



**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number 783

PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OPERABLE UNIT 4 - FORMER FIRE TRAINING AREA



DEFENSE SUPPLY
CENTER RICHMOND
RICHMOND, VIRGINIA



DEFENSE LOGISTICS
AGENCY

July 2005

Task Order 21
Contract No. F41624-03-D-8606



MACTEC ENGINEERING
AND CONSULTING, INC.



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28 July 2005

Project No. 6301-03-0011

Mr. Roy J. Shrove
 HQ AFCEE/IWA – COR
 3300 Sidney Brooks
 Brooks City-Base, TX 78235-5112

Contract : **Contract No. F41624-03-D-8606 – TO 21**

Subject: **Final Principal Threat Source Material Removal Action Completion Report
 Operable Unit 4 – Former Fire Training Area
 Defense Supply Center Richmond (DSCR)**

Dear Mr. Shrove:

Enclosed is one copy of comments received from USEPA and VDEQ on the *Draft Principal Threat Source Material Removal Action Completion Report Operable Unit 4 – Former Fire Training Area, Defense Supply Center Richmond* issued 13 March 2005, responses to these comments, replacement cover, spine, report pages, Appendix C text, and flysheets to generate the Final Report.

The responses to USEPA comments were resolved during a 19 May 2005 teleconference with DSCR, USEPA, and VDEQ. The responses to VDEQ comments were discussed during the 13 June 2005 DSCR Environmental Restoration Program Planning Meeting and resolved during a follow-up 7 July 2005 teleconference with DSCR, USEPA, and VDEQ. Based on the resolution of the enclosed USEPA and VDEQ comments, no further comments are expected.

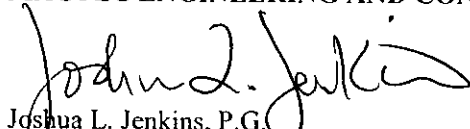
Please replace the following sheets/sections of the *Draft Principal Threat Source Material Removal Action Completion Report* with the enclosed:

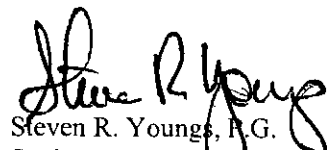
- Replacement cover and spine
- Replacement Cover Page, Table of Contents, Executive Summary, and Sections 1 – 4
- Appendix C text
- Replacement flysheets for Tables, Figures, and Appendices A – L

Additional copies of replacement sheets/sections have been issued as shown in the attached distribution list. If you have any questions, or need further information, please contact me at 770-421-3412 or Steve Youngs at 770-421-3377.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.


 Joshua L. Jenkins, P.G.
 Project Manager


 Steven R. Youngs, P.G.
 Senior Project Manager

Enclosures

DOCUMENT RESPONSE TO COMMENT FORM		Date: 20 April 2005	Defense Supply Center Richmond Richmond, Virginia
To: Steve Edlavitch, DSCR Environmental Engineer		From: U.S. EPA Region 3 Mr. John Potosnak, Remedial Project Manager (John Fellingner, TechLaw)	
Document Title & Location: <i>Draft Principal Threat Source Material Removal Action Completion Report Operable Unit 4 - Former Fire Training Area for Defense Supply Center Richmond, Richmond, Virginia</i>		Contract No: F41624-03-D-8606	Response Status: Final
Type of Action: <input type="checkbox"/> Draft Document <input type="checkbox"/> Pre-Final Document <input checked="" type="checkbox"/> Final Document <input type="checkbox"/> Other		<input type="checkbox"/> Chemistry <input type="checkbox"/> Geology/Hydrogeology <input type="checkbox"/> Safety & Health <input type="checkbox"/> Engineering <input type="checkbox"/> Risk Assessment <input type="checkbox"/> Other	
Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	MACTEC Response:
1	General	It is interesting to note that samples which appear to be collected in the same location, but at increasing depths have sample numbers in reverse of conventional nomenclature, that is, the deeper sample has a lower sample number than the corresponding shallow sample (e.g., Pit 1, SO-8/9, SO-16/17, Pit 3, SO-11/12, SO-13/14, and SO-20/21). The Daily Job Report, under Sampling Activities, also lists these samples out of order, although the sample times appear to be correct (i.e., earlier sample time for shallower sample). Please clarify how these samples were collected, logged, and account for the apparent reversal of the assigned sampling numbers.	The sample designations are correct as shown in the report. These comparison samples were collected from the sidewall of the excavation as it progressed. Therefore, it was possible to first collect the deeper sample prior to collecting the shallower sample. Sample numbers were assigned sequentially based upon the chronological order in which the samples were collected.
		ERP Team Member- Review Action & Date	

Document Response to Comment Form (continued)
 Document: Draft Principal Threat Source Material Removal Action Completion Report
 Operable Unit 4 – Former Fire Training Area

Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	MACTEC Response:	ERP Team Member- Review Action & Date
2	General	<p>Sections 3.1 and 3.3 describe general conclusions derived from the collected data concerning the horizontal extent of contamination at Pit 1 and Pit 3, respectively. These sections do not provide a general conclusion about the vertical extent of contamination, except to note that the contaminant concentrations were "highest" at depths of approximately 4 feet bgs [below ground surface] in Pit 1, and 3 to 4 feet bgs in Pit 3. As examples:</p> <ul style="list-style-type: none"> a. The concentration of perchloroethylene [PCE] is increasing with depth in Pit 1 at sampling location SO-16/17. b. The concentrations of 1,2-dichlorobenzene [DCB], <i>cis</i>-1,2-dichloroethene [DCE], and trichloroethene [TCE] concentrations are increasing with depth in Pit 3 at sampling locations SO-11/12 and SO-13/14. c. The concentration of <i>cis</i>-1,2-DCE is increasing with depth in Pit 3 at sampling location SO-20/21. <p>Please revise the Report to include general conclusions for the vertical extent of contamination at Pits 1 and 3.</p>	<p>As stated in the report, the conclusions in Sections 3.1 and 3.3 were based on the confirmation sample results, not the comparison sample results that EPA cites as examples. MACTEC will revise the report to add general conclusions for the vertical distribution of specific constituents at Pits 1 and 3.</p>	
3	General	<p>The Soil Excavation and Staging Activities sections for Pit 1 (Section 2.2.2) and Pit 3 (Section 2.2.4) note that "excavation continued until the appropriate maximum extent of excavation proposed in the Principal Threat Source Material Removal Action Work Plan (which had been derived on the basis of practicability constraints) was reached." Please revise the Report to include the specifics of the "appropriate maximum extent of excavation" as described in the Work Plan.</p>	<p>Both sections actually state "excavation continued until the <i>approximate</i> maximum extent of excavation proposed in the Principal Threat Source Material Removal Action Work Plan (which had been derived on the basis of practicability constraints) was reached." The "<i>appropriate</i> maximum extent of excavation" is not referenced. Because the approximate maximum extent of each excavation were shown in the work plan, no revisions to the report are necessary. Practicability constraints were based on technical and resource availability.</p>	

Document Response to Comment Form (continued)
 Document: *Draft Principal Threat Source Material Removal Action Completion Report*
Operable Unit 4 – Former Fire Training Area

Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	MACTEC Response:	ERP Team Member- Review Action & Date
4	Executive Summary, page ES-1	<p>The first two sentences in paragraph 1 state "The Defense Logistics Agency (DLA) elected to undertake a time-critical removal action (TCRA) at Operable Unit (OU) 4, the Former Fire Training Area (FTA). As the lead agency for response action at the Defense Supply Center Richmond (DSCR)." Please consider revising these sentences to read "The Defense Logistics Agency (DLA) elected to undertake a time-critical removal action (TCRA) at Operable Unit (OU) 4, the Former Fire Training Area (FTA), as the lead agency for response action at the Defense Supply Center Richmond (DSCR)."</p>	<p>The report will be revised accordingly.</p>	
5	Executive Summary, page ES-1	<p>The third sentence in paragraph 1 states "Shallow unlined pits in the FTA were used for fire training exercises, during which flammable liquid chemicals and petroleum products were dumped into the pits, ignited, and then extinguished." Please consider revising this sentence to read "Shallow unlined pits in the FTA were used for fire training exercises, during which flammable liquids, chemicals, and petroleum products were dumped into the pits, ignited, and then extinguished." In addition, please consider revising a similar sentence in lines 17 through 19, page 1-2, in the same manner.</p>	<p>The report will be revised accordingly.</p>	
6	Executive Summary, page ES-2	<p>The last sentence of the last paragraph on this page (Lines 16 through 20) concludes that additional excavation of an unknown volume of soils containing concentrations of CVOCs [chlorinated volatile organic compounds] is unlikely to result in significant risk reduction, based upon current and future land use scenarios. While this may be a true statement, it leads the reader to believe that the removal boundaries of the TCRA were risk-based, and that the TCRA has mitigated or limited overall risk for current and/or future land use exposure(s). Since the TCRA was limited primarily by available funding and to a lesser extent, practicability (e.g., depth of excavations), the conclusion as stated is misleading. Please remove this sentence from the Executive Summary. In addition, please remove a similar sentence from page 3-3, lines 7 through 9.</p>	<p>The report will be revised to remove "significant risk reduction" and insert "further substantiative reduction in the threat to underlying groundwater quality."</p>	

Document Response to Comment Form (continued)
 Document: Draft Principal Threat Source Material Removal Action Completion Report
 Operable Unit 4 – Former Fire Training Area

Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	MACTEC Response:	ERP Team Member- Review Action & Date
7	Section 1.0, Introduction, page 1-1	<p>The second paragraph on this page states that "...DLA determined that a TCRA could be used to practicably reduce the volume of principal threat source materials at OU 4 in anticipation of an appropriately designed, long-term containment/treatment strategy for residual soil and groundwater contamination that cannot be practicably restored with currently available technologies." Since the groundwater contamination under OU 4 is currently part of OU 7, and because the Final Focused Feasibility Study (FFS) for OU 7 is not complete, the conclusion that "groundwater contamination.... cannot be practicably restored with currently available technologies" cannot be supported at this time. Please revise this sentence to read "...DLA determined that a TCRA could be used to practicably reduce the volume of principal threat source materials at OU 4 in anticipation of an appropriately designed, long-term containment/treatment strategy for residual soil and groundwater contamination" or provide additional information/references to support the statement.</p>	<p>The report will be revised accordingly.</p>	
8	Section 2.2.1, Site Preparation, page 2-2	<p>This section indicates that less contaminated soil, from Pits 1 and 3 were to be staged at Stockpiles C and B, respectively. However, in Section 2.2.2 it is stated that 394 cubic yards of soil excavated from Pit 3 was staged at Stockpile C, and Section 2.2.3 indicates that approximately 5 cubic yards of soil excavated from Pit 2 was staged at Stockpile B. Therefore, it does not appear excavated soils from Pits 1 and 3 were segregated as implied in Section 2.2.1, Site Preparation. Please revise this section to address these discrepancies.</p>	<p>Section 2.2.2 states that soil from Pit 1, not Pit 3, was placed in Stockpile C, which is in accordance with Section 2.2.1. The decision to excavate a limited volume of soil from Pit 2 was a field decision and, as stated in the report, the soil was placed in Stockpile B, along with the soil from Pit 3.</p>	
9	Section 2.2.2, Pit 1, page 2-3	<p>This section notes (lines 14 through 16) that "excavation continued until the appropriate maximum extent of excavation proposed in the Principal Threat Source Material Removal Action Work Plan (which had been derived on the basis of practicability constraints) was reached." Please revise this section to include the specifics of the "appropriate maximum extent of excavation" as described in the Work Plan.</p>	<p>See response to Comment 3.</p>	

Document Response to Comment Form (continued)
 Document: *Draft Principal Threat Source Material Removal Action Completion Report*
 Operable Unit 4 – Former Fire Training Area

Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	MACTEC Response:	ERP Team Member- Review Action & Date
10	Section 2.2.3, Pit 2, page 2-3	This section states that comparison of confirmation samples were not collected to determine the extent to which soils containing vinyl chloride at concentrations exceeding the soil removal criteria (SRC) had been removed. Please revise this section to clarify why confirmation samples were not collected and how it was determined the SRC were met.	The excavation at Pit 2 was not included in the Work Plan, as the available data indicated that the areas around Pit 1 and Pit 3 had much greater volumes of source material. The report will be revised to reflect that based on pre-determined practicability constraints, a decision was made to excavate a small volume of shallow soil to address the single SRC exceedance near Pit 2, which occurred in OU4SBW at a depth of 2.6 feet. The sample from OU4SBW at 4.8 feet was below the SRC for all constituents; therefore characterized, and no confirmation sample was necessary.	
11	Section 2.4.2, Backfilling Sampling Results, page 2-3	This section indicates that two samples from the #21A aggregate were collected and analyzed for VOCs and SVOCs. The material was used for backfill after the results indicated that no constituents were detected above reporting limits. However, as described in Section 2.4.3, #57 aggregate was placed below the #21A aggregate. It is not clear why the #57 aggregate was not sampled before placing it in the pits. Please revise the Report to describe the procedures used to determine the appropriateness of this fill for site restoration.	The #57 aggregate is comprised of approximately 1-inch stones, which cannot be sampled for VOCs and SVOCs using EPA protocol. Because the #57 and #21 (stone dust) aggregates came from the same source, analysis of the #21 aggregate confirmed the suitability of the #57 aggregate. The report will be revised to reflect this procedure.	
12	Minor	Section 1.3, Source Materials Removal Action Background, page 1-4: The sentence on lines 19 to 21 states "For the proposed source material removal action, soils that contain concentrations of CVOCs equal to or exceeding 1 percent of aqueous the solubility of the chemical (presumptive evidence of NAPL) were defined as principal threat source materials." The sentence should be revised to read "For the proposed source material removal action, soils that contain concentrations of CVOCs equal to or exceeding 1 percent of the aqueous solubility of the chemical (presumptive evidence of NAPL) were defined as principal threat source materials."	The report will be revised accordingly.	

Continued on Next Page

End of Comments

DOCUMENT RESPONSE TO COMMENT FORM		Date: 3 June 2005	Defense Supply Center Richmond Richmond, Virginia
To: Steve Edlavitch, DSCR Environmental Engineer		From: Gerald J. Grimes, Project Officer Virginia Department of Environmental Quality	
Document Title & Location: <i>Draft Principal Threat Source Material Removal Action Completion Report Operable Unit 4 - Former Fire Training Area for Defense Supply Center Richmond, Richmond, Virginia</i>		Contract No: F41624-03-D-8606	Response Status: FINAL
Type of Action: (Check appropriate boxes)		<input type="checkbox"/> Chemistry <input type="checkbox"/> Geology/Hydrogeology <input checked="" type="checkbox"/> Safety & Health <input type="checkbox"/> Engineering <input type="checkbox"/> Risk Assessment <input type="checkbox"/> Other _____	
Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	ERP Team Member- Review Action & Date (5 July, 2005)
1	General	<p>The removal action left soils in-place with concentrations of contaminants above the soil removal criteria. These soils have concentrations of PCE and TCE as high as 332 mg/kg and 381 mg/kg, respectively. The maximum concentration of PCE and TCE used in the Risk Assessment was 130 mg/kg and 76 mg/kg. Since this new data indicates that the concentrations of PCE and TCE in the soils on-site are significantly higher than those values used in the risk assessment, this office suggests that the risks to potential receptors be re-evaluated.</p>	<p>This response is not acceptable. The risk associated with contaminants left in-place after the removal action taken at OU4 should be addressed under OU4. The soil exposure route used in the risk assessment for OU4 is very different for the groundwater exposure route that will be used for OU7. Although the vapor intrusion risk for OU4 and OU7 may be similar, the risks through soil ingestion and dermal contact and inhalation of particulates and soil vapor will not likely be evaluated for OU7. Since the exposure routes for risks presented by contaminants in the soils of OU4 are different from contaminants in the groundwater of OU7, we recommend that the risk to potential receptors at OU4 be re-evaluated and any necessary remedial actions be taken.</p>
MACTEC Response:		DSCR Reply: 19 July 2005	
<p>Comment noted. As agreed during the DSCR Environmental Restoration Program (ERP) planning meeting on 13 June 2005, DSCR will not use new soil analytical data generated from the OU 4 TCRA Report to re-evaluate risks. Instead, potential risks associated with OU 4 will be addressed under response actions pursuant to underlying groundwater at OU 7. As noted in the 13 June 2005 ERP planning meeting, OU 4 has a No Action Record of Decision (ROD) in place. Sampling results presented in the TCRA Report suggest that soils left in place at OU 4 may pose vapor intrusion risk for future indoor workers. However, DSCR is currently revising the OU 7 human health baseline risk assessment (HHBRA) to evaluate potential risks under an industrial</p>		<p>Comment Noted. Because the scope of the OU 4 Soil Removal Closure Report is to document and present the results of the removal action, no discussions regarding potential OU 4 risks will be included in the report. Re-evaluation of potential OU 4 soil risks will be included with the evaluation of potential OU 7 risks and addressed under a separate submittal.</p>	

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Document Title & Location: <i>Draft Principal Threat Source Material Removal Action Completion Report Operable Unit 4 - Former Fire Training Area for Defense Supply Center Richmond, Richmond, Virginia</i>		Contract No: F41624-03-D-8606	Response Status: FINAL
Type of Action: (Check appropriate boxes)		Risk Assessment	
<input type="checkbox"/> Draft Document <input type="checkbox"/> Pre-Final Document <input checked="" type="checkbox"/> Final Document <input type="checkbox"/> Other		<input type="checkbox"/> Chemistry <input type="checkbox"/> Geology/Hydrogeology <input type="checkbox"/> Safety & Health <input type="checkbox"/> Engineering <input type="checkbox"/> Risk Assessment <input type="checkbox"/> Other _____	
Cmt. No.	Page No./ Section No.	ERP Team Member Comment:	ERP Team Member- Review Action & Date (5 July, 2005)
2	Section 2.3.1.2, Table	The concentration of PCE for sample OU4-PITI-CS-4 should be changed from 33.2 to 332.	DSCR Reply: 19 July 2005
		MACTEC Response: exposure scenario. Preliminary results of the revised OU 7 HHBRA indicate unacceptable risk. DSCR will likely implement land use controls as a response action. Therefore, any potential vapor risk from soils at OU 4 will be addressed in a response action for OU 7. DSCR will incorporate language in the OU 7 ROD to restrict access and address potential risk pathways to the OU 4 soils, if necessary.	
		Agree. The concentration of PCE noted in Section 2.3.1.2 will be changed from 33.2 mg/kg to 332 mg/kg.	Comment noted
		Comment noted	Comment noted

Final

**PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION
COMPLETION REPORT**

OPERABLE UNIT 4 – FORMER FIRE TRAINING AREA

FOR

**DEFENSE SUPPLY CENTER RICHMOND
RICHMOND, VIRGINIA**

Prepared for:

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Task Order 21
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Revision 0

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- L Schneider Analytical Laboratory Report

LIST OF ACRONYMS AND ABBREVIATIONS

AAL	Accura Analytical Laboratory, Inc.
AFCEE	Air Force Center for Environmental Excellence
APL	All Points Logistics, Inc.
AST	Aboveground Storage Tank
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Restoration, Compensation, and Liability Act
CFR	Code of Federal Regulations
CVOC	Chlorinated Volatile Organic Compound
DCA	Dichloroethane
DCB	Dichlorobenzene
DCE	Dichloroethene
DLA	Defense Logistics Agency
DNAPL	Dense, Non-Aqueous Phase Liquid
DoD	Department of Defense
DSCR	Defense Supply Center Richmond
EQ	Environmental Quality Company
FID	Flame Ionization Detector
FTA	Fire Training Area
IDW	Investigation Derived Waste
MACTEC	MACTEC Engineering and Consulting, Inc.
mg/m ³	milligram per cubic meter
mg/kg	milligram per kilogram
mg/L	milligram per liter
NAPL	Non-Aqueous Phase Liquid
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OU	Operable Unit
PCE	Tetrachloroethene
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROD	Record of Decision

**LIST OF ACRONYMS AND ABBREVIATIONS
(Continued)**

SSHP	Site-Specific Safety and Health Plan
SRC	Soil Removal Criteria
SVOC	Semi-Volatile Organic Compound
TCA	Trichloroethane
TCB	Trichlorobenzene
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TCRA	Time-Critical Removal Action
TWA	Time-Weighted Average
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VDEQ	Virginia Department of Environmental Quality
VOC	Volatile Organic Compound

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EXECUTIVE SUMMARY

The Defense Logistics Agency (DLA) elected to undertake a time-critical removal action (TCRA) at Operable Unit (OU) 4, the former Fire Training Area (FTA), as the lead agency for response action at the Defense Supply Center Richmond (DSCR). Shallow unlined pits in the FTA were used for fire training exercises, during which flammable liquids, chemicals, and petroleum products were dumped into the pits, ignited, and then extinguished. OU 7 comprises the groundwater underlying the FTA. The shallow depths of potential vadose-zone source material, and the magnitude of contaminant concentrations identified, led DLA to consider invoking its removal authority under CERCLA.

The appropriateness of a TCRA at OU 4 was consistent with the Code of Federal Regulations (CFR) 40 CFR §300.415(b)(2)(iv). This regulation specifically references as eligible for consideration for a removal action those sites where high levels of hazardous substances in soils largely at or near the surface may migrate to the groundwater. The OU 4 Record of Decision (ROD) established that vadose-zone soils in OU 4 did not pose an unacceptable risk via direct exposure routes. However, consistent with the phased OU-based response strategy at DSCR, the OU 4 ROD deferred determination regarding groundwater threat potential to the OU 7 response action planning activities. Response planning activities for OU 7 are now underway, and the TCRA was an outcome of that planning process. Source control is expected to be a significant element of remedial strategies to be evaluated in conjunction with the OU 7 feasibility study. The removal of source mass in OU 4 soil is expected to enhance the effectiveness and reliability of other treatment or containment strategies at OU 7, if necessary.

The objective of the TCRA was to immediately reduce—to the extent practicable—principal threat source material in OU 4 that could contribute to further degradation of underlying groundwater (OU 7) and downgradient surface water (i.e., Kingsland Creek). The practicability constraints, which were based on considerations relating to technical and resource availability, were balanced against the chlorinated volatile organic compound (CVOC) source removal objective to pre-determine the approximate volume of material that could be excavated. The concentrations of CVOCs in soil that could leach to groundwater and result in groundwater concentrations equal to or greater than 1 percent of their solubility limits, thus making them principal threat CVOC sources, were established as the Soil Removal Criteria (SRC).

The Principal Threat Source Material Removal Action Work Plan, prepared by MACTEC in September 2004, outlined the planned approach. The removal action focused on the soil containing the source mass

considered most likely to migrate to the saturated zone using a “worst first” approach. Based on previous data, areas in Pit 1 and Pit 3 were identified as being the most likely area of a dense, non-aqueous phase liquid (DNAPL) source of CVOCs in the unsaturated soil. The excavations were guided through near real-time analysis of soil samples using an on-site mobile laboratory. When excavation was complete, the excavation side-walls were sampled to evaluate the extent to which removal of CVOC-impacted source material was achieved. The excavated soil was temporarily managed within the OU 4 boundary in stockpiles until the waste characterization sampling was completed and off-site transportation and disposal was arranged. Approximately 484 cubic yards of soil was removed from Pit 1, 5 cubic yards from Pit 2, and 498 cubic yards from Pit 3. Based on the final waste disposal manifests, 997 tons of non hazardous waste and 537 tons of hazardous material were disposed of off site.

Confirmation sample results indicate that some soil remaining in the subsurface in the Pit 1 and Pit 3 area contains CVOC contaminants at concentrations greater than the SRC. The volume of soil left in place that contains contaminants at concentrations greater than the SRC is not known and cannot be estimated accurately without additional sampling. However, because the TCRA was completed in general accordance with pre-determined practicability constraints, the objectives of the removal action were met. Given the pre- and post-TCRA site conditions, where in persistent CVOC source mass has already migrated into the saturated zone beneath and downgradient from the former FTA, and in the absence of completed groundwater exposure pathways under current and expected future land use scenarios, further excavation of accessible residual source mass at OUs 4 and 7 is considered unlikely to result in further substantive reduction in the threat to underlying groundwater quality.

1.0 INTRODUCTION

The Defense Logistics Agency (DLA) determined the need to undertake a time-critical removal action (TCRA) at Operable Unit (OU) 4 at the Defense Supply Center Richmond (DSCR) to immediately reduce –to the extent practicable–those principal threat source materials that could contribute to further degradation of underlying groundwater (OU 7) and downgradient surface water (i.e., Kingsland Creek).

DLA and the United States Environmental Protection Agency (USEPA) program experience has shown that complete removal and/or in situ treatment of some source material, such as soils containing non-aqueous phase liquids (NAPLs) or NAPL-like material, often is not practicable (i.e., not feasible to complete in a reasonable timeframe using available technologies and resources). However, DLA determined that a TCRA could be used to practicably reduce the volume of principal threat source materials at OU 4 in anticipation of an appropriately designed, long-term containment/treatment strategy for residual soil and groundwater contamination. Implementation of a source material removal action is consistent with the statutory preference for treatment of principal site threats (e.g., 40 Code of Federal Regulations [CFR] §300.430(a)(1)(iii)(A)). DLA elected to invoke its early removal authority to reduce the potential for chlorinated volatile organic compound (CVOC) migration from sources in the vadose zone, thereby controlling further degradation of underlying groundwater, and expediting selection and implementation of an effective final groundwater response action at OU 7. Use of early TCRA authority is consistent with the phased approach being used by DLA at DSCR to address complex environmental conditions.

DLA has tasked the Air Force Center for Environmental Excellence (AFCEE) with providing technical support, as necessary, to complete the environmental response program at DSCR in a reasonable time. AFCEE retained MACTEC Engineering and Consulting, Inc. (MACTEC), under Contract F41624-03-D-8606, Task Order 21, to undertake a TCRA in support of the final OU 7 response action.

1.1 PURPOSE AND ORGANIZATION OF COMPLETION REPORT

The purpose of this Principal Threat Source Material Removal Action Completion Report is to document the TCRA recently completed by MACTEC at OU 4, former Fire Training Area (FTA), at DSCR. The TCRA consisted of the excavation, characterization, transportation, and treatment/disposal of principal threat source materials (soils contaminated with CVOC NAPL).

Section 1 of this document describes the site and provides background on the events leading up to the source material removal action. Section 2 describes the activities conducted during the field implementation of the source material removal action. Conclusions based on the data collected and results of the field effort are discussed in Section 3. Data tables summarizing the sampling results and appropriate figures showing the site layout and sampling locations are also included. Other relevant information (photographs, field logs, laboratory reports, data validation reports, survey data, and waste disposal documentation) necessary to document the activities completed are included in appendices to this report.

1.2 OU 4 SITE DESCRIPTION

DSCR is a federal facility in Chesterfield County, Virginia, located about 8 miles south of Richmond. The DSCR site consists of approximately 650 acres that have been used by DLA as a supply center since 1941. The facility is owned and maintained by the United States Department of Defense (DoD).

OU 4 consists of the vadose-zone soils impacted by chemicals released during training activities at the former FTA. OU 4 is located in the southern portion of DSCR, approximately 600 feet north of Kingsland Creek and the facility's property boundary (Figure 1-1). Residences are located approximately 1,200 feet south of the southern boundary of OU 4. Fire training exercises were conducted at the FTA from the mid-1960s until the late 1970s. Three separate, shallow unlined pits have been identified in the FTA and designated as Pit 1, Pit 2, and Pit 3 (see Figure 1-2). During fire training exercises, flammable liquids, chemicals, and petroleum products were placed into the pits, ignited, and then extinguished. In addition to petroleum fuels and lubricating oils, solvents, pesticides, and herbicides may have been burned or otherwise disposed of at the site. OU 7 comprises the groundwater beneath the FTA.

1.3 SOURCE MATERIAL REMOVAL ACTION BACKGROUND

The final Record of Decision (ROD) for OU 4 (LAW, 1999) documents that, based on the risk assessment presented in the 1996 Remedial Investigation (RI) report (LAW, 1996), contaminants in vadose-zone soils did not pose an unacceptable risk to human or ecological receptors via direct exposure routes; therefore, no further action was deemed necessary for OU 4. Human receptors evaluated in the RI included current and potential future on-site workers, construction workers, recreational users, and residents. However, consistent with the phased response strategy undertaken at DSCR, the OU 4 ROD

deferred determination regarding the potential threats to underlying groundwater quality until further evaluation of response actions for OU 7 (the contaminated groundwater underlying the FTA) could be conducted. It has been determined that CVOCs originating at OU 4 have contaminated OU 7. DSCR is currently preparing a Final Focused Feasibility Study for OU 7.

Groundwater analytical results from OU 7 indicate that CVOCs, including tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-DCE, 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), carbon tetrachloride, chlorobenzene, 1,2-, 1,3-, and 1,4-dichlorobenzene (DCB), vinyl chloride (VC), and methylene chloride (in addition to several other volatile organic compounds [VOCs] at trace concentrations) are present in groundwater beneath and hydraulically downgradient (and stratigraphically down dip) from the FTA pits. Concentrations of several of these CVOCs, including PCE, TCE, and cis-1,2-DCE, approach or exceed 1 percent of their respective solubility limits in saturated media near the FTA. Concentrations of CVOCs in this range are commonly associated with the occurrence of dense, non-aqueous phase liquid (DNAPL) suggesting that persistent sources of CVOCs exist in the subsurface. Groundwater sampling data, which demonstrate that dissolved CVOC concentrations in the parts-per-million range have been present throughout the available monitoring period (since the late 1980s), support the interpretation of a persistent source mass at this site. Shallow soil samples collected at OU 4 in May 2004 indicate that CVOCs are present within the FTA at concentrations commonly associated with DNAPL occurrence.

According to USEPA, principal threat wastes are defined as “those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. They include liquids and other highly mobile materials (e.g., solvents) or materials having high concentrations of toxic compounds” (USEPA, 1991). DNAPL solvents, such as those that likely were released into vadose-zone soils at OU 4, meet the definition of principal threat wastes.

DLA, as the lead agency for response actions at DSCR, determined that the residual CVOC source mass in the unsaturated soils at OU 4, while not posing an unacceptable risk to human health or ecological receptors through direct exposure routes, warranted a TCRA as stated in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR §300.415. The high concentrations and mobility of contaminants in the vadose zone posed a continuing threat to groundwater quality, with the associated possibility of migration of hazardous contaminant to off-site locations. In accordance with the NCP,

several factors must be considered in determining the appropriateness of a TCRA in addressing threats to public health or welfare or the environment, including the following:

“High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.” – (40 CFR, §300.415 (b) (2) (iv)).

Therefore, DLA elected to reduce the volume of this source material at OU 4 to the extent practicable, based on logistical, resource, and cost considerations. The overall objective of the source material removal action was to reduce the potential for continued migration of CVOCs in the vadose zone to groundwater at elevated concentrations, thus further degrading groundwater quality in OU 7. The presence of DNAPL-like source materials in soils can significantly impact site restoration potential, and its removal may improve the effectiveness and efficiency of future response actions implemented to address contaminants in OU 7 groundwater. CVOCs in groundwater have migrated beyond the southern boundary of DSCR and Kingsland Creek. The Final Principal Threat Source Material Removal Action Memorandum (MACTEC, 2004A) presents additional information regarding the rationale behind the decision to implement the source material removal action. USEPA and Virginia Department of Environmental Quality (VDEQ) reviewed and concurred with DLA’s decision to implement the source material TCRA.

To address the primary goal of the source material removal action, Soil Removal Criteria (SRC) were developed in the Final Principal Threat Source Material Removal Site Evaluation Report – Operable Unit 4, Former Fire Training Area (MACTEC, 2004B). For the proposed source material removal action, soils that contain concentrations of CVOCs equal to or exceeding 1 percent of the aqueous solubility of the chemical (presumptive evidence of NAPL) were defined as principal threat source materials. The soil concentration adopted as the SRC for each constituent was calculated by multiplying the 1 percent solubility equilibrium concentration in water by the soil-dependent partitioning coefficient. The SRC for each CVOC constituent is shown on Table 1-1.

