated with sample SF20SL01 was less than the lower control limit (i.e., 415323) at 301770. 1,3-Dichlorobenzene, 1,4-dichlorobenzene, and 1,2-dichlorobenzene were quantitated using 1,4-dichlorobenzene-_{d4}; positive detections were qualified as "J" and non-detects were qualified "UJ".

The continuing calibration analyzed on 4/11/06 at 1210 displayed a %D greater than the control limit with negative bias for cyclohexane at 20.2%. The associated non-detect result was qualified as "UJ".

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV101 and KV108 at concentrations of 1.1 $\mu\text{g}/\text{kg}$ and 2.0 $\mu\text{g}/\text{kg}$, respectively. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 3/21/06 on instrument VOAMS9 displayed a percent relative standard deviation (%RSD) greater than the control limit for acetone at 24.4%. Since the associated sample result was previously flagged for RRF anomalies, no further data qualification was taken.

The continuing calibration analyzed on 4/11/06 at 1210 displayed a RRF less than the lower control limit for 2-butanone at 0.020. The %D for acetone was also greater than the control limit with negative bias at 23.7%. Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The continuing calibration analyzed on 4/18/06 at 1117 displayed %Ds greater than the control limit with positive biases for trichlorofluoromethane at 22.0% and carbon tetrachloride at 22.2%



DATA VALIDATION REPORT

and a RRF for 2-butanone less than the control limit at 0.023. Associated sample results were non-detect or previously qualified on the basis of initial calibration anomalies; no qualification was required.

The continuing calibration analyzed on 4/11/06 at 1350 displayed %Ds greater than the control limit with negative biases for acetone (32.5%), 2-butanone (26.5%), and 1,1,2,2-tetrachloroethane (21.9%). The 2-butanone RRF was less than the control limit at 0.025. Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The continuing calibration analyzed on 4/17/06 at 1956 displayed %Ds greater than the control limit with negative biases for acetone (32.5%), 2-hexanone (25.6%), and 1,1,2,2-tetrachloroethane (30.4%) and a RRF less than the control limit for 2-butanone at 0.028. Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The reanalysis of sample SF20SL01 displayed a surrogate recovery of bromofluorobenzene greater than the upper control limit (i.e., 154%) at 216%. The reanalysis was not used for data interpretation.

Internal standard area counts for flourobenezene, chlorobenzene-d₅, and 1,4-dichlorobenzene-d₄ associated with the reanalysis of sample SF20SL01 were less than their respective control limits. The reanalysis was not used for data interpretation.

SVOCs by SW-846 8270C:

Method blank samples SB108X and SB106 displayed positive detections for an unknown aldol condensate at 9,000 µg/kg and 11,000 µg/kg, respectively. SB106 also displayed a positive detection for 4,4'-biphenylenediamine. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The spike duplicate (SD) recovery for acenaphthene associated with sample SF49CE01 was less than the lower control limit (i.e., 66%) at 64%. Acenaphthene was not reported in the spiked sample; no qualification was required.

Metals by SW-846 6010B and 7471A:

Initial and continuing calibration blanks analyzed in conjunction with sample batch 20410 displayed positive detections for thallium ranging from 5.2 µg/L to 8.2 µg/L. Associated sample results were non-detect; no qualification was required.

The matrix spike (MS) recoveries for antimony, iron, aluminum, and copper analyzed in conjunction with sample batch 20410 were less than the lower control limit. The spiked sample did not originate from the Liberty Industrial Finishing site; no qualification was required.



DATA VALIDATION REPORT

Field blank sample FB0413 displayed positive detections above the instrument detection limit for barium at 24.6 µg/L and mercury at 0.12 µg/L. Associated sample results were greater than 10X the blank concentrations; no qualification was required.

Pesticides by SW-846 8081A:

Sample FB0413 displayed a surrogate recovery for decachlorobiphenyl (DCB) on the rear chromatography column at the lower control limit (i.e., 32%). No qualification was required.

The continuing calibration analyzed on 4/20/06 at 1207 displayed a %D greater than the control limit (i.e., 15.0%) with positive bias for delta-BHC at 15.721%. The associated sample result was non-detect; no qualification was required.

Continuing calibrations analyzed on 4/18/06 at 0926, 0927, 1428, and on 4/19/06 at 0751 displayed %Ds greater than the control limit with positive and negative biases on the front and rear chromatography columns for multiple compounds. These calibrations did not bracket investigative sample analyses; no qualification was required.

PCBs by SW-846 8082:

The MS/SD relative percent difference (RPD) was greater than the control limit (i.e., 12%) for aroclor-1260 at 27%. No action is taken directly as a result of MS/SD anomalies.

The continuing calibrations analyzed on 4/17/06 at 0911 and 1552 displayed one aroclor-1016 peak on the rear chromatography column that was greater than the control limit (i.e., 15.0%) at 20.39% and 17.61%, respectively. The continuing calibration analyzed on 4/18/06 at 0503 displayed one aroclor-1260 peak greater than the upper control limit on the rear chromatography column at 55.81%. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

The continuing calibration analyzed on 4/17/06 at 1341 displayed seven aroclor-1260 peaks greater than the control limit on the rear chromatography column. This calibration did not bracket investigative sample analyses; no qualification was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.



DATA VALIDATION REPORT

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

A handwritten signature in black ink that reads "Emily Strake". The signature is written in a cursive style and is positioned above a horizontal line.

APPENDIX A

A-15 Liberty Industrial Finishing Site – Sample Delivery Group Q609



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF20BNW01	4/17/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
DUP13	4/17/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF20BSE01	4/17/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF20BNE01	4/17/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF20BSW01	4/17/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF20CE01	4/17/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF20CW01	4/17/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
FB0417	4/17/06	VOCs, SVOCs, Pesticides, PCBs, Metals, CN ⁻
TB0417	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0417	4/17/06	VOCs	2-Butanone	R
FB0417	4/17/06	VOCs	Bromoform	UJ
TB0417	4/17/06	VOCs	2-Butanone	R
TB0417	4/17/06	VOCs	Bromoform	UJ
SF20BNW01	4/17/06	Metals	Calcium	U
SF20BNW01	4/17/06	Metals	Zinc	U
DUP13	4/17/06	Metals	Calcium	U
DUP13	4/17/06	Metals	Zinc	U
SF20BSE01	4/17/06	Metals	Calcium	U
SF20BSE01	4/17/06	Metals	Zinc	U
SF20BNE01	4/17/06	Metals	Calcium	U
SF20BNE01	4/17/06	Metals	Zinc	U
SF20BSW01	4/17/06	Metals	Calcium	U
SF20CW01	4/17/06	Metals	Calcium	U
SF20CW01	4/17/06	Metals	Zinc	U

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/3/06 on instrument VOAMS8 displayed a relative response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.020. The associated sample results were non-detect and were qualified as “R”.



DATA VALIDATION REPORT

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/3/06 on instrument VOAMS8 displayed a percent relative standard deviation (%RSD) greater than the control limit (i.e., 15.0%) for bromoform at 20.6%. Associated sample results were non-detect and were qualified as “UJ”.

Metals by SW-846 6010B and 7471A:

Calcium and zinc were detected in the preparation blank associated with sample batch 20454 at concentrations of 37.475 mg/kg and 0.619 mg/kg, respectively. Associated sample results less than the reporting limit were flagged “U”.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV103, KV108, KV110, KV114, and KV115 at concentrations ranging from 1.4 µg/kg to 2.2 µg/kg. Acetone was detected in method blank samples KV103, KV110, and KV115 at concentrations ranging from 3.2 µg/kg to 4.9 µg/kg. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 4/3/06 on instrument VOAMS8 displayed a %RSD greater than the control limit for acetone at 24.8%. Acetone results were previously qualified on the basis of continuing calibration RRF anomalies; no further action was required.

SVOCs by SW-846 8270C:

Method blank samples SB108X, SB115A, and SB112 displayed positive detections for unknown aldol condensates ranging from 800 µg/kg to 9,000 µg/kg. Blank sample SB115A also displayed a positive detection for a degradation product of 2,4,6-tribromophenol at 290 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

Method blank sample WB109B displayed positive detections for 1,2-dichlorobenzene at 1.1 µg/L and TICs tetrachloroethene, chlorobenzene, and an unknown analyte. Associated sample results were non-detect or were not analyzed for these compounds; no qualification was required.

The laboratory control sample (LCS) associated with sample batch 3830 displayed a recovery greater than the control limit (i.e., 131%) for 4,6-dinitro-2-methylphenol at 134%. Associated sample results were non-detect; no qualification was required.



DATA VALIDATION REPORT

Metals by SW-846 6010B and 7471A:

Multiple analytes were detected in the continuing and preparation blanks analyzed in conjunction with sample batch 20429. These analytes were not reported in the associated samples; no qualification was required.

The MS sample analyzed in conjunction with sample batch 20429 displayed recoveries less than the control limit for aluminum, antimony and iron. These analytes were only reported in the field blank sample, which is not subject to qualification based on spiked soil recoveries; no action was required.

The MS sample analyzed in conjunction with sample batch 20454 displayed recoveries outside the control limits for antimony and iron. These analytes were only reported in the field blank sample, which is not subject to qualification based on spiked soil recoveries; no action was required.

The field blank sample (FB0417) displayed detections for aluminum (89.9 µg/L), calcium (64.7 µg/L), chromium (3.4 µg/L), iron (128 µg/L), and manganese (2.9 µg/L). Associated samples either did not have the specified analytes reported or the associated concentrations were greater than 10X the field blank concentration; no qualification was required.

The laboratory duplicate sample analyzed in conjunction with sample batch 20454 displayed a RPD greater than the control limit for iron at 38.0%. Iron was not reported in the soil samples; no qualification was required.

The laboratory duplicate sample analyzed in conjunction with sample batch 20429 displayed a RPD greater than the control limit for lead at 36.0%. Lead was not reported in the soil samples; no qualification was required.

The laboratory duplicate sample analyzed in conjunction with sample batch 20429 displayed a relative percent difference (RPD) greater than the control limit for chromium at 47.4%, but less than 2X the reporting limit; no qualification was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.



DATA VALIDATION REPORT

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: Emily Strake

APPENDIX A

A-16 Liberty Industrial Finishing Site – Sample Delivery Group Q760



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF0506BNW01	4/18/2006	Select List VOCs
DUP14	4/18/2006	Select List VOCs
SF0506BSW01	4/18/2006	Select List VOCs
SF0506BNE01	4/18/2006	Select List VOCs
FB0418	4/18/2006	TCL VOCs, TCL SVOCs, TCL Pesticides, PCBs, TAL Metals, Cyanide
TB0418	4/18/2006	TCL VOCs
SF0506CSW01	4/18/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF0506CNE01	4/18/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF0506CSE01	4/18/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
SF0506CNW01	4/18/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide
DUP15	4/18/2006	Select List SVOCs, PCBs, Select List Metals, Cyanide

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0418	4/18/2006	TCL VOCs	2-Butanone	R
FB0418	4/18/2006	TCL VOCs	Acetone	UJ
FB0418	4/18/2006	TCL VOCs	1,1,2-Trichloroethane	UJ
FB0418	4/18/2006	TCL VOCs	2-Hexanone	UJ
FB0418	4/18/2006	TCL VOCs	Toluene	UJ
FB0418	4/18/2006	TCL VOCs	Chlorobenzene	UJ
FB0418	4/18/2006	TCL VOCs	Ethylbenzene	UJ
FB0418	4/18/2006	TCL VOCs	Styrene	UJ
FB0418	4/18/2006	TCL VOCs	Total Xylenes	UJ
FB0418	4/18/2006	TCL VOCs	1,2-Dibromoethane	UJ
FB0418	4/18/2006	TCL VOCs	Isopropylbenzene	UJ
FB0418	4/18/2006	TCL Pesticides	Methoxychlor	UJ
TB0418	4/18/2006	TCL VOCs	2-Butanone	R
TB0418	4/18/2006	TCL VOCs	Acetone	UJ
TB0418	4/18/2006	TCL VOCs	1,1,2-Trichloroethane	UJ
TB0418	4/18/2006	TCL VOCs	2-Hexanone	UJ
TB0418	4/18/2006	TCL VOCs	Toluene	UJ
TB0418	4/18/2006	TCL VOCs	Chlorobenzene	UJ
TB0418	4/18/2006	TCL VOCs	Ethylbenzene	UJ
TB0418	4/18/2006	TCL VOCs	Styrene	UJ
TB0418	4/18/2006	TCL VOCs	Total Xylenes	UJ
TB0418	4/18/2006	TCL VOCs	1,2-Dibromoethane	UJ
TB0418	4/18/2006	TCL VOCs	Isopropylbenzene	UJ
DUP15	4/18/2006	Select List SVOCs	Benzo(a)anthracene	J
DUP15	4/18/2006	Select List SVOCs	Benzo(k)fluoranthene	J
DUP15	4/18/2006	Select List SVOCs	Indeno(1,2,3-cd)pyrene	UJ
DUP15	4/18/2006	Select List Metals	Copper	J
DUP15	4/18/2006	Select List Metals	Lead	J



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
DUP15	4/18/2006	Select List Metals	Zinc	J
SF0506CSW01	4/18/2006	Select List SVOCs	Benzo(a)anthracene	UJ
SF0506CSW01	4/18/2006	Select List SVOCs	Benzo(b)fluoranthene	UJ
SF0506CSW01	4/18/2006	Select List SVOCs	Benzo(k)fluoranthene	UJ
SF0506CSW01	4/18/2006	Select List SVOCs	Benzo(a)pyrene	UJ
SF0506CSW01	4/18/2006	Select List SVOCs	Indeno(1,2,3-cd)pyrene	UJ
SF0506CSW01	4/18/2006	Select List Metals	Copper	J
SF0506CSW01	4/18/2006	Select List Metals	Lead	J
SF0506CSW01	4/18/2006	Select List Metals	Zinc	J
SF0506CNE01	4/18/2006	Select List SVOCs	Benzo(a)anthracene	UJ
SF0506CNE01	4/18/2006	Select List SVOCs	Benzo(b)fluoranthene	UJ
SF0506CNE01	4/18/2006	Select List SVOCs	Benzo(k)fluoranthene	UJ
SF0506CNE01	4/18/2006	Select List SVOCs	Benzo(a)pyrene	UJ
SF0506CNE01	4/18/2006	Select List SVOCs	Indeno(1,2,3-cd)pyrene	UJ
SF0506CNE01	4/18/2006	Select List Metals	Copper	UJ
SF0506CNE01	4/18/2006	Select List Metals	Lead	J
SF0506CNE01	4/18/2006	Select List Metals	Zinc	J
SF0506CSE01	4/18/2006	Select List SVOCs	Benzo(a)anthracene	J
SF0506CSE01	4/18/2006	Select List SVOCs	Benzo(b)fluoranthene	J
SF0506CSE01	4/18/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF0506CSE01	4/18/2006	Select List SVOCs	Benzo(a)pyrene	J
SF0506CSE01	4/18/2006	Select List SVOCs	Indeno(1,2,3-cd)pyrene	J
SF0506CSE01	4/18/2006	Select List Metals	Lead	J
SF0506CSE01	4/18/2006	Select List Metals	Mercury	J
SF0506CNW01	4/18/2006	Select List SVOCs	Benzo(a)anthracene	J
SF0506CNW01	4/18/2006	Select List SVOCs	Benzo(b)fluoranthene	J
SF0506CNW01	4/18/2006	Select List SVOCs	Benzo(k)fluoranthene	J
SF0506CNW01	4/18/2006	Select List SVOCs	Benzo(a)pyrene	J
SF0506CNW01	4/18/2006	Select List SVOCs	Indeno(1,2,3-cd)pyrene	J
SF0506CNW01	4/18/2006	Select List Metals	Copper	J
SF0506CNW01	4/18/2006	Select List Metals	Lead	J
SF0506CNW01	4/18/2006	Select List Metals	Zinc	J

Major

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS10 on 4/18/2006 displayed a relative response factor (RRF) less than the control limit (i.e., 0.050) for 2-butanone at 0.024. The non-detect 2-butanone results in FB0418 and TB0418 were flagged “R”.



DATA VALIDATION REPORT

Minor

Deficiencies: VOC analyses by SW8260B:

- ◇ The initial calibration analyzed on instrument VOAMS10 on 4/18/2006 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for acetone at 23.0%, 1,1,2-trichloroethane at 17.6%, 2-hexanone at 17.8%, toluene at 18.4%, chlorobenzene at 16.4%, ethylbenzene at 16.9%, styrene at 17.0%, total xylenes at 16.8%, 1,2-dibromoethane at 17.3%, and isopropylbenzene at 17.3%. Associated sample results were non-detect and were flagged “UJ”.

SVOCs by SW8270C:

- ◇ The field duplicate pair (SF0506CNW01/FD15) displayed absolute differences greater than the control limit (i.e., 2xRL or 70 µg/kg) for benzo(a)anthracene at 182 µg/kg, benzo(b)fluoranthene at 120 µg/kg, benzo(k)fluoranthene at 166 µg/kg, benzo(a)pyrene at 158 µg/kg, and indeno(1,2,3-cd)pyrene at 76 µg/kg. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”.

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/24/2006 at 11:00 displayed a %D greater than the control limit (i.e., ±15.0%) on the front column with a negative bias for methoxychlor at 24.865%. The non-detect methoxychlor result in FB0418 was flagged “UJ”.