The Principal Threat Source Material Removal Action Work Plan (MACTEC, 2004C), which outlined the proposed activities, was submitted to DLA, AFCEE, DSCR, VDEQ, and USEPA Region III in September 2004. On September 24, 2004, Mr. Eric Salopek of VDEQ issued a letter indicating that VDEQ had no further comments to the Work Plan, and on October 7, 2004, Mr. Jack Potosnak of USEPA sent an electronic mail stating that USEPA had no further comments to the Work Plan.

2.0 SOURCE MATERIAL REMOVAL ACTION IMPLEMENTATION

The source material removal action was conducted in general accordance with the Principal Threat Source Material Removal Action Work Plan (MACTEC, 2004C). A chronology of field events and additional details about the major activities completed as part of the source material removal action are presented below.

2.1 CHRONOLOGY OF EVENTS

- 11/8/04 MACTEC's subcontract surveyor, Resources International, Inc., located the soil borings that had been installed as part of the OU 4 source delineation. The locations provided reference points to guide the excavation.
- 11/9/04 The source material removal action Kickoff Meeting was held at DSCR and was attended by representatives of DSCR, MACTEC, and Mitretek Systems, Inc.
- 11/12/04 Samples were collected from stockpiles at Vulcan Construction Materials, Dale Plant/Quarry in Chester, Virginia. The samples were analyzed to confirm that the source of fill material was not contaminated.
- 11/15/04 The MACTEC field team mobilized to the site and began site preparation activities.
- 11/17/04 Soil excavation and staging activities began.
- 11/19/04 and 11/22/04 Waste characterization samples were collected.
- 11/22/04 Soil excavation and staging activities were completed.
- 11/30/04 Backfilling of the excavated areas began.
- 12/02/04 Backfilling of the excavated areas was completed. Construction oversight and inspection were conducted by MACTEC personnel, including a Virginia-licensed professional engineer.
- 12/07/04 DSCR approved MACTEC's recommendation to proceed with off-site disposal of the excavated stockpiled soil.
- 12/14/04 Resources International, Inc. surveyed the extent of the excavated areas.
- 01/04/05 Loading, transportation, and disposal of excavated material began.
- 01/06/05 Loading, transportation, and disposal of excavated material were completed.

2.2 SOIL EXCAVATION AND STAGING ACTIVITIES

The source material removal action focused on excavating soil at locations in the vicinity of Pit 1 and Pit 3 using a "worst first" approach, based on data from previous soil borings. Specifically, soils surrounding boreholes OU4SBN at Pit 1 (Figure 2-1), and OU4SBC at Pit 3 (Figure 2-2) were removed

first based on the relatively high concentrations of CVOCs measured at these locations; the excavation then proceeded outward from these two boring locations using field soil screening techniques and previous sampling data. Additionally, a small volume of soil around boring OU4SBW at Pit 2 was removed (Figure 2-3). Details regarding site preparation, soil excavation, and staging activity in each pit are described below. Photographs of activities are presented in Appendix A, and daily field reports indicating activity in chronological order are in Appendix B.

2.2.1 Site Preparation

MACTEC personnel arrived on site on December 15, 2004, and began preparing the OU 4 work site for excavation activities. Three stockpile staging locations were constructed within the OU 4 boundary (see Figure 1-2). A 20-mil, medium density polyethylene geomembrane was placed on the ground surface at each stockpile staging location to prevent stockpiled soils from contacting underlying soils within OU 4. Staging areas were identified as Stockpiles A, B, and C. Stockpile A was intended to receive those soils from Pit 1 and Pit 3 that were suspected of containing the highest concentrations of contaminants. Stockpile B was intended to receive less contaminated soil from the Pit 3 excavation, and Stockpile C was intended to receive less contaminated soil from the Pit 1 excavation. A soil berm (approximately 1-foot high) was constructed around the edge of each staging area and approximately 5 feet inside the extent of the geomembrane. The berm was constructed to assist in keeping stockpile leachate contained within the stockpile area and to prevent storm water from running onto the stockpile. The geomembrane liner was sandbagged in place to prevent movement. The geomembrane for Stockpile A measured approximately 50 feet by 50 feet, and the geomembranes for Stockpiles B and C measured approximately 65 by 65 feet.

MACTEC personnel constructed an exclusion zone encompassing the work area, and extending approximately to the OU 4 boundaries. A support zone, contaminant reduction zone, and air monitoring stations were established in general accordance with the Principal Threat Source Material Removal Action Work Plan and the Health and Safety Plan Addendum (MACTEC, 2004C; MACTEC, 2004D). The area immediately surrounding excavated areas was enclosed by orange barricade fencing, and silt fence was installed downgradient of the excavation areas and stockpile areas.

2.2.2 Pit 1

The source material removal action at Pit 1 began on November 17, 2004. The removal was performed in general accordance with the Principal Threat Source Material Removal Action Work Plan (MACTEC, 2004C). Soil excavation at OU 4 Pit 1 began at soil boring location OU4SBN, and the excavation was advanced radially outward until approximately 100 cubic yards of material had been removed to a depth of approximately 11 feet below ground surface (bgs). Soil samples used to guide the excavation activities, which are herein referred to as comparison samples, were collected at a frequency of one sample for approximately every 20 cubic yards of excavated material as the excavation progressed (Figure 2-1). The comparison samples were grab samples collected from the excavator bucket. The comparison samples were initially field-screened for the presence of VOCs using a flame-ionization detector (FID) organic vapor analyzer. The comparison samples then were submitted to an on-site mobile laboratory operated by ESN Southeast, Inc. for analysis of selected VOCs by USEPA Method SW8260B. The results from the on-site mobile laboratory indicated that CVOC concentrations in soils in the excavation sidewalls remained above the SRC (see Table 2-1); thus, excavation continued until the approximate maximum extent of excavation proposed in the Principal Threat Source Material Removal Action Work Plan (which had been derived on the basis of practicability constraints) was reached. The initial approximately 100 cubic yards of material removed from Pit 1, judged to be the most highly contaminated material from the former FTA pit, was staged at Stockpile A. The remainder of the soil removed from the excavation (approximately 384 cubic yards) was staged at Stockpile C. The stockpiled soils were covered with 6-mil, polyethylene sheeting secured by sandbags, pending sampling to evaluate the characteristics that would be used to determine their final disposition.

2.2.3 Pit 2

Results from the Final Principal Threat Source Removal Site Evaluation Report -- Operable Unit 4, Former Fire Training Area (MACTEC, 2004B) indicated that VC in soils at OU4SBW exceeded the SRC at a depth of 2.6 feet bgs in that location. Therefore, on November 22, 2004, a small volume of soil (approximately 5 cubic yards) was excavated from the area surrounding OU4SBW (Figure 2-3) to a depth of approximately 5 feet to address the single SRC exceedance near Pit 2. A deeper sample collected at a depth of 4.8 feet in OU4SBW was below the SRC for all constituents; therefore collection of comparison or confirmation samples during excavation was not necessary. The soil removed from Pit 2 was staged at Stockpile B.

2.2.4 Pit 3

The source material removal action at Pit 3 began on November 17, 2004. The removal was performed in general accordance with the Principal Threat Source Material Removal Action Work Plan (MACTEC, 2004C). The Pit 3 excavation was located within a secondary containment area enclosed by an earthen dike that contained a former aboveground storage tank (AST). The AST contained fuel oil and was installed after the area ceased to be used for fire training activities. Before excavation activities began, standing water within the diked area was pumped and discharged to the ground surface within OU 4. Portions of the berm were then removed to allow the excavation of source material associated with the former fire training pit to begin. The soil excavation at Pit 3 was begun at soil boring location OU4SBC, extending to a depth of approximately 10.0 feet bgs, and was advanced radially outward from that location until approximately 80 cubic yards of material were removed. Comparison samples (Figure 2-2) were collected at a frequency of one sample for approximately every 20 cubic yards of excavated material as the excavation progressed. The results of analyses of soil samples from the on-site mobile laboratory indicated that CVOC concentrations in soils in the excavation sidewalls remained above the SRC (see Table 2-2). Therefore, excavation was continued until the approximate maximum extent of excavation proposed in the Principal Threat Source Material Removal Action Work Plan was reached. The approximately 80 cubic yards of material initially removed from Pit 3, judged to be the most highly contaminated material from the former FTA pit, was staged at Stockpile A. The remainder of the soil removed from the excavation was staged at Stockpile B (approximately 378 cubic yards) and Stockpile C (approximately 40 cubic yards). The stockpiled soils were covered with 6-mil polyethylene sheeting and secured with sandbags.

2.3 EXCAVATION COMPARISON AND CONFIRMATION SAMPLING

Comparison samples were collected for every 20 cubic yards of material removed at Pits 1 and 3 during the excavation process, and were used to assess the concentrations of CVOCs in excavated soil. Upon completion of the excavation activities, a confirmation sample, designated by a "CS" in the sample name, was collected from the sidewall of each excavation to evaluate the VOC concentrations in soil remaining around the perimeter of the excavated area. Confirmation samples were collected for each 5-foot depth interval in each excavation, and at lateral distances spaced no greater than 20 linear feet apart. Comparison and confirmation samples were collected from the excavator bucket as the soil was brought to the surface. The comparison and confirmation samples were field-screened for the presence of VOCs

using an FID organic vapor analyzer. The samples were then submitted to an on-site mobile laboratory, operated by ESN Southeast, Inc., for laboratory analysis of VOCs by USEPA Method SW8260B. Ten percent of the comparison and confirmation samples were split and submitted to an off-site laboratory (Accura Analytical Laboratory [AAL]) for analysis of VOCs by USEPA Method SW8260B for quality-control purposes. Samples were not collected from the bases of the excavations, because the excavations were extended to the shallow groundwater table where contaminated groundwater was present. A complete data quality evaluation report is included as Appendix C.

2.3.1 Mobile Laboratory Analytical Results

Comparison samples collected at a frequency of approximately one sample per 20 cubic yards of excavated material were provided to the on-site mobile laboratory for chemical analyses as the excavations progressed. The mobile laboratory was able to produce results rapidly so that field personnel could make decisions based on data collected in near real-time. Results produced by the mobile laboratory were compared with the SRC. If the comparison sample results exceeded the SRC, then the excavation was advanced outwardly toward the proposed maximum extent of excavation. The proposed extent of excavation was established prior to the source material removal action and was based on previously collected data and practicability considerations (including cost). If the comparison results were below the SRC, then the excavation was not advanced in the associated direction. A total of 21 comparison samples was collected at Pit 1 and a total of 21 comparison samples was collected at Pit 3. A complete Certificate of Analysis Report for the mobile laboratory results is included as Appendix D.

Upon completion of excavation activities, 16 confirmation samples were collected at Pit 1 and 20 confirmation samples were collected at Pit 3. The confirmation samples were submitted to the mobile laboratory to evaluate the levels of contaminants at the extent of the excavations.

2.3.1.1 Comparison Sampling Results at Pit 1

Pit 1 comparison sampling locations are shown on Figure 2-1, and Pit 1 mobile laboratory comparison sampling analytical results are presented in Table 2-1. Comparison samples from Pit 1 contained 1,2-DCB, 1,3-DCB, 1,4-DCB, cis-1,2-DCE, PCE, and TCE at concentrations above the SRC. Comparison sampling results for samples OU4-PIT1-SO-10 through SO-15 indicated that as the excavation was advanced to the south toward soil boring location OU4SBT from the initial excavation near boring OU4SBN, contaminant concentrations were not detected above the SRC. However,

excavation was continued in this direction to remove soils in the vicinity of boring OU4SBT, where previous sampling data had indicated that contaminants were present at concentrations above the SRC. Comparison results for samples PIT1-SO-18 and SO-19 indicated that as the excavation was advanced west toward soil boring location OU4SBS, contaminant concentrations were not detected above the SRC; however, excavation was continued in this direction to remove soils in the vicinity of boring OU4SBS, where previous sampling data had indicated that contaminants were present at concentrations above the SRC.

Results of comparison sampling indicated that the highest concentrations of contaminants typically occurred in samples collected at depths between about 4 and 5 feet bgs (e.g., laboratory results for soils sampled near soil boring locations OU4SBN [comparison sample OU4-PIT1-SO-1] and OU4SBO [comparison sample OU4-PIT1-SO-17], and midway between soil boring locations OU4SBN and OU4SBT [comparison sampling location OU4-PIT1-SO-9]). The highest detected concentrations constituents in Pit 1 comparison samples are listed below:

Comparison Sample Location	Depth (feet bgs)	Contaminant	Concentration (mg/kg)
OU4-PIT1-SO-9	4.0	1,2-DCB	41.8
OU4-PIT1-SO-9	4.0	1,3-DCB	36.4
OU4-PIT1-SO-1	4.0	1,2-DCB	17.8
OU4-PIT1-SO-1	4.0	1,4-DCB	11.9
OU4-PIT1-SO-16	8.0	PCE	165
OU4-PIT1-SO-17	4.0	TCE	79.4

mg/kg = milligrams per kilogram

2.3.1.2 Confirmation Sampling Results at Pit 1

On the basis of the results of mobile laboratory analyses of comparison samples, Pit 1 was excavated to the proposed extent of excavation. Upon completion of the source material removal action, 16 confirmation samples were collected from the perimeter of Pit 1 (as described in Section 2.3). Confirmation sampling locations at Pit 1 are shown on Figure 2-4, and Pit 1 confirmation sampling

analytical results generated by the mobile laboratory are presented in Table 2-2. Contaminant concentrations in 7 of the 16 confirmation samples from Pit 1 were above the SRC for at least one constituent, including 1,2-DCB (2 samples), cis-1,2-DCE (one sample), PCE (six samples), and TCE (six samples).

Results of confirmation sampling indicated that the highest concentrations of contaminants generally occurred in soils at relatively shallow depth along the northern and northeastern sides of the excavation (e.g., the laboratory results for samples OU4-PIT1-CS-2, -CS-4, -CS-14, and -CS-16, all collected at depths of approximately 4 feet bgs). The highest detected concentrations of constituents in comparison samples were:

Confirmation Sample Location	Depth (feet bgs)	Contaminant	Concentration (mg/kg)
OU4-PIT1-CS-6	4.0	cis-1,2-DCE	1.99
OU4-PIT1-CS-4	4.0	PCE	332
OU4-PIT1-CS-4	4.0	TCE	381
OU4-PIT1-CS-13	8.0	1,2-DCB	2.29

2.3.1.3 Comparison Sampling Results at Pit 3

Pit 3 comparison sampling locations are shown on Figure 2-3, and Pit 3 mobile laboratory comparison sampling analytical results are presented in Table 2-3. Samples from Pit 3 contained 1,2-DCB (in 11 samples), 1,3-DCB (10 samples), 1,4-DCB (4 samples), cis-1,2-DCE (13 samples), and TCE (14 samples) were detected in comparison at concentrations above the SRC. Comparison sampling results indicated that contaminant concentrations generally decreased toward the east, northeast, and southwest as the excavation was advanced radially outward from the initial excavation near soil boring location OU4SBC. Only 3 of the 21 comparison samples from Pit 3 did not contain CVOCs at concentrations above the SRC. Based on these results, excavation was continued until the approximate proposed maximum extent of excavation had been reached.

Results of comparison sampling indicated that the highest concentrations of contaminants typically occurred in samples collected along a line trending southwest to northeast through Pit 3, from near soil boring location OU4SBC (e.g., comparison samples OU4-PIT1-SO-1 through SO-4) toward soil boring location OU4SBE (comparison sample OU4-PIT1-SO-18). The highest detected concentrations of contaminants in comparison samples were:

Comparison Sample Location	Depth (feet bgs)	Contaminant	Concentration (mg/kg)
OU4-PIT3-SO-18	5.0	1,2-DCB	138
OU4-PIT3-SO-18	5.0	1,4-DCB	53.9
OU4-PIT3-SO-18	5.0	TCE	3110
OU4-PIT3-SO-8	7.0	1,3-DCB	767
OU4-PIT3-SO-8	7.0	1,4-DCB	469

2.3.1.4 Confirmation Sampling Results at Pit 3

On the basis of the results of mobile laboratory analyses of comparison samples, Pit 3 was excavated to the proposed extent of excavation. Upon completion of the source material removal action, 20 confirmation samples were collected from the perimeter of the excavation (as described in Section 2.3). Confirmation sampling locations at Pit 3 are shown on Figure 2-5, and confirmation sampling analytical results generated by the mobile laboratory are presented in Table 2-4. After the initial confirmation samples were collected and analyzed, limited additional excavation was conducted in two areas where the highest concentrations of CVOCs remained in soils. Four additional confirmation samples (samples OU4-PIT3-CS-3R, -CS-4R, -CS-15R, and -CS-16R) were collected to assess the concentrations of CVOCs remaining in soils in sidewalls at the final maximum extent of the excavation. Contaminant concentrations in 11 of the 24 confirmation samples from Pit 3 were above the SRC for at least one constituent, including 1,2-DCB (six samples), 1,3-DCB (seven samples), 1,4-DCB (two samples), cis-1,2-DCE (seven samples), and TCE (three samples). CVOC concentrations in five confirmation samples collected along the final northwest sidewall of the excavation exceeded the SRC. The concentrations of 1,2-DCB in confirmation sample OU4-PIT3-CS10 and cis-1,2-DCE in

confirmation sample OU4-PIT3-CS-14 (collected along the south and east sidewalls, respectively, of the excavation at depths of approximately 3.5 feet bgs) also exceeded the SRC.

The results of confirmation sampling indicated that the highest concentrations of contaminants generally occurred in soils in the northwestern side of the excavation, at relatively shallow depth (e.g., the laboratory results for samples OU4-PIT1-CS-2, -CS-4R, and -CS16R, all collected along the northwestern sidewall of the excavation, at depths ranging from about 3 to 4 feet bgs. The highest detected concentrations of contaminants in comparison samples were:

Confirmation Sample Location	Depth (feet bgs)	Contaminant	Concentration (mg/kg)
OU4-PIT3-CS-16	3.0	1,2-DCB	5.55
OU4-PIT3-CS-2	3.5	1,3-DCB	1.68
OU4-PIT3-CS-16R	3.0	1,4-DCB	5.39
OU4-PIT3-CS-15R	7.5	cis-1,2-DCE	0.888
OU4-PIT3-CS-4R	4.0	TCE	59.8

2.3.2 Fixed-Base Laboratory Analytical Results

Ten percent of the comparison and confirmation samples were split; one-half of each split sample was analyzed at the on-site mobile laboratory, and the other half of each split sample was submitted to an off-site fixed-base laboratory, operated by AAL, for analysis of VOCs using USEPA Method SW8260B. Analysis of split samples was conducted for quality control purposes, so that the results of fixed-base laboratory analysis of each split sample could be used to assess the relative precision and accuracy of analysis of the corresponding split samples that was completed by the on-site mobile laboratory. Three comparison samples and two confirmation samples from Pit 1 were submitted to AAL for fixed-base laboratory analyses; and three comparison samples and two confirmation samples from Pit 3 were submitted to AAL. Four trip blanks, two equipment blanks, two replicate soil samples, and one matrix spike and matrix spike duplicate soil sample also were submitted to the fixed-base laboratory for analysis.

A complete Certificate of Analysis Report for the fixed-base laboratory analytical results is included as Appendix E.

2.3.2.1 Results for Pit 1

Comparison samples OU4-PIT1-SO-3, -SO-12, and -SO-19, which were collected from the Pit 1 excavation, were split and submitted to AAL for analysis; fixed-base laboratory analytical results for comparison samples and confirmation samples from Pit 1 are included in Tables 2-5 and 2-6, respectively. Neither the mobile laboratory nor the fixed-base laboratory detected CVOCs at concentrations greater than the SRC in samples OU4-PIT1-SO-12 or -SO-19. Although no target CVOCs were detected during analysis of samples OU4-PIT1-SO-12 or -SO-19 at the mobile laboratory, several of the same CVOCs were detected during analysis of these split samples at the fixed-base laboratory. However, CVOC concentrations detected at the fixed-base laboratory often were below the detection limits reported by the mobile laboratory.

During analysis of comparison sample OU4-PIT1-SO-3 at the on-site mobile laboratory, three CVOCs (1,3-DCB, PCE, and TCE) were detected at concentrations greater than the SRC, while analysis of the split comparison sample at the fixed-base laboratory detected five CVOCs (1,1,1-TCA, 1,2-DCB, cis-1,2-DCE, PCE, and TCE) at concentrations greater than the SRC. In addition to these discrepancies, the results of analyses for PCE and TCE at the on-site mobile laboratory indicated that these CVOCs were present in the soil sample at concentrations of 1.93 and 1.6 mg/kg, respectively. However, the results of analyses of the split sample for PCE and TCE at the fixed-base laboratory indicated that these CVOCs were present in the split sample at concentrations of 400 mg/kg and 41 mg/kg, respectively. Several factors may have contributed to these discrepancies in analytical results generated by the mobile laboratory and the fixed-base laboratory; these are discussed in Subsection 2.3.2.3.

Confirmation samples OU4-PIT1-CS-8 and -CS-15, which were collected from the walls of the Pit 1 excavation, were split and submitted to AAL for analysis. No CVOCs were detected at concentrations greater than the SRC in either of these two samples during analyses at the mobile or the fixed-base laboratories.

2.3.2.2 Results for Pit 3

Comparison samples OU4-PIT3-SO-7, -SO-17, and -SO-18, which were collected from the Pit 3 excavation, were split and submitted to AAL for analysis; a duplicate of the -SO-18 sample also was submitted to the fixed-base laboratory for analysis. Fixed-base laboratory results for comparison samples and confirmation samples from Pit 3 are included in Tables 2-7 and 2-8, respectively.

During analysis of comparison sample OU4-PIT3-SO-7 at the on-site mobile laboratory, four CVOCs (1,2-DCB, 1,3-DCB, cis-1,2-DCE, and TCE) were detected at concentrations greater than the SRC, while analysis of the split comparison sample for OU4-PIT3-SO-7 at the fixed-base laboratory detected five CVOCs (1,2-DCB, 1,3-DCB, 1,4-DCB, cis-1,2-DCE, and TCE) at concentrations greater than the SRC. The concentrations of CVOCs detected in the OU4-PIT3-SO-7 split samples during analyses at the mobile and fixed-base laboratories also differed substantially (compare analytical results in Table 2-3 with those in Table 2-7); these discrepancies in analytical results generated by the mobile laboratory and the fixed-base laboratory are discussed in Subsection 2.3.2.3.

During analysis of comparison sample OU4-PIT3-SO-17 at the on-site mobile laboratory, one CVOC (cis-1,2-DCE) was detected at a concentration greater than the SRC, while analysis of the split comparison sample at the fixed-base laboratory detected two CVOCs (cis-1,2-DCE and VC) at concentrations greater than the SRC.

During analysis of comparison sample OU4-PIT3-SO-18 at the on-site mobile laboratory, four CVOCs (1,2-DCB, 1,3-DCB, cis-1,2-DCE, and TCE) were detected at concentrations greater than the SRC, while analysis of the split comparison sample at the fixed-base laboratory detected eight CVOCs (1,2,4-trichlorobenzene [1,2,4-TCB], 1,2-DCB, 1,3-DCB, 1,4-DCB, chlorobenzene, cis-1,2-DCE, PCE, and TCE) at concentrations greater than the SRC. The concentrations of CVOCs detected in the OU4-PIT3-SO-18 split samples during analyses at the mobile laboratory and fixed-base laboratory also differed substantially (compare analytical results in Table 2-3 with those in Table 2-7). Eight CVOCs (1,2,4-TCB, 1,2-DCB, 1,3-DCB, 1,4-DCB, chlorobenzene, cis-1,2-DCE, PCE, and TCE) also were detected at concentrations greater than the SRC during analysis of the OU4-PIT3-SO-18 replicate sample at the fixed-base laboratory. The fixed-base analytical results for OU4-PIT3-SO-18 primary and duplicate samples generally were comparable within the requirements of the analytical method.

Confirmation samples OU4-PIT3-CS-5, and -CS-9, which were collected from the walls of the Pit 3 excavation, were split and submitted to AAL for analysis; a replicate of the -CS-9 sample also was submitted to the fixed-base laboratory for analysis. No CVOCs were detected at concentrations greater than the SRC in confirmation sample OU4-PIT3-CS-9 during analyses at the mobile laboratory or the fixed-base laboratory. No CVOCs were detected at concentrations greater than the SRC in the -CS-9 replicate sample during analyses at the fixed-base laboratory, and the fixed-base analytical results for OU4-PIT3-SO-18 primary and replicate samples generally were comparable within the requirements of the analytical method.

No CVOCs were detected at concentrations greater than the SRC during analysis of confirmation sample OU4-PIT3-CS-5 at the on-site mobile laboratory. Analysis of the split confirmation sample at the fixed-base laboratory detected cis-1,2-DCE and VC at concentrations greater than the SRC (compare analytical results in Table 2-4 with those in Table 2-8).

2.3.2.3 Discussion of Factors Contributing to Split-Sample Discrepancies

Several factors may have contributed to the discrepancies noted between the analytical results reported by the on-site mobile laboratory and the results reported for the associated split samples reported by the fixed-base laboratory. These factors include the following:

Naturally Occurring Heterogeneity in Soil Samples. Analyses of soil samples are conducted using a subsample (no more than 10 grams of soil) of the much larger sample (usually more than 100 grams) that is submitted to the laboratory. Soil samples (by nature) are heterogeneous. Heterogeneities including differences in grain size, clay content, organic-carbon content, or porosity can cause analytical results obtained for one 10-gram subsample to differ substantially from those obtained for a second 10-gram subsample collected at a distance of no more than a few centimeters from the first subsample. In light of these heterogeneities, it is not surprising that analytical results for split samples should differ.

Dilution of Sample Extracts Prior to Analysis. Chemical analyses of soil samples for VOCs are conducted by “extracting” the analytes from a solid soil sample using an extractant (a solvent) and analyzing the liquid extract (which consists of the extractant containing dissolved analytes). If elevated concentrations of an analyte are present in the extractant, it is necessary to dilute the extractant prior to analysis. Such dilutions can result in elevated detection limits for the associated sample. The extracts of several samples analyzed in the fixed-base laboratory were diluted (by a factor as much as 10,000) prior

to analysis, while no sample extracts were diluted prior to analysis at the on-site mobile laboratory. This can cause the analytical results obtained at the fixed-base laboratory to be not directly comparable with those obtained at the mobile laboratory.

Differences in Analytical Detection Limits. The detection limits for sample extracts analyzed at the on-site mobile laboratory generally were approximately one order of magnitude (a factor of 10) greater than the detection limits for undiluted sample extracts analyzed at the fixed-base laboratory. Such differences in detection limits between the laboratories can lead to situations in which a result for an analyte in a particular sample would be reported as “Not Detected” by the mobile laboratory, but would be reported as “Detected” at some value below the mobile laboratory’s detection limit by the fixed-base laboratory.

2.4 SITE RESTORATION

Following the determination that source-material removal had been completed to the extent practicable, the excavations were backfilled with imported clean fill, and the fill was compacted to criteria specified in the work plan. Upon completion, the backfill was compacted to support a fully loaded water truck without forming ruts or depressions. The surface was graded and shaped to the approximate original grade and to provide positive surface drainage.

2.4.1 Backfill Material and Source

Clean backfill material consisted of Virginia Department of Transportation-approved #57 stone and #21A aggregate. The aggregate was purchased from Vulcan Construction Materials, Dale Plant, at 11520 Iron Bridge Road in Chester, Virginia.

2.4.2 Backfill Sampling Results

On November 12, 2004, MACTEC personnel visited the Dale Plant and collected two soil samples from the #21A stockpile. The samples, OU4Backfill-1 and OU4Backfill-2, were submitted to AAL and analyzed for semi-volatile organic compounds by EPA Method SW8270C and VOCs by EPA Method SW8260B. The #57 aggregate is comprised of approximately 1-inch diameter stones which could not be sampled for VOCs and SVOCs using EPA protocol. However, because the #57 and #21 aggregates came from the same source, analysis of the #21 was deemed sufficient in determining the suitability of the #57 aggregate. Results of sample analysis for #21 aggregate are presented in Table 2-9. No constituents were

detected above laboratory reporting limits in either backfill sample. Therefore, MACTEC proceeded to use this material as backfill in the OU 4 excavations.

2.4.3 Compaction Testing and Certification

Between November 30, 2004 and December 2, 2004, Vulcan Materials delivered clean fill materials to the OU 4 work site. Initial backfilling efforts included placing #57 aggregate in the open excavations, bringing the surface of the backfill to a depth of 4.0 feet bgs. The aggregate was placed directly into the pit from the transfer trucks. The aggregate was spread evenly using an excavator, and upon completion of stone placement, the excavator bucket was used to tamp and compact the aggregate in the pits. Approximately 320 tons of #57 aggregate was placed in the Pit 1 excavation, and approximately 380 tons of #57 aggregate was placed in the Pit 3 excavation. A woven synthetic filter fabric (Mirafi™ 140-mil) was placed on the surface of the #57 aggregate backfill in each excavation. A MACTEC professional engineer licensed in Virginia visually inspected the backfilling operations and the filter fabric placement.

Following the placement of filter fabric, #21A aggregate was placed in the excavations in successive 12- to 18-inch loose lifts. Each lift of aggregate was compacted using a smooth-drum vibratory roller. After each successive lift had been compacted, density tests were performed on the lift using a Troxler 3440 Nuclear Density Gauge. Successive lifts were not placed until the preceding lift achieved a density equivalent to 95 percent of the Standard Proctor compaction specification for #21A aggregate, as determined by Vulcan Construction Materials quality control/quality assurance laboratory. Appendix F contains a Compaction Certification Memorandum, together with a summary of density test locations and results and the Standard Proctor compaction specification provided by Vulcan Construction Materials. Backfill continued to be placed in the excavations until the lifts were brought to the surrounding ground surface. After backfilling activities had been completed, a proof roll of the backfill material was conducted to ensure that it did not form ruts or deflect under load. Resources International then surveyed points around the perimeter of the excavated areas to establish coordinates for use in documenting the extent of the excavations. The survey data are included as Appendix G.

2.5 WASTE MANAGEMENT ACTIVITIES

On November 22, 2004, all excavation activities at DSCR OU4 were completed. During the excavation activity, three stockpiles were created. As proposed in the Principal Threat Source Material Removal

Action Work Plan (MACTEC, 2004C), samples would be collected from each soil stockpile at the conclusion of excavation activities, and analyzed to evaluate the characteristics that would be used to determine the ultimate disposition of soil in the stockpiles. Soil materials classified as “non-hazardous” on the basis of reactivity, corrosivity, ignitability, or toxicity, as determined from the results of laboratory analyses, could be sent to a Resource Conservation and Recovery Act (RCRA) Subtitle D disposal facility; material classified as “hazardous” would be treated and/or disposed of at a RCRA Subtitle C (“hazardous waste disposal”) facility.

Stockpile A (Figure 1-2) was established to receive those soils from Pit 1 and Pit 3 that were suspected of having the highest concentrations of contaminants. At the conclusion of excavation activities, Stockpile A contained approximately 180 cubic yards of soil. For the purpose of waste-characterization sampling, the stockpile was divided approximately into thirds on the basis of visual inspection, and a composite soil sample, consisting of soil collected through the full profile of the stockpile at four discrete sampling locations, was collected from each third (Figure 2-6).

Stockpile B was intended to receive less contaminated soil from the Pit 3 excavation, and Stockpile C was intended to receive less contaminated soil from the Pit 1 excavation. At the conclusion of excavation activities, Stockpile B contained approximately 383 cubic yards of soil, consisting primarily of soils removed from Pit 3, with a small volume (approximately 5 cubic yards) of soil that had been removed from Pit 2. For the purpose of waste-characterization sampling, the stockpile was divided approximately into halves on the basis of visual inspection, and a composite soil sample, consisting of soil collected through the full depth interval at four discrete sampling locations, was collected from each half (Figure 2-6).