Metals by SW6010B:

- ◇ The laboratory duplicate associated with batch 20445 displayed a relative percent difference greater than the control limit (i.e., 35%) for mercury at 57.9%. Associated sample results with positive detections were flagged “J”.
- ◇ The field duplicate pair (SF0506CNW01/DUP15) displayed an absolute difference greater than the control limit (i.e., 2x RL or 2.0 mg/kg) for copper at 2.6 mg/kg. Associated sample results with positive detections were flagged “J”; non-detects were flagged “UJ”.
- ◇ The field blank (FB0418) displayed positive detections for calcium at 360 µg/L, lead at 3.7 µg/L, and zinc at 7.1 µg/L. Associated sample results greater than the field blank concentration but less than 10x the field blank concentrations were flagged “J”.



DATA VALIDATION REPORT

Other

Deficiencies: VOC analyses by SW8260B:

- ◇ The continuing calibration analyzed on 4/25/2006 at 06:37 displayed a RRF less than the control limit for 2-butanone at 0.025. Since the associated sample results were previously flagged for initial calibration anomalies, no further data qualification was necessary.

Pesticides by SW8081A:

- ◇ The continuing calibration analyzed on 4/24/2006 at 15:51 displayed %Ds greater than the control limit (i.e., $\pm 15.0\%$) on both columns with positive biases for endrin aldehyde at 16.189% and 21.455%, respectively. The continuing calibration also displayed %DS greater than the control limit with positive biases on the front column for delta-BHC at 17.9%, heptachlor epoxide at 16.482%, gamma-chlordane at 16.03%, and alpha-chlordane at 24.486%. Since associated sample results were non-detect, no data qualification was necessary.

Polychlorinated Biphenyls by SW8082:

- ◇ The continuing calibration analyzed on 4/22/2006 at 20:59 displayed a %D greater than the control limit (i.e., $\pm 15.0\%$) for one peak in Aroclor 1260 at 16.46%. The average of the eight peaks was -7.31%, which is in control. No qualifying action is taken on one peak.

Metals by SW6010B:

- ◇ The initial calibration blank displayed a positive detection for copper at 3.9 $\mu\text{g/L}$. Since the associated sample result was non-detect, no data qualification was necessary.

Comments: On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

R. Michael Shadle

APPENDIX A

A-17 Liberty Industrial Finishing Site – Sample Delivery Group Q819



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF04BNW01	4/19/06	VOCs,
SF04BNE01	4/19/06	VOCs,
SF04BSW01	4/19/06	VOCs,
SF04BSE01	4/19/06	VOCs,
SF04CN01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF04CS01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF04CW01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF04CE01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF03BNE01	4/19/06	VOCs,
SF03BNW01	4/19/06	VOCs,
SF03BSE01	4/19/06	VOCs,
SF03BSW01	4/19/06	VOCs,
DUP16	4/19/06	VOCs,
SF03CN01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF03CS01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF03CE01	4/19/06	PAHs, PCBs, Metals, CN ⁻
SF03CW01	4/19/06	PAHs, PCBs, Metals, CN ⁻
DUP17	4/19/06	PAHs, PCBs, Metals, CN ⁻
FB0419	4/19/06	VOCs, BNAs, Pesticides, PCBs, Metals, CN ⁻
TB0419	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0419	4/19/06	VOCs	Chloroethane	UJ
FB0419	4/19/06	VOCs	Acetone	R
FB0419	4/19/06	VOCs	Trichlorofluoromethane	R
FB0419	4/19/06	VOCs	2-Butanone	R
TB0419	4/19/06	VOCs	Chloroethane	UJ
TB0419	4/19/06	VOCs	Acetone	R
TB0419	4/19/06	VOCs	Trichlorofluoromethane	R
TB0419	4/19/06	VOCs	2-Butanone	R
SF04CN01	4/19/06	Metals	Lead	J
SF04CS01	4/19/06	Metals	Lead	J
SF04CW01	4/19/06	Metals	Lead	J
SF04CE01	4/19/06	Metals	Lead	J

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed relative response factors (RRFs) for acetone, trichlorofluoromethane, and 2-butanone less than the control limit



DATA VALIDATION REPORT

(i.e., 0.050) at 0.033, 0.044, and 0.043, respectively. Associated sample results were non-detect and were qualified as “R”.

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed percent relative standard deviations (%RSDs) greater than the upper control limit (i.e., 15.0%) for chloroethane at 20.6% and acetone at 22.2%. Associated chloroethane sample results were non-detect and were qualified as “UJ”. Acetone was previously rejected.

Metals by SW-846 6010B and 7471A:

The laboratory duplicate sample (728485D) analyzed in conjunction with sample batch 20447 displayed a relative percent difference (RPD) greater than the duplicate control limit for soils (i.e., 35%) lead at 68%. Associated positive detections greater than the reporting limit were qualified as “J”.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank sample KV114 at a concentration of 1.7 µg/kg. Associated sample results were non-detect; no qualification was required.

The continuing calibrations analyzed on 4/22/06 at 1336 and 4/24/06 at 0843 displayed RRFs less than the control limit for acetone, trichlorofluoromethane, and 2-butanone. Sample results were previously qualified on the basis of initial calibration RRF anomalies; no further action was required.

The continuing calibration analyzed on 4/24/06 at 0843 displayed %Ds greater than the control limit (i.e., 20.0%) with positive biases for bromomethane, trichlorofluoromethane, 1,1,1-trichloroethane, and carbon tetrachloride. Sample results were non-detect; no qualification was required.

SVOCs by SW-846 8270C:

Method blank sample SB112 displayed positive detections for unknown aldol condensates at 1,800 µg/kg and 800 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The laboratory control sample (LCS) associated with sample batch 3830 displayed a recovery of 4,6-dinitro-2-methylphenol greater than the upper control limit (i.e., 131%) at 134%. 4,6-Dinitro-2-methylphenol was non-detect in the field blank sample; no qualification was required.



DATA VALIDATION REPORT

Metals by SW-846 6010B and 7471A:

The matrix spike analyzed in conjunction with sample batch 20447 displayed recoveries of antimony less than the lower control limit at 64.7% and recoveries of aluminum and iron greater than the upper control limit at 167.5% and 707.1%, respectively. These analytes were only reported in the field blank sample, which is not qualified on the basis of matrix spike anomalies. No action was required.

The initial calibration blank and a continuing calibration blank associated with sample batch 20447 displayed positive detections for thallium at 5.9 µg/L and 5.2 µg/L, respectively. Sample results were non-detect; no qualification was required.

Field blank sample FB0419 displayed positive detections for iron at 42 µg/L and barium at 1.6 µg/L. Iron was not reported in the associated investigative samples and associated barium results were greater than 10X the blank concentration; no qualification was required.

Pesticides by SW-846 8081A:

The matrix spike/spike duplicate relative percent differences (MS/SD RPDs) for alpha-BHC, beta-BHC, delta-BHC, gamma-BHC, dieldrin, Endosulfan I, and heptachlor epoxide were greater than their respective control limits. No qualification was required.

PCBs by SW-846 8082:

The continuing calibration analyzed on 4/26/06 at 11:33 displayed one aroclor-1016 peak and one aroclor-1260 peak on the rear chromatography column that were greater than the control limit (i.e., 15.0%) at 33.63% and 16.23%, respectively. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

SDG: Q819

Liberty Industrial Finishing Site
Soil Data Validation

APPENDIX A

A-18 Liberty Industrial Finishing Site – Sample Delivery Group Q836



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF51BNE01	4/20/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF51BNW01	4/20/06	VOCs
SF51BSE01	4/20/06	VOCs
SF51BSW01	4/20/06	VOCs, Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF51CE01	4/20/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
SF51CW01	4/20/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN ⁻
FB0420	4/20/06	VOCs, SVOCs, Pesticides, PCBs, Metals, CN ⁻
TB0420	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0420	4/20/06	VOCs	Chloroethane	UJ
FB0420	4/20/06	VOCs	Acetone	R
FB0420	4/20/06	VOCs	Trichlorofluoromethane	R
FB0420	4/20/06	VOCs	2-Butanone	R
FB0420	4/20/06	Metals	Beryllium	U
TB0420	4/20/06	VOCs	Chloroethane	UJ
TB0420	4/20/06	VOCs	Acetone	R
TB0420	4/20/06	VOCs	Trichlorofluoromethane	R
TB0420	4/20/06	VOCs	2-Butanone	R

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed relative response factors (RRFs) for acetone, trichlorofluoromethane, and 2-butanone less than the control limit (i.e., 0.050) at 0.034, 0.044, and 0.043, respectively. The associated sample results were non-detect and were qualified as “R”.

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed a percent relative standard deviation (%RSD) greater than the control limit (i.e., 15.0%) for chloroethane at 20.6%. The associated sample results were non-detect and were qualified as “UJ”.



DATA VALIDATION REPORT

Metals by SW-846 6010B and 7471A:

Beryllium was detected in the continuing calibration blanks analyzed in conjunction with sample batch 20474 at concentrations ranging from 0.3 µg/L to 0.4 µg/L. The positive detection in the field blank sample was qualified as “U” at the reporting limit.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV114 and KV115 at concentrations of 1.7 µg/kg and 1.4 µg/kg, respectively. Acetone was detected at 3.2 µg/kg in method blank sample KV115. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed a %RSD greater than the control limit for acetone at 22.2%. Associated results were previously qualified on the basis of initial calibration anomalies; no further action was required.

The continuing calibration analyzed on 4/22/06 at 1336 displayed RRFs less than the control limit for acetone, trichlorofluoromethane, and 2-butanone. The continuing calibration analyzed on 4/24/06 at 0843 displayed RRFs for 2-butanone and acetone less than the control limit. Sample results were previously qualified on the basis of initial calibration RRFs; no further action was required.

The continuing calibration analyzed on 4/24/06 at 0843 displayed %Ds greater than the control limit with positive biases for bromomethane, trichlorofluoromethane, 1,1,1-trichloroethane, and carbon tetrachloride. Associated sample results were non-detect; no qualification was required.

SVOCs by SW-846 8270C:

Method blank samples SB112 and SB113 displayed positive detections for unknown aldol condensates ranging from 380 to 7,400 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The LCS associated with sample batch 3830 displayed a recovery of 4,6-dinitro-2-methylphenol greater than the upper control limit (i.e., 131%) at 134%. The associated sample result was non-detect; no qualification was required.

The matrix spike/spike duplicate (MS/SD) relative percent difference (RPD) associated with sample batch 3834 was greater than the control limit (i.e., 40%) for pentachlorophenol at 128%. Pentachlorophenol was reported only in the field blank sample, which is not subject to qualification based on spiked soil recoveries; no action was required.



DATA VALIDATION REPORT

Pesticides by SW-846 8081A:

Multiple MS/SD RPDs associated with sample batch 3682 were greater than the respective control limits; no action was taken directly as a result of MS/SD anomalies.

PCBs by SW-846 8082:

The continuing calibration analyzed on 4/26/06 at 1133 displayed one aroclor-1016 peak and one aroclor-1260 peak on the rear chromatography column that were greater than the control limit (i.e., 15.0%) at 33.63% and 16.23%, respectively. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Metals by SW-846 6010B and 7471A:

Beryllium was detected in field blank sample FB0420 at 0.36 µg/L. This beryllium result was rejected on the basis of continuing calibration anomalies and was not used to assess contamination originating from field sampling activities.

Thallium was detected in the initial and continuing calibration blanks associated with sample batch 20474 at concentrations ranging from 4.7 µg/L to 5.5 µg/L. Lead was detected in the preparation blank at a concentration of 0.337 mg/kg. Thallium and lead were non-detect in the field blank sample; no qualification was required.

The MS sample analyzed in conjunction with sample batch 20474 displayed recoveries less than the control limit for aluminum, antimony, iron, and, manganese. These analytes were only reported in the field blank sample, which is not subject to qualification based on spiked soil recoveries; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-19 Liberty Industrial Finishing Site – Sample Delivery Group Q935



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF21B01	4/21/06	VOCs, BNAs, PCBs, Metals, CN
SF21E01	4/21/06	VOCs, BNAs, PCBs, Metals, CN
SF21W01	4/21/06	VOCs, BNAs, PCBs, Metals, CN
SF21S01	4/21/06	VOCs, BNAs, PCBs, Metals, CN
FB0421	4/21/06	VOCs, BNAs, PCBs, Pesticides, Metals, CN
TB0421	4/21/06	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0421	4/21/06	VOCs	Chloroethane	R
FB0421	4/21/06	VOCs	Acetone	R
FB0421	4/21/06	VOCs	Trichlorofluoromethane	R
FB0421	4/21/06	VOCs	2-Butanone	R
FB0421	4/21/06	VOCs	Arsenic	UJ
FB0421	4/21/06	VOCs	Lead	J
TB0421	4/21/06	VOCs	Chloroethane	R
TB0421	4/21/06	VOCs	Acetone	R
TB0421	4/21/06	VOCs	Trichlorofluoromethane	R
TB0421	4/21/06	VOCs	2-Butanone	R
SF21B01	4/21/06	Metals	Lead	J

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed relative response factors (RRFs) less than the control limit (i.e., 0.050) for acetone (0.034), trichlorofluoromethane (0.044), and 2-butanone (0.043). The associated non-detect results were qualified as “R”.

The initial calibration analyzed on 4/26/06 on instrument VOAMS3 displayed an RRF less than the control limit for chloroethane at 0.047. The associated non-detect results were qualified as “R”.

Minor

Deficiencies: Metals by SW-846 6010B and 7471A:

The preparation blank analyzed in conjunction with sample batch 20460 displayed a positive detection for lead at 0.0351 mg/kg. Associated sample results less than 10X the blank concentration were qualified as “J”.

The preparation blank analyzed in conjunction with sample batch 20460 displayed a negative



DATA VALIDATION REPORT

detection for arsenic at -0.334 mg/kg. The non-detect result in the field blank sample was qualified as "UJ".

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride and acetone were detected in method blank sample KV117 at concentrations of 1.4 µg/kg and 3.5 µg/kg, respectively. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 4/21/06 on instrument VOAMS3 displayed %RSDs greater than the control limit (i.e., 15.0%) for acetone at 22.2% and chloroethane at 20.6%. The associated sample results were previously qualified on the basis of RRF anomalies; no further action was required.

The continuing calibration analyzed on 4/25/06 at 0850 displayed an RRF less than the control limit for 2-butanone at 0.043 and acetone at 0.032. Trichlorofluoromethane displayed a %D greater than the control limit with positive bias at 20.4%. The associated results were previously qualified on the basis of initial calibration RRF anomalies; no further action was required.

The continuing calibration analyzed on 4/26/06 at 1106 displayed RRFs less than the lower control limit for chloroethane (0.047), acetone (0.028), trichlorofluoromethane (0.045) and 2-butanone (0.040). Sample results were previously qualified on the basis of initial calibration anomalies; no further action was required.

SVOCs by SW-846 8270C:

Method blank sample SB1113 displayed positive detections for an unknown aldol condensate at 7,400 µg/kg and an unknown at 380 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The matrix spike/spike duplicate (MS/SD) relative percent difference (RPD) for pentachlorophenol associated with spiked sample SF21S01 was greater than the control limit (i.e., 40%) at 128%. No action is taken directly as a result of MS/SD anomalies.

Metals by SW-846 6010B and 7471A:

Continuing calibration blanks analyzed in conjunction with sample batch 20460 displayed positive detections for lead ranging from 2.9 µg/L to 3.6 µg/L and beryllium at 0.4 µg/L. Associated sample results were non-detect or previously qualified on the basis of preparation blank contamination; no further action was required.

Field blank sample FB0421 displayed positive detections above the instrument detection limit for aluminum at 158 µg/L and lead at 3.3 µg/L. Aluminum was not reported in the associated investigative samples. Lead was previously qualified on the basis of preparation blank
SDG: Q935

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contamination, and was not used to assess contamination resulting from field sampling activities; no action was required.

The preparation blank analyzed in conjunction with sample batch 20460 displayed a positive detection for calcium at 8.306 mg/kg. Calcium was not reported in the investigative samples; no action was required.

Pesticides by SW-846 8081A:

The continuing calibration analyzed on 4/27/06 at 0820 displayed a %D greater than the control limit (i.e., 15.0%) with positive bias for delta-BHC at 15.144%. The associated sample result was non-detect; no qualification was required.

The continuing calibration analyzed on 4/27/06 at 1131 displayed %Ds greater than the control limit with positive biases for beta-BHC at 15.001%, delta-BHC at 16.743%, and 4,4'-DDE at 15.178%. The associated sample result was non-detect; no qualification was required.

PCBs by SW-846 8082:

The continuing calibration analyzed on 4/24/06 at 2037 displayed one Aroclor-1260 peak on the rear chromatography column that was greater than the control limit (i.e., 15.0%) at 17.16%. The continuing calibration analyzed on 4/25/06 at 0150 displayed one Aroclor-1016 peak greater than the upper control limit on the front chromatography column at 18.00%. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: 

APPENDIX A

A-20 Liberty Industrial Finishing Site – Sample Delivery Group R269



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF25B01	4/26/06	VOCs, BNAs, PCBs, Pesticides, Metals, CN ⁻
FB0426	4/26/06	VOCs, BNAs, PCBs, Pesticides, Metals, CN ⁻
TB0426	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0426	4/26/06	VOCs	Methylene Chloride	R
FB0426	4/26/06	VOCs	Acetone	R
FB0426	4/26/06	VOCs	1,1,2-Trichloroethane	UJ
FB0426	4/26/06	VOCs	trans-1,3-Dichloropropene	UJ
FB0426	4/26/06	VOCs	2-Hexanone	UJ
FB0426	4/26/06	VOCs	Toluene	UJ
FB0426	4/26/06	VOCs	Chlorobenzene	UJ
FB0426	4/26/06	VOCs	Ethylbenzene	UJ
FB0426	4/26/06	VOCs	Styrene	UJ
FB0426	4/26/06	VOCs	Xylenes	UJ
FB0426	4/26/06	SVOCs	2,4-Dinitrophenol	UJ
FB0426	4/26/06	Pesticides	4,4'-DDE	UJ
FB0426	4/26/06	Pesticides	Endosulfan Sulfate	UJ
FB0426	4/26/06	Pesticides	Endrin Ketone	UJ
FB0426	4/26/06	Pesticides	Methoxychlor	UJ
FB0426	4/26/06	Metals	Lead	J
TB0426	4/26/06	VOCs	Methylene Chloride	R
TB0426	4/26/06	VOCs	Acetone	R
TB0426	4/26/06	VOCs	1,1,2-Trichloroethane	UJ
TB0426	4/26/06	VOCs	trans-1,3-Dichloropropene	UJ
TB0426	4/26/06	VOCs	2-Hexanone	UJ
TB0426	4/26/06	VOCs	Toluene	UJ
TB0426	4/26/06	VOCs	Chlorobenzene	UJ
TB0426	4/26/06	VOCs	Ethylbenzene	UJ
TB0426	4/26/06	VOCs	Styrene	UJ
TB0426	4/26/06	VOCs	Xylenes	UJ
SF25B01	4/26/06	Metals	Chromium	J
SF25B01	4/26/06	Metals	Zinc	J
SF25B01	4/26/06	Metals	Lead	J

Major

Deficiencies: VOCs by SW-846 8260B:

The continuing calibration analyzed on 5/2/06 at 0553 displayed relative response factors (RRFs) for acetone and 2-butanone less than the control limit (0.050) at 0.042 and 0.022, respectively. Associated sample results were non-detect and were qualified as "R".



DATA VALIDATION REPORT

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed percent relative standard deviations (%RSDs) greater than the upper control limit (i.e., 15.0%) for 1,1,2-trichloroethane (17.6%), trans-1,3-dichloropropene (15.2%), 2-hexanone (17.8%), toluene (18.4%), chlorobenzene (16.4%), ethylbenzene (16.9%), styrene (17.0%), and total xylenes (16.8%). Associated sample results were non-detect and were qualified as “UJ”.

SVOCs by SW-846 8270C:

The laboratory control sample (LCS) associated with sample batch 3435 displayed a recovery less than the lower control limit (i.e., 49%) for 2,4-dinitrophenol at 48%. The associated non-detect result was qualified as “UJ”.

Pesticides by USEPA 8081A:

The continuing calibration analyzed on 5/2/06 at 1026 displayed percent deviations (%Ds) greater than the control limit (i.e., 15.0%) with negative biases for Endosulfan sulfate (17.802%), endrin ketone (16.284%), and methoxychlor (21.763%). Associated sample results were non-detect and were qualified as “UJ”.

The continuing calibration analyzed on 5/8/06 at 1545 displayed a %D greater than the control limit with negative biases for 4,4'-DDE at 21.912%. Associated sample results were non-detect and were qualified as “UJ”.

Metals by SW-846 6010B and 7471A:

Initial and continuing calibration blanks analyzed in conjunction with sample batch 20502 displayed negative detections for lead ranging from $-2.9 \mu\text{g/L}$ to $-5.8 \mu\text{g/L}$. Associated sample results were positive detections and were qualified as “J”.

The laboratory duplicate sample (lab sample ID: 731124D) analyzed in conjunction with sample batch 20502 displayed RPDs greater than the duplicate control limit for soils (i.e., 35%) for chromium at 58.6% and zinc at 37.5%. The associated positive sample results were qualified as “J”.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank sample KV123 at a concentration of $2.0 \mu\text{g/kg}$. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed a RRF less than



DATA VALIDATION REPORT

the control limit for 2-butanone and a %RSD greater than the control limit for acetone. The associated sample results were previously qualified on the basis of continuing calibration RRF anomalies; no further action was required.

The continuing calibration analyzed on 5/2/06 at 0553 displayed a %D greater than the control limit for acetone at 28.8%. Sample results were previously qualified on the basis of RRF anomalies; no further action was required.

SVOCs by SW-846 8270C:

Method blank sample SB120B displayed a positive detection for an unknown aldol condensate at 3,000 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The MS/SD recoveries for phenol and 4-nitrophenol were less than the lower control limits at 33% / 32%, and 31% / 32%, respectively. The spiked sample did not originate from the Liberty Industrial Finishing Site; no qualification was required.

Metals by SW-846 6010B and 7471A:

The matrix spikes analyzed in conjunction with sample batch 20502 displayed multiple recoveries greater than the upper control limit or less than the lower control limit. The spiked samples did not originate from the Liberty Industrial Finishing Site; no qualification was required.

A continuing calibration blank associated with sample batch 20502 displayed a positive detection for mercury at 0.2 µg/L and a positive detection for thallium at 4.8 µg/L. Sample results were non-detect; no qualification was required.

The preparation blank associated with sample batch 20502 displayed positive detections for antimony, calcium, and lead. The initial calibration blank displayed a positive detection for lead at 3.0 µg/L. Associated sample results were either non-detect or previously qualified on the basis of negative calibration blank contamination.

Field blank sample FB0426 displayed positive detections for calcium at 55.5 µg/L and lead at 4.2 µg/L. Calcium was not reported in the associated investigative sample. Lead was detected in sample SF25B01 at greater than 10X the field blank concentration; no qualification was required.

The laboratory duplicate sample (lab sample ID: 731124D) analyzed in conjunction with sample batch 20502 displayed RPDs greater than the duplicate control limit for soils (i.e., 35%) for aluminum, barium, beryllium, calcium, cobalt, iron, magnesium, manganese, potassium, and vanadium. These analytes were not reported in the investigative sample; no qualification was required.

The laboratory duplicate sample (Lab sample ID: 731132D) analyzed in conjunction with sample
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batch 20502 displayed RPDs greater than the duplicate control limit for soils for cadmium at 54.7%. The associated sample result was non-detect; no qualification was required.

PCBs by SW-846 8082:

The continuing calibrations analyzed on 5/2/06 at 1226 and 5/2/06 at 1928 each displayed one aroclor-1260 peak on the rear chromatography column that was greater than the control limit (i.e., 15.0%) at 19.88% and 16.28%, respectively. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-21 Liberty Industrial Finishing Site – Sample Delivery Group R295



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF27BE01	4/28/06	VOCs, SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF27BC01	4/28/06	VOCs, SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF27BW01	4/28/06	VOCs, SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF27NE01	4/28/06	VOCs, SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF27S01	4/28/06	VOCs, SVOCs, Dieldrin, PCBs, Metals, CN ⁻
SF27NW01	4/28/06	VOCs, SVOCs, Dieldrin, PCBs, Metals, CN ⁻
FB0428	4/28/06	VOCs, SVOCs, Pesticides, PCBs, Metals, CN ⁻
TB0428	-	VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0428	4/28/06	VOCs	Acetone	R
FB0428	4/28/06	VOCs	2-Butanone	R
FB0428	4/28/06	VOCs	1,1,2-Trichloroethane	UJ
FB0428	4/28/06	VOCs	trans-1,3-Dichloropropene	UJ
FB0428	4/28/06	VOCs	2-Hexanone	UJ
FB0428	4/28/06	VOCs	Toluene	UJ
FB0428	4/28/06	VOCs	Chlorobenzene	UJ
FB0428	4/28/06	VOCs	Ethylbenzene	UJ
FB0428	4/28/06	VOCs	Styrene	UJ
FB0428	4/28/06	VOCs	Xylenes	UJ
FB0428	4/28/06	SVOCs	Hexachlorocyclopentadiene	UJ
FB0428	4/28/06	Pesticides	Endrin	R
FB0428	4/28/06	Metals	Beryllium	U
FB0428	4/28/06	Metals	Mercury	UJ
TB0428	4/28/06	VOCs	Acetone	R
TB0428	4/28/06	VOCs	2-Butanone	R
TB0428	4/28/06	VOCs	1,1,2-Trichloroethane	UJ
TB0428	4/28/06	VOCs	trans-1,3-Dichloropropene	UJ
TB0428	4/28/06	VOCs	2-Hexanone	UJ
TB0428	4/28/06	VOCs	Toluene	UJ
TB0428	4/28/06	VOCs	Chlorobenzene	UJ
TB0428	4/28/06	VOCs	Ethylbenzene	UJ
TB0428	4/28/06	VOCs	Styrene	UJ
TB0428	4/28/06	VOCs	Xylenes	UJ
SF27BE01	4/28/06	PCBs	Aroclor-1254	J
SF27BE01	4/28/06	Pesticides	Dieldrin	J
SF27BW01	4/28/06	PCBs	Aroclor-1260	J

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed a relative
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response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.024. The associated sample results were non-detect and were qualified as “R”.

The continuing calibration analyzed on 5/2/06 at 0553 displayed a RRF for acetone less than the control limit at 0.042. The associated sample results were non-detect and were qualified as “R”.

Pesticides by SW-846 8081A:

The laboratory control sample (LCS) associated with aqueous sample batch 3733 displayed a recovery less than the lower control limit (i.e., 78%) for endrin at 60%. The associated non-detect field blank sample result was qualified “R”.

Minor

Deficiencies: Metals by SW-846 6010B and 7471A:

The initial calibration blanks associated with sample batch 20516 displayed a positive detection for mercury at 0.1 µg/L and a negative detection at -0.1 µg/L. The non-detect field blank sample result was qualified as “UJ”.

Beryllium was detected in the continuing calibration blanks analyzed in conjunction with sample batch 20474 at concentrations of 0.5 µg/L and 0.3 µg/L. The positive detection in the field blank sample was qualified as “U” at the reporting limit.

VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for acetone (23.0%), 1,1,2-trichloroethane (17.6), trans-1,3-dichloropropene (15.2%), 2-hexanone (17.8%), toluene (18.4%), chlorobenzene (16.4%), ethylbenzene (16.9%), styrene (17.0%), and xylene (16.8%). Associated sample results were non-detect and were qualified as “UJ”.

PCBs by SW-846 8082:

The continuing calibration analyzed on 5/3/06 at 1704 displayed %Ds greater than the control limit (i.e., 15.0%) for three aroclor-1260 peaks on the front chromatography column with positive biases at 18.56%, 26.50%, and 16.04%. Since some of the Aroclor-1260 peaks are also used to quantify Aroclor-1254, the associated positive Aroclor-1254 detection was qualified as “J”.

Pesticides by SW-846 8081A:

Sample SF27BE01 displayed dual column imprecision for dieldrin greater than the control limit (i.e., 25%) at 56%. The positive detection was qualified as “J”.



DATA VALIDATION REPORT

SVOCs by SW-846 8270C:

The continuing calibration analyzed on 5/8/06 at 0939 displayed a %D greater than the control limit (i.e., 20.0%) with negative bias for hexachlorocyclopentadiene at 44.0%. The associated sample result was non-detect and was qualified as "UJ".

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank sample KV123 at a concentration of 2.0 µg/kg. Associated sample results were non-detect; no qualification was required.

The continuing calibration analyzed on 5/2/06 at 0553 displayed RRFs less than the control limit for acetone and 2-butanone, and a percent deviation (%D) greater than the control limit with negative bias for acetone. 2-Butanone and acetone were previously qualified on the basis of initial and continuing calibration anomalies; no further action was required.

SVOCs by SW-846 8270C:

Method blank sample SB122 displayed positive detections for an unknown aldol condensate and a degradation product of 2,4,6-tribromophenol at 14,000 µg/kg and 300 µg/kg, respectively. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The matrix spike/spike duplicate (MS/SD) relative percent difference (RPD) associated with sample batch 3882 was greater than the control limit (i.e., 40%) for pentachlorophenol at 69%. No action is taken directly as a result of MS/SD RPD anomalies.

Pesticides by SW-846 8081A:

The continuing calibration analyzed on 5/5/06 at 1539 displayed a %D greater than the control limit (i.e., 15.0%) with positive bias for 4,4'-DDE at 23.172%. The associated sample result was non-detect; no qualification was required.

The MS/SD recoveries of 4,4'-DDD associated with sample batch 3735 were less than the lower control (i.e., 60%) at 51% and 58%, respectively. The spiked sample did not originate from the Liberty Industrial Finishing site; no qualification was required.

Multiple MS/SD relative percent differences (RPDs) associated with aqueous sample batch 3733 were greater than the control limit. No action is taken directly as a result of MS/SD RPD anomalies.



DATA VALIDATION REPORT

PCBs by SW-846 8082:

The continuing calibration analyzed on 5/3/06 at 1704 displayed a %D greater than the control limit (i.e., 15.0%) for one aroclor-1260 peak. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

Metals by SW-846 6010B and 7471A:

The matrix spike (MS) recoveries of iron and manganese analyzed in conjunction with sample batch 20516 (sample SF27BE01) were outside the control limits (i.e., [75%, 125%]). These analytes were not reported in the investigative samples; no action was required.

A continuing calibration analyzed in conjunction with sample batch 20516 displayed a negative detection for lead at $-3.0 \mu\text{g/L}$. This calibration did not bracket the investigative samples; no qualification was required.

Calcium and zinc were detected in field blank sample FB0428 at $57.0 \mu\text{g/L}$ and $7.7 \mu\text{g/L}$, respectively. Calcium was not requested in the investigative samples and positive zinc detections were greater than 10X the blank contamination; no qualification was required. Beryllium was detected in FB0428 at a concentration of $0.42 \mu\text{g/L}$. This result was rejected due to continuing calibration blank contamination and was not used to assess contamination resulting from field sample activities.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

APPENDIX A

A-22 Liberty Industrial Finishing Site – Sample Delivery Group R426



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory-applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory-applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
SF1618BNE01	5/1/06	VOCs
DUP18	5/1/06	VOCs
SF1618BNW01	5/1/06	VOCs
SF1618BSE01	5/1/06	VOCs
SF1618BSW01	5/1/06	VOCs
SF1618CB01	5/1/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN
SF1618CN01	5/1/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN
SF1618CS01	5/1/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN
SF1618CW01	5/1/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN
FB0501	5/1/06	VOCs, SVOCs, Pesticides, PCBs, Metals, CN
TB0501	-	VOCs
DUP19	5/1/06	Benzo(a)pyrene, Dibenz(a,h)anthracene, PCBs, Metals, CN

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB0501	5/1/06	VOCs	Vinyl Chloride	UJ
FB0501	5/1/06	VOCs	Acetone	R
FB0501	5/1/06	VOCs	Trichlorofluoromethane	UJ
FB0501	5/1/06	VOCs	2-Butanone	R
FB0501	5/1/06	VOCs	2-Hexanone	UJ
FB0501	5/1/06	VOCs	Tetrachloroethene	UJ
FB0501	5/1/06	Pesticides	All Pesticides	UJ
FB0501	5/1/06	PCBs	Aroclor-1016	R
FB0501	5/1/06	PCBs	Aroclor-1221	R
FB0501	5/1/06	PCBs	Aroclor-1232	UJ
FB0501	5/1/06	PCBs	Aroclor-1242	UJ
FB0501	5/1/06	PCBs	Aroclor-1248	UJ
FB0501	5/1/06	PCBs	Aroclor-1254	UJ
FB0501	5/1/06	PCBs	Aroclor-1260	UJ
FB0501	5/1/06	Metals	Beryllium	U
TB0501	5/1/06	VOCs	Chloroethane	UJ
TB0501	5/1/06	VOCs	Acetone	R
TB0501	5/1/06	VOCs	2-Butanone	R
TB0501	5/1/06	VOCs	1,1,2-Trichloroethane	UJ
TB0501	5/1/06	VOCs	trans-1,3-Dichloropropene	UJ
TB0501	5/1/06	VOCs	2-Hexanone	UJ
TB0501	5/1/06	VOCs	Toluene	UJ
TB0501	5/1/06	VOCs	Chlorobenzene	UJ
TB0501	5/1/06	VOCs	Ethylbenzene	UJ
TB0501	5/1/06	VOCs	Styrene	UJ



DATA VALIDATION REPORT

Major

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed a relative response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.024. The continuing calibration analyzed on 5/3/06 at 0541 displayed RRFs for acetone and 2-butanone less than the control limit at 0.045 and 0.024, respectively. The associated sample results were non-detect and were qualified as "R".

The initial calibration analyzed on 5/5/06 on instrument VOAMS10 displayed a relative response factor (RRF) for 2-butanone less than the control limit (i.e., 0.050) at 0.024. The continuing calibration analyzed on 5/6/06 at 0615 displayed RRFs for acetone and 2-butanone less than the control limit at 0.044 and 0.022, respectively. The associated sample results were non-detect and were qualified as "R".

PCBs by SW-846 8082:

The laboratory control sample (LCS) analyzed in conjunction with aqueous sample batch WP125A displayed a recovery less than the lower control limit (i.e., 66%) for aroclor-1016 at 60%. Aroclor-1016 peaks overlap entirely with aroclor-1221 peaks, therefore the non-detect field blank results for aroclor-1016 and aroclor-1221 were rejected.

Minor

Deficiencies: VOCs by SW-846 8260B:

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed percent relative standard deviations (%RSDs) greater than the control limit (i.e., 15.0%) for 1,1,2-trichloroethane (17.6%), trans-1,3-dichloropropene (15.2%), 2-hexanone (17.8%), toluene (18.4%), chlorobenzene (16.4%), ethylbenzene (16.9%), and styrene (17.0%). Associated sample results were non-detect and were qualified as "UJ".