Stockpile C contained approximately 424 cubic yards of soil, consisting of approximately 384 cubic yards of soil from Pit 1, and including approximately 40 cubic yards of material from Pit 3. For the purpose of waste-characterization sampling, the stockpile was divided approximately into halves on the basis of visual inspection, and a composite soil sample, consisting of soil collected through the full depth interval at four discrete sampling locations, was collected from each half (Figure 2-6). The samples were submitted to AAL, a certified analytical laboratory. The samples were analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) (SW-846 Method 1311) and also were analyzed for reactivity, corrosivity, ignitability, and toxicity using SW-846 Method 1010. All seven investigation derived waste

(IDW) composite soil samples (three samples from Stockpile A and two samples each from Stockpiles B and C) were submitted for characterization analyses.

Soil removal and sampling activities generated a small volume of liquid waste. Liquid wastes were primarily in the form of water that had been used to decontaminate excavation and sampling equipment, and consisted of deionized water and Alconox™ soap. This material was disposed of by adding it to Stockpile A soils, which were suspected to be the most heavily contaminated soils to be handled, and which would likely be disposed of at a RCRA Subtitle C facility. Therefore, separate characterization of water generated during removal and sampling activities was not necessary.

2.5.1 Waste Characterization Sampling Results

Composite samples OU4-IDW-SO-3, OU4-IDW-SO-4, and OU4-IDW-SO-5 were collected from Stockpile A (Figure 2-6) on November 19, 2004. Laboratory results, presented in Table 2-10, indicated that soils represented by sample OU4-IDW-SO-3 were non-hazardous waste on the basis of reactivity, corrosivity, ignitability, and toxicity. Therefore, this material (the northern one-third of Stockpile A) was manifested for disposal at a RCRA Subtitle D disposal facility. Laboratory results indicated that soils represented by composite samples OU4-IDW-SO-4 and OU4-IDW-SO-5 were characterized as hazardous waste on the basis of toxicity. The leachate generated during the TCLP analysis of sample OU4-IDW-SO-4 contained TCE at a concentration of 1.5 milligrams per liter (mg/L), and the leachate generated during TCLP analysis of sample OU4-IDW-SO-5 contained TCE at a concentration of 3.1 mg/L (Table 2-10). A material capable of generating leachate containing TCE at a concentration greater than 0.5 mg/L during TCLP analyses is classified as “toxic”. Therefore, this material (the southern two-thirds of Stockpile A) was manifested for disposal at a RCRA Subtitle C disposal facility.

Composite samples OU4-IDW-SO-1 and OU4-IDW-SO-2 were collected from Stockpile B (Figure 2-6) on November 19, 2004; and composite samples OU4-IDW-SO-6 and OU4-IDW-SO-7 were collected from Stockpile C on November 22, 2004. Laboratory results (Table 2-10) indicated that the soil materials staged at Stockpile B and in the southern one-half of Stockpile C were characterized as non-hazardous waste on the basis of reactivity, corrosivity, ignitability, and toxicity. Therefore, all material in Stockpile B and in the southern one-half of Stockpile C was manifested for disposal at a RCRA Subtitle D disposal facility. However, the leachate generated during TCLP analysis of sample OU4-IDW-SO-7 contained TCE at a concentration of 5.5 mg/L (Table 2-10). The soils represented by sample

OU4-IDW-SO-7 characterized as hazardous waste on the basis of toxicity, and this material (the northern one-half of Stockpile C) was manifested for disposal at a RCRA Subtitle C disposal facility.

2.5.2 Waste Transportation and Disposal

MACTEC subcontracted All Points Logistics (APL) to manage the transportation and disposal of both hazardous and non-hazardous waste.

2.5.2.1 Transportation and Disposal of Non-Hazardous Waste

Soil in Stockpile B, the northern one-third of Stockpile A, and the southern one-half of Stockpile C, was characterized as non-hazardous waste, and was manifested for disposal at Old Dominion Landfill (an Allied Waste Company certified RCRA Subtitle D landfill), located at 2100 Charles City Road in Richmond, Virginia. All Points Logistics, Inc. (APL), with the assistance of MACTEC and DSCR, produced the necessary generator waste profile documentation and submitted this to Allied Waste Company. Reece Services, Inc. transported the non-hazardous material off-site to Old Dominion Landfill, under subcontract with APL. Based on the final waste disposal manifests, Old Dominion Landfill received 997.48 tons of non-hazardous waste.

2.5.2.2 Transportation, Treatment, and Disposal of Hazardous Waste

According to Section 121(d)(3) of the Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA), the off-site transfer of any hazardous substance, pollutant, or contaminant generated during CERCLA response actions must be sent to a treatment, storage, or disposal facility that complies with applicable federal and state laws and has been approved by USEPA for acceptance of CERCLA waste (refer to the "Off-Site Rule" at 40CFR §300.440 *et seq.*). Therefore, material in the southern two-thirds of Stockpile A, and in the northern one-half of Stockpile C, which was characterized as hazardous waste, was manifested for disposal at a certified RCRA Subtitle C landfill. Michigan Waste Disposal Treatment Plant, an Environmental Quality Company (EPA ID #MID 000 724831), located at 49350 N. I-94 Service Road in Belleville, Michigan, received the hazardous waste. MACTEC verified with the USEPA Region 5 Off-Site Rule Coordinator (Mr. William W. Damico) that the facility is an acceptable facility for receipt of CERCLA waste (Appendix H). Prior to transfer of the material, MACTEC received written confirmation from Ms. Tracy Eckel, an authorized representative of the disposal facility, that the facility complies with the applicable provisions of 40 CFR §300.440 *et seq.*

(Appendix I). Based on this information, APL contracted with the Environmental Quality Company for the treatment and disposal of hazardous materials generated during the OU 4 source material removal action. According to the Land Disposal Restriction and Certification Form submitted to the receiving facility, the contaminated soil exhibits characteristics of a hazardous waste and is subject to the soil treatment standards as provided in 40 CFR §268.49(c) (the “universal treatment standards”). The Environmental Quality Company issued approval number 122104MBF to APL to receive the waste generated during the OU4 source material removal action based on the waste characterization (Appendix J). APL, in turn, subcontracted with Action Resources and Bulk Transport, Inc. to transport of the material characterized as hazardous waste from the site to the disposal facility.

On January 4, 2005, MACTEC personnel met with APL personnel to begin the removal of hazardous waste generated during the source material removal action. Close coordination among MACTEC logistical personnel, equipment operators, APL personnel, and the contract transporters was required to complete the removal and disposal of stockpiled wastes. MACTEC personnel delineated the stockpiled material as either hazardous or non-hazardous based on analytical results (Section 2.5.1). DSCR personnel were on site to assist in coordination of truck traffic and to sign appropriate waste manifests. All manifest documentation was completed by APL, and copies were placed on file at DSCR.

From January 4, 2005, to January 6, 2005, MACTEC equipment operators and hazardous material specialists transferred the stockpiled material into the appropriate disposal transport vehicles. Hazardous and non-hazardous waste manifest documentation, along with certificates of disposal, are included in Appendix K. Michigan Disposal Waste Treatment Plant received 536.62 tons of hazardous material.

2.6 AIR MONITORING

Air monitoring was conducted in accordance with the guidelines established in the Site-Specific Safety and Health Plan (SSHP) Addendum (MACTEC, 2004D). Both personal and ambient air monitoring was performed. Real-time (direct-reading) instruments were used to measure atmospheric oxygen levels, and concentrations of flammable/combustible vapors, organic vapors, and airborne particulates (dust). Monitoring results for oxygen, flammable/combustible vapors, and/or organic vapors did not exceed the personal protective equipment upgrade criteria established by the SSHP Addendum. Field air monitoring results are summarized in Table 2-11.

Constituent-specific samples also were collected to verify that the comparison action levels and associated responses to exceedances of health and safety criteria were effective. The breathing space (Breathing Zone) of personnel working nearest the excavation was sampled with a passive organic vapor badge. Stationary locations also were sampled periodically. Three stationary sampling locations were initially set up in accordance with the SSHP. Sample locations were modified during the excavation activities. A new station was placed to the south of the stockpiles and the downwind station was moved with changing wind directions. Figure 1-2 shows the stationary sampling locations. Samples were collected in accordance with National Institute of Occupational Safety and Health methods and were submitted for analysis by Schneider Laboratories, Inc. Collected vapor samples were analyzed for CVOCs, including PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1,1-TCA, 1,1-DCE, 1,2-DCB, 1,4-DCB, and VC. The laboratory reports are included as Appendix K.

2.6.1 Working Area Breathing Zone

Constituent-specific samples of the working area breathing zone were collected using passive organic vapor badges worn by workers closest to the active excavation areas. Samples were collected on the first two days of excavation activities (November 17 and 18, 2004). The laboratory results for the CVOC concentrations were below laboratory reporting limits for all constituents except TCE. Analysis of samples collected on November 17 and 18, 2004 resulted in 8-hour, time-weighted average (TWA) TCE concentrations of 3.448 milligrams per cubic meter (mg/m^3) of air sampled and 5.768 mg/m^3 8-hour TWA, respectively. Both reportable quantities were below the OSHA Permissible 8-hour TWA Permissible Exposure Limit for TCE of 537 mg/m^3 ; results are presented in Appendix L.

2.6.2 Working Area Perimeter

Stationary monitoring locations were established to monitor air conditions in the perimeter surrounding the pit excavations (Figure 1-2). Constituent-specific sampling was performed for the first two work days of the excavation activities (November 17 and 18, 2004). The three stationary locations were originally located between Pit 3 and 8th street at the exclusion zone boundary (L1), between Pit 1 and the jogging trail at the exclusion zone boundary (L2), and between and the nearest downwind exclusion zone boundary to the north-northwest of Pit 3 (L3). The downwind stationary monitoring location (L3) was moved to correspond with changing wind direction and excavated material stockpile locations. During excavation activities, L3 was moved from the north-northwest of Pit 3 to a position south of Pit 3 at the

exclusion zone boundary. A fourth stationary location was added to the south of the stockpiles (L4) and stationary location L5 replaced the original location of L3 to the north-northwest of Pit 3.

The samples were collected using passive organic vapor badges placed at each air monitoring sampling location. No analyzed CVOC was detected at a concentration greater than laboratory reporting limits in any air sample collected at a stationary location (Table 2-11).

3.0 CONCLUSIONS

In late 2004, DLA elected to complete a TCRA that was intended to reduce the volume of contaminant source material at OU 4 to the extent practicable. The Principal Threat Source Material Removal Action Work Plan (MACTEC, 2004C), which outlined the proposed activities, was submitted to DLA, AFCEE, DSCR, VDEQ, and the USEPA Region 3 in September 2004. Activities associated with the proposed source material removal action commenced after all reviewing parties concurred on the general scope and practicability constraints. In general, the results of soil comparison sampling indicate that the excavation activities were successful in removing a significant amount of contaminant mass from the vadose zone at OU 4. However, the confirmation sample results indicate that some soil remaining in the subsurface in the Pit 1 and Pit 3 areas contains CVOC contaminants at concentrations greater than the SRC. The volume of soil left in place that contains contaminants at concentrations greater than the SRC is not known and cannot be estimated accurately without additional sampling. However, because the TCRA was completed in general accordance with pre-determined practicability constraints, the objectives of the removal action were met. The results of the TCRA at each of the former FTA pits are summarized in the following subsections.

3.1 PIT 1

The source material removal action in the Pit 1 area resulted in the excavation and ultimate disposal of approximately 484 cubic yards of material. On the basis of comparison sampling results, the excavation was advanced to the approximate maximum extent that had been proposed in the work plan. Confirmation samples were collected from the sidewalls of the excavation after it had been advanced to its final extent. The following conclusions are made based on the analytical results of confirmation sampling:

- Soils remaining in the southern sidewall of the excavation in the Pit 1 area, in the vicinity of soil boring location OU4SBT, do not contain contaminants at concentrations greater than the SRC.
- Soils remaining in the southwestern sidewall of the excavation do not contain contaminants at concentrations greater than the SRC.
- Contaminants remain in soils at concentrations greater than the SRC, along the northernmost sidewall of the excavation in the vicinity of soil boring locations OU4SBN and OU4 SBS.

- Contaminant concentrations in confirmation samples typically were highest in samples collected at depths of approximately 4 feet bgs.
- The vertical distribution of constituents at two sampling locations in Pit 1 indicates increasing concentrations with depth. At sampling location, SO-16,17 near soil boring location OU4SBO (Figure 2-1) 1,2-DCB and PCE concentrations increase with depth and at location CS-13,14 on the north sidewall (Figure 2-4) the concentration of 1,2-DCB increases with depth. This trend was not observed at the other sampling locations.

3.2 PIT 2

Source removal activities completed in the Pit 2 area were limited to excavating approximately 5 cubic yards of material from the vicinity of soil boring location OU4SBW, because data collected during the 2004 investigation indicated that potential source materials in the Pit 2 area likely were restricted to this location. No other removal activities were completed in the Pit 2 area, because the concentrations of CVOC contaminants detected in other parts of the Pit 2 area during the 2004 investigation were relatively low.

3.3 PIT 3

The source material removal action in the Pit 3 area resulted in the excavation and ultimate disposal of approximately 498 cubic yards of material. On the basis of comparison sampling results, the excavation was advanced to the approximate maximum extent that had been proposed in the work plan. Confirmation samples were collected from the sidewalls of the excavation after it had been advanced to its final extent. The following conclusions are made based on the analytical results of confirmation sampling:

- Soils remaining in the southern sidewall of the excavation in the Pit 3 area, in the vicinity of soil boring locations OU4SBA and OU4SBB, do not contain contaminants at concentrations greater than the SRC.
- Except for a single confirmation-sampling detection (cis-1,2-DCE, at location OU4-PIT3-CS-14), soils remaining in the eastern sidewall of the excavation in the Pit 3 area do not contain contaminants at concentrations greater than the SRC .
- Soils remaining in the northern and northeastern sidewall of the excavation in the Pit 3 area, in the vicinity of soil boring OU4SBE, do not contain contaminants at concentrations greater than the SRC.

- Contaminants at concentrations greater than the SRC remain in soils along the northwestern sidewall of the excavation in the Pit 3 area, west and northwest of soil boring location OU4SBC.
- Contaminant concentrations in confirmation samples typically were highest in those samples collected at depths between approximately 3 and 4 feet bgs.
- The vertical distribution of the constituents at two sampling locations in Pit 3 indicates increasing concentrations with depth. The concentrations of 1,2-DCB, cis-1,2-DCE and TCE at sampling locations, SO-11,12 and SO-13,14 (Figure 2-3) increase with depth. This trend was not observed at the other sampling locations.

3.4 SUMMARY OF CONCLUSIONS

Based on the observations summarized in the preceding subsections, the TCRA at OU 4 has achieved its stated objective – the reduction of the volume of contaminant source material in the vadose zone at OU 4, to the extent practicable, in order to limit the continued movement of contaminants to underlying groundwater at elevated concentrations. Given the pre- and post-TCRA site conditions, wherein persistent CVOC source mass has already migrated into the saturated zone beneath and downgradient from the former FTA, and in the absence of completed groundwater exposure pathways under current and expected future land use scenarios, further excavation of accessible residual source mass at OUs 4 and 7 is considered unlikely to result in further substantive reduction in the threat to underlying groundwater quality.

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*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

July 2005

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TABLES

TABLE 1-1

SUMMARY OF SOIL REMOVAL CRITERIA
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia

Constituent	Aqueous Solubility ^a (µg/L)	1% Limit of Aqueous Solubility ^b (µg/L)	Organic-Carbon Partition Coefficient ^c (mL/g)	Soil Removal Criteria (Sorbed Concentration in Soil in Equilibrium with Dissolved Concentration) (µg/kg ^d)
Halomethanes				
Methylene Chloride (Dichloromethane)	19,400,000	194,000	28	5,432
Chloroform	8,000,000	80,000	28	2,240
Chlorobenzenes				
Chlorobenzene	500,000	5,000	149	745
1,2-Dichlorobenzene	100,000	1,000	187	187
1,3-Dichlorobenzene	69,000	690	170	117
1,4-Dichlorobenzene	49,000	490	158	77
1,2,4-Trichlorobenzene	48,800	488	1,430	698
Chlorinated Aliphatic Hydrocarbons				
Carbon Tetrachloride	785,700	7,857	417	3,276
Chloroethane	5,740,000	57,400	26.5	1,521
1,1-DCA	5,500,000	55,000	30	1,650
1,1,1-TCA	4,400,000	44,000	105	4,620
1,1,2-TCA	4,500,000	45,000	56	2,520
PCE	140,000	1,400	263	368
TCE	1,100,000	11,000	107	1,177
1,1-DCE	2,250,000	22,500	65	1,463
<i>cis</i> -1,2-DCE	800,000	8,000	44.7	358
<i>trans</i> -1,2-DCE	600,000	6,000	59	354
Vinyl Chloride	1,100,000	11,000	2.5	28

Notes:

^a Values for aqueous solubility from Verschueren (1983); µg/L = micrograms of constituent per liter of water.

^b

"1% limit" is the concentration of a constituent in groundwater judged to be indicative of the possible presence of a non-aqueous-phase liquid.

^c Values for organic carbon partition coefficient from a number of sources mL/g = milliliters per gram.

^d mg/kg = micrograms of constituent per kilogram of soil.

^e NA = not applicable or available.

CVOCs - Chlorinated volatile organic compounds.

Table prepared by John W. Anthony, Mitretek Systems, 2004.

PREPARED/DATE: John Anthony/Mitretek

CHECKED/DATE: NTG 7/12/2004

TABLE 2-1

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Sample Depth (ft.):	Sample Date:	Soil		Soil		Soil		Soil	
				OU4-PITI-SO-1	OU4-PITI-SO-2	OU4-PITI-SO-3*	OU4-PITI-SO-4	OU4-PITI-SO-5	OU4-PITI-SO-6	OU4-PITI-SO-7	OU4-PITI-SO-8
Reporting Limit (a)	SRC Concentration	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004
Volatile Organic Compounds - SW8260B (mg/Kg)											
1,1-Dichloroethane	1.65	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.187	<0.025	<0.025	<0.025	<0.025	<0.025	0.28	<0.025	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.117	34.9	2.47	5.08	0.307	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.077	17.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.358	11.9	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	--	18.8	1.9	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.368	90.1	1.19	1.93	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	1.177	72.6	1.34	1.6	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results.

TABLE 2-1

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	SRC Concentration	Soil	Soil	Soil	Soil
				OU4-PIT1-SO-6	OU4-PIT1-SO-7	OU4-PIT1-SO-8	OU4-PIT1-SO-9
				5	10	8	4
	Sample Depth (ft.):			11/18/2004	11/18/2004	11/19/2004	11/19/2004
	Sample Date:						
Volatile Organic Compounds - SW8260B (mg/Kg)							
1,1-Dichloroethane	0.025	1.65	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	0.187	<0.025	<0.025	0.597	41.8	41.8
1,3-Dichlorobenzene	0.025	0.117	<0.025	<0.025	0.597	36.4	36.4
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	<0.025	<0.025	0.764	<0.025	<0.025
Ethylbenzene	0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	0.368	12.6	12.6	<0.025	<0.025	158
Trichloroethene	0.025	1.177	9.36	9.36	<0.025	0.36	48.1

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- (b) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis. See Table 2-6 for Fixed Based Results.

TABLE 2-1

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil	Soil	Soil
Sample Location:	OU4-PIT1-SO-10	OU4-PIT1-SO-11	OU4-PIT1-SO-12*	OU4-PIT1-SO-13	Soil
Sample Depth (ft.):	7	3	7	3.5	Soil
Sample Date:	11/19/2004	11/19/2004	11/19/2004	11/19/2004	11/19/2004
Reporting Limit (a)	SRC Concentration				
<u>Volatile Organic Compounds - SW8260B (mg/Kg)</u>					
1,1-Dichloroethane	1.65	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.187	0.126	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.117	0.096	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.077	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.358	0.222	0.168	0.056	0.056
Ethylbenzene	--	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	--	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.368	<0.025	<0.025	<0.025	<0.025
Trichloroethene	1.177	<0.025	<0.025	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis. See Table 2-6 for Fixed Based Results.

TABLE 2-1

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Sample Depth (ft.):	Sample Date:	Reporting Limit (a)	SRC Concentration	Soil		Soil	
						OU4-PIT1-SO-14	OU4-PIT1-SO-15	OU4-PIT1-SO-16	OU4-PIT1-SO-17
						7	4	8	4
						11/20/2004	11/20/2004	11/20/2004	11/20/2004
Volatile Organic Compounds - SW8260B (mg/Kg)									
1,1-Dichloroethane		0.025		1.65	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene		0.025		0.187	<0.025	<0.025	3.35	3	<0.025
1,3-Dichlorobenzene		0.025		0.117	0.036	<0.025	1.18	<0.025	<0.025
1,4-Dichlorobenzene		0.025		0.077	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene		0.025		0.358	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene		0.025		--	<0.025	<0.025	1.42	<0.025	<0.025
m&p-Xylene		0.025		--	<0.025	<0.025	1.46	<0.025	<0.025
Tetrachloroethene		0.025		0.368	<0.025	<0.025	165	77.5	77.5
Trichloroethene		0.025		1.177	<0.025	<0.025	47.5	79.4	79.4

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis. See Table 2-6 for Fixed Based Results.

TABLE 2-1

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil	Soil
Sample Location:	OU4-PIT1-SO-18	OU4-PIT1-SO-19*	OU4-PIT1-SO-20	OU4-PIT1-SO-21
Sample Depth (ft.):	7	3	7	4
Sample Date:	11/20/2004	11/20/2004	11/20/2004	11/20/2004
Reporting Limit (a)	SRC Concentration			
Volatile Organic Compounds - SW8260B (mg/Kg)				
1,1-Dichloroethane	0.025	1.65	<0.025	<0.025
1,2-Dichlorobenzene	0.025	0.187	<0.025	0.176
1,3-Dichlorobenzene	0.025	0.117	<0.025	<0.025
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	<0.025	0.029
Ethylbenzene	0.025	--	<0.025	<0.025
m&p-Xylene	0.025	--	<0.025	<0.025
Tetrachloroethene	0.025	0.368	<0.025	0.041
Trichloroethene	0.025	1.177	<0.025	0.061
				8.84
				<0.025
				<0.025
				<0.025
				111
				99.8

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis. See Table 2-6 for Fixed Based Results.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE 2-2

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:		Soil		Soil		Soil	
	Sample Location:	Reporting	OU4-PIT1-CS-1	OU4-PIT1-CS-2	OU4-PIT1-CS-3	OU4-PIT1-CS-4	Soil	Soil
	Sample Depth (ft.):	Limit (a)	8	4	8	4	8	4
	Sample Date:	Concentration	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004
Volatile Organic Compounds - SW8260B (mg/Kg)								
1,1-Dichloroethane	0.025	1.65	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	0.187	<0.025	<0.025	0.058	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.025	0.117	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	<0.025	<0.025	0.129	<0.025	<0.025	<0.025
Ethylbenzene	0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	0.368	<0.025	60.7	0.971	332	332	332
Trichloroethene	0.025	1.177	<0.025	6.38	1.39	381	381	381

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- * Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results.

TABLE 2-2

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Sample Depth (ft.):	Sample Date:	Soil		Soil		Soil	
				OU4-PIT1-CS-5	OU4-PIT1-CS-6	OU4-PIT1-CS-7	OU4-PIT1-CS-8*		
Reporting Limit (a)	SRC Concentration	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004
Volatile Organic Compounds - SW8260B (mg/Kg)									
0.025	1.65	<0.025	<0.025	0.071	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	0.187	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	0.117	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	0.077	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	0.358	<0.025	<0.025	1.99	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	--	<0.025	<0.025	0.04	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	0.368	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
0.025	1.177	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- * Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results.

TABLE 2-2

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:	Soil		Soil		Soil		Soil		
	Sample Location:	OU4-PIT1-CS-9	OU4-PIT1-CS-10	OU4-PIT1-CS-11	OU4-PIT1-CS-12					
	Sample Depth (ft.):	8	4	8	4					
Sample Date:	Reporting Limit (a)	Concentration	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	
Volatile Organic Compounds - SW8260B (mg/Kg)										
1,1-Dichloroethane	0.025	1.65	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.052	
1,2-Dichlorobenzene	0.025	0.187	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
1,3-Dichlorobenzene	0.025	0.117	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
cis-1,2-Dichloroethene	0.025	0.358	<0.025	0.074	0.063	0.209	<0.025	<0.025	<0.025	
Ethylbenzene	0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
m&p-Xylene	0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Tetrachloroethene	0.025	0.368	<0.025	0.025	0.096	0.026	<0.025	0.026	0.026	
Trichloroethene	0.025	1.177	<0.025	<0.025	0.073	0.039	<0.025	0.039	0.039	

SRC = Soil Removal Criteria

Notes:

Positive result exceeds SRC concentration

Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

* Split-sample sent to Fixed Based Laboratory for analysis.
 See Table 2-6 for Fixed Based Results.

TABLE 2-2

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 1 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location:	Reporting Limit (a)	SRC Concentration	Soil		Soil		Soil			
				OU4-PIT1-CS-13	OU4-PIT1-CS-14	OU4-PIT1-CS-15*	OU4-PIT1-CS-16	OU4-PIT1-CS-13	OU4-PIT1-CS-14	OU4-PIT1-CS-15*	OU4-PIT1-CS-16
				8	4	4	4	8	8	4	4
Volatile Organic Compounds - SW8260B (mg/Kg)											
1,1-Dichloroethane		0.025	1.65	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025		
1,2-Dichlorobenzene		0.025	0.187	2.29	<0.025	0.034	2.15	<0.025	2.15		
1,3-Dichlorobenzene		0.025	0.117	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025		
1,4-Dichlorobenzene		0.025	0.077	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025		
cis-1,2-Dichloroethene		0.025	0.358	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025		
Ethylbenzene		0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025		
m&p-Xylene		0.025	--	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025		
Tetrachloroethene		0.025	0.368	14.5	45.9	0.029	5.77	0.029	5.77		
Trichloroethene		0.025	1.177	16.5	139	0.14	10.6	0.14	10.6		

SRC = Soil Removal Criteria

Notes:

- Positive result exceeds SRC concentration
 - Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
 - * Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:		Soil		Soil	
	Sample Location:	Reporting Limit (a)	OU4-PIT3-SO-1	OU4-PIT3-SO-2	OU4-PIT3-SO-3	Soil
Sample Depth (ft.):	Sample Date:	Concentration	5	7	9	
			11/17/2004	11/17/2004	11/17/2004	
Volatile Organic Compounds - SW82.60B (mg/Kg)						
1,2-Dichlorobenzene	0.025	0.187	<0.025	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.025	0.117	<0.025	767	162	162
1,4-Dichlorobenzene	0.025	0.077	<0.025	469	400	400
cis-1,2-Dichloroethene	0.025	0.358	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	1.177	2500	25.3	16.5	16.5

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- * Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
- * See Table 2-6 for Fixed Based Results.

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil	Soil
Sample Location:	OU4-PIT3-SO-4	OU4-PIT3-SO-5	OU4-PIT3-SO-6	OU4-PIT3-SO-6
Sample Depth (ft.):	7	10	6	6
Sample Date:	11/17/2004	11/17/2004	11/17/2004	11/17/2004
Reporting Limit (a)	SRC Concentration	SRC Concentration	SRC Concentration	SRC Concentration
Volatle Organic Compounds - SW8260B (mg/Kg)				
1,2-Dichlorobenzene	0.025	0.187	<0.025	5.22
1,3-Dichlorobenzene	0.025	0.117	41.3	5.86
1,4-Dichlorobenzene	0.025	0.077	59.6	<0.025
cis-1,2-Dichloroethene	0.025	0.358	<0.025	2.35
Trichloroethene	0.025	1.177	461	31.5

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- * Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results.

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	SRC Concentration	Soil OU4-PIT3-SO-7* 5 11/17/2004	Soil OU4-PIT3-SO-8 5 11/17/2004	Soil OU4-PIT3-SO-9 9 11/18/2004
Volatile Organic Compounds - SW8260B (mg/Kg)					
1,2-Dichlorobenzene	0.025	0.187	10.5	122	<0.025
1,3-Dichlorobenzene	0.025	0.117	3.25	38.6	<0.025
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	5.01	35.4	<0.025
Trichloroethene	0.025	1.177	46.9	1760	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- (b) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
 See Table 2-6 for Fixed Based Results.

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil
Sample Location:	OU4-PIT3-SO-10	OU4-PIT3-SO-11	OU4-PIT3-SO-12
Sample Depth (ft.):	4	8	3.5
Sample Date:	11/18/2004	11/18/2004	11/18/2004
Reporting Limit (a)	Concentration	SRC	
Volatile Organic Compounds - SW8260B (mg/Kg)			
1,2-Dichlorobenzene	<0.025	0.187	4.035
1,3-Dichlorobenzene	<0.025	0.117	<0.025
1,4-Dichlorobenzene	<0.025	0.077	<0.025
cis-1,2-Dichloroethene	<0.025	0.358	5.63
Trichloroethene	<0.025	1.177	4.47

SRC = Soil Removal Criteria

Notes:

(a) []

Positive result exceeds SRC concentration

Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

* Split-sample sent to Fixed Based Laboratory for analysis.

See Table 2-6 for Fixed Based Results.

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	SRC Concentration	Soil OU4-PIT3-SO-13 8 11/18/2004	Soil OU4-PIT3-SO-14 3 11/18/2004	Soil OU4-PIT3-SO-15 2 11/18/2004
Sample Location:	Sample Depth (ft.):	Sample Date:			
Volatile Organic Compounds - SW8260B (mg/Kg)					
1,2-Dichlorobenzene	0.025	0.187	3.42	0.882	<0.025
1,3-Dichlorobenzene	0.025	0.117	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	1.19	0.534	<0.025
Trichloroethene	0.025	1.177	33.7	23.7	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis. See Table 2-6 for Fixed Based Results.

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	SRC Concentration	Soil		Soil	
				OU4-PIT3-SO-16	OU4-PIT3-SO-17*	OU4-PIT3-SO-16	OU4-PIT3-SO-18*
	Sample Depth (ft.):			5	8.5	5	5
	Sample Date:			11/18/2004	11/18/2004	11/18/2004	11/18/2004
Volatile Organic Compounds - SW8260B (mg/Kg)							
1,2-Dichlorobenzene	0.025	0.187		0.386	0.146		138
1,3-Dichlorobenzene	0.025	0.117		<0.025	<0.025		18.8
1,4-Dichlorobenzene	0.025	0.077		<0.025	<0.025		<0.025
cis-1,2-Dichloroethene	0.025	0.358		1.11	0.361		53.9
Trichloroethene	0.025	1.177		<0.025	<0.025		3110

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- * Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results.