The continuing calibration analyzed on 5/3/06 at 0541 displayed a percent deviation (%D) greater than the control limit (i.e., 20.0%) with negative bias for chloroethane at 21.8%. The associated non-detect sample result was qualified as "UJ".

The initial calibration analyzed on 5/5/06 on instrument VOAMS10 displayed %RSDs greater than the control limit for vinyl chloride (15.9%), trichlorofluoromethane (15.2%), 2-hexanone (18.2%), and tetrachloroethene (15.5%). Associated sample results were non-detect and were qualified as "UJ".

Pesticides by SW-846 8081A:

The surrogate recoveries for decachlorobiphenyl associated with sample FB0501 were less than the lower control limits (i.e., 32%) on the front and rear chromatography columns at 20% and



DATA VALIDATION REPORT

20%, respectively. The associated sample results were non-detect and were qualified as 'UJ'.

PCBs by SW-846 8082:

The surrogate recovery for decachlorobiphenyl associated with sample FB0501 and its reanalysis was less than the lower control limit (i.e., 31%) at 22% and 19%, respectively. The associated sample results were non-detect and were qualified as 'UJ'.

Metals by SW-846 6010B and 7471A:

Beryllium was detected in the initial and continuing calibration blanks associated with sample batch 20519 at concentrations ranging from 0.1 µg/L to 0.6 µg/L. The positive detection in the field blank sample was qualified as "U" at the reporting limit.

Other

Deficiencies: VOCs by SW-846 8260B:

Methylene chloride was detected in method blank samples KV128 and KV128A at concentrations of 1.5 µg/kg and 0.8 µg/kg, respectively. Associated sample results were non-detect; no qualification was required.

The initial calibration analyzed on 4/18/06 on instrument VOAMS10 displayed a %RSD greater than the control limit for acetone at 23.0%. Sample results were previously qualified on the basis of continuing calibration RRF anomalies; no further action was required.

The continuing calibration analyzed on 5/3/06 at 0541 displayed a %D greater than the control limit with negative bias for acetone at 23.7%. Sample results were previously qualified on the basis of continuing calibration RRF anomalies; no further action was required.

The initial calibration analyzed on 5/5/06 on instrument VOAMS10 displayed a %RSD greater than the control limit for acetone at 24.1%. Sample results were previously qualified on the basis of continuing calibration RRF anomalies; no further action was required.

SVOCs by SW-846 8270C:

Method blank sample SB125 displayed a positive detection for an unknown aldol condensate at 7,000 µg/kg. The detection of Tentatively Identified Compounds (TICs) in laboratory method blanks does not impact data quality; no action was required.

The field blank sample (FB0501) displayed a positive detection for naphthalene at 0.3 µg/L. Naphthalene was not reported in any investigative samples; no qualification was required.



DATA VALIDATION REPORT

Pesticides by SW-846 8081A:

The continuing calibration analyzed on 5/11/06 at 0742 displayed a %D greater than the control limit (i.e., 15.0%) with positive bias for 4,4'-DDD at 18.572%. The associated sample result was non-detect; no qualification was required.

PCBs by SW-846 8082:

The continuing calibrations analyzed on 5/5/06 at 1639 and 2058, 5/8/06 at 1428, and 5/9/06 at 0104 displayed one or two aroclor-1260 peaks on the front and rear chromatography columns that were greater than the control limit (i.e., 15.0%). Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

The continuing calibrations analyzed on 5/5/06 at 1412 and 5/8/06 at 1428 each displayed one aroclor-1016 peak on the rear chromatography column that were greater than the control limit. Three aroclor peaks must exhibit continuing calibration anomalies before qualification is warranted; no action was required.

The LCS analyzed in conjunction with aqueous sample batch WP125A displayed a recovery less than the lower control limit (i.e., 66%) for aroclor-1016 at 60%. Aroclor-1016 and aroclor-1221 were rejected; all other aroclors were previously qualified on the basis of surrogate spike recoveries.

Metals by SW-846 6010B and 7471A:

Beryllium was detected in field blank sample FB0501 at 0.48 µg/L. This beryllium result was qualified on the basis of continuing calibration anomalies and was not used to assess contamination originating from field sampling activities.

Barium was detection in field blank sample FB0501 at 44.0 µg/L. Barium was not reported in the investigative samples; no qualification was required.

The MS sample analyzed in conjunction with sample batch 20519 displayed recoveries less than the control limit for antimony and iron. These analytes were only reported in the field blank sample, which is not subject to qualification based on spiked soil recoveries; no action was required.

The MS sample analyzed in conjunction with sample batch 20551 displayed recoveries less than the control limit for antimony and copper, and greater than the control limit for calcium, iron, lead, manganese, and zinc. The spiked sample did not originate from the Liberty Industrial Site; no qualification was required.

The duplicate soil samples analyzed in conjunction with sample batch 20551 displayed a relative percent difference (RPD) greater than the control limit for multiple analytes. Only the field blank sample was reported from this batch, which is not subject to qualification based on soil duplicate



DATA VALIDATION REPORT

RPDs; no action was required.

Comments:

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed: _____

A handwritten signature in black ink that reads "Emily Strake". The signature is written in a cursive style and is positioned above a horizontal line.

APPENDIX A

A-23 Liberty Industrial Finishing Site – Sample Delivery Group 0709454-RE



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
UST13ANG01040	9/27/2007	Metals
UST13AEG01040	9/27/2007	Metals
UST13ASG01040	9/27/2007	Metals
UST13ABG01090	9/27/2007	Metals
UK33B01130	9/27/2007	Metals

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
UST13ANG01040	9/27/2007	Metals	Cadmium	UJ
UST13AEG01040	9/27/2007	Metals	Cadmium	UJ
UST13ASG01040	9/27/2007	Metals	Cadmium	UJ
UST13ABG01090	9/27/2007	Metals	Cadmium	UJ
UK33B01130	9/27/2007	Metals	Cadmium	UJ

Major

Deficiencies: No major deficiencies were observed.

Minor

Deficiencies: Metals by SW-846 6010B:

- ◇ The matrix spike (from parent sample 0709303-01) displayed a percent recovery less than the lower control limit (i.e., 75%) for cadmium at 70.3%. Associated sample results were non-detect and were flagged “UJ”.

Other

Deficiencies: Metals by SW-846 6010B:

- ◇ The initial calibration blank and two continuing calibration blanks displayed positive detections for cadmium ranging from 0.6 µg/L to 0.9 µg/L. Since associated sample results were non-detect, no data qualification was necessary.

Comments: The samples listed above were initially analyzed on 10/4/2007. Results for cadmium were rejected due to contract required detection limit deficiencies. These



DATA VALIDATION REPORT

samples were reanalyzed upon request by the primary consultant. The results of the reanalyzed data are added as an attachment to the original report.

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed:

A handwritten signature in black ink, appearing to read 'R. Michael Shadle', written over a horizontal line.

R. Michael Shadle

APPENDIX A

A-24 Liberty Industrial Finishing Site – Sample Delivery Group 0711068



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
UK37B01150	11/5/2007	Select VOCs, SVOCs and Metals, PCBs, Cyanide
COSP0601G01	11/5/2007	Select VOCs and Metals
COSP0601G02	11/5/2007	Select VOCs and Metals
COSP0601G03	11/5/2007	Select VOCs and Metals
COSP0601G04	11/5/2007	Select VOCs and Metals
COSP0601G05	11/5/2007	Select VOCs and Metals
COSP0601G06	11/5/2007	Select VOCs and Metals
COSP0601G07	11/5/2007	Select VOCs and Metals
FB071105	11/5/2007	Select VOCs, SVOCs and Metals, PCBs, Cyanide
TB071105	11/5/2007	Select VOCs
COSP0601C01	11/5/2007	PCBs
COSP0601C02	11/5/2007	PCBs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
FB071105	11/5/2007	PCBs	Aroclor 1232	UJ
FB071105	11/5/2007	PCBs	Aroclor 1242	UJ
FB071105	11/5/2007	PCBs	Aroclor 1248	UJ
FB071105	11/5/2007	PCBs	Aroclor 1254	UJ
FB071105	11/5/2007	PCBs	Aroclor 1260	UJ
UK37B01150	11/5/2007	Metals	Cadmium	UJ
UK37B01150	11/5/2007	Metals	Chromium	UJ
COSP0601G01	11/5/2007	Metals	Cadmium	J
COSP0601G01	11/5/2007	Metals	Chromium	J
COSP0601G02	11/5/2007	Metals	Cadmium	J
COSP0601G02	11/5/2007	Metals	Chromium	J
COSP0601G03	11/5/2007	Metals	Cadmium	J
COSP0601G03	11/5/2007	Metals	Chromium	J
COSP0601G04	11/5/2007	Metals	Cadmium	UJ
COSP0601G04	11/5/2007	Metals	Chromium	J
COSP0601G05	11/5/2007	Metals	Cadmium	UJ
COSP0601G05	11/5/2007	Metals	Chromium	J
COSP0601G06	11/5/2007	Metals	Cadmium	UJ
COSP0601G06	11/5/2007	Metals	Chromium	J
COSP0601G07	11/5/2007	Metals	Cadmium	UJ
COSP0601G07	11/5/2007	Metals	Chromium	J

Major

Deficiencies: No major deficiencies were observed.

Minor

Deficiencies: PCBs by SW-846 8082:

- ◇ The continuing calibration analyzed on 11/7/2007 at 16:20 displayed a percent deviation greater than the control limit (i.e., $\pm 15\%$) with a negative bias for Aroclor 1260 at 18.4%. The Aroclor 1260 standard includes Aroclor identification peaks from Aroclor 1232 to Aroclor 1260. The non-detect results in sample FB0711005 were flagged "UJ".

Metals by SW-846 6010B:

- ◇ The continuing calibration analyzed on 11/7/2007 at 12:55 displayed percent recoveries (%Rs) less than the lower control limit (i.e., 90%) for cadmium at 89.1% and chromium at 89.0%. Associated sample results with positive detections were flagged "J"; non-detects were flagged "UJ".

Other

Deficiencies: Metals by SW-846 6010B:

- ◇ The soil preparation blank (batch # 152597) displayed a positive detection for cadmium at 0.0008 mg/kg. Since associated sample results were previously flagged for calibration anomalies, no further data qualification was necessary.
- ◇ The continuing calibration blanks (batches 152597 and 152585) displayed positive detections for cadmium at 0.4 $\mu\text{g/L}$ and 0.3 $\mu\text{g/L}$ and chromium at 0.5 $\mu\text{g/L}$. Since associated sample results were previously flagged for calibration anomalies, no further data qualification was necessary.

VOC analyses by SW-846 8260B:

- ◇ The MS/MSD pair (0711071-05) displayed a %R greater than the upper control limit (i.e., 112%) in the MSD for chlorobenzene at 115%. No data qualification is taken based solely on MS/MSD anomalies.

Comments: On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction. All data are usable for their intended purpose, as qualified.

Signed:



R. Michael Shadle

APPENDIX A

A-25 Liberty Industrial Finishing Site – Sample Delivery Group 0803132



DATA VALIDATION REPORT

Samples were extracted and analyzed per the specific requested methods. Data reported by the laboratory contain laboratory applied qualifiers. Some of the more common qualifiers are as follows:

- J** – Reported result is between the reporting limit and the method detection limit.
- B** – Reported result may be potentially biased high due to blank contamination.
- U** – Reported result has not been detected at or above the method detection limit.
- P** – Reported result reported where results on dual column were greater than 40%
- D** – Reported result is from a dilution greater than 1x.

Data have been reviewed using a Level III review process. This process includes the review of initial and continuing calibrations; method, laboratory, trip, field, and preparation blanks; blank spikes, matrix spikes and matrix spike duplicates, surrogate recoveries (VOCs and SVOCs only), internal standard recoveries (VOCs and SVOCs only), sample extraction and analysis holding times, preservation requirements, field duplicates, laboratory duplicates (inorganic analyses only), and tune summaries (VOCs and SVOCs only).

Data have been validated using:

- *SOP HW-24: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 Method 8260B (June 1999, rev. 1),*
- *SOP HW-22: Standard Operating Procedure for the Validation of Organic Data Acquired Using SW-846 8270C (June 2001, rev. 2),*
- *SOP HW-2: Evaluation of Metals Data for the Contract Laboratory Program based on SOW – ILM05.3 (September 2005, Rev. 11),*
- *SOP HW-6: CLP Organics Data Review and Preliminary Review (March 2001, rev. 12),*
- *SOP HW-23: Validating Pesticide/PCB Compounds by SW-846 Method 8080A (April 1995, rev. 0),*
- *SOP HW-23B: Validating PCB Compounds by SW-846 Method 8082 (May 2002, rev. 1),*
and;
- The specifics of the methods.



DATA VALIDATION REPORT

The following qualifiers may be applied as a result of data validation:

- R** – Result is considered unusable due to a major quality control anomaly.
- U** – Result is considered non-detect either at the reporting limit or at sample concentration.
- J** – Result is estimated due to a minor quality control anomaly.
- UJ** – Non-detect result (reporting limit) is estimated due to a minor quality control anomaly.
- NJ** – Results are present and estimated due to pesticide breakdown.

Any validation qualifiers will supersede the laboratory applied qualifiers.



DATA VALIDATION REPORT

The following table represents all samples in this SDG submitted for analysis:

<i>Sample</i>	<i>Sample Date</i>	<i>Analyses Requested</i>
D06EG01005	3/11/08	Select Metals
D06WG01005	3/11/08	Select Metals
D06NG01005	3/11/08	Select Metals
D06SG01005	3/11/08	Select Metals
D06B01020	3/11/08	Select Metals
SB25B01130	3/11/08	Select VOCs, SVOCs and Metals, PCBs, Cyanide
UK1BSL01110	3/11/08	TCL VOCs, TCL SVOCs, PCBs, Pesticides, Metals, Cyanide
FB080311	3/11/08	TCL VOCs, TCL SVOCs, PCBs, Pesticides, Metals, Cyanide
TB080311	3/11/08	TCL VOCs

The following table represents all validator applied data qualification:

<i>Sample</i>	<i>Sample Date</i>	<i>Analysis</i>	<i>Analyte</i>	<i>Qualification</i>
				<i>Validator Flag (final flag)</i>
UK1BSL01110	3/11/08	VOCs	Bromomethane	UJ
UK1BSL01110	3/11/08	VOCs	Chloroethane	UJ
UK1BSL01110	3/11/08	VOCs	Chloromethane	UJ
UK1BSL01110	3/11/08	VOCs	Vinyl chloride	UJ
UK1BSL01110	3/11/08	VOCs	Bromoform	UJ
UK1BSL01110	3/11/08	VOCs	Tetrachloroethylene	UJ
UK1BSL01110	3/11/08	VOCs	o-Xylene	UJ
UK1BSL01110	3/11/08	SVOCs	2,4-Dinitrophenol	UJ
UK1BSL01110	3/11/08	SVOCs	4-Nitrophenol	UJ
UK1BSL01110	3/11/08	SVOCs	Fluorene	J
UK1BSL01110	3/11/08	SVOCs	Pentachlorophenol	UJ
UK1BSL01110	3/11/08	Pesticides	alpha-BHC	UJ
UK1BSL01110	3/11/08	Pesticides	gamma-BHC	UJ
UK1BSL01110	3/11/08	Pesticides	beta-BHC	UJ
UK1BSL01110	3/11/08	Pesticides	gamma-chlorodane	J
UK1BSL01110	3/11/08	Pesticides	alpha-chlorodane	J
UK1BSL01110	3/11/08	Pesticides	4,4'-DDE	J
UK1BSL01110	3/11/08	Pesticides	Endosulfan I	J
UK1BSL01110	3/11/08	Pesticides	Dieldrin	J
UK1BSL01110	3/11/08	Pesticides	Endrin	UJ
UK1BSL01110	3/11/08	Pesticides	4,4'-DDD	J
UK1BSL01110	3/11/08	Pesticides	4,4'-DDT	UJ
UK1BSL01110	3/11/08	Pesticides	Methoxychlor	UJ
UK1BSL01110	3/11/08	Pesticides	Endrin Aldehyde	UJ
UK1BSL01110	3/11/08	Pesticides	Endrin Ketone	UJ
UK1BSL01110	3/11/08	Metals	Aluminum	J
UK1BSL01110	3/11/08	Metals	Antimony	UJ
UK1BSL01110	3/11/08	Metals	Arsenic	R



DATA VALIDATION REPORT

Sample	Sample Date	Analysis	Analyte	Qualification
				Validator Flag (final flag)
UK1BSL01110	3/11/08	Metals	Calcium	J
UK1BSL01110	3/11/08	Metals	Iron	J
UK1BSL01110	3/11/08	Metals	Magnesium	J
UK1BSL01110	3/11/08	Metals	Manganese	J
UK1BSL01110	3/11/08	Metals	Potassium	J
UK1BSL01110	3/11/08	Metals	Selenium	UJ
UK1BSL01110	3/11/08	Metals	Thallium	R
FB080311	3/11/08	VOCs	Bromomethane	UJ
FB080311	3/11/08	VOCs	Chloroethane	UJ
FB080311	3/11/08	SVOCs	Pyridine	UJ
FB080311	3/11/08	SVOCs	3-Nitroaniline	UJ
FB080311	3/11/08	SVOCs	2,4-Dinitrophenol	UJ
FB080311	3/11/08	SVOCs	4-Nitrophenol	UJ
FB080311	3/11/08	SVOCs	4-Nitroaniline	UJ
FB080311	3/11/08	SVOCs	3,3'-Dichlorobenzidine	UJ
FB080311	3/11/08	SVOCs	Pentachlorophenol	UJ
FB080311	3/11/08	SVOCs	Carbazol	UJ
FB080311	3/11/08	Pesticides	alpha-BHC	UJ
FB080311	3/11/08	Pesticides	gamma-BHC	UJ
FB080311	3/11/08	Pesticides	beta-BHC	UJ
FB080311	3/11/08	Pesticides	Endrin	UJ
FB080311	3/11/08	Pesticides	4,4'-DDT	UJ
FB080311	3/11/08	Pesticides	Methoxychlor	UJ
FB080311	3/11/08	Pesticides	Endrin Aldehyde	UJ
FB080311	3/11/08	Pesticides	Endrin Ketone	UJ
FB080311	3/11/08	Metals	Aluminum	UJ
FB080311	3/11/08	Metals	Magnesium	UJ
FB080311	3/11/08	Metals	Manganese	0.022 U
FB080311	3/11/08	Metals	Mercury	UJ
FB080311	3/11/08	Metals	Selenium	UJ
FB080311	3/11/08	Metals	Silver	R
FB080311	3/11/08	Metals	Sodium	R
TB080311	3/11/08	VOCs	Bromomethane	UJ
TB080311	3/11/08	VOCs	Chloroethane	UJ

Major

Deficiencies: Metals by SW-846 6010B:

- ◇ The initial calibration verification (C3210-47) and continuing calibration verification (C3210-69) displayed %Rs less than the lower rejection threshold (i.e., 75%) for sodium at 60.5% and 50.8, respectively. The associated sample result was flagged "R".