TABLE 2-3

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil	Soil
Sample Location:	OU4-PIT3-SO-19	OU4-PIT3-SO-20	OU4-PIT3-SO-21	Soil
Sample Depth (ft.):	5	8.5	4.5	
Sample Date:	11/18/2004	11/18/2004	11/18/2004	
Reporting Limit (a)	SRC Concentration			
Volatile Organic Compounds - SW8260B (mg/Kg)				
1,2-Dichlorobenzene	0.025	0.187	10.8	<0.025
1,3-Dichlorobenzene	0.025	0.117	13	<0.025
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	2.21	0.486
Trichloroethene	0.025	1.177	12.3	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- * Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis.
 See Table 2-6 for Fixed Based Results.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE 2-4

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	SRC Concentration	Soil	Soil	Soil
Sample Depth (ft.)	Sample Date	Limit (a)	Concentration	OU4-PIT3-CS-1	OU4-PIT3-CS-2	OU4-PIT3-CS-3
				7	3 5	8
				11/19/2004	11/19/2004	11/19/2004
Volatile Organic Compounds - SW8260B (mg/Kg)						
1,2-Dichlorobenzene		0.025	0.187	<0.0375	0.61	<0.025
1,3-Dichlorobenzene		0.025	0.117	<0.0375	1.68	<0.025
1,4-Dichlorobenzene		0.025	0.077	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene		0.025	0.358	0.178	<0.025	6.74
Trichloroethene		0.025	1.177	<0.0375	<0.025	<0.025
						0.656
						2.82

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions
- * Split-sample sent to Fixed Based Laboratory for analysis
- See Table 2-6 for Fixed Based Results

TABLE 2-4

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	SRC Concentration	Soil OU4-PIT3-CS-4 3 11/19/2004	Soil OU4-PIT3-CS-4R 4 11/21/2004	Soil OU4-PIT3-CS-5* 7 11/19/2004	Soil OU4-PIT3-CS-6 3 11/19/2004
Volatile Organic Compounds - SW8260B (mg/Kg)						
1,2-Dichlorobenzene	0.025	0.187	<0.025	3.7	<0.025	<0.025
1,3-Dichlorobenzene	0.025	0.117	56.2	0.686	<0.025	<0.025
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	<0.025	<0.025	<0.025	0.222
Trichloroethene	0.025	1.177	1080	59.8	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions
- Split-sample sent to Fixed Based Laboratory for analysis.
- See Table 2-6 for Fixed Based Results

TABLE 2-4

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location	Soil	Soil	Soil	Soil
Sample Depth (ft.)	Reporting Limit (a)	SRC Concentration	OU4-PIT3-CS-7	OU4-PIT3-CS-8	OU4-PIT3-CS-9*
Sample Date	Limit (a)	Concentration	7	3	7
			11/19/2004	11/19/2004	11/19/2004
Volatile Organic Compounds - SW8260B (mg/Kg)					
1,2-Dichlorobenzene	0.025	0.187	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.025	0.117	<0.025	<0.025	0.107
1,4-Dichlorobenzene	0.025	0.077	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.358	<0.025	0.06	<0.025
Trichloroethene	0.025	1.177	<0.025	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
 Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions
- * Split-sample sent to Fixed Based Laboratory for analysis.
 See Table 2-6 for Fixed Based Results

LE 2-4

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location	Sample Depth (ft):	Reporting Limit (a)	SRC Concentration	Soil	Soil	Soil	Soil
					OU4-PIT3-CS-11	OU4-PIT3-CS-12	OU4-PIT3-CS-13	OU4-PIT3-CS-14
					7.5	3.5	7.5	3.5
					11/19/2004	11/19/2004	11/19/2004	11/19/2004
Volatile Organic Compounds - SW8260B (mg/Kg)								
1,2-Dichlorobenzene		0.025	0.187	<0.025	<0.025	<0.025	<0.025	<0.025
1,3-Dichlorobenzene		0.025	0.117	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene		0.025	0.077	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene		0.025	0.358	<0.025	<0.025	0.209	0.806	0.806
Trichloroethene		0.025	1.177	<0.025	<0.025	<0.025	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- * Split-sample sent to Fixed Based Laboratory for analysis
- See Table 2-6 for Fixed Based Results.

LE 2-4

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 3 MOBILE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil	Soil
Sample Location:	OU4-PIT3-CS-15	OU4-PIT3-CS-15R	OU4-PIT3-CS-16	OU4-PIT3-CS-16R
Sample Depth (ft):	7.5	7.5	3	3
Sample Date:	11/19/2004	11/21/2004	11/19/2004	11/21/2004
Reporting Limit (a)	SRC Concentration	SRC Concentration	SRC Concentration	SRC Concentration
Volatle Organic Compounds - SW8260B (mg/Kg)				
1,2-Dichlorobenzene	0.025	0.187	0.956	2.91
1,3-Dichlorobenzene	0.025	0.117	0.242	0.794
1,4-Dichlorobenzene	0.025	0.077	1.93	5.39
cis-1,2-Dichloroethene	0.025	0.358	0.888	0.399
Trichloroethene	0.025	1.177	<0.025	<0.025

SRC = Soil Removal Criteria

Notes:

- (a) Positive result exceeds SRC concentration
- Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions
- * Split-sample sent to Fixed Based Laboratory for analysis
- See Table 2-6 for Fixed Based Results.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 1 FIXED-BASE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Soil	Soil	Soil
Sample Location:	OU4-PIT1-SO-3	OU4-PIT1-SO-12	OU4-PIT1-SO-19
Sample Depth (ft.):	4	7	3
Sample Date:	11/17/2004	11/19/2004	11/20/2004
Reporting Limit (a)	SRC Concentration		
D2216 - Percent Solids (%)	--	87	89
Percent Solids			
Volatile Organic Compounds - SW8260B (mg/Kg)			
1,1,1-Trichloroethane	4.62	0.0026 JQ	<0.0047
1,1-Dichloroethane	1.65	0.0018 JQ	0.083
1,1-Dichloroethene	1.463	<0.0048	0.011
1,2,4-Trimethylbenzene	--	<0.0048	<0.0047
1,2-Dichlorobenzene	0.187	0.0022 JQ	<0.0047
2-Butanone	--	0.0019 JQ	0.072
4-Methyl-2-Pentanone	--	<0.0095	0.25 J
Acetone	--	0.052	0.61 J
cis-1,2-Dichloroethene	0.358	0.031	0.24 J
Dichlorodifluoromethane	--	0.00065 JQ	<0.0047
Methylene Chloride	5.432	<0.0048	0.021
Naphthalene	--	0.0018 JB	0.0012 JQ
Tetrachloroethylene	0.368	0.0084	0.0086
Toluene	--	<0.0048	0.00079 JB
trans-1,2-Dichloroethene	0.354	<0.0048	0.0011 JQ
Trichloroethene	1.177	0.0058	0.026
Trichlorofluoromethane	--	<0.0048	<0.0047

SRC = Soil Removal Criteria

Notes:

- J Estimated; based on QC data
- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

☐ Positive result exceeds SRC concentration

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT I FIXED-BASE LABORATORY
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Location: Sample Depth (ft.) Sample Date.	Reporting Limit (a)	SRC Concentration	Soil	
			OU4-PIT1-CS-8 4 11/20/2004	Soil OU4-PIT1-CS-15 8 11/20/2004
D2216 - Percent Solids (%)		--	92	89
Percent Solids				
Volatile Organic Compounds - SW8260B (mg/Kg)				
1,1,1-Trichloroethane	0.005	4.62	<0.0045	0.024
1,1-Dichloroethane	0.005	1.65	0.0025 JQ	0.018
1,1-Dichloroethene	0.005	1.463	<0.0045	0.0018 JQ
1,2,4-Trimethylbenzene	0.005	--	<0.0045	0.0024 JQ
1,2-Dichlorobenzene	0.005	0.187	0.0052 JQ	0.14
1,3-Dichlorobenzene	0.005	0.117	<0.0045	0.0013 JQ
1,4-Dichlorobenzene	0.005	0.077	0.00097 JB	0.016
2-Butanone	0.01	--	<0.009	0.072
Acetone	0.01	--	0.029	0.39 J
Bromochloromethane	0.005	--	<0.0045	0.0011 JQ
Carbon Disulfide	0.005	--	0.0013 JQ	<0.0045
cis-1,2-Dichloroethene	0.005	0.358	0.052	0.015
Ethylbenzene	0.005	--	<0.0045	0.0035 JQ
m,p-Xylene	0.01	--	0.0023 JQ	0.038
Methylene Chloride	0.005	5.432	0.011	0.048
Naphthalene	0.005	--	0.0016 JQ	0.032
o-Xylene	0.005	--	<0.0045	0.0023 JQ
Tetrachloroethylene	0.005	0.368	0.013	0.14
Toluene	0.005	--	0.00067 JB	0.0028 JQ
Trichloroethene	0.005	1.177	0.0044 JQ	0.31 J

SRC = Soil Removal Criteria

Notes:

- J Estimated; based on QC data
 JB Estimated; possibly biased high or false positive based on blank contamination
 JQ Estimated; Value is between reporting limit and detection limit
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

SUMMARY OF DETECTED CONSTITUENTS RESULTS - COMPARISON SAMPLING PIT 3 FIXED-BASE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:		Soil		Soil		Soil		Duplicate	
	Sample Location:	Sample Depth (ft.):	Reporting Limit (a)	SRC Concentration	OU4-PIT3-SO-7	OU4-PIT3-SO-17	OU4-PIT3-SO-18	OU4-PIT3-SO-18	OU4-PIT3-SO-18	OU4-PIT3-SO-18
D2216 - Percent Solids (%)										
Percent Solids	--			88		NA	NA	NA	NA	NA
Volatiles Organic Compounds - SW8260B (mg/Kg)										
1,2,4-Trichlorobenzene	0.005	0.698		<4.5		<0.0048		2.7 JQ		2.3 JQ
1,2,4-Trimethylbenzene	0.005	--		<4.5		<0.0048		1.1 JQ		0.9 JQ
1,2-Dichlorobenzene	0.005	0.187		32		0.0014 JQ		410 J		230 J
1,3-Dichlorobenzene	0.005	0.117		18 JQ		<0.0048		17		14
1,4-Dichlorobenzene	0.005	0.077		20		0.0026 JB		260 J		150 J
2-Butanone	0.01	--		<8.9		0.0085 JQ		<12		<11
Acetone	0.01	--		<8.9		0.043		<12		<11
Chlorobenzene	0.005	0.745		<4.5		0.007		11		11
cis-1,2-Dichloroethene	0.005	0.358		9.5		0.74		30		41
Dichlorodifluoromethane	0.005	--		<4.5		0.0008 JQ		<6.1		<5.5
p-Isopropyltoluene	0.005	--		<4.5		0.0017 JQ		<6.1		<5.5
Tetrachloroethylene	0.005	0.368		<4.5		<0.0048		1.7 JQ		1.7 JQ
Toluene	0.005	--		<4.5		0.0017 JB		4 JQ		4.9 JQ
trans-1,2-Dichloroethene	0.005	0.354		<4.5		0.0044 JQ		<6.1		<5.5
Trichloroethene	0.005	1.177		54		0.0052		860 J		1200 J
Vinyl Chloride	0.005	0.028		<4.5		0.35		<6.1		<5.5

SRC = Soil Removal Criteria

Notes:

- J Estimated; based on QC data
- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- ☐ Positive result exceeds SRC concentration

SUMMARY OF DETECTED CONSTITUENTS RESULTS - CONFIRMATION SAMPLING PIT 3 FIXED-BASE LABORATORY
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	SRC Concentration ^c	Soil		Duplicate
				OU4-PIT3-CS-5	OU4-PIT3-CS-9	
Sample Depth (ft):	Sample Date:			7	11/19/2004	7.5
				11/19/2004	11/19/2004	11/19/2004
D2216 - Percent Solids (%)			--	88	89	89
Percent Solids						
Volatile Organic Compounds - SW8260B (mg/Kg)						
1,1,1-Trichloroethane		0.005	4.62	0.0022 JQ	0.0025 JQ	0.0025 JQ
1,3-Dichlorobenzene		0.005	0.117	<0.0047	0.0018 JQ	0.0013 JQ
1,4-Dichlorobenzene		0.005	0.077	<0.0047	0.024 J	0.017 J
Acetone		0.01	--	0.018	0.041	0.052
Carbon Disulfide		0.005	--	0.0044 JQ	<0.0045	<0.0047
Chlorobenzene		0.005	0.745	0.0015 JQ	0.036	0.044
cis-1,2-Dichloroethene		0.005	0.358	1.7 J	0.011 J	0.017 J
Dichlorodifluoromethane		0.005	--	0.0067 JQ	<0.0045	0.00074 JQ
Methylene Chloride		0.005	5.432	<0.0047	<0.0045	0.016
Toluene		0.005	--	0.0012 JB	0.00074 JB	0.001 JB
trans-1,2-dichloroethene		0.005	0.354	0.015	<0.0045	<0.0047
Trichloroethene		0.005	1.177	0.027 J	0.004 JQ	0.0068 J
Vinyl Chloride		0.005	0.028	0.13 J	<0.0045	<0.0047

SRC = Soil Removal Criteria

Notes:

- J Estimated; based on QC data
- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

☐ Positive result exceeds SRC concentration

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 PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE 2-9

SUMMARY OF BACKFILL SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:		Soil	Soil
Sample Location:	Reporting	OU4BACKFILL-1	OU4BACKFILL-2
Sample Date:	Limit (a)	11/12/2004	11/12/2004
Semi-Volatile Organic Compounds - SW8270C (mg/Kg)			
1,2,4-Trichlorobenzene	0.35	<0.35	<0.35
1,2-Dichlorobenzene	0.35	<0.35	<0.35
1,3-Dichlorobenzene	0.35	<0.35	<0.35
1,4-Dichlorobenzene	0.35	<0.35	<0.35
2,4,5-Trichlorophenol	0.35	<0.35	<0.35
2,4,6-Trichlorophenol	0.35	<0.35	<0.35
2,4-Dichlorophenol	0.35	<0.35	<0.35
2,4-Dimethylphenol	0.35	<0.35	<0.35
2,4-Dinitrophenol	0.7	<0.7	<0.71
2,4-Dinitrotoluene	0.35	<0.35	<0.35
2,6-Dinitrotoluene	0.35	<0.35	<0.35
2-Chloronaphthalene	0.35	<0.35	<0.35
2-Chlorophenol	0.35	<0.35	<0.35
2-Methylnaphthalene	0.35	<0.35	<0.35
2-Methylphenol	0.35	<0.35	<0.35
2-Nitroaniline	0.7	<0.7	<0.71
2-Nitrophenol	0.35	<0.35	<0.35
3,3-Dichlorobenzidine	0.7	<0.7	<0.71
3,4-Methylphenol	0.7	<0.7	<0.71
3-Nitroaniline	0.7	<0.7	<0.71
4,6-Dinitro-2-methylphenol	1.8	<1.8	<1.8
4-Bromophenyl-phenylether	0.35	<0.35	<0.35
4-Chloro-3-methylphenol	0.35	<0.35	<0.35
4-Chloroaniline	0.35	<0.35	<0.35
4-Chlorophenyl-phenylether	0.35	<0.35	<0.35
4-Nitroaniline	0.7	<0.7	<0.71
4-Nitrophenol	0.35	<0.7 UL	<0.71 UL
Acenaphthene	0.35	<0.35	<0.35
Acenaphthylene	0.35	<0.35	<0.35
Anthracene	0.35	<0.35	<0.35
Benzo(a)anthracene	0.35	<0.35	<0.35
Benzo(a)pyrene	0.35	<0.35	<0.35
Benzo(b)fluoranthene	0.35	<0.35	<0.35
Benzo(g,h,i)perylene	0.35	<0.35	<0.35
Benzo(k)fluoranthene	0.35	<0.35	<0.35
Benzoic acid	0.7	<0.7	<0.71
Benzyl alcohol	0.35	<0.35	<0.35
bis(2-Chloroethoxy)methane	0.35	<0.35	<0.35
bis(2-chloroethyl)ether	0.35	<0.35	<0.35
bis(2-chloroisopropyl)ether	0.35	<0.35	<0.35
bis(2-Ethylhexyl)phthalate	0.35	<0.35	<0.35
Butylbenzylphthalate	0.35	<0.35	<0.35
Chrysene	0.35	<0.35	<0.35
Dibenz(a,h)anthracene	0.35	<0.35	<0.35
Dibenzofuran	0.35	<0.35	<0.35
Diethylphthalate	0.35	<0.35	<0.35
Dimethylphthalate	0.35	<0.35	<0.35

TABLE 2-9

SUMMARY OF BACKFILL SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type: Sample Location: Sample Date:	Reporting Limit (a)	Soil OU4BACKFILL-1 11/12/2004	Soil OU4BACKFILL-2 11/12/2004
di-n-Butylphthalate	0.35	<0.35	<0.35
di-n-Octylphthalate	0.35	<0.35	<0.35
Fluoranthene	0.35	<0.35	<0.35
Fluorene	0.35	<0.35	<0.35
Hexachlorobenzene	0.35	<0.35	<0.35
Hexachlorobutadiene	0.35	<0.35	<0.35
Hexachlorocyclopentadiene	0.35	<0.35	<0.35
Hexachloroethane	0.35	<0.35	<0.35
Hexachloropropene	0.35	<0.35	<0.35
Indeno(1,2,3-c,d)pyrene	0.35	<0.35	<0.35
Isophorone	0.35	<0.35	<0.35
Naphthalene	0.35	<0.35	<0.35
Nitrobenzene	0.35	<0.35	<0.35
N-Nitroso-di-n-propylamine	0.35	<0.35	<0.35
N-Nitrosodiphenylamine	0.35	<0.35	<0.35
Pentachlorophenol	0.7	<0.7	<0.71
Phenanthrene	0.35	<0.35	<0.35
Phenol	0.35	<0.35	<0.35
Pyrene	0.35	<0.35	<0.35
Surrogate - %			
2,4,6-Tribromophenol	--	66	42
2-Fluorobiphenyl	--	71	51
2-Fluorophenol	--	61	40
Nitrobenzene-d5	--	51	36
Phenol-d5	--	61	42
p-Terphenyl-d14	--	85	71
Volatile Organic Compounds - SW8260B (mg/Kg)			
1,1,1,2-Tetrachloroethane	0.005	<0.0052	<0.0052
1,1,1-Trichloroethane	0.005	<0.0052	<0.0052
1,1,2,2-Tetrachloroethane	0.005	<0.0052	<0.0052
1,1,2-Trichloroethane	0.005	<0.0052	<0.0052
1,1-Dichloroethane	0.005	<0.0052	<0.0052
1,1-Dichloroethene	0.005	<0.0052	<0.0052
1,1-Dichloropropene	0.005	<0.0052	<0.0052
1,2,3-Trichlorobenzene	0.005	<0.0052	<0.0052
1,2,3-Trichloropropane	0.005	<0.0052	<0.0052
1,2,4-Trichlorobenzene	0.005	<0.0052	<0.0052
1,2,4-Trimethylbenzene	0.005	<0.0052	<0.0052
1,2-Dibromo-3-Chloropropane	0.005	<0.0052	<0.0052
1,2-Dibromoethane	0.005	<0.0052	<0.0052
1,2-Dichlorobenzene	0.005	<0.0052	<0.0052
1,2-Dichloroethane	0.005	<0.0052	<0.0052
1,2-Dichloropropane	0.005	<0.0052	<0.0052
1,3,5-Trimethylbenzene	0.005	<0.0052	<0.0052
1,3-Dichlorobenzene	0.005	<0.0052	<0.0052
1,3-Dichloropropane	0.005	<0.0052	<0.0052

TABLE 2-9

SUMMARY OF BACKFILL SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Reporting	Soil	Soil
Sample Location:	Limit (a)	OU4BACKFILL-1	OU4BACKFILL-2
Sample Date:		11/12/2004	11/12/2004
1,4-Dichlorobenzene	0.005	<0.0052	<0.0052
2,2-Dichloropropane	0.005	<0.0052	<0.0052
2-Butanone	0.01	<0.01	<0.01
2-Chlorotoluene	0.005	<0.0052	<0.0052
2-Hexanone	0.01	<0.01	<0.01
4-Chlorotoluene	0.005	<0.0052	<0.0052
4-Methyl-2-Pentanone	0.005	<0.01	<0.01
Acetone	0.01	<0.01	<0.01
Benzene	0.005	<0.0052	<0.0052
Bromobenzene	0.005	<0.0052	<0.0052
Bromochloromethane	0.005	<0.0052	<0.0052
Bromodichloromethane	0.005	<0.0052	<0.0052
Bromoform	0.005	<0.0052	<0.0052
Bromomethane	0.005	<0.0052	<0.0052
Carbon Disulfide	0.005	<0.0052	<0.0052
Carbon Tetrachloride	0.005	<0.0052	<0.0052
Chlorobenzene	0.005	<0.0052	<0.0052
Chloroethane	0.005	<0.0052	<0.0052
Chloroform	0.005	<0.0052	<0.0052
Chloromethane	0.005	<0.0052	<0.0052
cis-1,2-Dichloroethene	0.005	<0.0052	<0.0052
cis-1,3-Dichloropropene	0.005	<0.0052	<0.0052
Dibromochloromethane	0.005	<0.0052	<0.0052
Dibromomethane	0.005	<0.0052	<0.0052
Dichlorodifluoromethane	0.005	<0.0052	<0.0052
Ethylbenzene	0.005	<0.0052	<0.0052
Hexachlorobutadiene	0.005	<0.0052	<0.0052
Isopropylbenzene	0.005	<0.0052	<0.0052
m,p-Xylene	0.01	<0.01	<0.01
Methylene Chloride	0.005	<0.0052	<0.0052
Naphthalene	0.005	<0.0052	<0.0052
n-Butylbenzene	0.005	<0.0052	<0.0052
n-Propylbenzene	0.005	<0.0052	<0.0052
o-Xylene	0.005	<0.0052	<0.0052
p-Isopropyltoluene	0.005	<0.0052	<0.0052
Sec-Butylbenzene	0.005	<0.0052	<0.0052
Styrene	0.005	<0.0052	<0.0052
tert-Butylbenzene	0.005	<0.0052	<0.0052
Tetrachloroethylene	0.005	<0.0052 UJ	<0.0052
Toluene	0.005	<0.0052	<0.0052
trans-1,2-dichloroethene	0.005	<0.0052	<0.0052
trans-1,3-dichloropropene	0.005	<0.0052	<0.0052
Trichloroethene	0.005	<0.0052	<0.0052
Trichlorofluoromethane	0.005	<0.0052	<0.0052
Vinyl Chloride	0.005	<0.0052	<0.0052

TABLE 2-9

SUMMARY OF BACKFILL SAMPLING RESULTS
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting	Soil	Soil
Sample Location:	Limit (a)	OU4BACKFILL-1	OU4BACKFILL-2
Sample Date:		11/12/2004	11/12/2004
Surrogate - %			
1,2-Dichloroethane-d4	--	98	97
Bromofluorobenzene	--	102	103
Toluene-D8	--	103	103

Notes:

UJ Undetected; Reported Detection Limit is imprecise

UL Undetected, Data biased low - Reported Detection Limit is higher than indicated

^(a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05

CHECKED/DATE: JAH 1/13/05

SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location	Sample Date	Reporting Limit (a)	Regulatory Criterion	Soil OU4-IDW-SO-1 11/19/2004	Soil OU4-IDW-SO-2 11/19/2004	Soil OU4-IDW-SO-3 11/19/2004	Soil OU4-IDW-SO-4 11/19/2004
D2216 - Percent Solids (%)								
Percent Solids			--	--	87	89	87	87
Ignitability - Flashpoint (Closed Cup) - SW1010 (Deg F)								
Flash Point			65	140	>140	>140	>140	>140
Percent Free Liquid - SW9095A (%)								
Percent Free Liquid			--	--	<1	<1	<1	<1
pH - SW9045C (pH Units)								
pH			--	--	4.39	4.32	4.09	4.27
Polychlorinated Biphenyls (PCBs) - SW8082 (mg/Kg)								
PCB-1016			0.033	--	<0.038	<0.037	<0.038	<0.038
PCB-1221			0.033	--	<0.038	<0.037	<0.038	<0.038
PCB-1232			0.033	--	<0.038	<0.037	<0.038	<0.038
PCB-1242			0.033	--	<0.038	<0.037	<0.038	<0.038
PCB-1248			0.033	--	<0.038	<0.037	<0.038	<0.038
PCB-1254			0.033	--	<0.038	<0.037	<0.038	<0.038
PCB-1260			0.033	--	<0.038	<0.037	<0.038	<0.038
Surrogate - %								
Decachlorobiphenyl			--	--	85	77	74	84
Tetrachloro-m-xylene			--	--	68	47	108	99
Reactive Cyanide - SW Ch 7.3.4 (mg/Kg)								
Reactive Cyanide			1	250	<1.1	<1.1	<1.1	<1.1
Reactive Sulfide - SW Ch 7.3.4 (mg/Kg)								
Reactive Sulfide			110	500	46 JQ	110 JQ	<110	<110

Notes:

- JB Estimated, possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.
- TCLP Toxicity Characteristic Leaching Procedure

**SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT**

OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Reporting Limit (a)	Regulatory Criterion	Soil OU4-IDW-SO-1 11/19/2004	Soil OU4-IDW-SO-2 11/19/2004	Soil OU4-IDW-SO-3 11/19/2004	Soil OU4-IDW-SO-4 11/19/2004
TCLP Mercury - SW7470A (mg/L)						
Mercury	1	0.2	0.0211	<0.02	<0.02	<0.02
TCLP Metals - SW6010B (mg/L)						
Arsenic	1	5	<1	<1	<1	<1
Barium	1	100	0.19 JQ	0.19 JQ	0.12 JQ	0.13 JQ
Cadmium	1	1	0.0022 JQ	0.0024 JQ	<1	<1
Chromium	1	5	<1	<1	<1	<1
Copper	1	--	<1	<1	<1	<1
Lead	1	5	<1	0.069 JQ	<1	<1
Nickel	1	--	0.027 JQ	0.015 JQ	0.019 JQ	0.032 JQ
Selenium	1	1	<1	<1	<1	<1
Silver	1	1	<1	<1	<1	<1
Zinc	1	--	0.065 JQ	0.048 JQ	0.046 JQ	0.075 JQ
TCLP Semi-Volatile Organic Compounds - SW8270C (mg/L)						
1,4-Dichlorobenzene	0.1	7.5	<0.1	<0.1	0.013 JQ	0.087 JQ
2,4,5-Trichlorophenol	0.1	400	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	0.1	2	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	0.1	0.13	<0.1	<0.1	<0.1	<0.1
2-Methylphenol	0.1	200	<0.1	<0.1	<0.1	<0.1
3 & 4-Methylphenol	0.2	200	<0.2	<0.2	<0.2	<0.2
Hexachlorobenzene	0.1	0.13	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	0.1	0.5	<0.1	<0.1	<0.1	<0.1
Hexachloroethane	0.1	3	<0.1	<0.1	<0.1	<0.1
Nitrobenzene	0.1	2	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.2	100	<0.2	<0.2	<0.2	<0.2
Pyridine	0.1	5	<0.1	<0.1	<0.1	<0.1

Notes:

JB Estimated; possibly biased high or false positive based on blank contamination

JQ Estimated; Value is between reporting limit and detection limit

(a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

**SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT**

OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type	Sample Location	Reporting Limit (a)	Regulatory Criterion	Soil OU4-IDW-SO-1 11/19/2004	Soil OU4-IDW-SO-2 11/19/2004	Soil OU4-IDW-SO-3 11/19/2004	Soil OU4-IDW-SO-4 11/19/2004
Surrogate - %							
2,4,6-Tribromophenol		--	--	59	59	67	69
2-Fluorobiphenyl		--	--	49	57	59	67
2-Fluorophenol		--	--	43	48	50	50
Nitrobenzene-d5		--	--	44	46	51	54
Phenol-d5		--	--	42	50	46	49
p-Terphenyl-d14		--	--	69	80	89	91
TCLP Volatile Organic Compounds - SW8260B (mg/L)							
1,1-Dichloroethene		0.05	0.7	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane		0.05	0.5	<0.05	<0.05	<0.05	<0.05
2-Butanone		0.05	200	<0.5	<0.5	<0.5	<0.5
Benzene		0.05	0.5	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride		0.05	0.5	<0.05	<0.05	<0.05	<0.05
Chlorobenzene		0.05	100	<0.05	<0.05	<0.05	<0.05
Chloroform		0.05	6	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene		0.05	0.7	<0.05	<0.05	0.2	0.14
Trichloroethene		0.05	0.5	0.056	<0.05	0.11	1.5
Vinyl Chloride		0.2	0.2	<0.02	<0.02	<0.02	<0.02
Surrogate - %							
1,2-Dichloroethane-d4		--	--	104	101	100	106
4-Bromofluorobenzene		--	--	102	105	103	100
Toluene-D8		--	--	99	98	99	102
Total Organic Halides - EPA 9020B (mg/Kg)		10	--	<57.5	<56.2	70.3	111
TOX, Total Organic Halogens							
TPH DRO - SW8015M (mg/Kg)		10	--	44 JQ	29	230	890
Diesel Range Organics (C10-C28)							

Notes:

JB Estimated; possibly biased high or false positive based on blank contamination

JQ Estimated; Value is between reporting limit and detection limit

(a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

**SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT**

OU 4

Defense Supply Center Richmond
Richmond, Virginia

Surrogate - %	Sample Location:	Reporting Limit (a)	Regulatory Criterion	Soil		Soil	
				OU4-IDW-SO-1 11/19/2004	OU4-IDW-SO-2 11/19/2004		OU4-IDW-SO-3 11/19/2004
o-Terphenyl		--	--	73	101	72	91
TPH GRO - SW8015M (mg/Kg)							
Gasoline Range Organics (C6-C10)		10	--	3.4 JB	1.1 JB	16	16
Surrogate - %							
Isopropyltoluene		--	--	119	118	114	127

Notes:

- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	Regulatory Criterion	Soil OU4-IDW-SO-5 11/19/2004	Soil OU4-IDW-SO-6 11/22/2004	Soil OU4-IDW-SO-7 11/22/2004
<u>D2216 - Percent Solids (%)</u>		--	--	84	89	87
Percent Solids						
<u>Ignitability - Flashpoint (Closed Cup) - SW1010 (Deg F)</u>		65	140	>140	>140	>140
Flash Point						
<u>Percent Free Liquid - SW9095A (%)</u>		--	--	<1	<1	<1
Percent Free Liquid						
<u>pH - SW9045C (pH Units)</u>		--	--	4.22	5.01	4.2
pH						
<u>Polychlorinated Biphenyls (PCBs) - SW8082 (mg/Kg)</u>						
PCB-1016	0.033	--	--	<0.04	<0.037	<0.038
PCB-1221	0.033	--	--	<0.04	<0.037	<0.038
PCB-1232	0.033	--	--	<0.04	<0.037	<0.038
PCB-1242	0.033	--	--	<0.04	<0.037	<0.038
PCB-1248	0.033	--	--	<0.04	<0.037	<0.038
PCB-1254	0.033	--	--	<0.04	<0.037	<0.038
PCB-1260	0.033	--	--	<0.04	<0.037	<0.038
<u>Surrogate - %</u>						
Decachlorobiphenyl	--	--	--	80	72	71
Tetrachloro-m-xylene	--	--	--	86	107	107
<u>Reactive Cyanide - SW Ch 7.3.4 (mg/Kg)</u>		1	250	<1.2	<1.1	<1.1
Reactive Cyanide						
<u>Reactive Sulfide - SW Ch 7.3.4 (mg/Kg)</u>		110	500	48 JQ	160	92 JQ
Reactive Sulfide						

Notes:

- JB Estimated, possibly biased high or false positive based on blank contamination
 JQ Estimated; Value is between reporting limit and detection limit
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

**SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT**

OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Location:	Sample Type:	Reporting Limit (a)	Regulatory Criterion	Soil	
				OU4-IDW-SO-5 11/19/2004	OU4-IDW-SO-6 11/22/2004
TCLP Mercury - SW7470A (mg/L)					
Mercury	1	0.2	<0.02	<0.02	<0.02
TCLP Metals - SW6010B (mg/L)					
Arsenic	1	5	<1	<1	<1
Barium	1	100	0.17 JQ	0.087 JQ	0.15 JQ
Cadmium	1	1	<1	0.0026 JQ	<1
Chromium	1	5	<1	<1	<1
Copper	1	--	<1	<1	<1
Lead	1	5	<1	<1	<1
Nickel	1	--	0.021 JQ	0.021 JQ	0.026 JQ
Selenium	1	1	<1	<1	<1
Silver	1	1	<1	<1	<1
Zinc	1	--	0.13 JQ	0.13 JQ	0.078 JQ
TCLP Semi-Volatile Organic Compounds - SW8270C (mg/L)					
1,4-Dichlorobenzene	0.1	7.5	0.098 JQ	<0.1	0.16
2,4,5-Trichlorophenol	0.1	400	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	0.1	2	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	0.1	0.13	<0.1	<0.1	<0.1
2-Methylphenol	0.1	200	<0.1	<0.1	<0.1
3 & 4-Methylphenol	0.2	200	<0.2	<0.2	<0.2
Hexachlorobenzene	0.1	0.13	<0.1	<0.1	<0.1
Hexachlorobutadiene	0.1	0.5	<0.1	<0.1	<0.1
Hexachloroethane	0.1	3	<0.1	<0.1	<0.1
Nitrobenzene	0.1	2	<0.1	<0.1	<0.1
Pentachlorophenol	0.2	100	<0.2	<0.2	<0.2
Pyridine	0.1	5	<0.1	<0.1	<0.1

Notes:

JB Estimated; possibly biased high or false positive based on blank contamination