DATA VALIDATION REPORT

- ◇ The aqueous laboratory control sample (LCS) displayed %Rs less than the rejection threshold (i.e., 50%) for silver at 15.1%. The associated sample result was flagged “R”.

SVOCs by SW-846 8270C:

- ◇ The internal standards chrysene-d12 and perylene-d12 displayed area counts less than the rejection threshold (i.e., 25%) for sample UK1BSL01110 at 19.9% and 21.9%, respectively. The associated non-detect results were flagged “R”, and the associated positive results were flagged “J”.

Minor

Deficiencies: Metals by SW-846 6010:

- ◇ The interference check standard (ICS) run on instrument C3210 displayed %Rs less than the lower control limit (i.e., 80%) for aluminum at 77.3% and iron at 78.8%. Associated positive sample results were flagged “J”, non-detects were flagged “UJ”.
- ◇ The beginning and ending interference check standard (ICS) displayed detections greater than the control limit (i.e., \pm CRDL) for antimony at 114 μ g/L and 110 μ g/L, respectively; arsenic at -58 μ g/L and -49.1 μ g/L, respectively; selenium at 48 μ g/L and 60.7 μ g/L; and thallium at -54.8 μ g/L and -63.4 μ g/L, respectively. The concentrations of the potential interfering analytes, aluminum, calcium, iron, and magnesium, in the associated samples were either less than the amount found in the ICS check standard or were non-detect. The positive calcium result was flagged “J”; the non-detect aluminum, iron, and magnesium results were flagged “UJ”.
- ◇ The aqueous continuing calibration blanks (E1737-34 and E1737-46) displayed negative detections for mercury at -0.14 ug/L, and -0.14 ug/L, respectively. The associated sample results were non-detect and flagged “UJ”.
- ◇ The preparation blank (C3210-35[158154]) displayed a positive detection for manganese at 35.4 ug/L. The associated sample FB080311 result was flagged “U” at the sample concentration.
- ◇ The continuing calibration verification (C3182-118) displayed %Rs less than the lower control limit (i.e., 90%) for aluminum at 89.3%, calcium at 85.6%, iron at 82.1%, and manganese at 88.4%. The associated positive sample results were flagged “J”; non-detects were flagged “UJ”.
- ◇ The batch matrix spike (0803119-03) displayed a %R greater than the upper control limit (i.e., 125%) for manganese at 127%. Associated sample results were flagged as “J”.
- ◇ The batch matrix spike (0803119-01) displayed a %R less than the lower control limit (i.e., 75%) for antimony at 66.5%. Associated sample results were flagged as “UJ”.
- ◇ The batch matrix spike (0803126-01) displayed a %R less than the lower control limit (i.e., 75%) for manganese at 57.0%. The associated positive sample result was flagged “J”.



DATA VALIDATION REPORT

- ◇ The LCS displayed a %R greater than the upper control limit (i.e., 120%) for manganese at 123%, and sodium at 127%. The associated positive sample result was flagged “J”.
- ◇ The LCS displayed a %R less than the lower control limit (i.e., 80%) for aluminum at 42.4%. The associated positive sample result was flagged “J”.
- ◇ The aqueous LCS displayed %Rs greater than the upper control limit (i.e., 120%) for potassium at 150%, and sodium at 136%. The associated positive sample result was flagged “J”.

VOCs analyses by SW-846 8260B:

- ◇ The initial calibration analyzed on instrument A2694 on 2/28/2008 displayed relative standard deviations (RSDs) greater than the control limit (i.e., 15%) for bromomethane and chloroethane at 18.34% and 22.38%, respectively. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument B2589 on 2/28/2008 displayed RSDs greater than the control limit for chloromethane at 18.21%, vinyl chloride at 20.57%, bromomethane at 16.37%, and chloroethane at 17.26%, and bromoform at 16.33%, respectively. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The continuing calibration analyzed on 3/13/2008 at 10:38 displayed percent deviations (%Ds) greater than the control limit (i.e., $\pm 20\%$) with negative biases for tetrachloroethene at -21.3% and o-xylene at -20.6%. Associated sample results were non-detect and were flagged “UJ”.

SVOCs analyses by SW-846 8270C:

- ◇ The initial calibration analyzed on instrument A1803 on 3/4/2008 displayed RSDs greater than the control limit for pyridine at 15.98%, 3-nitroaniline at 29.33%, 2,4-dinitrophenol at 42.96%, 4-nitrophenol at 36.12%, 4-nitroaniline at 22.75%, pentachlorophenol at 27.43%, carbazole at 22.15%, and 3,3'-dichlorobenzidine at 19.48%, and dibenz(a,h)anthracene at 28.08%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The initial calibration analyzed on instrument B2317 on 3/12/2008 displayed RSDs greater than the control limit (i.e., 15%) for 2,4-dinitrophenol at 35.01%, 4-nitrophenol at 38.24%, fluorene at 18.54%, and pentachlorophenol at 23.22%. Associated sample results were non-detect and were flagged “UJ”.
- ◇ The continuing calibration analyzed on 3/14/2008 at 9:37 displayed a %D greater than the control limit (i.e., $\pm 20\%$) with negative bias for 3-nitroaniline at -53.7%. Associated sample results were non-detect and were flagged “UJ”.

Pesticides by SW-846 8081A:

- ◇ The continuing calibration verification analyzed on 3/10/2008 at 12:42 displayed relative percent differences (RPDs) greater than the control limit (i.e., $\pm 15\%$) on the front



DATA VALIDATION REPORT

chromatography column with negative biases for alpha-BHC at 49.0%, gamma-BHC at 44.3%, beta-BHC at 34.9%, endrin at 34.5%, 4,4'-DDT at 28.6%, and methoxychlor at 23.5%. In addition, the rear column displayed an RPD greater than the control limit for with a negative bias for methoxychlor at 16.7%. The associated non-detect sample results were flagged "UJ".

- ◇ The continuing calibration analyzed on 3/13/2008 at 10:35 displayed %Ds greater than the control limit (i.e., $\pm 15\%$) on the front chromatography column with positive biases for gamma-chlordane at 24.6%, alpha-chlordane at 24.7%, 4,4'-DDE at 24.6%, endosulfan I at 15.3%, and 4,4'-DDD at 29.7%. The associated positive sample results were flagged "J".
- ◇ The continuing calibration analyzed on 3/13/2008 at 17:14 displayed %Ds greater than the control limit (i.e., $\pm 15\%$) on the rear chromatography column with negative biases for endrin aldehyde at -15.7%, and endrin ketone at -18.3%, respectively. The associated non-detect sample results were flagged "UJ".
- ◇ Sample UK1BSL01110 displayed dual column imprecision between the front and rear chromatography columns greater than the control limit (i.e., 25%) for dieldrin at 31.4%. The associated positive sample result was flagged "J".

Other

Deficiencies: Metals by SW-846 6010B:

- ◇ The continuing calibration verification (C3210-47) displayed a %R higher than the rejection threshold (i.e., 125%) for potassium at 191%. In addition, a %R lower than the rejection threshold (i.e., 75%) was displayed for sodium at 50.8%. Since the associated sample results were previously flagged for other anomalies, no further data qualification was necessary.
- ◇ The continuing calibration verification (C3182-104) displayed a %R higher than the upper control limit (i.e., 110%) for potassium at 124%. Since the associated sample result was non-detect, no data qualification was necessary.
- ◇ The aqueous initial calibration verification (E1737-9) and continuing calibration blank (E1737-22) displayed negative detections for mercury at -0.0089 ug/L and -0.13 ug/L. Since the associated sample result was greater than 10x the blank concentration, no data qualification was necessary.
- ◇ The preparation blank (batch # 158169) displayed a positive detection for iron at 9.90 mg/Kg and potassium at 10.3 mg/Kg. Since the associated sample results were greater than 10x the blank concentration, no data qualification was necessary.
- ◇ The preparation blank (batch # 158154) and continuing calibration blanks (C3182-119 and C3182-157) displayed positive detections for the majority of compounds analyzed at concentrations measured in $\mu\text{g/L}$. Since all of the sample results were greater than 10x the blank concentration, no data qualifications were necessary.



DATA VALIDATION REPORT

- ◇ The aqueous preparation blank (batch # 158154) displayed a positive detection for calcium at 118 µg/L, iron at 89.0 µg/L, magnesium at 156 µg/L, nickel at 0.8 µg/L, potassium at 145 µg/L, and sodium at 216 µg/L. Since the associated sample results were either non-detect or greater than 10x the blank concentration, no data qualification was necessary.
- ◇ The field blank sample displayed a positive detection for manganese at 0.022 mg/L. This result was qualified as “U” based on laboratory blank contamination and was not used to evaluate contamination resulting from field sampling activities.
- ◇ The field blank sample displayed a positive detection for calcium at 0.035 mg/L, and zinc at 0.016 mg/L. Since the associated sample results were greater than 10x the blank concentration, no data qualification was necessary.
- ◇ The batch matrix spike (0803126-01) did not recover (i.e., 0%) for iron. Since the amount found in the parent sample was greater than 4x the spiking concentration, no data qualification was necessary.
- ◇ The initial contract required detection limit (CRDL) standards (C3182-89 and C3182-146) displayed a %R less than the lower control limit (i.e., 70%) for selenium at 65.0%. Since the associated sample was non-detect, no data qualification was necessary.
- ◇ The initial and final CRDL standards (C3182-89 and C3182-146) displayed %Rs higher than the upper control limit (i.e., 130%) for zinc at 150% and 147%, respectively. Since the associated samples were greater than twice the CRDL, no data qualification was necessary.
- ◇ The initial CRDL standards (C3210-32) displayed a %R higher than the upper control limit (i.e., 70%) for selenium at 131%. In addition, the initial and final CRDL standards (C3210-32 and C3210-59) displayed %Rs higher than the upper control limits for thallium at 183% and 143%. Since the associated samples were either non-detect or greater than twice the CRDL, no data qualification was necessary.
- ◇ The beginning and ending interference check standard (ICS) displayed detections greater than the control limit (i.e., ±CRDL) for antimony at 143 µg/L and 98.8 µg/L, respectively; arsenic at -61.3 µg/L and -47.4 µg/L, respectively; selenium at 54.1 µg/L and 67.7 µg/L; and thallium at -78.1 µg/L and -68.4 µg/L, respectively. The concentrations of the potential interfering analytes, aluminum, calcium, iron, and magnesium, in the associated samples were greater than the amount found in the ICS check standard. Since the amount found in the associated sample were greater than the amount found in the ICS check standard, no data qualification was necessary.
- ◇ The batch matrix spike (0803119-03) displayed a %R greater than the upper control limit (i.e., 125%) for selenium at 126%. Since the associated sample result was non-detect, no data qualification was necessary.
- ◇ The LCS displayed %Rs greater than the upper control limit (i.e., 120%) for antimony at 183% and selenium at 123%. Since associated sample results were non-detect, no data qualification was necessary.



DATA VALIDATION REPORT

VOC analyses by SW-846 8260B:

- ◇ The continuing calibration analyzed on 3/12/2008 at 11:02 displayed a %D greater than the control limit (i.e., $\pm 20\%$) with a positive bias for 2-hexanone at 29.0%. Since the associated sample results were non-detect, no further data qualification was necessary.

SVOC analyses by SW-846 8270C:

- ◇ The sample FB080311 displayed a %R less than the lower control limit (i.e., 24%) for phenol-d6 at 22.0%. However, qualification was not warranted because semivolatiles data are not qualified unless two or more surrogates within the same fraction are out of specification.
- ◇ The continuing calibration analyzed on 3/14/2008 at 11:10 displayed a %D greater than the control limit (i.e., $\pm 20\%$) with positive bias for 2,4-dinitrophenol at -25.5%. Since the associated sample results were non-detect, no data qualification was necessary.

Pesticides by SW-846 8081A:

- ◇ The continuing calibration analyzed on 3/13/2008 at 10:09 displayed RPDs greater than the control limit (i.e., $\pm 15\%$) on the front chromatography column with positive biases for gamma-BHC at 16.1% and endrin at 21.6%. Since the associated sample results were non-detect, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 3/13/2008 at 10:09 displayed RPDs greater than the control limit (i.e., $\pm 15\%$) on the rear chromatography column with negative biases for alpha-BHC at 30.3%, gamma-BHC at 28.6%, and beta-BHC at 23.0%. Since associated samples were previously flagged for continuing calibration anomalies, no further data qualification was necessary.
- ◇ The continuing calibration analyzed on 3/13/2008 at 10:35 displayed a %D greater than the control limit (i.e., $\pm 15\%$) on the rear chromatography column with a positive bias for endrin at 22.1%. Since the associated sample results were non-detect, no data qualification was necessary.
- ◇ The continuing calibration analyzed on 3/13/2008 at 17:14 displayed %Ds greater than the control limit (i.e., $\pm 15\%$) on the front chromatography column with positive biases for alpha-BHC at 15.6%, gamma-BHC at 22.2%, delta-BHC at 30.9%, heptachlor epoxide at 15.9%, endrin at 20.3%, gamma-chlordane at 25.6%, alpha-chlordane at 24.6%, 4,4'-DDE at 23.8%, and 4,4'-DDD at 22.0%. Since the associated sample results were either non-detect or previously flagged for a continuing calibration anomaly, no further data qualification was necessary.

Comments: The laboratory did not report the pH of the samples within the data package. Sample pH was therefore not subject to review.



DATA VALIDATION REPORT

On the basis of this evaluation, the laboratory appears to have correctly applied data qualifiers to the results according to the provisions of the guidelines, with the exception of errors discussed above.

If a given fraction is not mentioned above, that means that all specified criteria were met for that fraction.

Signed:

A handwritten signature in black ink, appearing to read 'Nicole Simonowicz', written in a cursive style.

Nicole Simonowicz

APPENDIX B
Subsurface Features Photographs



Photograph 1 – View of SF-01, interpreted as a storm water catch basin, was a 3-foot diameter metal grate covering a circular brick and concrete-walled basin approximately 6.5 feet deep. The basin widened with depth, contained two 12-inch diameter terra cotta inlet/outlet pipes, and appeared to have an earthen bottom.



Photograph 2 – Stained soil at 12 feet bgs within SF-01.
All stained soil was removed and the excavation was
completed to 12.5 feet bgs.



Photograph 3 – Portion of an 8-foot diameter, 1-foot thick by 1-foot wide concrete ring that was encountered at a depth of 11.5 feet bgs within SF-01.



Photograph 4 – View of SF-02, interpreted as a slab-mounted utility/electrical junction box, is a 14-inch wide by 20-inch long by 8-inch deep metal box covered by a 14-inch wide by 20-inch long metal plate. SF-02 was not excavated.



Photograph 5 - View of SF-03, interpreted as a storm water catch basin; SF-03 was a 32-inch diameter cinder block and brick-walled basin, ~10 feet deep with an open bottom and covered by a 34-inch square steel plate. The basin widened with depth and contained two terra cotta inlet/outlet pipes located approximately two feet bgs.



Photograph 6 – Stained soil at ~5 feet bgs in SF-03 excavation. The excavation was 11 feet deep at completion.



Photograph 7 - SF-04, interpreted as a storm water catch basin, was a 3-foot diameter vertical brick-walled basin, approximately 5 feet deep with an open bottom and covered by a 37-inch square steel plate.



Photograph 8 - One of two horizontal 12-inch diameter terra cotta inlet/outlet pipes located at ~3 feet bgs within SF-04.



Photograph 9 – SF-05, interpreted as a storm water catch basin, was an ~24-inch diameter vertical brick basin with a solid concrete bottom that was covered by a 23-inch diameter steel manhole cover. SF-05 was connected to SF-06 by a terra cotta inlet/outlet pipe that entered the basin at a depth of 2 feet bgs.