JQ Estimated; Value is between reporting limit and detection limit

(a)

Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

**SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT**

Defense Supply Center Richmond
Richmond, Virginia

OU 4

Surrogate - %	Sample Type:	Sample Location:	Reporting Limit (a)	Regulatory Criterion	Soil		
					OU4-IDW-SO-5 11/19/2004	OU4-IDW-SO-6 11/22/2004	OU4-IDW-SO-7 11/22/2004
2,4,6-Tribromophenol	--	--	--	--	74	75	70
2-Fluorobiphenyl	--	--	--	--	70	68	60
2-Fluorophenol	--	--	--	--	61	59	53
Nitrobenzene-d5	--	--	--	--	58	56	52
Phenol-d5	--	--	--	--	58	55	47
p-Terphenyl-d14	--	--	--	--	85	97	92
<u>TCLP Volatile Organic Compounds - SW8260B (mg/L)</u>							
1,1-Dichloroethene	0.05	0.7	0.05	0.7	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05	0.5	0.05	0.5	<0.05	<0.05	<0.05
2-Butanone	0.05	200	0.05	200	<0.5	<0.5	<0.5
Benzene	0.05	0.5	0.05	0.5	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	0.5	0.05	0.5	<0.05	<0.05	<0.05
Chlorobenzene	0.05	100	0.05	100	0.033 JQ	<0.05	0.035 JQ
Chloroform	0.05	6	0.05	6	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05	0.7	0.05	0.7	0.12	0.26	0.049 JQ
Trichloroethene	0.05	0.5	0.05	0.5	3.1	0.16	5.5
Vinyl Chloride	0.2	0.2	0.2	0.2	<0.02	<0.02	<0.02
<u>Surrogate - %</u>							
1,2-Dichloroethane-d4	--	--	--	--	105	107	104
4-Bromofluorobenzene	--	--	--	--	103	102	99
Toluene-D8	--	--	--	--	100	100	100
<u>Total Organic Halides - EPA 9020B (mg/Kg)</u>							
TOX, Total Organic Halogens	10	--	10	--	88.2	28	48.2
<u>TPH DRO - SW8015M (mg/Kg)</u>							
Diesel Range Organics (C10-C28)	10	--	10	--	430	780	69

Notes:

- JB Estimated; possibly biased high or false positive based on blank contamination
 JQ Estimated; Value is between reporting limit and detection limit
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

SUMMARY OF WASTE CHARACTERIZATION SAMPLING RESULTS
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location	Sample Date	Reporting Limit (a)	Regulatory Criterion	Soil OU4-IDW-SO-5 11/19/2004	Soil OU4-IDW-SO-6 11/22/2004	Soil OU4-IDW-SO-7 11/22/2004
Surrogate - % o-Terphenyl			--	--	99	115	104
TPH GRO - SW8015M (mg/Kg) Gasoline Range Organics (C6-C10)			10	--	71	34	170
Surrogate - % Isopropyltoluene			--	--	126	124	123

Notes:

- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

**SUMMARY OF AIR MONITORING RESULTS
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia**

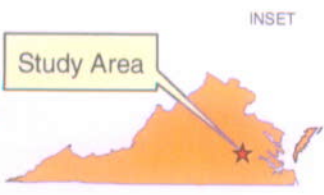
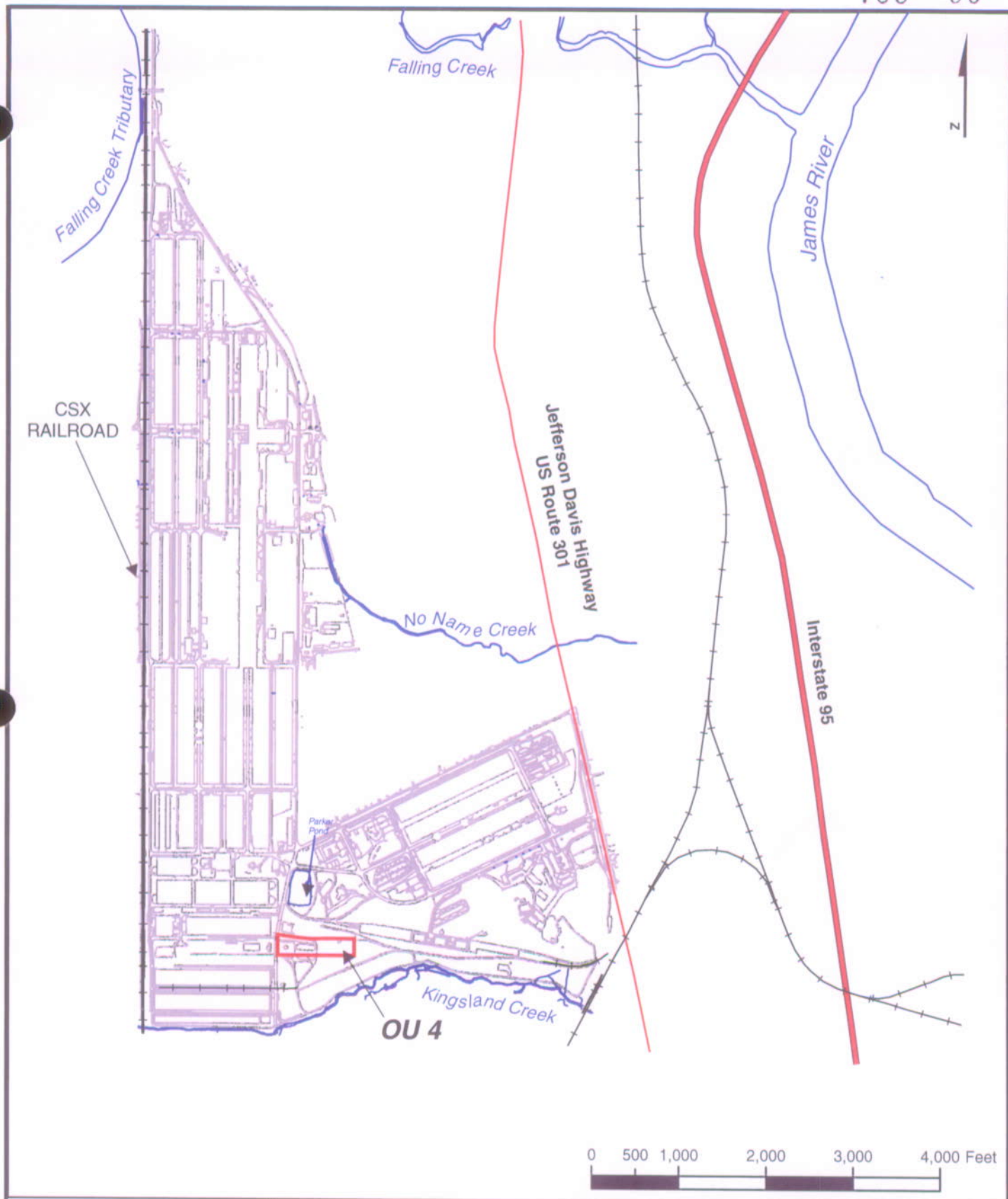
Date	Monitoring Station	LEL (%)			O ₂ (%)			Particulates (mg/m ³)			OVA (ppm)			Dräger Tubes (VC/0.5) (ppm)		
		No. of Readings	No. of Detections	Avg. Detected Conc.	No. of Readings	No. of Detections	Avg. Detected Conc.	No. of Readings	No. of Detections	Avg. Detected Conc.	No. of Readings	No. of Detections	Avg. Detected Conc.	No. of Readings	No. of Detections	Avg. Detected Conc.
11/17/2004	L1 ^b	10	0	NA	10	10	20.9	9	0	0.013	10	0	NA	NA	NA	NA
11/17/2004	L2 ^c	10	0	NA	10	10	21.0	9	3	0.018	10	0	NA	NA	NA	NA
11/17/2004	L3 ^d	10	0	NA	10	10	20.9	9	8	0.013	10	2	3.05	2	0	0
11/17/2004	L4 ^e	9	0	NA	9	9	21.0	10	3	0.019	10	1	1.7	1	0	0
11/17/2004	BS ^f	0	0	NA	0	0	0.0	0	0	0.000	7	0	NA	NA	NA	NA
11/18/2004	L1 ^b	8	0	NA	8	8	21.1	8	3	0.023	7	0	NA	NA	NA	NA
11/18/2004	L2 ^c	8	0	NA	8	8	21.1	8	5	0.018	7	1	3.6	NA	NA	NA
11/18/2004	L3 ^b	8	0	NA	8	8	21.1	8	6	0.017	7	0	NA	NA	NA	NA
11/18/2004	L4 ^e	8	0	NA	8	8	21.1	8	5	0.018	6	0	NA	NA	NA	NA
11/18/2004	L5 ^g	2	0	NA	2	2	21.3	2	0	NA	2	0	NA	NA	NA	NA
11/18/2004	BS ^f	2	0	NA	2	2	21.1	2	0	NA	7	2	3.8	1	0	NA
11/19/2004	L1 ^b	6	0	NA	6	6	21.0	6	4	0.028	6	0	NA	NA	NA	NA
11/19/2004	L2 ^c	7	0	NA	7	7	21.0	7	1	0.036	7	0	NA	NA	NA	NA
11/19/2004	L3 ^b	7	0	NA	7	7	21.0	7	3	0.031	7	0	NA	NA	NA	NA
11/19/2004	L4 ^e	6	0	NA	6	6	21.0	6	0	NA	6	0	NA	NA	NA	NA
11/19/2004	L5 ^g	7	0	NA	7	7	21.0	7	2	0.035	7	0	NA	NA	NA	NA
11/19/2004	BS ^f	4	0	NA	4	4	21.0	2	0	NA	4	0	NA	NA	NA	NA
11/20/2004	L1 ^b	2	0	NA	2	2	20.9	0	0	NA	2	0	NA	NA	NA	NA
11/20/2004	L2 ^c	3	0	NA	3	3	20.9	0	0	NA	3	0	NA	NA	NA	NA
11/20/2004	L3 ^b	2	0	NA	2	2	20.9	0	0	NA	2	0	NA	NA	NA	NA
11/20/2004	L4 ^e	2	0	NA	2	2	20.9	0	0	NA	2	0	NA	NA	NA	NA
11/20/2004	L5 ^g	3	0	NA	3	3	20.9	0	0	NA	3	0	NA	NA	NA	NA
11/20/2004	BS ^f	1	0	NA	1	0	NA	0	0	NA	1	0	NA	NA	NA	NA
11/21/2004	L1 ^b	2	0	NA	2	2	20.9	1	0	NA	2	0	NA	NA	NA	NA
11/21/2004	L2 ^c	2	0	NA	2	2	20.9	1	0	NA	2	0	NA	NA	NA	NA
11/21/2004	L3 ^b	2	0	NA	2	2	20.9	1	0	NA	2	0	NA	NA	NA	NA
11/21/2004	L4 ^e	2	0	NA	2	2	20.9	1	1	0.027	2	0	NA	NA	NA	NA
11/21/2004	L5 ^g	2	0	NA	2	2	20.9	1	0	NA	2	0	NA	NA	NA	NA
11/21/2004	BS ^f	2	0	NA	2	2	20.9	0	0	NA	2	0	NA	NA	NA	NA

LEL = Lower Explosive Limit
OVA = Organic Vapor
VC = Vinyl Chloride

Notes:

- (a) Background concentrations were sampled at an upwind location.
- (b) L1 located between Pit 3 and 8th Street at the exclusion zone boundary.
- (c) L2 located between Pit 1 and the jogging trail at the exclusion zone boundary.
- (d) L3 (old) located to the North-Northwest of Pit 3.
- (e) L4 (new) located to the South of the Stockpiles.
- (f) BS (Breathing Zone) located on personnel working nearest to the excavation.
- (g) L5 (new) located to the North-Northwest of Pit 3.
- (h) L3 (new) located to the South of Pit 3.

PREPARED/DATE: JLS 1/20/05
CHECKED/DATE: GW 2/4/05



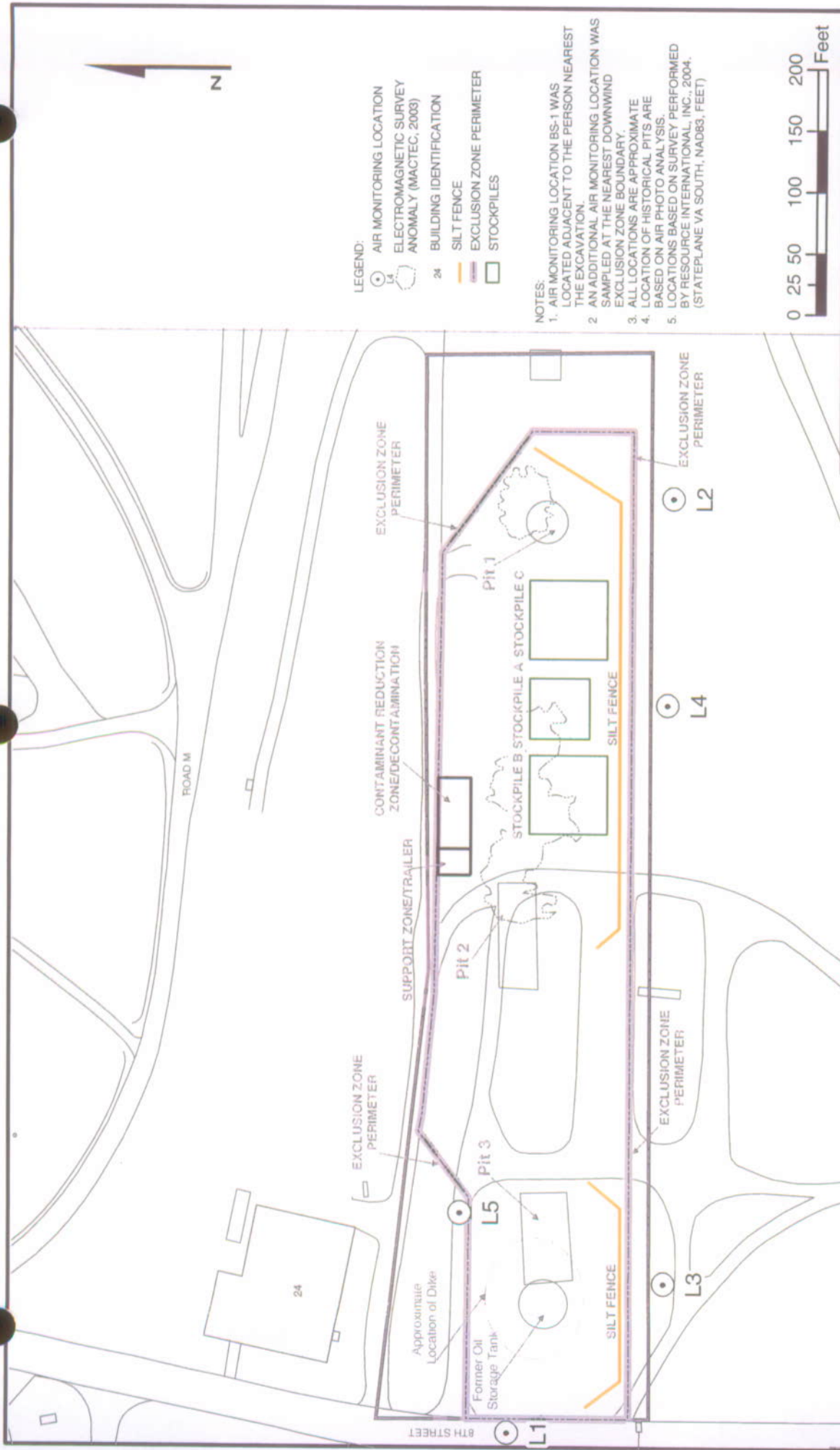
Legend

- SURFACE WATER
- OPERABLE UNIT 4
- + + RAILROAD

MAJOR ROADS

- INTERSTATE 95
- JEFFERSON DAVIS HIGHWAY

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE		
DEFENSE SUPPLY CENTER RICHMOND		
RICHMOND, VIRGINIA		
PRINCIPAL THREAT SOURCE MATERIAL		
REMOVAL ACTION COMPLETION REPORT		
DEFENSE SUPPLY CENTER AND SURROUNDING AREA		
PREPARED BY: THP	FIGURE NUMBER: 1-1	FILE DATE: 1/24/05
CHECKED BY: TAW		PLOT DATE: 1/24/05
PROJECT NO: 6301-03-0011		FILE NAME: ou4-plt3_SO.MXD

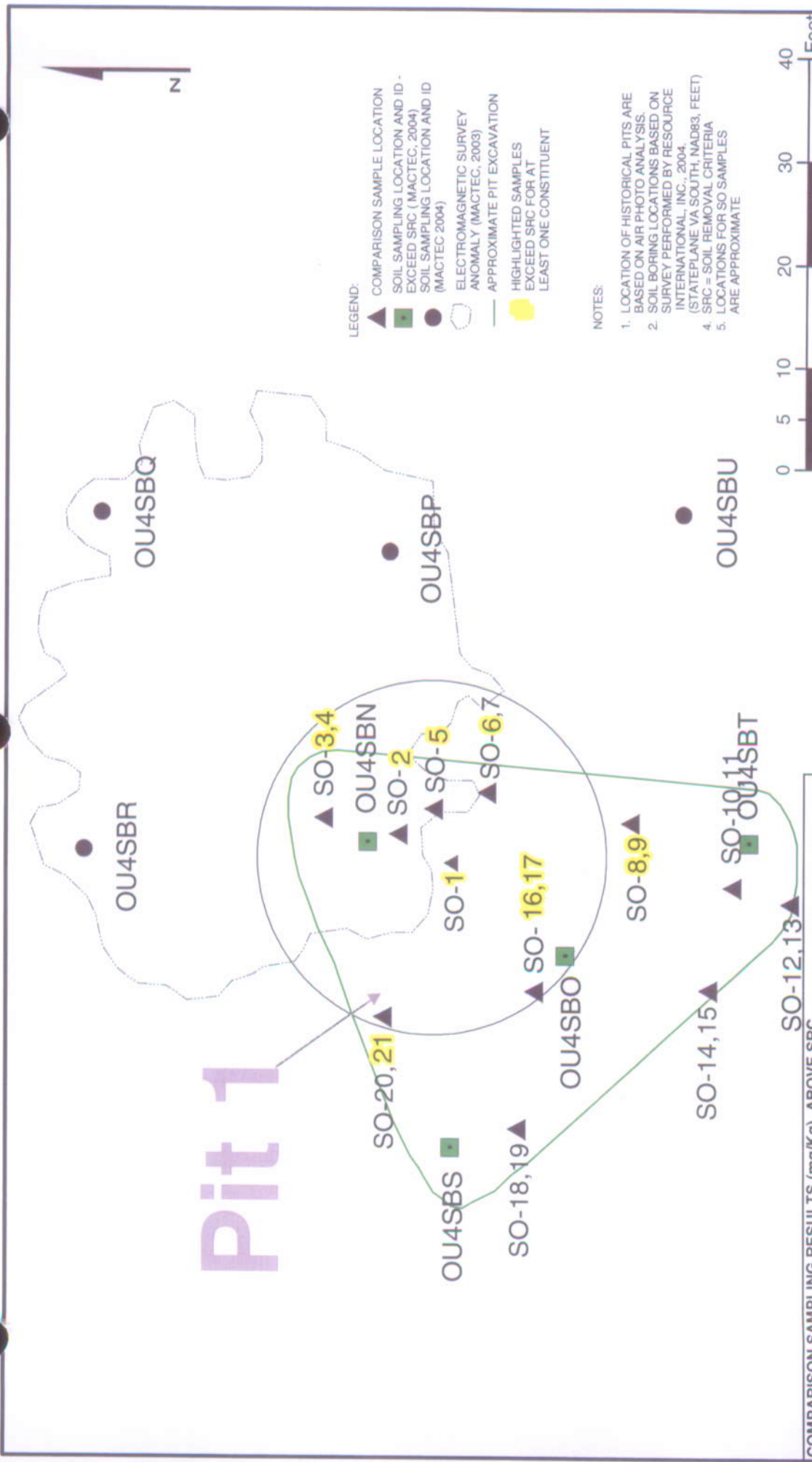


- LEGEND:**
- AIR MONITORING LOCATION
 - L4 ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION
 - SILT FENCE
 - EXCLUSION ZONE PERIMETER
 - STOCKPILES

- NOTES:**
1. AIR MONITORING LOCATION BS-1 WAS LOCATED ADJACENT TO THE PERSON NEAREST THE EXCAVATION.
 2. AN ADDITIONAL AIR MONITORING LOCATION WAS SAMPLED AT THE NEAREST DOWNWIND EXCLUSION ZONE BOUNDARY.
 3. ALL LOCATIONS ARE APPROXIMATE
 4. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 5. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT	
SITE MAP	
PREPARED BY: THP	FILE DATE: 1/24/05
CHECKED BY: TAW	FIGURE NUMBER: 1-2
PROJECT NO: 6301-03-0011	PLOT DATE: 1/24/05
	FILE NAME: ou4-pit3_SO.MXD



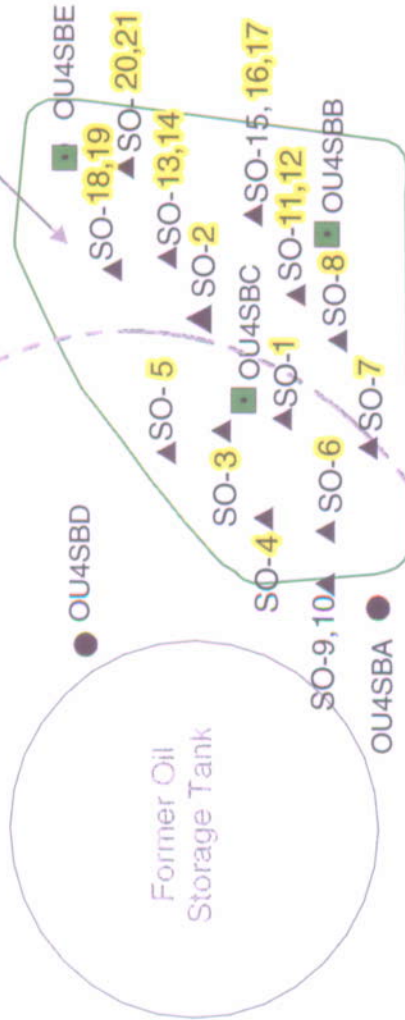
AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT COMPARISON SAMPLING LOCATIONS PIT 1 FORMER FIRE TRAINING AREA	
PREPARED BY: THP	FIGURE NUMBER: 1/24/05
CHECKED BY: TAW	2-1
PROJECT NO: 6301-03-0011	FILE NAME: ou4-pit1CS.MXD

TABLE NOTES:
* = CONCENTRATION BELOW SRC

LOCATION ID	DEPTH	1,2 DCB	1,3 DCB	1,4 DCB	1,2 DCB cis,1-2	TCE	PCE
SO-1	4'	*	34.9	17.8	11.9	72.6	90.1
SO-2	8'	*	2.47	*	*	1.34	1.19
SO-3	7'	*	5.08	*	*	1.6	1.93
SO-4	8.5'	0.28	0.307	*	*	*	*
SO-5	-9'	*	*	*	*	1.58	0.638
SO-6	5'	*	*	*	*	9.36	12.6
SO-8	8'	0.597	0.597	*	0.764	*	*
SO-9	4'	41.8	36.4	*	*	48.1	158
SO-16	8'	3.35	1.18	*	*	47.5	165
SO-17	4'	3	*	*	*	79.4	77.5
SO-21	4'	8.84	*	*	*	99.8	111

Pit 3

Approximate Location of Dike



- LEGEND:**
- ▲ COMPARISON SOIL SAMPLING LOCATIONS
 - SOIL SAMPLING LOCATION AND ID - EXCEED SRC (MACTEC 2004)
 - SOIL SAMPLING LOCATION AND ID (MACTEC 2004)
 - ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - APPROXIMATE PIT EXCAVATION
 - HIGHLIGHTED SAMPLES EXCEED SRC FOR AT LEAST ONE CONSTITUENT

NOTES:

1. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
2. SOIL BORING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004.
3. SRC = SOIL REMOVAL CRITERIA (STATEPLANE VA SOUTH, NAD83, FEET) ARE APPROXIMATE
4. LOCATIONS FOR SO SAMPLES ARE APPROXIMATE

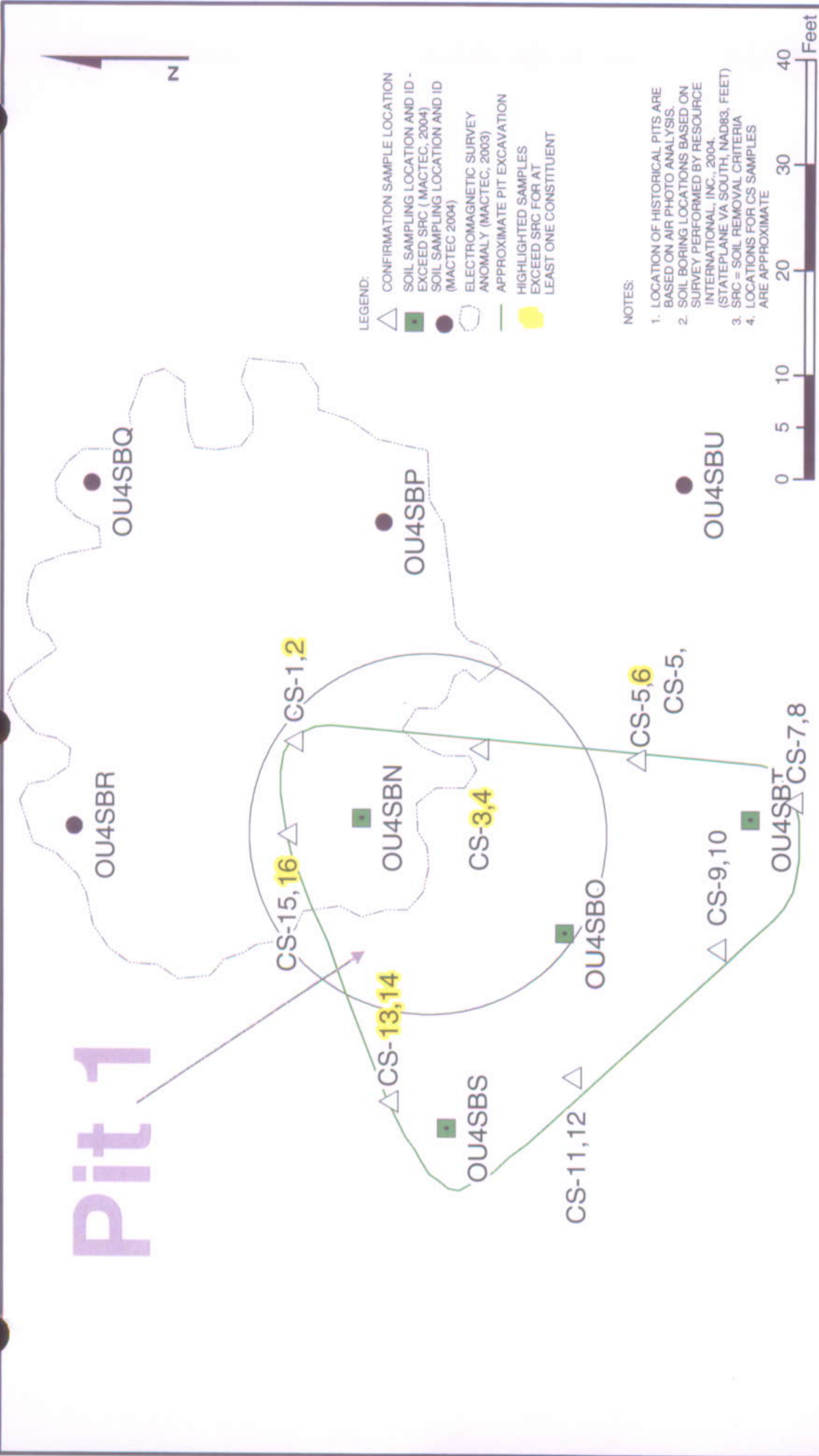


COMPARISON SAMPLING LOCATION ID	DEPTH	RESULTS (mg/Kg) ABOVE SRC				TCE
		1,2 DCB	1,3 DCB	1,4 DCB	cis-1,2 DCE	
SO-1	5'	*	*	*	*	2500
SO-2	7'	*	767	469	*	25.3
SO-3	9'	*	162	400	*	16.5
SO-4	7'	*	41.3	59.6	*	461
SO-5	10'	*	16.3	20.7	*	21.1
SO-6	6'	5.22	5.86	*	2.35	31.5
SO-7	5'	10.5	3.25	*	5.01	46.9
SO-8	5'	122	38.6	*	35.4	1760
SO-11	8'	6.69	*	*	25.2	17.6
SO-12	3.5'	4.035	*	*	5.63	4.47
SO-13	8'	3.42	*	*	1.19	33.7
SO-14	3'	0.882	*	*	0.534	23.7
SO-16	5'	0.386	*	*	1.11	*
SO-17	8.5'	*	*	*	0.361	*
SO-18	5'	138	18.8	*	53.9	3110
SO-19	5'	10.8	13	*	2.21	12.3
SO-20	8.5'	0.351	0.362	*	1.83	*
SO-21	4.5'	*	*	*	0.486	*

TABLE NOTES:
 * = CONCENTRATION BELOW SRC

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT	
COMPARISON SAMPLING LOCATIONS	
PREPARED BY: THP	FIGURE NUMBER: 2-3
CHECKED BY: TAW	FILE DATE: 1/24/05
PROJECT NO: 6301-03-0011	PLOT DATE: 1/24/05
	FILE NAME: out-pit3.mxd

Pit 1



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND	
RICHMOND, VIRGINIA	
PRINCIPAL THREAT SOURCE MATERIAL	
REMOVAL ACTION COMPLETION REPORT	
CONFIRMATION SAMPLING LOCATIONS	
PIT 1 FORMER FIRE TRAINING AREA	
PREPARED BY: THP	FIGURE NUMBER: 2-4
CHECKED BY: TAW	FILE DATE: 1/24/05
PROJECT NO: 6301-03-0011	PLOT DATE: 1/24/05
	FILE NAME: out-pit1CS.MXD

TABLE NOTES:
 * = CONCENTRATION BELOW SRC

CONFIRMATION SAMPLING LOCATION ID	DEPTH	1,2 DCB	(mg/Kg) cis,1-2 DCE	ABOVE SRC	PCE
CS-2	4'	*	6.38	*	60.7
CS-3	8'	*	1.39	*	0.971
CS-4	4'	*	381	*	332
CS-6	4'	*	1.99	*	*
CS-13	8'	2.29	*	16.5	14.5
CS-14	4'	*	139	*	45.9
CS-16	4'	2.15	*	10.6	5.77

Pit 3

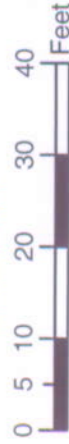
Approximate Location of Dike

LEGEND:

- △ CONFIRMATION SOIL SAMPLING LOCATIONS
- SOIL SAMPLING LOCATION AND ID - EXCEED SRC (MACTEC, 2004)
- SOIL SAMPLING LOCATION AND ID (MACTEC 2004)
- ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
- APPROXIMATE PIT EXCAVATION
- HIGHLIGHTED SAMPLES EXCEED SRC FOR AT LEAST ONE CONSTITUENT

NOTES:

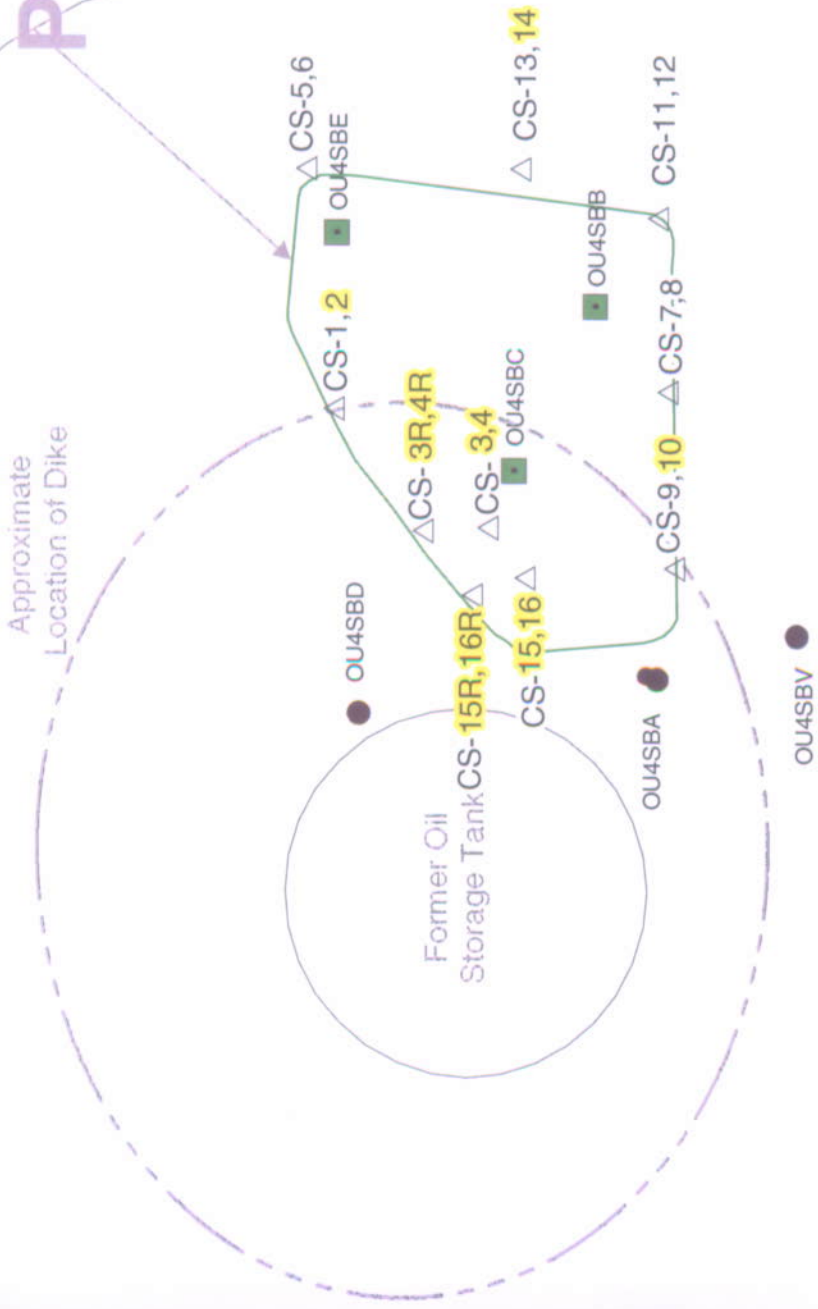
1. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
2. SOIL BORING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004.
3. STATEPLANE VA SOUTH, NAD83, FEET)
4. SRC = SOIL REMOVAL CRITERIA
5. LOCATIONS FOR CS SAMPLES ARE APPROXIMATE



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND	
RICHMOND, VIRGINIA	
PRINCIPAL THREAT SOURCE MATERIAL	
REMOVAL ACTION COMPLETION REPORT	
CONFIRMATION SAMPLING LOCATIONS	
PIT 3 FORMER FIRE TRAINING AREA	
PREPARED BY: THP	FIGURE NUMBER: 2-5
CHECKED BY: TAW	FILE DATE: 1/24/05
PROJECT NO: 6301-03-0011	PLOT DATE: 1/24/05
	FILE NAME: ou4-pit3.mxd

TABLE NOTES
* = CONCENTRATION BELOW SRC

CONFIRMATION SAMPLING RESULTS (mg/Kg) ABOVE SRC	DEPTH	1,2 DCB	1,3 DCB	1,4 DCB	cis,1,2 DCE	TCE
CS-2	3.5'	*	1.68	*	*	*
CS-3	8'	*	*	6.74	*	*
CS-4	3'	*	56.2	*	1080	2.82
CS-3R	8'	*	*	0.656	*	59.8
CS-4R	4'	3.7	0.686	*	*	*
CS-10	3.5'	0.237	*	*	*	*
CS-14	3.5'	*	*	0.806	*	*
CS-15	7.5'	0.343	0.39	0.41	*	*
CS-16	3'	5.55	19.1	4.02	*	*
CS-15R	7.5'	0.956	0.242	1.93	0.888	*
CS-16R	3'	2.91	0.794	5.39	0.399	*

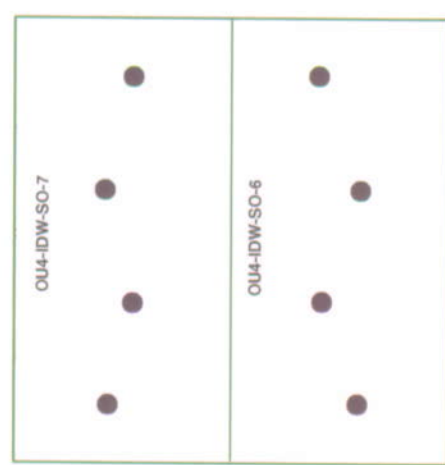
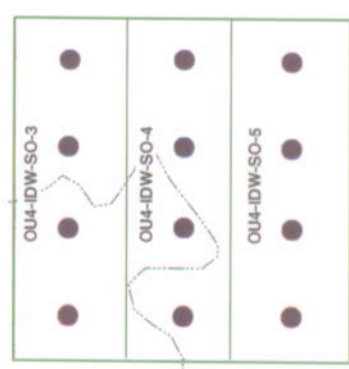
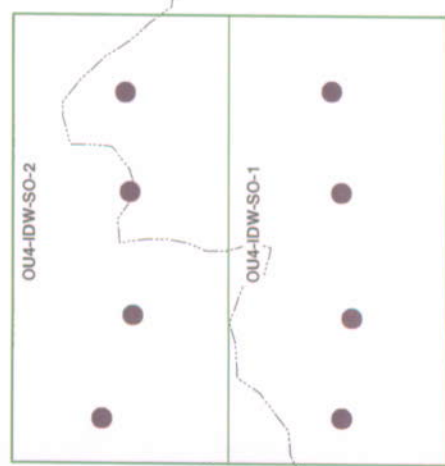


CONTAMINATION REDUCTION
ZONE/DECONTAMINATION

STOCKPILE B

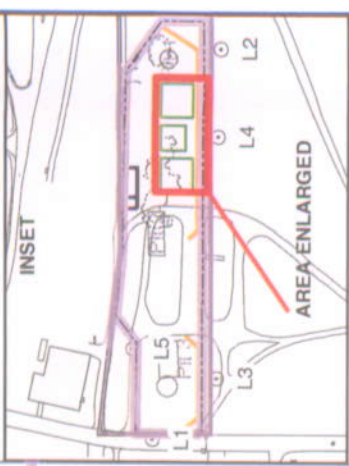
STOCKPILE A

STOCKPILE C



SILT FENCE

EXCLUSION ZONE PERIMETER




- LEGEND:
- COMPOSITE SUB-SAMPLE LOCATIONS
 - ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - SILT FENCE
 - EXCLUSION ZONE PERIMETER

- NOTES:
1. ALL LOCATIONS ARE APPROXIMATE
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)
 4. COMPOSITE SAMPLES OU4-IDW-SO-1 THROUGH OU4-IDW-SO-7 WERE COMPRISED OF FOUR SUB-SAMPLES, RESPECTIVELY

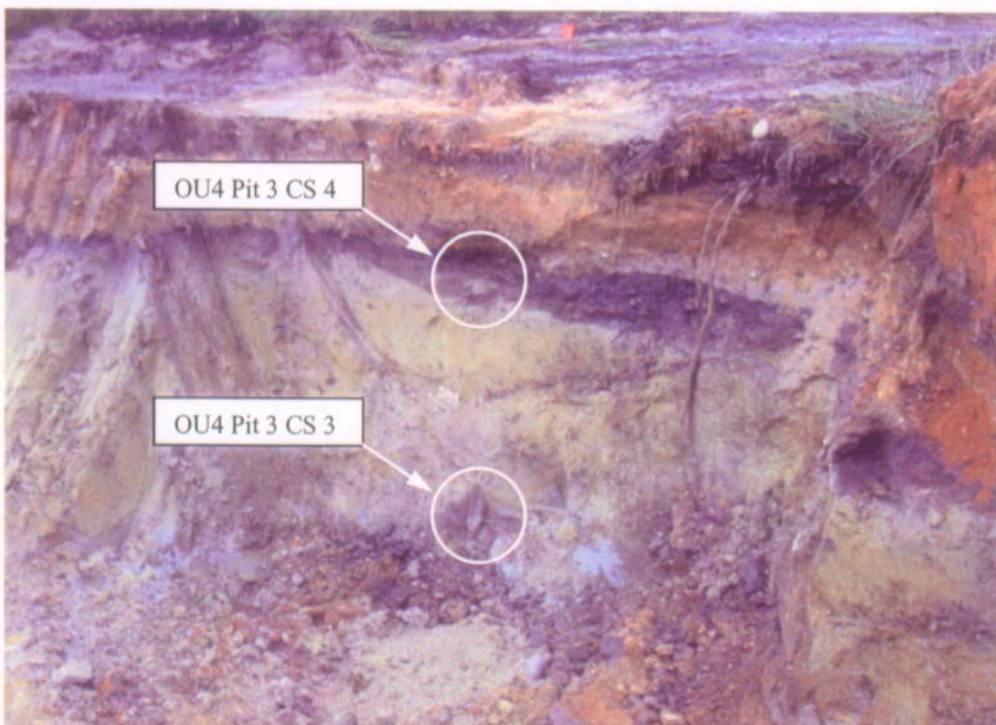


AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT	
STOCKPILE SAMPLING LOCATIONS	
PREPARED BY: THP	FILE DATE: 1/24/05
CHECKED BY: TAW	PLOT DATE: 1/24/05
PROJECT NO: 6301-03-0011	FIGURE NUMBER: 2-6
	ou4-pit1CS.MXD

**APPENDIX A
PHOTOGRAPHIC DOCUMENTATION**


Photograph No. 1	Remarks
	<p>Pit 3: View from top of berm facing south. Staked locations are within proposed excavation area.</p>

Photograph No. 2	Remarks
	<p>Pit 3: Photo facing north.</p>

Photograph No. 3	Remarks
 <p>OU4 Pit 3 CS 4</p> <p>OU4 Pit 3 CS 3</p>	Example of Pit 3 sample locations.

Photograph No. 4	Remarks
 <p>En Core</p>	Pit 3: Photo of soil sample SO-4.

Photograph No. 5	Remarks
	Stockpile A during initial Pit 3 excavation.

Photograph No. 6	Remarks
	Photo of mobile laboratory in parking lot north of work site.

Photograph No. 7



Remarks

First lift placement of #57 stone in Pit 3 prior to even distribution of material.

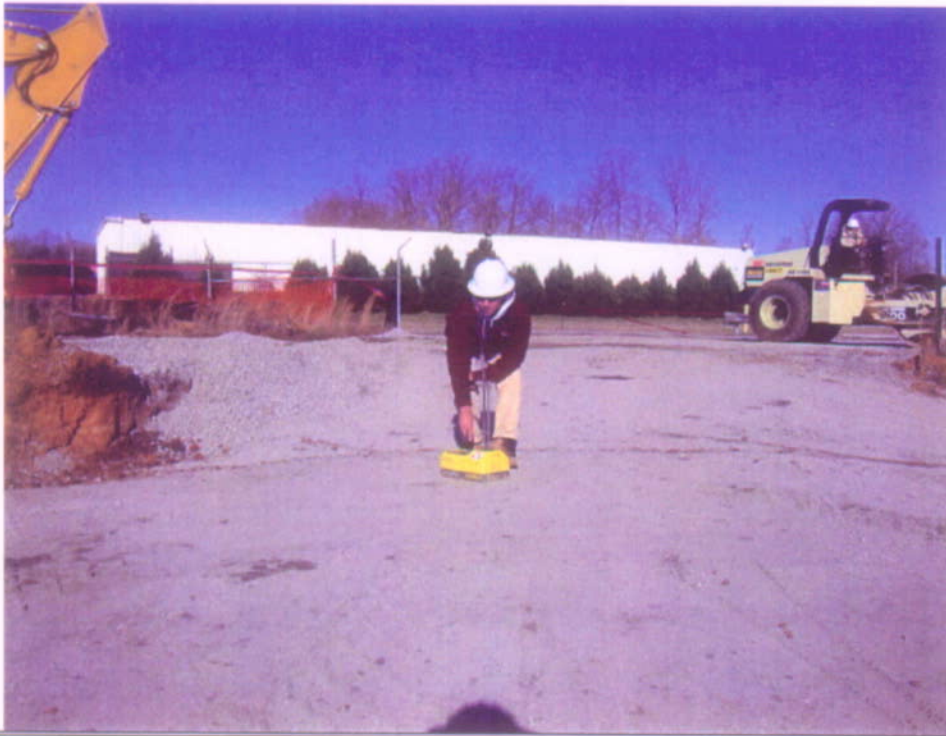
Photograph No. 8



Remarks

First lift of #21A material placed in Pit 3 after placement of Mirafy fabric.

Photograph No. 9



Remarks


Photograph of field personnel conducting field nuclear density testing at Pit 3 during backfill efforts.


Photograph No. 10




Remarks

Pit 3 proofroll observations at end of backfill operations.

Photograph No. 11	Remarks
	OU4 Pit 1 excavation. Burned debris near point N.

Photograph No. 12	Remarks
	Pit 2 excavation which included the removal of approximately 5 cubic yards of material.

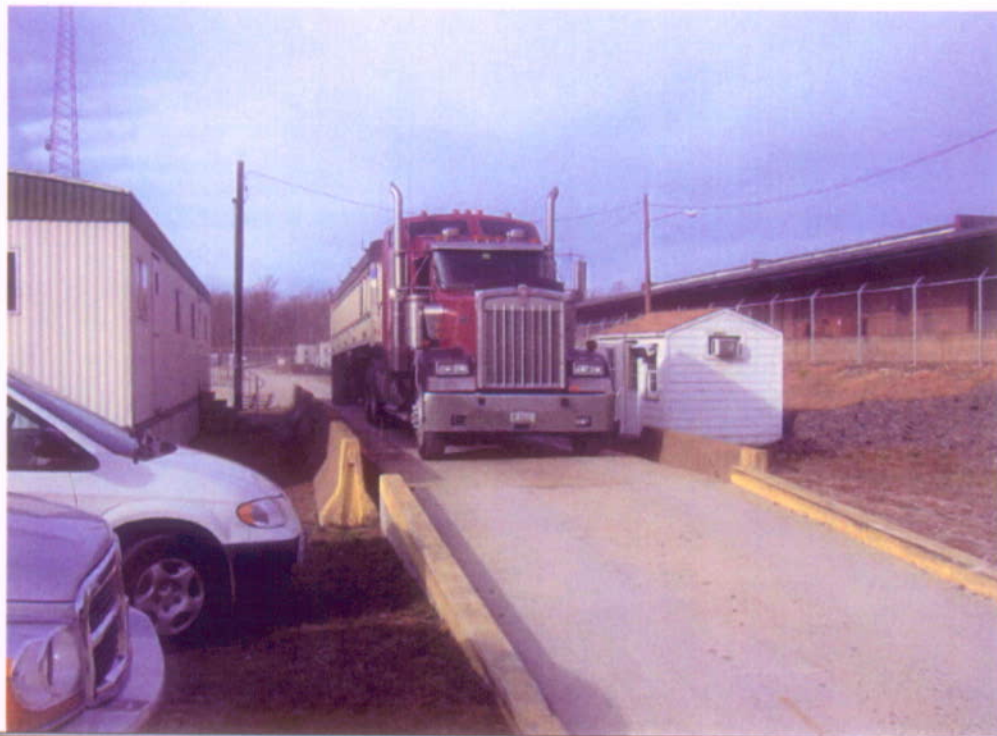
Photograph No. 13	Remarks
	<p>Facing east of soil stockpile areas with Pit 1 area in the background.</p>

Photograph No. 14	Remarks
	<p>Overlooking the OU4 stockpiled soils.</p>

Photograph No. 15	Remarks
 A yellow excavator is positioned on a large pile of dark material, likely soil or debris. The excavator's arm is raised, and its bucket is positioned over the back of a white truck. The truck is parked on a dirt surface. In the background, there are several white storage containers and a line of trees under a cloudy sky.	Non-hazardous material being loaded out at Stockpile B.

Photograph No. 16	Remarks
 A yellow Deere excavator is positioned on a large pile of dark material. The excavator's arm is raised, and its bucket is positioned over the back of a white truck. The truck has "RESOURCES" written on its side, along with "HANCEVILLE, ALABAMA" and "800-228-8846". The excavator is a Deere 200C model. The scene is outdoors with trees in the background.	Excavator loading hazardous material onto allied resources truck from north half of Stockpile C.

Photograph No. 17

**Remarks**

Weighing of hazardous material transport trucks during manifest generation at DSCR.

Photograph No. 18

**Remarks**

Former Stockpile staging area after final dressing of area.

*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

July 2005

**APPENDIX B
DAILY FIELD REPORTS**

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, Suite 100
Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-15-04

Client: AFCEE

Weather: CLEAR SUNNY, 40°-60°

Site Address: DSCR, OU4

City: Richmond

State: VA Zip: 23237

MACTEC PERSONNEL

Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T. *	O.T.
Ted Wittmann (TW)	Site Manager	0600	0630	1700	1800	12	
Lindsey Maddox (LM)	Construction Coordinator	0600 0630	1000	1700	1800	12	
Dan Vass (DV)	Technician	0630 0600	0700 0630	1700	1730	11	
Lamar McNabb (LM)	Operator	0630	0630	1630	1800	11.5	
Matt Wortman (MW)	Operator	0630	0630	1630	1800	11.5	
JOHNATHAN BARDEAU	-	NOT PART OF OUT REMOVAL					

* HRS APPROXIMATE SEE SIGN IN/
SIGN OUT

Subcontractors/Visitors

Name	Title	Company
ECOR (0945) MIKE RANSON	SUPERVISOR	ECOR (SILT FENCE)
DSCR STEVE EDLAVITCH, JEFF ZOECKLER	DSCR CLEANUP PROGRAM	
RAIN FOR RENT (1130)	DELIVERY DRIVERS	RAINFOR RENT
HERTZ (0930-1300)	DELIVERY DRIVERS	HERTZ

VEHICLES

	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2	0600	SEE EXPENSE FORMS			TED W/DAN VASS
* Rental Vehicles 450 H DUMP	2	0630	2,259 HRS			LM
* Trackhoe 200 C EXC	1	0630	134.2 HRS			LM
* Backhoe TC 54 H LOADER	1	0630	5,448 HRS			MW/LM
FORD F250	1	0630	SEE EXPENSE FORMS			MATT W/LAMAR M.
* H2O TRUCK		18094	-			MW/LM
* DUMP TRUCK		20,642 mi.	-			MW

* VEHICLE HRS/mi @ START OF JOB

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TED W.	0730	0745	COVERED PRE MOB ISSUES
Calibrations (See Attached Form)	DAN VASS	0930		FAMILIARIZE SELF W/AIR MON. EQUIP
Daily Agenda/Goals Meeting	TED W.	0700	0730	DISCUSSE PRE MOB, SITE SETUP
Equipment Check	ALL	0630	0700	INVENTORY/ EQUIPMENT, UNLOAD
Equipment Loading/Depart	ALL	0745	0815	UPLOAD NECESSARY/ SITE, EQUIP
Additional Comments:				
<ul style="list-style-type: none"> DAN VASS DEPART W/ ALL FOR GADGINS AND SITE INSP. RETURNS TO FIELD OFFICE FOR AIR MONITORING EQUIP. PRE CALIBRATION/ CALIBRATION/ USE FAMILIARITY. DAN VASS CONTACTS DINE RE: FID NOT IGNITING. FID TO BE SHIPPED OVERNIGHT FOR ARRIVAL @ RICHMOND OFFICE IN A.M. 				

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	ALL	0815	0900	DISCUS ZONE SETUP @ 0815 BEGIN SETUP @ 11-16-04 AM
EZ Construction/Inspection	N/A	-	-	TO BE SETUP 11-16-04
Decontamination Zone Construction/Inspection	MW/LM/TW	0900	0930	TRAILER SETUP, DECON SETUP
Stockpile Staging Construction/Inspection	MATT W LAMAR M.	1200	1545	BEGIN LAYOUT @ 1200 FINISH 1545
Erosion Control Construction/Inspection	ELOR	1130	1700	TRENCHING COMPLETE. 50% OF FENCE IN PLACE
Posting and Signage Set-up/Inspection	N/A	-	-	TO BE COMPLETED 11-16-04
Air Monitoring Zone Set-up/Inspection	N/A	-	-	-
Equipment check and start-up	MATT W.	1130	1330	EQUIPMENT ARRIVES MW COMPLETES
Additional Comments:				
<ul style="list-style-type: none"> CONSTRUCTION OF ALL ZONES CONTINUE THROUGHOUT DAY WITH MODIFICATIONS MADE AS NEEDED, TAPE AND FENCE POSTS TO GO UP IN A.M. FOR CRZ; EZ STOCKPILE STAGING AND CONSTRUCTION ZONES COMPLETED. RAISED BEAMS AROUND EDGE OF POLY LINERS AND SAND BASSING OF POLY COMPLETE. DECON AREA ESTABLISHED AND WILL BE MANIPULATED 11-16-04 FOR FINAL SETUP RAIN FOL RENT DELIVERED PRAC TANK AND LOCATED/SETUP ON SITE 				

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removal	Stockpiled Location (A, B, C)	Comments
NO REMOVAL/ EXCAVATION 11-15-04						
Summary of Removal Activity Pit #1			Total Removed Daily		Total Removed Project	
Total to Stockpile A			Total to Stockpile B		Total to Stockpile C	

Daily Activities (Cont.)

Excavation Activity Pit # 2

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpile Location (A, B, C)	Comments
NO REMOVAL / EXCAVATION ACTIVITY						
		11-15-04				
Summary of Removal Activity Pit # 2			Total Removed Daily		Total Removed Project	
Total to Stockpile A			Total to Stockpile B		Total to Stockpile C	

Excavation Activity Pit # 3

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpile Location (A, B, C)	Comments
NO REMOVAL EXCAVATION ACTIVITY						
		11-15-04				
Summary of Removal Activity Pit # 3			Total Removed Daily		Total Removed Project	
Total to Stockpile A			Total to Stockpile B		Total to Stockpile C	

Sampling Activities

Sampling Personnel	Sample ID/Location	Sample Depth	Time	pH Results	Sample Type (Stream (S), Confirmation (C), TCEP, Baffle (B))	Substrate (Accra, Hodge, Bah)	ESR	Results (pass/fail, SRC, see table / reverse)	
								Pass	Fail
NO SAMPLING ACTIVITY									
		11-15-04							

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to	Result	Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1									
2	NO REMOVAL ACTION								
3	11-15-04								
Summary of Removal Actions									

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D	N/A	INITIAL PPE	HASP	TED W.	N/A	INITIAL PPE FOR MOB. SETUP

Additional Comments:

- AIR MONITORING NOT REQUIRED DURING MOB/SETUP. WILL IMPLEMENT AIR MONITORING UPON EXCAVATION ACTIVITY START UP.

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
DECONTAMINATION ACTIVITY NOT REQUIRED			
11-15-04			

Additional Comments:

Additional Observations

- UTILITY LOCATED (STORM SEWER) NEAR 204 PIT # 1 POINT P. CALLED STEVE E. / JEFF Z. TO CONFIRM LOCATION. LOCATION IS \approx 30' EAST OF PROPOSED EXCAVATION AND NOT EXPECTED TO IMPACT EXCAVATION.
- DEWATERING OF DIKE AREA BY DEEP UTILITIES PERSONNEL BEGINS @ 0800 AND CONTINUES THROUGH DAY. OBSERVED @ 1100 H₂O STILL STANDING IN DIKE AREA \approx 8 IN.
- PHOTO LOG COMPLETED FOR DAILY ACTIVITIES

Daily Correspondence

Name / Agency	Time	Topic
STEVE EDLAVITCH / DSCR	0915	CONTACTED TO HAVE HYDRANT TURNED OFF TO ATTACH BF PREVENTOR
STEVE EDLAVITCH / DSCR	1130	UTILITY LOCATE NEAR OUL PIT #1 CONCERNS
JOHNATHAN BORDAU MACTEC	1145	ARRIVED @ FIELD OFFICE AND BEGIN SITE WORK
STEVE EDLAVITCH / DSCR	1200	CONTACTED TO ORGANIZE FOR SAND BAGS FOR SAND BAGS. O.KAY @ 1300

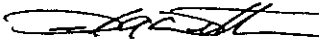
ACTIVITIES PLANNED FOR NEXT WORK DAY

- PUT UP CRZ TAPE / FENCE POSTS, EZ ESTABLISHMENT, ORANGE EXCAVATION FENCE SIGNAGE
- EXCAVATE BERM/DIKE @ PIT #3 FOR REMOVAL ACTIVITIES, REMOVE FENCE POSTS.
- RECEIVE COOLERS, SAMPLING EQUIPMENT, FID FROM PINE.
- FINE TUNE DECON AREAS
- ESTABLISH AIR MONITORING LOCATIONS
- RESPIRATOR FIT TEST FOR MW, LM, LM.
- H₂O LEVELS @ PIT #1 PIT #3 TO ESTABLISH GW ELEV.

JOB DISCREPANCIES

NONE NOTED EXCEPT FOR UTILITY LINE IN PROXIMITY OF PIT #1. NO DISCREPANCIES WORTH NOTING

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann 	PROJECT: DSCR OU4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	<input checked="" type="checkbox"/> Continue <input type="checkbox"/> Completed

DAILY SAFETY LOG			
Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>		
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>11-15-04</u>		
City, State: <u>Richmond, Virginia</u>	Weather: <u>CLEAR SUNNY</u>		
Client Name: <u>DLA</u>	Temperature: (am) <u>30°F ±</u> (pm) <u>60°F ±</u>		
SECTION I: DAILY TAILGATE SAFETY MEETING			
Meeting Lead by: <u>TEDA WITTEMANN</u>	Tailgate Topic: _____		
Time of Meeting: <u>0700</u> (am) (pm)	Type of Project: <u>SOURCE REMOVAL</u>		
Contaminant(s): <u>VOC (CHLORINATED SOLVENTS)</u>			
(Describe in Detail Specific Items Discussed Under the Following Categories)			
1. Protective Clothing/Equipment: <u>PPE START @ LEVEL D; TYVEK, NITRILE GLOVES, RUBBER BOOTS BE PREPARED FOR LEVEL C W/ RESPIRATOR. DURING SETUP WEAR GLOVES STEEL TOE BOOTS, HARD HATS, GASSES</u>			
2. Chemical Hazards: <u>VOC'S DURING EXCAVATION ACTIVITIES.</u>			
3. Physical Hazards: <u>EXCAVATION EQUIPMENT, HEAVY EQUIPMENT, OLD STRESS IN AM, TRIPS AND FALLS</u>			
4. Emergency Procedures: <u>REPORT INJURIES TO SHSO (TED WITTEMANN), MEDICAL CALL 911 FIRST, APPLY FIRST AID OR IF QUALIFIED, EVALUATE WOUND TO DESIGNATED AREAS. HOSPITAL ROUTE POSTED IN FIELD OFFICE, COPY W/SHSO</u>			
5. Special Equipment/Other: <u>DECONTAMINATION REQUIRED PRIOR TO LEAVING CRZ.</u>			
6. Tailgate Safety Topic: <u>MOB/DEMOB EQUIP AND SUPPLIES => COORD. EQUIPMENT, POT. TO BE STRUCK BY VEHICLE OVEREXERCION, SLIP/TRIP/FALL, POT. TO BE STRUCK BY EQUIPMENT. SIGN HASP</u>			
ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.			
Printed Name	Signature	Printed Name	Signature
<u>M. WITTEMANN</u>	<u>[Signature]</u>		
<u>T. WITTEMANN</u>	<u>[Signature]</u>		
<u>DLA VASS</u>	<u>[Signature]</u>		
<u>Lindsay Madley</u>	<u>[Signature]</u>		
SECTION II: COMMENTS/CONCERNS		SECTION III: SAFE BEHAVIOR	
		<u>N/A</u>	Exposure monitoring being conducted per HASP?
		<u>N/A</u>	Decontamination procedures being followed?
		<u>N/A</u>	Housekeeping tasks being conducted daily?
		<u>W</u>	PPE being worn as specified in the HSP?
		<input checked="" type="checkbox"/>	safety glasses or goggles
		<input checked="" type="checkbox"/>	hard hats
		<input checked="" type="checkbox"/>	gloves (chemical or work)
		<u>N/A</u>	respirator & cartridges
		<u>N/A</u>	tyvek or PPE suits
		<input checked="" type="checkbox"/>	Lifting - Associates maintain good work habits
<input checked="" type="checkbox"/>	Moving of loads -Maintenance of good work habits		
<input checked="" type="checkbox"/>	Daily walk-around inspection of heavy equipment?		
<input checked="" type="checkbox"/>	Check for clear work area around heavy equipment?		
<input checked="" type="checkbox"/>	Look before backing when using heavy equipment?		
<input checked="" type="checkbox"/>	Unobstructed vision maintained by operators?		
<input checked="" type="checkbox"/>	Maintain traction - no slipping or skidding equipment?		
<u>N/A</u>	Traverse slopes vertically when using equipment?		
Project Safety Officer: <u>[Signature]</u>		Date: <u>11-15-04</u>	

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 11-15-04

TED WITTEMAN Power SHOT 3200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 0001	11-15-04 0838	PIT #3 UTILITY CONTRACTOR PUMPING DIKE H ₂ O
2. 2	" 0839	PIT #3 WORKERS R VALVE VAULT BOX
3. 3	1116	UTILITY LOCATION MARKINGS
4. 4	1122	PHOTO OF GRATE INLET FACING SOUTH TOWARD PIT #1 A
5. 5	1138	ECOR INSTALLING SILT FENCE
6. 6	1258	ECOR TRENCHING FOR SILT FENCE INSTALLATION
7. 7	1440	PHOTO OF RAIN FOR RENT 20,000 GAL FRAC TANK
8. 8	1440	VIEW FACING EAST OF SOIL STOCKPILE CONSTRUCTION
9. 9	1558	COMPLETED SOIL STOCKPILE LOCATIONS
10. 10	1602	H ₂ O STILL STANDING IN DIKED AREA NEAR PIT #3 A
11. 11	1707	SON SETTING OVER SOIL CONTAINMENT AREA
12.		
13.		
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**I Inload to file at end of every day.