Photograph 10 - SF-06 was a 25-inch diameter vertical brick basin with a solid concrete bottom that was covered by a 37-inch square steel cover. The basin walls appeared to extend to a depth of 5-feet bgs.



Photograph 11 - SF-07, interpreted as a storm water catch basin, was a 32-inch diameter vertical brick and concrete-walled basin with a solid bottom. The catch basin contained two 12-inch diameter terra cotta inlet/outlet pipes that were oriented generally northwest-southeast.



Photograph 12 – View of partially excavated brick and concrete-walled basin at SF-07.



Photograph 13 – SF-08 was located near the northwestern corner of Building U. Pictured is the trapezoidal shaped steel cover. SF-08 was interpreted as a small brick and mortar catch basin, approximately 4-feet by 4-feet by 4-feet deep.. The roof drain pictured in the background discharged to SF-08. 6-inch diameter terra cotta piping entered SF-08 from the east and west.



Photograph 14 - SF-08 and all associated piping was excavated and removed on March 2, 2008. The piping from SF-08 was traced to the east to UK-44, and to the west to the SF-01 excavation completed during 2006.



Photograph 15 - SF-13, interpreted as a fire water main access vault, was historically identified as a 2-foot by 3-foot cinder block structure with a steel cover. The only subsurface feature AMO observed in the vicinity of SF-13 was an 8-inch diameter steel pipe shown above.



Photograph 16 – SF-14, interpreted as a city water main access vault, was a 4-foot square vault with a solid bottom approximately 5 feet deep.



Photograph 17 – View of a 10-inch diameter water main with two capped valve boxes trending north-south within the SF-14 vault.



Photograph 18 – SF-15, interpreted as a former sanitary sewer access sump, was a 24-inch deep concrete basin with a solid bottom and a 20-inch diameter steel manhole cover. Three 6-inch diameter terra cotta pipes entered the basin from the west. Two pipes are plugged with wood.



Photograph 19 - SF-16 and SF-17, interpreted as former storm or sanitary sewer access sumps, were 2-foot diameter steel manholes that led into a 15.5-foot long by 13.5-foot wide by 7.5-foot deep concrete vault. SF-16 manhole is shown above.



Photograph 20 – SF-16/SF-17 excavation looking south.



Photograph 21 - SF-18, interpreted as a former gas main access point, was a two-inch diameter vertical steel pipe. The capped steel pipe was in an enclosed seven-foot wide by seven-foot long by six-foot tall brick shed located in a courtyard east of Building A and south of Building E.



Photograph 22 – View of SF-18 gas main pipe following demolition of the brick enclosure (looking east).



Photograph 23 – SF-19, interpreted as slab-mounted electrical junction boxes, consisted of 21 metal boxes. View above of metal-plate covered box is typical of the majority of boxes.



Photograph 24 – View of SF-19 excavation area for 21 electrical junction boxes.



Photograph 25 – SF-20, interpreted as a former machine foundation and pit, consisted of three patched areas in the concrete floor (looking west).



Photograph 26 – View of one of the three vaults excavated from SF-20 after removal of demolition debris.



Photograph 27 – SF-20 excavation area looking east.



Photograph 28 – SF-21, interpreted as a former septic clean-out access sump, was a 2.5-foot square poured concrete vault with an open bottom that was covered with a steel plate.



Photograph 29 – SF-21 contained horizontal east-west trending 4-inch diameter cast iron piping.



Photograph 30 – SF-25, interpreted as a fire water main access vault, was a three-foot square cinder block vault approximately four feet deep with a solid bottom and a three-foot square steel cover.



Photograph 31 – The SF-25 vault contains a 6-inch diameter steel pipe trending north-south and a vertically-oriented shut-off valve offset to the west of the pipe as shown above.



Photograph 32 - SF-27, interpreted as an electrical service access vault, was a 5-foot wide by 4-foot long by 2.5-foot deep cinder block vault that was covered by two steel plates. SF-27 had an earthen bottom.



Photograph 33 - The SF-27 open-bottomed vault contained numerous electrical conduits and wires as shown above.



Photograph 34 – View of SF-41 prior to excavation (looking south).



Photograph 35 – The SF-41 steel UST appeared to be used for containerizing water. Piping from SF-41 was traced to the water well located in the SF-39/SF-40 well vault.



Photograph 36 - SF-42, interpreted as a blind floor sump, was a vertically-oriented 19-inch diameter by 22-inch long fiberglass cylinder with an open bottom.



Photograph 37 – The open-bottomed fiberglass cylinder at SF-42 was filled with sediment, concrete and brick debris.



Photograph 38 - SF-43, interpreted as a blind floor sump, was initially identified as an 18-inch diameter circular depression in the concrete floor slab of former Building A as shown above.



Photograph 39 - During excavation, SF-43 was identified as a vertically-oriented 19-inch diameter by 24-inch long fiberglass cylinder with an open bottom, which was filled with bentonite.



Photograph 40 – No stained soil was observed in the SF-43 excavation.



Photograph 41 - SF-44, interpreted as a floor drain in a former electrical room, was located within former Building A.



Photograph 42 – The SF-44 floor drain was a 3-inch diameter vertical steel drain pipe located inside a 9-foot by 15-foot concrete structure. The pipe discharged to a small 4-foot square by 2-foot deep cinder block vault with an earthen bottom.



Photograph 43 – SF-45, interpreted as a blind floor sump, was initially identified as a two-foot diameter depression and concrete patch in the floor slab of former Building A as shown above.



Photograph 44 - During excavation activities, SF-45 was identified as a poured concrete basin with a solid bottom. The structure contained solid resin, concrete and bentonite fill.



Photograph 45 – SF-46, interpreted as former lavatory floor drains and water supply piping, was comprised of two vaults located approximately 23 feet apart.



Photograph 46 – View above is of a 2.0-foot by 4.0-foot vault. The vault contained a vertical steel pipe that connected to the vault located approximately 23 feet to the north. Vault was filled with sediment, brick and concrete debris.



Photograph 47 – View of water supply piping and shut-off valve observed in the southern vault of SF-46.



Photograph 48 – View (looking north) of SF-46 excavation and 2-inch diameter steel pipe that ran between the two vaults.



Photograph 49 – SF-47, interpreted as a former machine foundation pit, was four 2.5-foot square by 2-feet deep concrete vaults with concrete bottoms formed within a large concrete “footer.”



Photograph 50 – view of SF-48 during demolition. Orange painted spots near center of photograph are “fill ports”. Rail structures associated with SF-48 can be seen running from left to right (north) beneath the excavator tracks.



Photograph 51 – view of SF-48 (looking north) during excavation. Note piping with electrical cables and rail structures associated with SF-48.



Photograph 52 – View of SF-48 during excavation showing “fill ports” and attached horizontal piping. SF-48, located within former Building U, was a series of two north-south oriented rows of fuel oil fill ports and piping, associated steel rails, and cement filled electrical boxes. Upon excavation, the fill ports and piping appeared to have been used as electrical conduits. The north and south ends of the piping entered electrical pull boxes that were also filled with cement. View is to the south.



Photograph 53 – SF-49, interpreted as a former machine foundation vault, was a 4-foot wide by 9-foot long by 6-foot deep concrete vault with an open bottom that was sealed by a 4.5-foot by 9.5-foot concrete cover.



Photograph 54 – view of SF-49 vault following removal of concrete cover and demolition debris.



Photograph 55 – View of SF-49 excavation looking to the east.



Photograph 56 – SF-51, interpreted as a former septic clean-out access vault, was a 2-foot by 2.5-foot poured concrete vault with an open bottom and covered with a metal plate. Two 4-inch diameter cast iron pipes with cleanouts were present within the vault.



Photograph 57 – SF-55, interpreted as a former production water well vault and steel UST used for containing the well water. The vault was 10-feet by 10-feet by 8-feet deep with two 32-inch square steel manhole covers. View is to the north.



Photograph 58 – View of the 65-foot deep, 12-inch diameter water well within the SF-55 vault. The well was abandoned prior to excavation of the vault and UST.



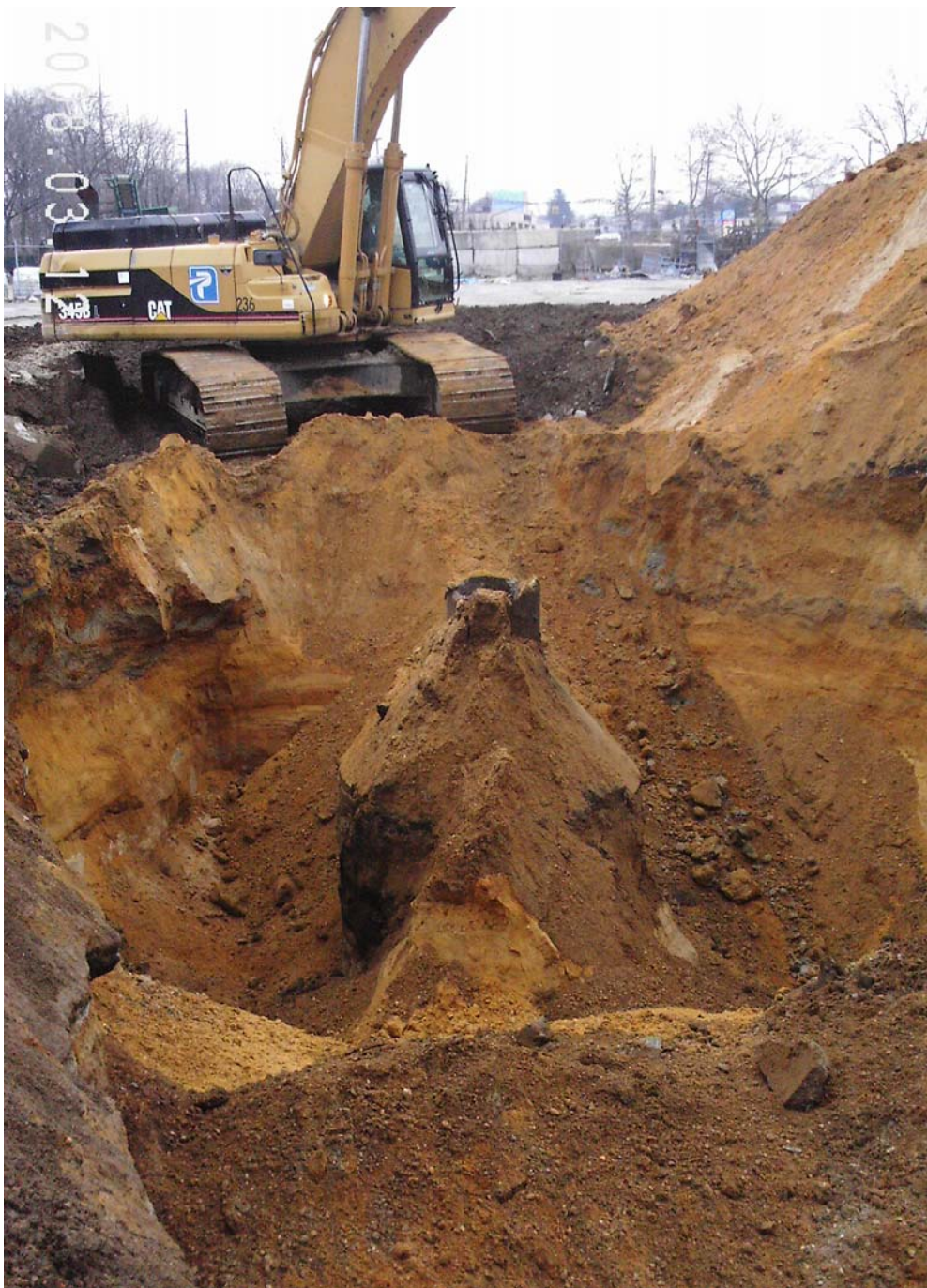
Photograph 59 – View during excavation of the vault and 6,200-gallon steel UST associated with SF-55.



Photograph 60 – UK-01 was interpreted as a stormwater catch basin at the base of southern loading dock at Building U.



Photograph 61 – Upon excavation, piping from UK-01 was traced to this dry well located south of UK-01. Piping from this drywell was traced east to UK-01A. The broken sidewall of UK-01A can be seen at the right of the photograph beneath the excavator. View is to the northeast.



Photograph 62 – UK-01B was exposed after tracing piping to the east from UK-01A. All three features were located south of the Building U loading dock. UK-01 and UK-01B were connected to stormwater catch basins. UK-01A appeared to act as an overflow for UK-01 and UK-01B. View is to the east.



Photograph 63 – view of groundwater entering UK-01B excavation as the base of UK-01B was encountered.



Photograph 64 - UK-05, interpreted as potentially being associated with the Northern Leaching Chamber Field, was visible as a depression partially beneath an 18-inch thick concrete slab south of the “small brick building” (looking west).



Photograph 65 – view of piping traced to the southeast from UK-05 (view to the northwest).



Photograph 66 - UK-07, interpreted as a blind floor sump, was a five-gallon plastic bucket placed vertically within the concrete floor of former Building A.



Photograph 67 – UK-08 was identified as storm water drainage pipes at the base of a loading dock within Building E. These pipes extended 2 feet vertically beneath the base of the loading dock ramp into an inaccessible vault of unknown construction.



Photograph 68 – UK-09, identified as a blind floor sump, was a 12-inch diameter by 38-inch long open-bottomed fiberglass pipe with an expanded metal screen at the top.



Photograph 69 - View of UK-09 during excavation. The end of cylinder was placed in sandier native material.



Photograph 70 – UK-10, interpreted as a blind floor sump, was a 32-inch diameter concrete basin with a concrete bottom covered by a 24-inch diameter metal drainage grate.



Photograph 71 – view of UK-33/UST-13A excavation.



Photograph 72 – UK-33/UST-13 vault was located within the former Building A slab (view to the east).



Photograph 73 – during excavation of UK-33, UST-13A was encountered.



Photograph 74 – UK-37 was a series of three dry wells that were interpreted to be the southeastern most features of the Northern Leaching Chamber Field (looking northwest).



Photograph 75 – UK-37 excavation nearing completion (looking southeast).



Photograph 76 – UK-42, interpreted to be a water main valve box, was located in the former pump room west of Building H (looking northwest).



Photograph 77 – UK-43, interpreted as a former lavatory facility with sewage cleanout vaults and piping, was excavated and removed on February 13, 2008 (looking north).



Photograph 78 - UK-44, interpreted as a stormwater catch basin, was located at the northeastern corner of Building U. Piping from UK-44 ran to SF-01, SF-08 and UK-45. View is to the south.



Photograph 79 – view of trench excavated to trace piping from SF-01 and SF-08 to UK-44 (looking west).



Photograph 80 – UK-45, interpreted as a stormwater catch basin, was located south of Building U in asphalt pavement. View is to northeast.



Photograph 81 – view of UK-45 structure after excavation. Top of structure with grate is facing viewer.



Photograph 82 – view of UK-46 (looking east), discovered while excavating test trenches across SF-48 excavation to verify that no UST was present at SF-48.



Photograph 83 – view of UK-46 excavation and pipe running to the north (looking north). Pipe was traced to the north where it intersected with pipe connecting SF-01, SF-08 and UK-44.



Photograph 84 – photo showing fence posts marking the location of UK-54 and UK-55, two southern most features of the eastern Leaching Chamber Field (looking south).



Photograph 84 – view of domed concrete lid of UK-54 being removed during excavation.



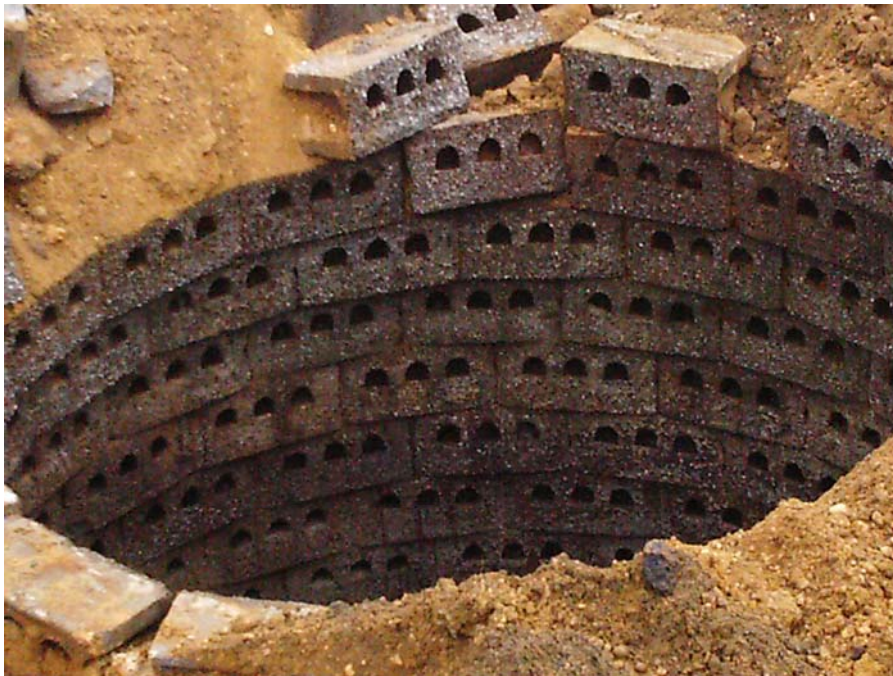
Photograph 86 – view of excavation around UK-55 (looking south) to allow evaluation prior to removal .



Photograph 87 – view of UK-56 (middle feature of the eastern Leaching Chamber Field) prior to removal of the feature.