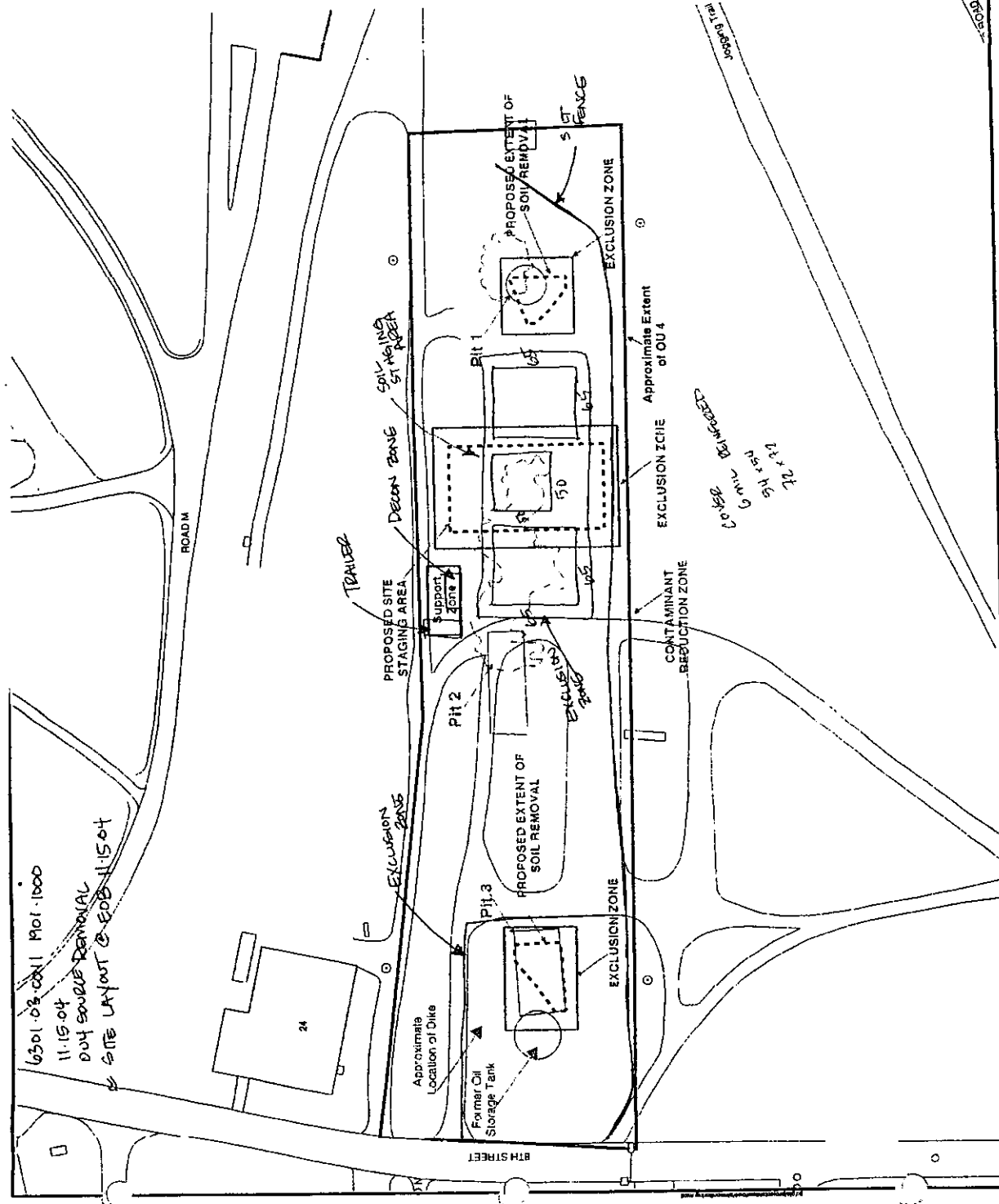
- LEGEND:**
- ⊙ AIR MONITORING STATION
 - ELECTROMAGNETIC SURVEY ANOMALY (MAGTEC, 2003)
 - 24 BUILDING IDENTIFICATION

NOTES:

1. ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS.
2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA PAUL REMOVAL ACTION WORKPLAN - OPERABLE UNIT 4	
FIGURE NUMBER:	H-2
DATE:	9/20/04
BY:	9/20/04
FILE NAME:	airmonitoring.mxd



MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-16-04
 Site Address: DSCR, OU4

Client: AFCEE
 City: Richmond

Weather: P. SUNNY / P. CLOUDY
40° - 65°
 State: VA Zip: 23237

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	0600	0630	1030	1700	15.0	
Lindsey Maddox (LM)	Construction Coordinator	0630	0630	1700	1700	11.5	
Dan Vass (DV)	Technician	0600	0630	1600	1630	10.0	
Lamar McNabb (LM)	Operator	0630	0630	1700	1700	11.5	
Matt Wortman (MW)	Operator	0630	0630	1700	1700	11.5	

Subcontractors/Visitors		
Name	Title	Company
STEVE EDLAVITCH, JEFF ZOELER	DSCR CLEANUP PROGRAM	DSCR 1000-1030
MIKE RANSON, HELPER	SUPERVISOR	ECOR 0700

VEHICLES						
	Qty.	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2	SEE EXPENSE / MILEAGE FORMS				TW/DV
* Rental Vehicles 450# DOZER	1	2,259 HRS	2,261 HRS			LMC / MW
* Trackhoe 200L EXC	1	134.2 HRS		137.6 HRS		LMC / MW
* Backhoe TC 54H LOADER	1	5,448 HRS		5,449		LMC / MW
FORD F250		SEE EXPENSE / MILEAGE FORMS				LMC / MW
* H ₂ O TRUCK		18,094 MILES		18094 MILES		LMC / MW
* DUMPTRUCK		20,642 MILES		20642 MILES		LMC / MW

* VEHICLE HRS/MILES @ START OF JOB

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TED W	0645	0700	COVERED PRE MOB/SETUP ISSUES IN HASP
Calibrations (See Attached Form)	N/A			NO AIR MONITORING CONDUCTED NEW FID APPROVES WILL START ON 11-17-04
Daily Agenda/Goals Meeting	TW/LM	0700	0715	SEE BELOW
Equipment Check	ALL	0715	0730	LOAD EQUIP. NECESSARY FOR JOB
Equipment Loading/Depart	ALL	0730	0745	DEPART AFTER UNLOAD OF EQUIP
Additional Comments: • SEE DAILY SAFETY REPORT LOG FOR SAFETY TOPIC AND ADDITIONAL TOPICS • ADDRESS DAILY GOALS / AGENDA • ESTABLISH EZ, CRZ, DRIVE PITS AND PUT UP FLAGGING, FENCE AND SIGNS, ORANGE EXCAVATION FENCE; • EXCAVATE BERM/DIKE WALL • RECEIVE SAMPLING EQUIPMENT ETC. • DEPART FIELD OFFICE @ 0745				

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	LM/DV/TW			
EZ Construction/Inspection	LM/DV/TW	0830	1600	WORK ON EXCLUSION ZONE THROUGHOUT DAY. INSPECTED BY TW/LM
Decontamination Zone Construction/Inspection	LM/mw	0830	1600	LINDBY AND MATT COMPLETE DECON AREA @ 1600. INSPECTED BY TW/LM
Stockpile Staging Construction/Inspection	TW/LM	1530	1600	INSPECTED BY TW/LM. NO MODS.
Erosion Control Construction/Inspection	ECOR/TW/LM	0800	1200	FLOOR COMPLETES Silt FENCE INSTALL. INSPECTED BY TW/LM @ 1600
Posting and Signage Set-up/Inspection	DV/TW/LM	1330	1430	SETUP SIGNS BY DV. INSPECTED BY TW/LM @ 1600
Air Monitoring Zone Set-up/Inspection	DV/TW/LM	1430	1530	SETUP AND EST AIR MONITORING ZONES BY DV. INSPECTED BY TW/LM @ 1600
Equipment check and start-up	LM/mw	0800	0830	MW/LMC SEE EQUIPMENT LIST
Additional Comments: • MW/LMC SETUP TRASH PUMP AND BEGIN PURGING H ₂ O IN DIKE AREA @ 0830 CONTINUE EFFORTS THROUGHOUT MORNING • EZ, FENCING, DECON ZONE, SIGN POSTING AND AIR MONITORING ZONES WORKED ON THROUGHOUT DAY. COMPLETED AND INSPECTED BY TW/LM @ 1600. MINOR MODIFICATIONS MADE BEFORE EOB.				

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity (Removed)	Stockpiled Location (A, B, C)	Comments
						@ PIT #1
						NO EXCAVATION ACTIVITY ON 11-16-04
Summary of Removal Activity Pit # 1				Total Removed Daily		Total Removed Project
Total to Stockpile A				Total to Stockpile B		Total to Stockpile C

Daily Activities (Cont.)

Excavation Activity Pit # 2

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments
NO EXCAVATION ACTIVITY @ PIT # 2 ON 11-16-04						
<i>[Signature]</i>						
Summary of Removal Activity Pit #2				Total Removed Daily		Total Removed Project
Total to Stockpile A		Total to Stockpile B		Total to Stockpile C		

Excavation Activity Pit # 3

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments
NO EXCAVATION ACTIVITY @ PIT # 3 ON 11-16-04						
<i>[Signature]</i>						
Summary of Removal Activity Pit #3				Total Removed Daily		Total Removed Project
Total to Stockpile A		Total to Stockpile B		Total to Stockpile C		

Sampling Activities

Sampling Personnel	Sample Location	Sample Depth	Time	Lab Results	Sample Type (Screening (S) Contamination (C) or TQLP)	Submitted to (ES&S, Accura, Budge Lab)	Results (soil/air, etc) (see table reverse)
NO SAMPLING ACTIVITY ON 11-16-04							
<i>[Signature]</i>							

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to	Results	Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1									
2	NO REMOVAL ACTION ON 11-16-04								
3									
Summary of Removal Actions									

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D	0630	HASP INITIAL LEVEL OF	PPE	TAW		NON INTRUSIVE SETUP MOB WORK REQUIRING LEVEL D
Additional Comments: AIR MONITORING NOT REQUIRED DURING MOB./SETUP. WILL IMPLEMENT AIR MONITORING UPON EXCAVATION ACTIVITY STARTUP						

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
NO DECONTAMINATION PROCEDURES REQUIRED 11-16-04			
Additional Comments:			

Additional Observations

- DTW
- H₂O LEVEL @ FOS 4 - 10.84 @ 1300
- DEWATERING EFFORTS CONTINUE THROUGHOUT DAY TO READY PIT #3 EXCAVATION AREA.
- BERM REMOVED AND MOVED MATERIAL NW AND SW OF PIT #3 AREA. AREA PREPARED FOR EXCAVATION STARTING 11-17-04.
- TW LEAVES SITE @ 12:00 - 13:30 FOR SUPPLY PICKUP @ RICHMOND OFFICE. ALL COOLERS AND SAMP SUPPLIES ARRIVE. FID FROM PINE ARRENS.
- STEVE E., JEFF Z. OBSERVE ACTIVITIES 0900 - 1000 (APPROX.) AND 1500 - 1600 (APPROX.)
- PHOTO LOG COMPLETED FOR DAILY ACTIVITIES

Daily Correspondence

Name / Agency	Time	Topic
E. EDLAVITCH / DSCR	1000	H ₂ O @ FIREHYDRANT NOT ABLE TO RELIEVE H ₂ O
B. MARCHIOLD / BEN	1045	ARRIVAL AND COORDINATION OF MOBILE LAB
S. EDLAVITCH / DSCR	1100	H ₂ O @ HYDRANT RESOLVED
S. FULLER / ALURA	1105	SAMPLING EQUIPMENT TO ARRIVE VIA FED EX
J. JENKINS / MACTEC	1115	PROGRESS UPDATE
G. WIRENN / MACTEC	1300	PROGRESS UPDATE. INFORMATION PROVIDED RE. VOC BADGES SHIPPING

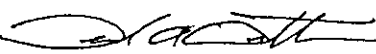
ACTIVITIES PLANNED FOR NEXT WORK DAY

- BEGIN EXC. @ PIT#3 AFTER DEWATER IN AM.
- MOBILE LAB ARRIVAL
- EQUIPMENT CALIBRATIONS IN AM. BY DV.
- TAKE EQUIP. BLANK SAMPLES IN A.M.
- IMPLEMENT AIR MONITORING PROGRAM UPON GROUND BREAKING @ OU4 PIT#3
- LEVEL D MODIFIED PPE TOMORROW. ENTER/EXIT WORK ZONE THROUGH CRZ. CLEAN TRAILER.
- SCREEN SAMPLE COLLECTION @ PIT#3 AND PIT#1 POSSIBLE.
- BEGIN SOIL STOCK PILING AND EQUIPMENT (HEAVY) USAGE AS REMOVAL ACTIONS DICTATE.
- POTENTIAL H₂O IDW TO BE GENERATED BASED ON PIT#3 H₂O INFILTRATION.

JOB DISCREPANCIES

NONE NOTED

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann 	PROJECT: DSCR OU4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	

Continue
 Completed

DAILY SAFETY LOG			
Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>		
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>1.16.04</u>		
City, State: <u>Richmond, Virginia</u>	Weather: <u>P. SUNNY / P. CLOUDY</u>		
Client Name: <u>DLA</u>	Temperature: (am) <u>40°F ±</u> (pm) _____		
SECTION I: DAILY TAILGATE SAFETY MEETING			
Meeting Lead by: <u>TED WITTEMAN</u>		Tailgate Topic: <u>SAFETY ASSOC. W/SETUP DEMOB.</u>	
Time of Meeting: <u>0645</u> (am) (pm)		Type of Project: <u>OU4 SOURCE REMOVAL</u>	
Contaminant(s): <u>CVOC'S</u>			
(Describe in Detail Specific Items Discussed Under the Following Categories)			
1. Protective Clothing/Equipment: <u>LEVEL D PPE HARDHATS GLASSES, EAR PROTECTION</u> <u>WILL GO TO LEVEL D MODIFIED UPON BEGINNING EXCAVATION</u> <u>ACTIVITY</u>			
2. Chemical Hazards: <u>CVOC'S UPON BEGINNING EXCAVATION ACTIVITY. VINYL</u> <u>CHLORIDE, CHLORINATED SOLVENTS</u>			
3. Physical Hazards: <u>HEAVY EQUIPMENT, STRUCK BY EQUIP, OVEREXERTION</u> <u>LOADING, UNLOADING, CAUGHT IN/ON/BETWEEN EQUIP, SLIP TRIP</u> <u>FALL, VEHICLE TRAFFIC</u>			
4. Emergency Procedures: <u>CALL 911, NOTIFY SHSO (TED WITTEMAN), APPLY</u> <u>FIRST AID/CPR OR CONTACT QUALIFIED PERSONS, HOSPITAL ROUTE</u> <u>NOTIFY DSCR (CLIENT)</u>			
5. Special Equipment/Other: <u>NONE. FENCE POSTS INSTALLATION INTOUGH GROUND.</u> <u>BE CAREFUL USING EQUIPMENT TO DRIVE POSTS.</u>			
6. Tailgate Safety Topic: <u>PHYSICAL HAZARDS ESP. HEAVY EQUIPMENT, WET SLIPPERY</u> <u>POLY. OVER EXERTION DUE TO LIFTING.</u>			
ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.			
Printed Name	Signature	Printed Name	Signature
<u>M. WORTON</u>	<u>[Signature]</u>		
<u>L. M. W. H.</u>	<u>[Signature]</u>		
<u>T. WITTEMAN</u>	<u>[Signature]</u>		
<u>DAN VAS</u>	<u>[Signature]</u>		
<u>Lindsay Madley</u>	<u>[Signature]</u>		
SECTION II: COMMENTS/CONCERNS		SECTION III: SAFE BEHAVIOR	
<u>LINDSEY ADDRESSES SLIPPERY</u> <u>POLY LINERS</u> <u>HOSPITAL ROUTE HANDOUTS</u> <u>SAMPLING PROCEDURES</u>		<input type="checkbox"/> Exposure monitoring being conducted per HASP?	
		<input type="checkbox"/> Decontamination procedures being followed?	
		<input type="checkbox"/> Housekeeping tasks being conducted daily?	
		<input type="checkbox"/> PPE being worn as specified in the HSP?	
		<input type="checkbox"/> safety glasses or goggles	
		<input type="checkbox"/> hard hats	
		<input type="checkbox"/> gloves (chemical or work)	
		<input type="checkbox"/> respirator & cartridges	
		<input type="checkbox"/> tyvek or PPE suits	
		<input type="checkbox"/> Lifting - Associates maintain good work habits	
<input type="checkbox"/> Moving of loads -Maintenance of good work habits			
<input type="checkbox"/> Daily walk-around inspection of heavy equipment?			
<input type="checkbox"/> Check for clear work area around heavy equipment?			
<input type="checkbox"/> Look before backing when using heavy equipment?			
<input type="checkbox"/> Unobstructed vision maintained by operators?			
<input type="checkbox"/> Maintain traction - no slipping or skidding equipment?			
<input type="checkbox"/> Traverse slopes vertically when using equipment?			
Project Safety Officer: _____		Date: _____	

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

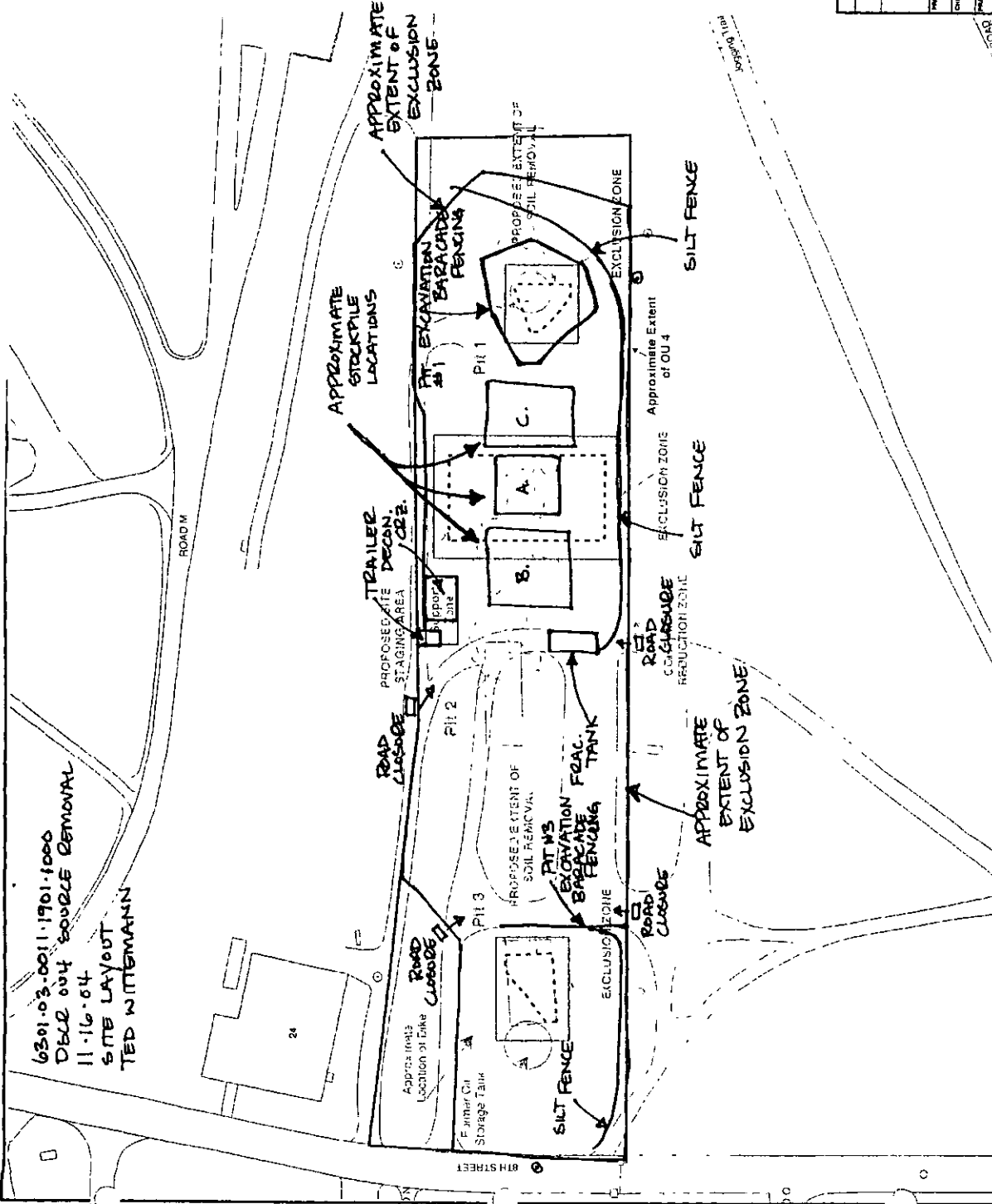
DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: DSCR OU4 SOURCE REMOVAL DATE: 11-16-04
TED WITTEMAN N POWER SHOT S200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 0001	11-16-04 1326	PIT #3 AREA w/BERM REMOVED AND MOVED
2. 2	1326	VIEW FACING NW OF BERM EXCAVATION / MOVE
3. 3	1326	VIEW OF H2O IN BERM AREA DURING MOVING OF MAT.
4. 4	1554	PHOTO OF LM DRESSING UP FORMER BERM AREA
5. 5	1554	LM CONTINUING DEWATER OF PIT #3 AREA
6. 6	1555	WATER REMAINING AFTER DEWATERING EFFORTS
7. 7	1555	TADPOLES IN BERM BASIN
8. 8	1604	SIGN POSTED ON 8 TH STREET SIDE AIR MONIT. LOC. FACING EAST
9. 9	1605	SITE INSP. VIEW OF PIT #3 EXC. AREA FACING NE
10. 10	1606	SITE INSP. VIEW OF PIT #3 EXC. AREA FACING N.
11. 11	1606	SITE INSP. ROAD CLOSED. VIEW FACING NW
12. 12	1606	SIGN POSTED @ ROAD CLOSURE
13. 13	1608	LM @ CONST. SIGN @ 2ND RD CLOSURE
14. 14	1609	SITE INSP. TOP OF FRACTANK FACING EAST OVER STOCKPILE CELLS
15. 15	1609	SITE INSP. TOP OF FRACTANK FACING WEST TO PIT #3
16. 16	1616	SITE INSP. VIEW OF PIT #1 EXCAVATION AREA
17. 17	1617	SITE INSP. FACING WEST FROM EAST OF PIT #1
18. 18	1618	PIT #1 EXC. AREA FACING SOUTH
19. 19	1623	SITE INSP. DELON AREA AND CRZ.
20. 20	1624	SITE INSP. ROAD CLOSURE @ ADDRESS EGRESS ROAD
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6301-03-0011-1901-1000
 DECLE 004 SOUOLE REMOVAL
 11-16-04
 SITE LAYOUT
 TED WITTMANN



LEGEND
 ① AIR MONITORING STATION
 ② ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 24 BUILDING IDENTIFICATION

NOTES:
 1 ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS.
 2 LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS
 3 LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND	
RICHMOND, VIRGINIA	
FACILITY REMOVAL ACTION WORKPLAN (FRAWP) UNIT 4	
PROPOSED SOIL STAGING PILE AND PERIMETER - AIR MONITORING LOCATIONS	
PREPARED BY:	FILE DATE:
CLC	9/20/04
DATE:	NUMBER:
9/20/04	H-2
PROJECT NO:	6301-03-0011
airmon@afce.af.mil	

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-17-04
 Site Address: DSCR, OU4

Client: AFCEE
 City: Richmond

Weather: SUNNY 35-66°F±
 State: VA Zip: 23237

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	0600	0630	1900	1930		
Lindsey Maddox (LM)	Construction Coordinator	0630	0630	1700	1700		
Dan Vass (DV)	Technician	0600	0630	1845	1930		
Lamar McNabb (LM)	Operator	0630	0630	1700	1700		
Matt Wortman (MW)	Operator	0630	0630	1700	1700		

Subcontractors/Visitors		
Name	Title	Company
JEFF ZROGLER, STEVE EDUAVICH	DSCR-CLEANUP PROGRAM	DSCR (ON AND OFF THROUGHOUT DAY)

VEHICLES						
	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2	SEE EXPENSE / MILEAGE FORMS				TW/DV
Rental Vehicles 450 H DOZER	1	2261 HRS			NONE	MW
Trackhoe 260C EXC.	1	137.6 HRS			NONE	LMC
Backhoe 7054H LOADER	1	5,449 HRS			NONE	MW
H2O TRUCK	1	18,094 MI			REMOVED DUE TO LEAK (H2O)	LM
DUMP TRUCK	1	20,642 MI			NONE	MW
FORD F250	1	SEE EXPENSE / MILEAGE FORMS				LMC/MW

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TED W.	0800	0815	
Calibrations (See Attached Form)	DV	0630	0700	
Daily Agenda/Goals Meeting	TW/LM	0800	0815	
Equipment Check	ALL	0630	0700	
Equipment Loading/Depart	ALL	0630	0700	

Additional Comments: • SEE SAFETY LOG FOR SPECIFIC AGENDA

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	LM/TW	0806	0830	NO MODS
EZ Construction/Inspection	LM/TW	0800	0830	↓
Decontamination Zone Construction/Inspection	LM/TW	0800	0830	
Stockpile Staging Construction/Inspection	LM/TW	0800	0830	
Erosion Control Construction/Inspection	LM/TW	0800	0830	
Posting and Signage Set-up/Inspection	LM/TW	0800	0830	
Air Monitoring Zone Set-up/Inspection	DV	0800	0830	
Equipment check and start-up	MW/LMC	0800 0730	0815	NO MAINT REQ.

Additional Comments: • SITE INSPECTED AND ZONES READY FOR WORK TO PROCEED

#3

Excavation Activity Pit #:

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments	
DEERE EXC.	LMC	0830	1200	80 YDS	A	ODOR DETECTED DURING EXC. AND SAMPLING. PD READINGS INDICATE CONT.	
DEERE EXC.	LMC	1530	1630	60 YDS	B		
Summary of Removal Activity Pit # 3			Total Removed Daily		140 YDS	Total Removed Project	140 YDS
Total to Stockpile A	80 YDS	Total to Stockpile B		60 YDS	Total to Stockpile C	NONE	

Daily Activities (Cont.)

Excavation Activity Pit # 2

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpile Location (A, B, C)	Comments
NO REMOVAL ACTION @ PIT 2 11-17-04						
Summary of Removal Activity Pit # 2				Total Removed Daily		Total Removed Project
Total to Stockpile A		Total to Stockpile B				Total to Stockpile C

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpile Location (A, B, C)	Comments
DEERE EXC.	LMC	12:30	1500	100 YDS	A	STAINED SOIL, BURNED WOOD DEBRIS PETROLEUM OILS DETECTED
Summary of Removal Activity Pit # 1				Total Removed Daily	100 YDS	Total Removed Project
Total to Stockpile A		100 YDS		Total to Stockpile B	NONE	Total to Stockpile C
						NONE

Sampling Activities

Sampling Personnel	Sample Identification	Sample Depth	Date	Time	Results	Sample Type (Soil, Sediment, etc.)	Submitted to: (ESN, ACURA, etc.)	Results (ppm TCE, PCB, etc.)
TW	004-EB1	N/A	0840	N/A	EQUIPMENT BLANK	ACURA	FAIL (2500 ppm TCE)	
TW	004-PIT3-501	5.0'	0920	1,287	S	ESN	FAIL (460 ppm TCE, 1,4 PCB)	
TW	004-PIT3-502	7.0'	0955	1,337	S	ESN	FAIL (400 ppm TCE, 1,4 PCB)	
TW	004-PIT3-503	9.0'	1015	2,197	S	ESN	FAIL (460 ppm TCE, 1,4 PCB)	
TW/DV	004-PIT3-504	7.0'	1035	1876	S	ESN	FAIL (20.7 ppm TCE, 1,4 PCB)	
TW	004-PIT3-505	10.0'	1100	4,253	S	ESN	FAIL (TW)	
TW	004-PIT1-501	4.0'	1255	1,407	S	ESN	FAIL (726 TCE, etc.)	
TW	004-PIT1-502	8.0'	1325	478	S	ESN	FAIL (2.47, 1,3 PCB, etc.)	
* TW	004-PIT1-503	4.0'	1425	481	S	ESN, ACURA	FAIL (5.08, 1,3 PCB, etc.)	
TW	004-PIT1-504	8.5'	1445	293	S	ESN	FAIL (0.451 TCE, etc.)	
TW	004-PIT1-505	9.0'	1455	185	S	ESN	FAIL (0.638 TCE, etc.)	
TW/DV	004-PIT3-506	6.0'	1530	2150	S	ESN	FAIL (31.5 TCE, etc.)	
* TW/DV	004-PIT3-507	5.0'	1600	4948	S	ESN, ACURA	FAIL (46.9 TCE, etc.)	
TW/DV	004-PIT3-508	5.0'	1615	11044	S	ESN	FAIL (1760 TCE, etc.)	
TW	TB-11-17-04	N/A	1730	N/A	ACURA TRIP BLANK	ACURA		

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to	Results	Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1	X			X	100 yds	N/A		X	INITIAL RESULTS INDICATE HIGH LEVELS CONT.
2									
3	X			X	140 yds	N/A		X	INITIAL RESULTS INDICATE HIGH LEVELS CONT.
Summary of Removal Actions			"HOT SPOT" REMOVAL COMPLETE @ PIT #1 AND PIT #3						

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D MODIFIED	N/A	HASP N/A	HASP	TED W	N/A	LEVEL D MODIFIED DURING EXCAVATION

Additional Comments:

- AIR MONITORING RESULTS ON DAILY AIR MONITORING FORM. DV COMPLETES FORM. PULLS DRABER TUBES WHEN REQUIRED NEAR PIT #3. NO ACTION LEVELS REACHED FOR PPE LEVEL ACTION.
- MONITORING PERFORMED ACCORDING TO HASP
- PASSIVE AIR MONITORING PERFORMED BADGES SUBMITTED TO LAB
- SEE ATTACHED PLAN

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
SAMPLING	TW/DV	THROUGHOUT DAY	DECON OF SAMPLING EQUIPMENT CONDUCTED THROUGHOUT DAY BETWEEN SCREEN SAMPLING ACCORDING TO WORK PLAN.

Additional Comments:

Additional Observations

- FID READINGS AND PRELIMINARY LAB RESULTS INDICATE LEVELS ABOVE SRC AT PIT #1 AND PIT #3.
- CONTINUE EXC. @ PIT #3 IN AFTERNOON. FID RESULTS STILL HIGH @ PIT #3 SEE SAMPLE RESULTS ACTIVITIES

Daily Correspondence

Name/Agency	Time	Topic
1. ZOECKLER/SEDWITCH	THROUGHOUT DAY	PRELIMINARY INDICATION OF FID AND ODOR INDICATE CONT. SOILS @ BOTH PITS. INCREASE AIR MONITORING DOWNWIND OF PIT #3 AND STACKPILES.
JUDY HARTNESS	12:00 (APPROX)	INCLUDE EST. FIELD MOISTURE % w/ SCREEN SAMPLES FOR MOISTURE CORRECTIONS.


ACTIVITIES PLANNED FOR NEXT WORK DAY

- CONTINUE PIT #3 SOURCE REMOVAL / SCREEN SAMPLES
- CONTINUE PIT #1 SOURCE REMOVAL / SCREEN SAMPLES

JOB DISCREPANCIES

- AIR MONITORING REQUESTS BY SE AND JZ DOWNWIND OF PIT #3 AND STOCKPILE IS IN ADDITION TO PROPOSED HASP. NO DISCREPANCY w/ ACCOMODATING REQUEST.

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann 	PROJECT: DSCR OU4 Principal Threat Source Material Removal
Reviewed by		<input checked="" type="checkbox"/> Continue <input type="checkbox"/> Completed
Organization	MACTEC	

DAILY SAFETY LOG			
Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>		
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>11-17-04</u>		
City, State: <u>Richmond, Virginia</u>	Weather: <u>SUNNY</u>		
Client Name: <u>DLA</u>	Temperature: (am) <u>35°±</u> (pm) <u>60°±</u>		

SECTION I: DAILY TAILGATE SAFETY MEETING

Meeting Lead by: <u>TED WITTMANN</u>	Tailgate Topic: <u>EXCAVATION, SOIL SAMPLING</u>
Time of Meeting: <u>0800</u> (am) (pm)	Type of Project: <u>OU4 SOIL SOURCE REMOVAL</u>
Contaminant(s): <u>VOC'S</u>	

(Describe in Detail Specific Items Discussed Under the Following Categories)

1. Protective Clothing/Equipment: LEVEL D, MODIFIED - ONCE EXCAVATION ACTIVITY IS SCHEDULED TO START PERSONNEL WILL MEET IN CR2 AND DON TYVEK GLOVES, RUBBER BOOTS, HARD HATS ETC. AS OUTLINED IN HASP PRIOR TO GROUND BREAKING LEVEL D IS SUFFICIENT
2. Chemical Hazards: VOC'S AS OUTLINED IN HASP; SAMPLING: WEAR PROPER PPE MONITOR AIR IN BREATHING SPACE
3. Physical Hazards: EXCAVATION: UTILITIES (UNDERGROUND OVERHEAD) VAPOUR AND DUST, HEAVY EQUIPMENT, CAVE INS SIDE WALL COLLAPSE TRAFFIC SLIP/TIPS/FALLS, OVEREXERTION SAMPLING: FROM BUCKET, EYE CONTACT, EXPOSURE
4. Emergency Procedures: CALL 911 IN EMERGENCY, NOTIFY SHED, APPLY FIRST AID CPR AS NECESSARY IF QUALIFIED, NOTIFY CLIENT IN EMERGENCY
5. Special Equipment/Other: AIR MONITORING CONDUCTED DV TO NOTIFY TWA IF ACTION LEVELS ARE EXCEEDED
6. Tailgate Safety Topic: AIR MONITORING AND ACTION LEVELS, UPWIND EVAC ETC

ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.