Photograph 88 – view (looking south) of excavation surrounding UK-57 to allow evaluation prior to removal.



Photograph 89 – view of interior construction of UK-58. Wall construction beneath the concrete lid was identical on all 5 features identified as part of the Eastern Leaching Chamber Field.



Photograph 90 – view of pipe excavation from UK-45, which led to the discovery of UK-59. Pipe that exited UK-59 can be seen at the lower right of the photo.



Photograph 91 – view of concrete lid being removed from UK-59. A portion of UK-59, interpreted as a stormwater drain cleanout box, can be seen on the left side of the photo.

APPENDIX C

Waste Disposal Manifests and Weigh Slips

**BUSCH BROS. CESSPOOL,
SEWER & DRAIN, CORP.**
ONE WATKINS TERRACE
NORTH AMITYVILLE, NEW YORK 11701-1200
PHONE (631) 841-0800
FAX (631) 841-0628

JOB WORK ORDER

Arrived on job A.M. / P.M. MECHANIC HELPER DATE
 Left job A.M. / P.M. *SHK*

JOB NAME *Marine Collection Control* JOB PHONE

ADDRESS *55 Meeker Ave*

CITY *Lawrenceville*

BILL TO PHONE

ADDRESS

LATE NIGHT
 SUNDAY
 HOLIDAY

NEW
 REFERRAL
 REPEAT

PUMPING *3000 gal load to City*

CHEMICALS *Rock*

LINE CLEANING

SINK TUB TOILET

LABOR

OTHER

Purchaser shall provide access to job site. It shall be the obligation of the Purchaser to inform the Service Company of any above or below ground or hidden perils. The Seller shall not be responsible for damage above or below ground to property or hidden perils. Signor assumes liability representatively and personally for payment of contract amount.

DATE PAID **CHECK NO.**

AMT. REC'D
 CASH M.C. VISA LEFT BILL

GENERATOR SIGNED STATEMENT
 I am the owner, or lessor, of the individual Sewage Disposal

DEPARTMENT OF PUBLIC WORKS
 Nassau County, N.Y. **H**
CESSPOOL WASTES DISPOSAL RECEIPT

Collector: Name _____

Address: _____

Capacity of Tank in Gallons _____

Permit No. _____ License No. _____ Date _____

Plant Attendant _____
 (SIGNATURE)

Driver _____
 (SIGNATURE)

The above form is to be made out in duplicate for each load. One copy to be given to the collector for his record, and copy for plant record.
 PW-4781, Rev. 2/98

**BUSCH BUS. GESSPOUL,
SEWER & DRAIN, CORP.**
ONE WATKINS TERRACE
NORTH AMITYVILLE, NEW YORK 11701-1200
PHONE (831) 641-0600
FAX (831) 641-0629

JOB WORK ORDER

Arrived on job A.M. / P.M.
Left job A.M. / P.M.

MECHANIC	HELPER	DATE 5/1/16
----------	--------	----------------

JOB NAME		JOB PHONE	
ADDRESS			
CITY			<input type="checkbox"/> LATE NIGHT <input type="checkbox"/> SUNDAY <input type="checkbox"/> HOLIDAY
BILL TO		PHONE	
ADDRESS			
			<input type="checkbox"/> NEW <input type="checkbox"/> REFERRAL <input type="checkbox"/> REPEAT

PUMPING			
CHEMICALS			
LINE CLEANING			
SINK TUB TOILET			
LABOR			
OTHER			

Purchaser shall provide access to job site. It shall be the obligation of the Purchaser to inform the Service Company of any above or below ground or hidden perils. The Seller shall not be responsible for damage above or below ground to property or hidden perils. Signor assumes liability representatively and personally for payment of contract amount.

SUB TOTAL		
TAX		
TOTAL		

*** COLLECTION COSTS:*** I agree to pay any cost of collection money I owe under this agreement, including court costs, attorneys fees, and any other disbursements not in excess of 18% of the unpaid debt.

DATE PAID: _____
 CHECK NO.: _____
 AMT. REC'D: _____
 CASH M.C. VISA LEFT BILL

GENERATOR SIGNED STATEMENT

I, _____ hereby affirm that I am the owner, or user, of the Individual Sewage Disposal Facility (septic tank/leaching facilities) located at the address of the invoice and: (1) That the facilities to be pumped contain only sanitary sewage; (2). That I have not been notified by the Suffolk County Department of Health or the Nassau County Department of Health to have this system pumped by a licensed industrial hauler, that neither I nor any person in my family or in my employ have added any chemical solvent waste or industrial wastes of any kind to the facility to be pumped and that I make this Statement knowing that the waste will be disposed of at a Municipal Septage Treatment Facility and that in the event that any chemical solvent waste or industrial waste of any kind have been added, legal action may be undertaken by the appropriate regulatory agency against any or all parties involved.
 "I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law".

107
DEPARTMENT OF PUBLIC WORKS
Nassau County, N.Y.
CESSPOOL WASTES DISPOSAL RECEIPT

H 581

Collector: Name _____

Address: _____

Capacity of Tank in Gallons 3800 _____

Permit No. 10 License No. _____ Date _____

Plant Attendant _____
(SIGNATURE)

Driver _____
(SIGNATURE)

The above form is to be made out in duplicate for each load. One copy to be given to t
for for his record, and copy for plant record.
PW-4781, Rev. 2/88

1000 N. W. 11th St. - 500
 11701-1900
 11701-1900

DATE	4/27/06
CITY	West Suffern
STATE	N.Y.
ADDRESS	85 Motive Pkwy Farmingdale N.Y.
PHONE	
QUANTITY	7000 gals
REMARKS	Disposal at Bay Park on 4/28/06
LABOR	
OTHER	Transport to Bay Park Sewage Disposal Facility per written approval letter
<input type="checkbox"/> LATE NIGHT <input type="checkbox"/> SUNDAY <input type="checkbox"/> HOLIDAY	<input type="checkbox"/> NEW <input type="checkbox"/> REFERRAL <input type="checkbox"/> REPEAT
SUB TOTAL TAX TOTAL	
DATE PAID CHECK NO. AMT. PAID BY FOR	

8 AM

DEPARTMENT OF PUBLIC WORKS
 Nassau County, N.Y. H 5860
 CESSPOOL WASTES DISPOSAL RECEIPT

Collector: Name Basil

Address: 11111 111th St

Capacity of Tank in Gallons 11111

Permit No. 411 License No. _____ Date _____

Plant Attendant [Signature] (SIGNATURE)

Driver [Signature] (SIGNATURE)

The above form is to be made out in duplicate for each load. One copy to be given to the collector for his record, and copy for plant record.

#1A588

WASTE WALK COMPANY,
2000 A STREET, SUITE 100,
THE HARBOR FRONTAGE
NORTH ANDYVILLE, NEW YORK 11701-1800
PHONE (813) 441-8888
FAX (813) 441-8828

JOB WORK NUMBER

ARRIVED ON JOB	AM / PM	DEPARTED	HOURS	DATE
LEFT JOB	AM / PM			5/1/16
JOB NAME: <u>MARINE COLLECTION CENTER</u>				
ADDRESS: <u>55 METAS AVE</u>				
CITY: <u>FARMINGDALE</u>				
STATE: <u>NY</u>				
PHONE: _____				
<input type="checkbox"/> NEW <input type="checkbox"/> REFERRAL <input type="checkbox"/> REPEAT				
<input type="checkbox"/> LATE NIGHT <input type="checkbox"/> SUNDAY <input type="checkbox"/> HOLIDAY				
PUMPING <u>3000 gal lead to dry</u> PAY K				
CHEMICALS				
LINE BLENDING				
SINK TUB TOILET				
LABOR				
OTHER				
SUB TOTAL				
TAX				
TOTAL				

Purchaser shall provide access to job site. It shall be the obligation of the Purchaser to inform the Service Company of any obstructions or other ground or hidden perils. The Order shall not be responsible for damage done to or before ground to property or hidden perils. Signer assumes liability representatively and personally for approval of customer signature.

DATE PAID _____
CHECKING NO. _____
AMT. REC'D. _____
 CASH M.C. VISA AMEX

WASTE WALK COMPANY, 2000 A STREET, SUITE 100, THE HARBOR FRONTAGE, NORTH ANDYVILLE, NEW YORK 11701-1800, PHONE (813) 441-8888, FAX (813) 441-8828

main
Hester

DEPARTMENT OF PUBLIC WORKS
Nassau County, N.Y. H 586
CESSPOOL WASTES DISPOSAL RECEIPT

Collector: Name _____

Address: _____

Capacity of Tank in Gallons _____

Permit No. _____ License No. _____ Date _____

Plant Attendant _____ (SIGNATURE)

Driver _____ (SIGNATURE)

The above form is to be made out in duplicate for each load. One copy to be given to the collector for his record, and copy for plant record.
PW-4781, Rev. 2/98



702 GRAND BOULEVARD
 WESTBURY NY 11590
 (516) 333-3133
 FAX 333-8660

INVOICE NUMBER	19501268
INVOICE DATE	04/25/06

PHONE: 14141152

CONCRETE STRUCTURES
 11590 GRAND BOULEVARD
 WESTBURY NY 11590

SOLD TO: BLUE WATER ENVIRONMENTAL, INC
 1010 NEW HULLBURY

11590 GRAND BOULEVARD
 WESTBURY NY 11590

11590 GRAND BOULEVARD

DATE SHIPPED	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
4/25/06	3111	05103	NET 30	
ITEM CODE	QTY SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
14:18	39.44	61.03 TO G		
		21.59 TO T (MAN WT)		
		39.44 TO N		
SUB-TOTAL			SHIPPING CHARGES	
SALES TAX			PLEASE PAY THIS AMOUNT	

Sub Delivery Only. If ordered to cross curb, our truckers do so at owner's risk of any and all damages that may occur.

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 339-3133
 FAX 333-8660

INVOICE NUMBER
 102993

INVOICE DATE
 04/25/06

TIME: 13:13

SHIP TO: LIBERTY FINISHING
 MOTOR AVE

SOLD TO: BLUE WALKER ENVIRONMENTAL INC
 1010 NEW HURDURY

FARMINGDALE, NY
 CUSID# 000025

FARMINGDALE, NY 11735

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
04/25/06	CUSTOMER PICK	310	05103	NET 30	BR
ITEM CODE	QTY. SHIP	DESCRIPTION		UNIT PRICE	EXTENSION
002	425.63	CLEAN CONCRETE			
		13:13	4/25/2006	54.26 tn 6	
				21.59 tn 1 (MAN WT)	



702 GRAND BOULEVARD
 WESTBURY NY 11590
 (516) 333-9133
 FAX 333-8860

INVOICE NUMBER
 1009R12

INVOICE DATE
 04/25/06

LINE: 1009R12

SHIP TO: LIBERTY FINISHING MOTOR PNE VARRINDALE NY 11590
 SOLD TO: BLINE WALTER ENVIRONMENTAL INC 1510 RED HIGHTWAY VARRINDALE NY 11590

DATE SHIPPED: 04/25/06 TRUCK # 310 PROJECT 25119 TERMS NET 30 104 CUSTOMER PO NUMBER

ITEM CODE	QTY SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
02	59.93	CLEAN CONCRETE		
		11:39	4/25/2006	61.62 to 6
				21.59 to 7 (MON WT)
				40.03 to N
SUB-TOTAL				SHIPPING CHARGES
SALES TAX				PLEASE PAY THIS AMOUNT <input type="checkbox"/>

and Delivery Only. If ordered to cross curb, our truckers do so at owner's risk of any and all damages that may occur.

[Signature]

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
WESTBURY, NY 11590
(516) 333-3133
FAX 333-8880

INVOICE NUMBER
102970

INVOICE DATE
07/25/06

TIME: 10:51:00

SHIP TO: LINDSEY EISENHARTIG
MOTOR OIL

SOLD TO: BLUE WATER ENVIRONMENTAL INC.
1010 NEW HIGHWAY

FARMINGDALE NY 11735

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
07/25/06	TRUCK	010	05103	NET 30 DAY	
ITEM CODE	QTY.	SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
00	3	010	CEMENT CONCRETE		
				10:33	4/25/2006
					59.58 tn G
					21.59 tn T (NON WT)
					37.99 tn N
SUB-TOTAL			SHIPPING CHARGES		
SALES TAX			PLEASE PAY THIS AMOUNT		△

urb Delivery Only. Ordered to cross curb, our truckers do so
owner's risk of any and all damages that may occur.

[Handwritten signature]

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-6660

INVOICE NUMBER	18-00000
INVOICE DATE	01/25/12

REF: 18-00000

SHIP TO: **CLARKSON UNIVERSITY**
 1000 UNIVERSITY BLVD
 P.O. BOX 1000
 WESTBURY, NY 11590

SOLD TO: **CLARKSON UNIVERSITY**
 1000 UNIVERSITY BLVD
 WESTBURY, NY 11590

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER	UNIT PRICE	EXTENSION
			02100	10-1			
ITEM CODE	QTY. SHIP	DESCRIPTION					
		CLARKSON UNIVERSITY					
<p>Pr. 56.750 21.59 man wd. OS-RE-750</p>							
Sub Total						SHIPPING CHARGES	
SALES TAX						PLEASE PAY THIS AMOUNT <input type="checkbox"/>	

into Delivery Only, if ordered to cross curb, our trucks do so at owner's risk of any and all damages that may occur.

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8660

INVOICE NUMBER
 1111111111

INVOICE DATE
 01/15/2016

1111111111

SHIP TO [Address] **TO** [Address]

DATE SHIPPED [Date] **TRUCK #** [Truck #] **PROJECT** [Project Name] **TERMS** [Terms] **CUSTOMER P.O. NUMBER** [P.O. #]

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER

ITEM CODE	QTY.	SHIP	DESCRIPTION	UNIT PRICE	EXTENSION

Gr. 56.96
 20.59, w. on left.
 Net. 36.31

Sub-TOTAL	SHIPPING CHARGES
SALES TAX	PLEASE PAY THIS AMOUNT <input type="checkbox"/>

Free Delivery Only. If ordered to cross curb, our truckers do so at owner's risk at any and all damage that may occur.

[Signature]

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8660

INVOICE NUMBER	1030025
INVOICE DATE	04/25/2006

TIME: 15:11:50

SHIP TO: LIBERTY FINISHING
 16010R GVE
 FARMINGDALE, NY
 CREDIT# 0000025

SOLD TO: BLUE WATER ENVIRONMENTAL, INC
 16310 NEW HIGHWAY
 FARMINGDALE NY 11735

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER PO. NUMBER
04/25/06	CUSTOMER	010	0100	NET 30 DIA	
ITEM CODE	QTY.	SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
102	44.84		GRAVEL CONCRETE		
				15:26	4/25/2006
				66.43 tn G	
				21.59 tn T (NON WT)	
				44.84 tn N	

(No Delivery Only. If ordered to cross curb, our truckers do so owner's risk of any and all damages that may occur.) 	SUB-TOTAL SALES TAX	SHIPPING CHARGES PLEASE PAY THIS AMOUNT <input type="checkbox"/>
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PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3193
 FAX 333-8660

INVOICE NUMBER
 183094

INVOICE DATE
 04/06/00

REF: 183094

SHIP TO: **PROPERTY MANAGEMENT**
 1000 WESTBURY ROAD
 WESTBURY, NY 11590

CONTACT: **JOHN J. COUGHLIN**
 (516) 333-3193

DATE SHIPPED: 04/06/00 SHIPPED VIA: TRUCK # 333A PROJECT: 05000 TERMS: NET 30 CUSTOMER P.O. NUMBER: 183094

ITEM CODE	QTY.	SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
001	1	1	05000 (NET)		
<p><i>Gr. 64.18</i></p> <p><i>21.54 man. wt.</i></p> <p><i>Net 42.64</i></p>					
SUB-TOTAL					SHIPPING CHARGES
SALES TAX					PLEASE PAY THIS AMOUNT <input type="checkbox"/>

Info Delivery Only. If ordered to cross curb, our truckers do so at owner's risk of any and all damages that may occur.

[Signature]

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8660

INVOICE NUMBER
 103 0004

INVOICE DATE
 04/06/06

SHIP TO

SHIP TO: JIMMYE FORD (516) 333-3133
 103004

SOLD TO: JIMMYE FORD (516) 333-3133
 103004

CONCRETE SOLUTIONS LLC
 702 GRAND BOULEVARD

WESTBURY, NY 11590

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
04/06/06	CONCRETE	0100	051005	NET 30	
ITEM CODE	QTY SHIP	DESCRIPTION		UNIT PRICE	EXTENSION
100	00.00	CONCRETE			
	10:47	4"Z6S/2006		32.08	341.66
		21.59			462.25



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8660

INVOICE NUMBER

193067

INVOICE DATE

04/29/09

11811111111111

SHIP TO: LIBERTY FERTILIZERS
 PROJECT # 100

SOLD TO: BABYON WESTBURY PLANT

11811111111111
 TRUCK # 11811111111111

11811111111111

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
04/29/09	TRUCK	11811111111111	11811111111111	NET 30	11811111111111
ITEM CODE	QTY. SHIP	DESCRIPTION	UNIT PRICE	EXTENSION	
11811111111111	11811111111111	11811111111111	11811111111111	11811111111111	V
04/29	4/26/2009		61.36 tn 5		
			21.59 tn 1 (MAN WT)		
			39.77 tn 1		

On Delivery Only. If ordered to cross curb, our truckers do so at owner's risk for any and all damages that may occur.

SUB-TOTAL
 SALES TAX

SHIPPING CHARGES
 PLEASE PAY THIS AMOUNT

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8650

INVOICE NUMBER
 1055070

INVOICE DATE
 07/26/06

1055070

SHIP TO: 1 SOUTH BAY STREET, WESTBURY, NY 11590
 PHONE: 516-333-3133
 TO: THE WESTBURY OFFICE
 FROM: THE WESTBURY OFFICE
 TERMS: NET 30
 PROJECT: 4/26/2006
 TRUCK #: 2006/07/26
 CUSTOMER P.O. NUMBER: 1055070

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
ITEM CODE	QTY.	SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
9:58			4/26/2006	54.76 tn @	
			21.59 tn @ (MAN WT)		
			43.17 tn @		
SUB-TOTAL			SHIPPING CHARGES		
SALES TAX			PLEASE PAY THIS AMOUNT		▲

IF Delivery City, if ordered to cross curb, our truckers do so at customer's risk of any and all damages that may occur.

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8660

INVOICE NUMBER
 005177

INVOICE DATE
 04-14-10


DATE RECEIVED

SHIP TO: UNIVERSITY FINISHING
 140109 AVE

SOLD TO: MUELLER CONSTRUCTION INC
 1610 NEW HOLLAND

FOR QUOTE ONLY
 TEL # 400025

ESTIMATE NO: 107 111 00

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER PO. NUMBER
04-14-10	CUSTOMER PICKUP	310	05107	NET 30 DAY	
ITEM CODE	QTY. SHIP	DESCRIPTION	UNIT PRICE	EXTENSION	
	1.50	6.000 CONCRETE			
			G-64.73 21.59 amount. Net. 43.14		
Sub Delivery Duty: If ordered to cross curb, our trucks do so at owner's risk of any and all damages that may occur.					SUB-TOTAL
					SALES TAX
					SHIPPING CHARGES
					PLEASE PAY THIS AMOUNT <input type="checkbox"/>

PLANT LOCATIONS: BARYLON • WESTBURY



702 GRAND BOULEVARD
WESTBURY NY 11590
(516) 333-3133
FAX 333-8860

INVOICE NUMBER	1123175
INVOICE DATE	01/01/05

1100 - 1000000000

SHIP TO: CONCRETE & STEEL
WESTBURY NY
SOLD TO: BLDG GROUP PROJECTIONS INC
1630 THE HIGHLANDS

PROJECT: 1000000000
CITY: WESTBURY NY

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
01/01/05	CONCRETE & STEEL	1000000000	1000000000	NET 30	
ITEM CODE	QTY	SHIP	DESCRIPTION	UNIT PRICE	EXTENSION
100	100	100	CONCRETE & STEEL		
	9:40		4/27/2006		
			62.25 to 6		
			21.53 to 7 (MAX WT)		
			40.66 to N		
SUB-TOTAL			SHIPPING CHARGES		
SALES TAX			PLEASE PAY THIS AMOUNT		

Delivered Only. If ordered to cross curb, our truckers do so on owner's lot of any and all damages that may occur.

[Handwritten signature]

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
 WESTBURY, NY 11590
 (516) 333-3133
 FAX 333-8680

INVOICE NUMBER
 18319

INVOICE DATE
 04/27/06

FORM # 11334114

SHIP TO: LIBERTY FIRMING INC
 1001 NEW HIGHWAY
 FARMINGDALE NY 11735

TRUCK # 01100 PROJECT 01100 TERMS 11/13 PER
 CUST# 00800205

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER PO. NUMBER
04/27/06	TRUCK	01100	01100	11/13	PER
ITEM CODE	QTY. SHIP	DESCRIPTION	UNIT PRICE	EXTENSION	
11:13	42.77	4/27/2006	42.77	tn 6	
SUB-TOTAL			SHIPPING CHARGES		
SALES TAX			PLEASE PAY THIS AMOUNT		

Our Delivery Only. We do not deliver to cross curbs, our truckers do so at owner's risk of any and all damages that may occur.

[Handwritten Signature]

PLANT LOCATIONS: BABYLON • WESTBURY



702 GRAND BOULEVARD
WESTBURY, NY 11590
(516) 333-3133
FAX 333-8880

INVOICE NUMBER	11336624
INVOICE DATE	04/24/08

CONCRETE CONTRACTOR

SHIP TO CONCRETE CONTRACTOR, 11336624, 400 W. 157th ST., WESTBURY, NY 11590
SHIP TO CONCRETE CONTRACTOR, 11336624, 400 W. 157th ST., WESTBURY, NY 11590

CONCRETE CONTRACTOR, 11336624, 400 W. 157th ST., WESTBURY, NY 11590
CONCRETE CONTRACTOR, 11336624, 400 W. 157th ST., WESTBURY, NY 11590

DATE SHIPPED	SHIPPED VIA	TRUCK #	PROJECT	TERMS	CUSTOMER P.O. NUMBER
ITEM CODE	QTY. SHIP		DESCRIPTION	UNIT PRICE	EXTENSION
SUB-TOTAL				SHIPPING CHARGES	
SALES TAX				PLEASE PAY THIS AMOUNT	

TRD

PLANT LOCATIONS: BABYLON • WESTBURY

Curb Delivery Only. If ordered to cross curb, our trucks do so at owner's risk of any and all damages that may occur.

THIS RETURN IS INTENDED SOLELY FOR FILING OF RECORDS

Shipper's Address 3

Carrier

RECEIVED, subject to the conditions and tariffs in effect on the date of the receipt by the carrier of the property described in the Original Bill of Lading.

at Albany, N.Y. from 55 Albany Ave. Heringford, MA

the property described herein, in accordance with the terms and conditions of the bill of lading, and the carrier's liability for loss or damage to the property under the bill of lading shall be limited to the actual value of the property at the time of loss or damage, and the carrier shall not be liable for any loss or damage to the property in excess of the actual value of the property at the time of loss or damage.

Consigned to Creston Recycling (62) 507-1991 (Name or Street address of consignee - For purposes of notification only.)

Destination Albany, N.Y. State of NY Zip Code 12217 County of

Routing Highway Delivering Carrier Sheldahl Vehicle or Car Initial HL No. 42

Collect On Delivery \$ and remit to:

C. O. D. charge to be paid by Shipper Consignee

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and of other lawful charges.

(Signature of Consignor)

If charges are to be prepaid, write or stamp here, "TO BE PREPAID."

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Lbs. or Kgs.)	Class or Rate	City	State
1	6'x25' Steel Underground Storage Tank (UST) (Approx 500 lbs) UST has been cleaned, cut and rendered useless.				

If the shipper moves between two parts by a carrier by water, the law requires that the bill of lading shall state whether it is "weight or shipper's weight." NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

Agent, Per Shipper, Per

Remained post-office address of shipper,

(The Bill of Lading is to be signed by the shipper and agent of the carrier issuing same.)

3

RETAIL TICKET

TIME IN: 05/02/06 07:53 AM
TIME OUT: 05/02/06 07:56 AM
STATUS: PAID
VENDOR: 3794 White Dump (L)



655 Muncy Ave.
 Lindenhurst, NY 11757
 Phone 631 587-1991
 Fax 631 884-2823
 NYD7054828

TICKET#: 1124392
CONTRACT#:
CARRIER:
TRUCK NO:
DESCRIP: HERTZ
DRIVER:

D.LIC#:
PHONE:
FAX:

WEIGHER: Vinny B

TOTAL \$: \$41.40
TOTAL LBS: 1,380



10278	Light Iron	15,880	14,500	1,380 C	3.0000	41.40
		15,880	14,500	1,380		41.40

Notes:

SF#55

RETAIL TICKET

TIME IN: 05/01/06 10:46 AM
TIME OUT: 05/01/06 10:49 AM
STATUS: PAID
VENDOR: 3794 White Dump (L)



655 Muncy Ave.
 Lindenhurst, NY 11757
 Phone 631 587-1991
 Fax 631 884-2823
 NYD7054828

TICKET#: 1123825
CONTRACT#:
CARRIER:
TRUCK NO:
DESCRIP:
DRIVER:

D.LIC#:
PHONE:
FAX:

WEIGHER: Vinny B

TOTAL \$: \$43.80
TOTAL LBS: 1,460



10278	Light Iron	15,800	14,340	1,460 C	3.0000	43.80
		15,800	14,340	1,460		43.80

Notes:

SF#55

RETAIL TICKET

TME IN: 04/29/06 10:00 AM
TME OUT: 04/29/06 10:06 AM
STATUS: PAID
VENDOR: 3794 White Dump (L)



655 Muncy Ave.
Lindenhurst, NY 11757
Phone 631 587-1991
Fax 631 884-2823
NYD7054828

TICKET#: 1123054
CONTRACT#:
CARRIER:
TRUCK NO:
DESCRIP:
DRIVER:

D.LIC#:
PHONE:
FAX:

WEIGHER: Vinny B
TOTAL \$: \$132.00
TOTAL LBS: 3,300

10280	Mixed Steel	17,900	14,600	3,300 C	4,0000	132.00
		17,900	14,600	3,300		132.00

Notes:

SP #41

RETAIL TICKET

TME IN: 05/02/06 11:02 AM
TME OUT: 05/02/06 11:09 AM
STATUS: PAID
VENDOR: 3794 White Dump (L)



655 Muncy Ave.
Lindenhurst, NY 11757
Phone 631 587-1991
Fax 631 884-2823
NYD7054828

TICKET#: 1124586
CONTRACT#:
CARRIER:
TRUCK NO:
DESCRIP:
DRIVER:

D.LIC#:
PHONE:
FAX:

WEIGHER: Vinny B
TOTAL \$: \$151.20
TOTAL LBS: 3,780

10280	Mixed Steel	18,240	14,460	3,780 C	4,0000	151.20
		18,240	14,460	3,780		151.20

Notes:

SP #55

UNIFORM STRAIGHT BILL OF LADING Original—Not Negotiable—Domestic

Shipper's # **AMC-2**

Carrier

Agent's No.

RECEIVED, subject to the conditions and terms in effect on the date of the issue of this Bill of Lading, at **April 29, 2006** from **Liberty Ind. Fishbuss, 55 Maple St, Framingham, MA**

This bill of lading is subject to the conditions and terms in effect on the date of the issue of this bill of lading. It is not negotiable. It is not a receipt for the goods described hereon. It is not a contract of carriage. It is not a document of title. It is not a document of ownership. It is not a document of possession. It is not a document of control. It is not a document of interest. It is not a document of right. It is not a document of title. It is not a document of ownership. It is not a document of possession. It is not a document of control. It is not a document of interest. It is not a document of right.

Consigned to **Geshow Packaging (63) 507-1991** (Mail or street address of consignee—For purposes of notification only.)

Destination **655 Albany Ave, Lindenvest State of NY, zip Code 11757** County of **Putnam**

Routing **Highway** Delivering Carrier **Shelton** Vehicle or Car Initial **Htz** No. **307**

Collect On Delivery **and remit to:** Shipper Consignee

C. O. D. charge to be paid by Shipper Consignee

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignee's part, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)
If charges are to be prepaid, write or stamp here, "TO BE PREPAID."

Received \$ _____ to apply to payment of the charges on the property described hereon.
Agent or Cashier

Per _____ (The signatory here acknowledges only the amount prepaid.)
Charges Advised

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Sub. to 100s)	City	State	Check Column
1	5'x20'5" Steel Underground Storage Tank (UST) (Approx 3900 lbs) crushed and residual useless				

5'x20'5" Steel Underground Storage Tank (UST) (Approx 3900 lbs) crushed and residual useless

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "tanker's or shipper's weight." NOTE—Where the rate is customary on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The amount or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

Permanent post-office address of shipper: _____ Shipper, Per _____ Agent, Per **1**

(This Bill of Lading is to be issued by the shipper and agent of the carrier issuing same.)

11928 28x7.35x5 = AP 27933

UNIFORM STRAIGHT BILL OF LADING Original—Not Negotiable—Domestic 38

Shipper's No. AMC/Kobayashi

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at April 27 Blue Water Car. Carrier Agent's No.

110 Landfill from Liberty Ind. Freshness

55 Water Ave. Farmingdale

The property described herein is hereby agreed to be transported and carried in conformity with the regulations of the Interstate Commerce Commission and the regulations of the Federal Motor Carrier Administration. It is further agreed that the carrier shall not be liable for any loss or damage to the property described herein, whether by fire, theft, or otherwise, unless the shipper has advised the carrier in writing at the time of shipment of the nature and extent of the interest in the property and the value thereof. It is further agreed that the carrier shall not be liable for any loss or damage to the property described herein, whether by fire, theft, or otherwise, unless the shipper has advised the carrier in writing at the time of shipment of the nature and extent of the interest in the property and the value thereof. It is further agreed that the carrier shall not be liable for any loss or damage to the property described herein, whether by fire, theft, or otherwise, unless the shipper has advised the carrier in writing at the time of shipment of the nature and extent of the interest in the property and the value thereof.

Consigned to 110 Landfill (Mail or street address of consignee—For purposes of notification only.)

Destination Spiegel Rd. Adelphi State of NY Zip Code 11797 County of _____

Routing Highway Delivering Carrier Blue Water Vehicle or Car Initial _____ No. _____

Collect ~~Delivery~~ Cherry & Balaban Car. - BWO5109 and remit to _____ C. O. charge to be paid by Shipper Consignee

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignee's part, the consignee shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Sub. to Car.)	City	State	Class or Rate	Check Column
	<u>3-A Construction + Demo Debris</u>					
	<u>Cherry & Blue Water Car. - BWO5109</u>					

If the agreement between two parties by a carrier by water, the law requires that the bill of lading shall specify whether it is "carriage of shipper's receipt" or "B/L"—where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby voluntarily stated by the shipper to be not exceeding:

Shipper Per [Signature] Agent, Per Amc/Kobayashi

Permanent post-office address of shipper: _____

Received \$ _____ to apply to prepayment of the charges on the property described herein.

Agent or Consignee _____

Per _____ (The signature here acknowledges only the amount prepaid.)

Charges Advanced _____

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
11428		01	LAND FILL			014036

CUSTOMER NAME:

BLUE WATER ENVIRONMENTAL

DATE	TAX PERCENTAGE	TRADE CODE	NATIONAL CODE
5/27/06			951

MATERIAL DESCRIPTION:

DEBRIS FILLION YDS

GROSS	TARE	NET	UNIT	WEIGHED BY
		34.00	CU. YD.	TOH
IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.	
14:10			APR 29 03	

DELIVERY ADDRESS

1610 NEW HIGHWAY
FARMINGDALE, NY 11737
2877 3475 YDS

RECEIVED BY: _____

CARRIER SIGNATURE _____

CUSTOMER SIGNATURE _____

SEE REVERSE SIDE FOR COLLECTION TERMS

TOTAL TODAY

QUANTITY THIS ORDER TODAY

LOADS THIS ORDER TODAY

OFFICE USE ONLY

Miller Environmental Group, Inc. Confined Space Entry Permit

Type of Permit: Vessel Entry Other (Describe) Permit #: _____

Permit Valid For Date: 2/26/06 Time: From 10:20 To _____

Site Address: 55 MOTOR AVE FARMINGDALE

Description of Job / Special Procedures: CLEAN OUT VENTS #2

Does this job require special training? Yes No

Employee Designation and Training Name	Job Designation (Entrant, Monitor, Fire Watch)	Safe Entry / Rescue Training Date
<u>J. RUBIO</u>	<u>ERT WITTMANN</u>	
<u>R. LOPEZ</u>		

Pre-entry briefing date: _____ Briefing Conducted By: _____

Contractor Notification

Contractor Notified of Permit Conditions Potential Hazards

Tools / Equipment

Lighting Requirements: _____

Special Tools / Equipment: _____

Are all electrical devices intrinsically safe? Yes NA

Have all power cords and tools been visually inspected? Yes NA

Vessel Preparation

Work Area Isolate with Signs / Barriers? Yes NA

All Energy Sources Locked / Tagged Out? Yes NA

All Input Lines Capped / Blinded? Yes NA

Vessel Contents Purged? Yes NA

Ventilation Provided 30 Minutes Prior to Entry? Yes NA

Pre-Entry Monitoring	Time / Reading	Time / Reading	Time / Reading	Time / Reading	Time / Reading	Time / Reading	Time / Reading	Time / Reading	Time / Reading
Oxygen Content % O ₂	<u>21.5</u>	<u>1000</u>	<u>21.4</u>	<u>1300</u>					
Explosive Gases % LEL	<u>0</u>	<u>1000</u>	<u>0</u>	<u>1300</u>					
Toxic Gas (If Required) PPM	<u>0</u>	<u>1000</u>	<u>0</u>	<u>1300</u>					

Toxic Gas Tested for: _____ Heat / Cold Stress Hazard: Temp: F C

Safety Equipment SAFETY HARNESS AND TRIPOLI

Personal Protective Equipment Required: TYPE E YELLOW BOOTS

Area Safety Equipment Required:

Self-Contained Breathing Apparatus Required? No Yes Type: _____

Portable Atmospheric Monitor Required? No Yes Type: _____

Location of Written Emergency / Rescue Plan: _____

Type of Emergency / Rescue Team Required: On-Site Off-Site Phone: _____

Entry Log	Enter	Exit	Enter	Exit	Enter	Exit
Entrant Name						
<u>J. RUBIO</u>	<u>1045</u>	<u>1200</u>	<u>1315</u>	<u>1345</u>		

Permit Authorization

I certify that I have inspected the work area for safety and reviewed all safety precautions recorded on this permit.

Permit Authorized by (Print): _____ Signature: _____