Printed Name	Signature	Printed Name	Signature
<u>TED WITTMANN</u>	<u>[Signature]</u>		
<u>LINDSEY MACKAY</u>	<u>[Signature]</u>		
<u>DAN VASS</u>	<u>[Signature]</u>		
<u>MOP WITTMAN</u>	<u>[Signature]</u>		
<u>LAMAR MCKAY</u>	<u>[Signature]</u>		

SECTION II: COMMENTS/CONCERNS

SECTION III: SAFE BEHAVIOR

	<input checked="" type="checkbox"/> Exposure monitoring being conducted per HASP?
	<input checked="" type="checkbox"/> Decontamination procedures being followed?
	<input checked="" type="checkbox"/> Housekeeping tasks being conducted daily?
	<input checked="" type="checkbox"/> PPE being worn as specified in the HSP?
	<input checked="" type="checkbox"/> safety glasses or goggles
	<input checked="" type="checkbox"/> hard hats
	<input checked="" type="checkbox"/> gloves (chemical or work)
	<input checked="" type="checkbox"/> respirator & cartridges
	<input checked="" type="checkbox"/> tyvek or PPE suits
	<input checked="" type="checkbox"/> Lifting - Associates maintain good work habits
	<input checked="" type="checkbox"/> Moving of loads - Maintenance of good work habits
	<input checked="" type="checkbox"/> Daily walk-around inspection of heavy equipment?
	<input checked="" type="checkbox"/> Check for clear work area around heavy equipment?
	<input checked="" type="checkbox"/> Look before backing when using heavy equipment?
	<input checked="" type="checkbox"/> Unobstructed vision maintained by operators?
	<input checked="" type="checkbox"/> Maintain traction - no slipping or skidding equipment?
	<input checked="" type="checkbox"/> Traverse slopes vertically when using equipment?

Project Safety Officer: _____	Date: _____
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DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

DHL

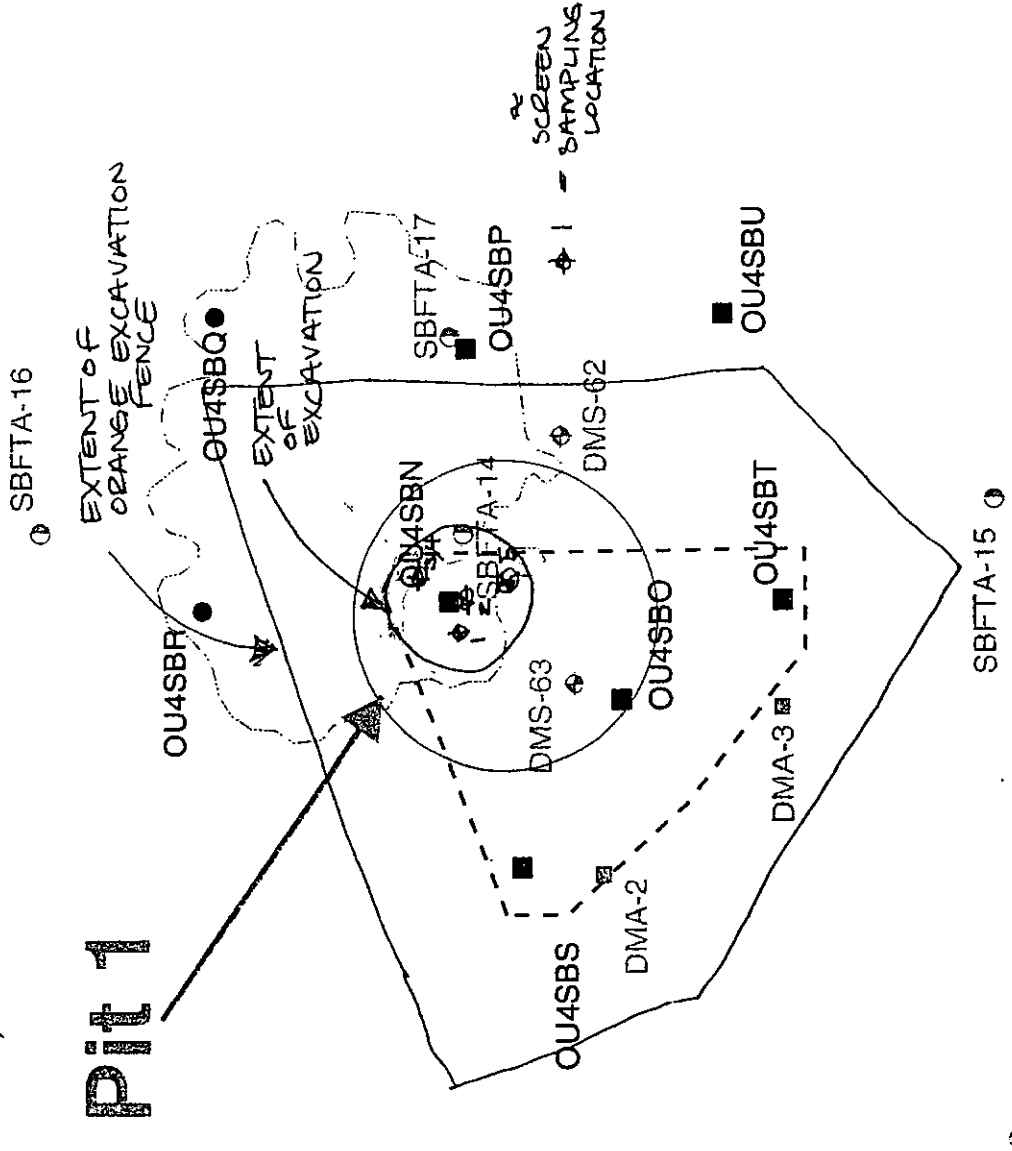
 SITE LOCATION: OU4 SOURCE REMOVAL DATE: 11.17.04

TED WITTEMAN PowerShot S200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 0001	11-17-04 / 0908	BEGINNING EXC. PIT #3 VIEW FROM SW
2. 2	/ 0909	EXCAVATOR @ PIT #3
3. 3	0941	SAMPLE OU4-PIT#3-SO-1
4. 4	1049	SAMPLE OU4-PIT#3-SO-4
5. 5	1053	CONTINUED EXCAVATION @ PIT #3
6. 6	1204	VIEW OF STAINED SOILS IN PIT #3
7. 7	1204	STAINED SOILS SOUTH WALL PIT #3
8. 8	1206	STOCKPILED SOILS @ STOCKPILE A
9. 9	1259	OU4 PIT #1 EXCAVATION. BURNED DEBRIS NEAR POINT
10. 10	1324	OU4 PIT #1 FACING EAST WEST; ORANGE FILL OVER NAT ^N
11. 11	1326	EXCAVATOR LOADING @ PIT #1
12. 12	1528	OU4 PIT #3 CONTINUED REMOVAL. STAINED SOIL DELIN
13. 13	1632	EXCAVATOR DRESSING UP STOCKPILE A
14. 14	1632	COVERING STOCKPILE B SOILS
15. 15	1634	EXCAVATION PIT #3 EOB
16. 16	1637	EOB FACING EAST LOOKING OVER SITE. PIT #1 IN DIST.
17. 17	1638	EOB FACING WEST LOOKING OVER SITE. PIT #3 IN DIST.
18. 18	1641	EOB PIT #1 FACING EAST
19. 19	1656	MOBILE LAB
20. 20	1656	MOBILE LAB PROXIMITY TO SITE
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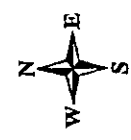
11.17.04
PIT #1 ACTIVITY
TED WOTEMANN

Pit 1



- LEGEND:**
- ⊕ MONITORING WELL LOCATION AND ID
 - SOIL SAMPLING LOCATION AND ID - EXCEED SRC
 - SOIL SAMPLING LOCATION AND ID
 - ⊕ SOIL SAMPLING LOCATION AND ID (LAW, 1992)
 - ⊕ SOIL SAMPLING LOCATION AND ID (ES, 1992)
 - ⊕ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1999)
 - ⊕ SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊕ ELECTROMAGNETIC SURVEY ANOMALY (MAGTEC, 2003)
 - 24 ○ BUILDING IDENTIFICATION
 - ⊕ PROPOSED EXTENT OF SOIL REMOVAL

- NOTES:**
1. LOCATIONS FOR SUFOS-#, DMA-# AND DMS-# SAMPLES ARE APPROXIMATE.
 2. LOCATION OF HISTORICAL FITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)
 4. SRC = SOIL REMOVAL CRITERIA



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND	
RICHMOND, VIRGINIA	
POTENTIAL MOBILE MATERIAL INVESTIGATION REPORT - OPERABLE PIT 1	
PROPOSED EXTENT OF SOIL REMOVAL - PIT 1	
PROJECT TITLE	PROPOSED EXTENT OF SOIL REMOVAL - PIT 1
DATE	7/15/04
REVISION	3-2
DATE	7/15/04
SCALE	AS SHOWN
PROJECT NO.	6801-04-0011
FILE NO.	9/1504
NUMBER	9/1504
DATE	9/1504
SCALE	AS SHOWN
PROJECT NO.	6801-04-0011
FILE NO.	9/1504
NUMBER	9/1504
DATE	9/1504
SCALE	AS SHOWN

11-17-04
 PIT #3 ACTIVITY
 TED WITTMANN

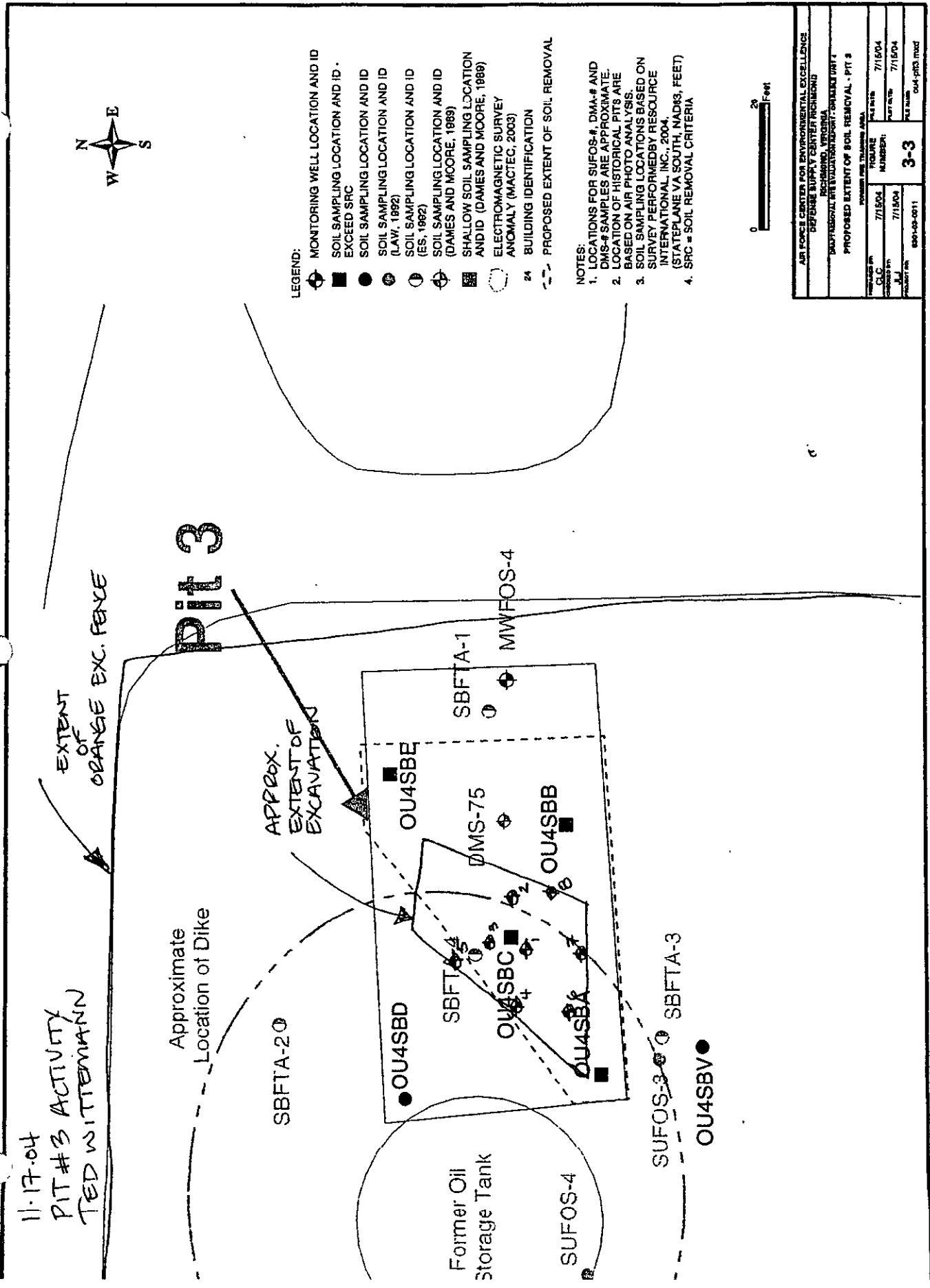
EXTENT OF ORANGE EXC. FENCE

Approximate Location of Dike

Pit 3

APPROX. EXTENT OF EXCAVATION

Former Oil Storage Tank



- LEGEND:**
- MONITORING WELL LOCATION AND ID
 - SOIL SAMPLING LOCATION AND ID - EXCEED SRC
 - SOIL SAMPLING LOCATION AND ID
 - ⊕ SOIL SAMPLING LOCATION AND ID (LAW, 1992)
 - ⊖ SOIL SAMPLING LOCATION AND ID (ES, 1992)
 - ⊗ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊘ SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊙ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - ⊚ BUILDING IDENTIFICATION
 - - - PROPOSED EXTENT OF SOIL REMOVAL

- NOTES:**
1. LOCATIONS FOR SUFOS-#, DMA-# AND DMS-# SAMPLES ARE APPROXIMATE.
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004, (STATEPLANE VA SOUTH, NAD83, FEET)
 4. SRC = SOIL REMOVAL CRITERIA

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA			
PROJECT TITLE: EXTENT OF SOIL REMOVAL - PIT 3			
PROJECT AREA:	PROJECT NUMBER:	DATE:	SCALE:
7/15/04	3-3	7/15/04	0-4-pit3.mxd
DATE:	PROJECT NUMBER:	DATE:	SCALE:
7/15/04	3-3	7/15/04	0-4-pit3.mxd
DATE:	PROJECT NUMBER:	DATE:	SCALE:
7/15/04	3-3	7/15/04	0-4-pit3.mxd

DAILY AIR MONITORING FORM

Project No. 62701-03-001
 Date 11/17/04
 Sheet 1 of 4
 Geol/Eng. D.V.

Instr. no. 04148 FID
 Range 0-1352
 Zero air ZERO D ZERO D
 Calibration gas METHANE METHANE
 Calibration gas conc. 100 ppm
 Reading 100.0 ppm

Instr. no. MARTEC D
 Range ---
 Zero air ZERO D
 Calibration gas AIR BAG
 Calibration gas conc. --- ppm
 Reading --- ppm

CGA Instr. no. B
 LEL calibration gas AIR
 LEL calibration gas conc. ---
 LEL reading ZERO D
 Oxygen background 20.9
 Alarm trigger (% LEL) ---
 Alarm trigger (% oxygen) ---

Weather conditions	Temp. (°F)	Humidity (%)	Wind direction	Wind speed (mph)
CLEAR	40-50	AV.	WINDS	LIGHT

Methane Gas Key
 BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

MIE (mg/m³)

Point	Location	Monitoring Point	LEL (%)	O ₂ (%)	CO (ppm)	CO ₂ (ppm)	NO _x (ppm)	SO ₂ (ppm)	Temp. (°F)	Humidity (%)	Wind direction	Wind speed (mph)	Filter type	Remarks
815	W OF PIT 3	L1	N/A	20.9	0.021	0.00	0.00	0.00	0.0	0.0	---	---	---	PRE-EXCAVATION
825	SE OF PIT 3	L2	N/A	20.9	0.016	0.00	0.00	0.00	0.0	0.0	---	---	---	PRE-EXCAVATION
820	NW OF PIT 3	L3	N/A	20.9	0.025	0.00	0.00	0.00	0.0	0.0	---	---	---	PRE-EXCAVATION
840	S OF PIT 3	L3	N/A	---	---	0.00	0.00	0.00	0.0	0.0	---	---	---	MOVED L3 TO DOWNWIND
900	S OF PIT 3	L3	N/A	20.9	0.006	0.00	0.00	0.00	0.0	0.0	---	---	---	BACKGROUND MIE 0.006
904	PIT 3	BS	N/A	---	---	0.00	0.00	0.00	0.0	0.0	---	---	---	---
906	W OF PIT 3	L1	N/A	20.9	0.021	0.018	0.00	0.00	0.0	0.0	---	---	---	---
910	S OF STRIP 1	L4	N/A	20.9	---	0.00	0.00	0.00	0.0	0.0	---	---	---	DOWNWIND OF "HOT" STOCKPILE
915	SE OF PIT 1	L2	N/A	20.9	0.016	0.014	0.00	0.00	0.0	0.0	---	---	---	---
925	W OF PIT 3	L1	N/A	20.9	0.021	0.021	0.00	0.00	0.0	0.0	---	---	---	---
926	PIT 3	BS	N/A	---	---	0.00	0.00	0.00	0.0	0.0	---	---	---	---
927	S OF PIT 3	L3	N/A	20.9	0.006	0.010	0.00	0.00	0.0	0.0	---	---	---	---
930	S OF STRIP 1	L4	N/A	20.9	0.00	0.008	0.00	0.00	0.0	0.0	---	---	---	---

DAILY AIR MONITORING FORM

Project No. 6301-03-0011
 Date 11/17/04
 Sheet 3 of 4
 Geol./Eng. DA

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3
 L4 - LOCATION 4

MEI
FID

Instr. no. _____ Range _____
 Zero air SEE Zero air _____
 Calibration gas PAK E Calibration gas _____
 Calibration gas conc. _____ ppm Calibration gas conc. _____ ppm

Instr. no. _____ Range _____
 Zero air SEE Zero air _____
 Calibration gas PAK E Calibration gas _____
 Calibration gas conc. _____ ppm Calibration gas conc. _____ ppm

LEL calibration gas _____
 LEL reading PAK E
 Oxygen background PAK E
 Alarm trigger (% LEL) _____
 Alarm trigger (% oxygen) _____

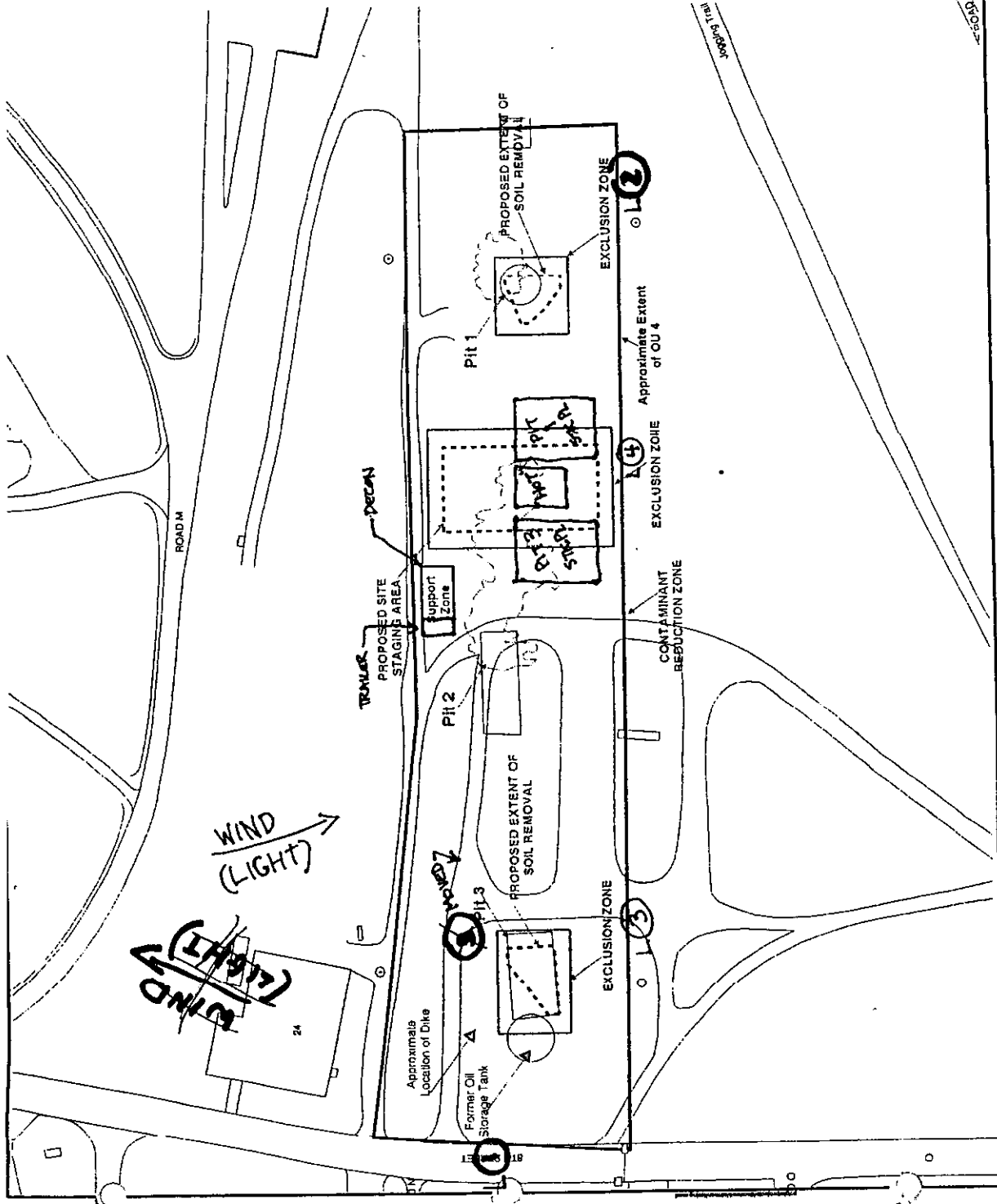
Weather conditions	Temp (°F)	Humidity (%)	Wind direction	Wind speed
CLEAR	40-50	NV	S	LIGHT
CLEAR	50-60	NV	S	LIGHT

MIE (mg/m³)

Time	Location	Heighting point	Depth (ft)	CO (ppm)	O ₂ (%)	Temp (°F)	Humidity (%)	Wind direction	Wind speed	FID (ppm)	Background	Reading	Remarks
1130	S OF STIRL 1	L4	N/A	0	20.9	0.009	0.009	S	LIGHT	0.0	0.0	0.0	
1132	SE OF PIT 1	L2	N/A	0	20.9	0.016	0.008	S	LIGHT	0.0	0.0	0.0	
1134	PIT 1	BS	N/A	-	-	-	-	S	LIGHT	0.0	0.0	0.0	PRE-EXCAVATION
1235	W OF PIT 3	L1	N/A	0	20.9	0.021	0.004	S	LIGHT	0.0	0.0	0.0	
1238	S OF PIT 3	L3	N/A	0	20.9	0.006	0.009	S	LIGHT	0.0	0.0	1.4	DRAGER VC 0.5/b: 0 ppm
1241	S OF STIRL 1	L4	N/A	0	20.9	0.009	0.008	S	LIGHT	0.0	0.0	0.0	
1244	SE OF PIT 1	L2	N/A	0	20.9	0.016	0.011	S	LIGHT	0.0	0.0	0.0	(NO DANGER THIS POINT)
1320	W OF PIT 3	L1	N/A	0	20.9	0.021	0.009	S	LIGHT	0.0	0.0	0.0	
1332	S OF PIT 3	L3	N/A	0	20.9	0.006	0.016	S	LIGHT	0.0	0.0	4.7	DRAGER VC 0.5/b: 0 ppm
1334	S OF STIRL 1	L4	N/A	0	20.9	0.009	0.019	S	LIGHT	0.0	0.0	1.7	
1336	SE OF PIT 1	L2	N/A	0	20.9	0.016	0.004	S	LIGHT	0.0	0.0	0.0	(NO DANGER THIS POINT) VC 0.5/b: 0 ppm
1337	PIT 1	BS	N/A	-	-	-	-	S	LIGHT	0.0	0.0	0.0	
1430	W OF PIT 3	L1	N/A	0	20.9	0.021	0.011	S	LIGHT	0.0	0.0	0.0	



11/17/04



- LEGEND:
- ⊙ AIR MONITORING STATION
 - ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION

NOTES:

1. ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS.
2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
FINAL REMOVAL ACTION WORKPLAN - OPERABLE UNIT 4	
PROPOSED SOIL STAGING PILE AND PERIMETER - AIR MONITORING LOCATIONS	
PREPARED BY CLC	FILE DATE 9/20/04
DRAWN BY GW	NUMBER 920/04
PROJECT NO: 6391-03-0011	FILE NAME airmonitoring.mxd
H-2	

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, Suite 100
Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-18-04
Site Address: DSCR, OU4

Client: AFCEE
City: Richmond

Weather: OVERCAST 50°F
State: VA Zip: 23237

MACTEC PERSONNEL

Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittmann (TW)	Site Manager	0600	0630	1900	1930		
Lindsey Maddox (LM)	Construction Coordinator	0630	0630	1730			
Dan Vass (DV)	Technician	0600	0630	1800 1800	1900		
Lamar McNabb (LM)	Operator	0630	0630	1730			
Matt Wortman (MW)	Operator	0630	0630	1730			
JOSH JENKINS	PROJECT MAN.	0630	0630	1730			

Subcontractors/Visitors

Name	Title	Company
JEFF ZOELKLER STEVE EDLAVITCH	DSCR - CLEANUP PROG.	DSCR (ON AND OFF THROUGHOUT DAY)
BRIAN MARCIANO	CHEMIST	ESN (0800 - 1700)

VEHICLES

	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2					
Rental Vehicles	2					
Trackhoe	1					
Backhoe	1					

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TW	0645	0700	
Calibrations (See Attached Form)	DV	0630	0645	
Daily Agenda/Goals Meeting	TW/LM	0645	0700	
Equipment Check	ALL	0630	0700	
Equipment Loading/Depart	ALL	0630	0730	

Additional Comments: *SEE SAFETY LOG (ATTACHED) FOR DAILY SPECIFIC AGENDA.*

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	TW/LM	0730	0800	NO MODIFICATIONS
EZ Construction/Inspection	TW/LM	↓	↓	
Decontamination Zone Construction/Inspection	TW/LM	↓	↓	
Stockpile Staging Construction/Inspection	TW/LM	↓	↓	
Erosion Control Construction/Inspection	TW/LM	↓	↓	
Posting and Signage Set-up/Inspection	TW/LM	↓	↓	
Air Monitoring Zone Set-up/Inspection	TW/LM/DV	↓	↓	
Equipment check and start-up	MW/LMC	↓	↓	

Additional Comments: *SITE INSPECTED AND READY FOR WORK TO PROCEED*

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments
DEERE EXC.	LMC	1045	1200	54	C	<i>MATERIAL REMOVED. GRAVEL @ BOTTOM SAMPLED. QUESTION IF WE SHOULD REMOVE TO A THROUGH GRAVEL. WILL RESOLVE MOVE BACK TO PIT #3 @ 1200</i>
Summary of Removal Activity Pit # 1				Total Removed Daily 54 YDS		Total Removed Project 154
Total to Stockpile A		100 YDS	Total to Stockpile B		NONE	Total to Stockpile C
		100 YDS				54 YDS

Daily Activities (Cont.)

Excavation Activity Pit # 2

NO REMOVAL @ PIT #2 11-18-04			
Summary of Removal Activity Pit #2		Total Removed Daily	Total Removed Project
Total to Stockpile A	Total to Stockpile B	Total to Stockpile C	

Excavation Activity Pit # 3

DEEPEX	LM	0800	1045	120 yds	B
		1230	1600	126	B
Summary of Removal Activity Pit #3		Total Removed Daily	Total Removed Project		
Total to Stockpile A	80 yds	Total to Stockpile B	246 yds	Total to Stockpile C	NONE

Sampling Activities

TW	04-PIT3-509	9.0'	0910	25.1	S	ESN	PASS
TW	04-PIT3-508	4.0'	0840	8 ppm	S	ESN	PASS
TW	04-PIT3-5011	8.0'	0915	4327 ppm	S	ESN	FAIL (17.6 TCE, ETC.)
TW	04-PIT3-502	3.5'	0850	1596 ppm	S	ESN	FAIL (5.63 CIS)
TW	04-PIT3-5013	8.0'	0925	210.7 ppm	S	ESN	FAIL (33.7 TCE, ETC.)
TW	04-PIT3-5014	3.0'	0900	85.4 ppm	S	ESN	FAIL (23.7 TCE)
TW	04-PIT3-505	2.0'	1020	103.7 ppm	S	ESN	PASS
TW	04-PIT3-5016	5.0'	1030	3626 ppm	S	ESN	
TW/DV	04-PIT3-5018	8.5'	1040	1353 ppm	S	ESN, ACURA	
TW	04-PIT1-506	5.0'	1100	337.5 ppm	S	ESN	
TW	04-PIT1-507	10.0'	1140	13.3 ppm	S	ESN	PASS
TW/DV	04-PIT3-508	5.0'	1325	4327 ppm (166) @ (DUP-1)	S	ESN, ACURA	
TW	04-PIT3-501	8.5'	1340	1375 ppm	S	ESN	
DV	04-PIT3-507	8.5'	1430	1080 ppm	S	ESN	
DV	04-PIT3-501	4.5'	1445	1137 ppm	S	ESN	
TW	04-PIT3-502	N/A	0800	N/A		ACURA	TRIP BLANK
TW	04-TB-11-18-04	N/A	1700	N/A		ACURA	TRIP BLANK

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to	Results	Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1	X			X	154 yds	INFORMED		X	
2									
3	X			X	386 yds	INFORMED		X	
Summary of Removal Actions									

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D MODIFIED	0630	HASP	HASP	TED W	0630	INITIAL LEVEL D MODIFIED THROUGHOUT DAY. NO ACTION LEVELS EXCEEDED

Additional Comments: . SEE AIR MONITORING RESULTS FOR 11-18-04 (ATTACHED)

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
SAMPLING	TW	THROUGHOUT DAY	DECON SAMPLING EQUIP THROUGHOUT DAY
DONNING/DIFFING	ALL	THROUGHOUT DAY	AND ALL PERSONNEL DON AND OFF EQUIPMENT IN CR2 WHILE EXITING AND ENTERING

Additional Comments:

Additional Observations

- O₂ FID AND LAB RESULTS INDICATE SOUTH WEST PORTION OF EXC @ ND LEVELS
- EFFORTS ALONG EAST WALL CONTINUE. EXTENT ALMOST REACHED @ PIT #3. MAJORITY OF RESULTS INDICATE LEVELS ABOVE SRC.
- STAINED SOILS VISIBLE @ 3-5' BAS AROUND ALL EXCAVATION WALLS.
- SEE PHOTOS AND SAMPLE RESULTS FOR DETAILS.
- CONFIRMATION SAMP. TO BEGIN 11-19-04 @ PIT #3. EXTENT OF EXC. WILL BE REACHED.


Daily Correspondence		
Name/Agency	Time	Topic
S.E. / IZ	THROUGHOUT DAY	PROGRESS
J. HARTNESS	1200	TCLP SAMPLING

ACTIVITIES PLANNED FOR NEXT WORK DAY

- CONTINUE @ PIT #3 SOURCE REMOVAL
- CONTINUE @ PIT #1 SOURCE REMOVAL
- CONFIRMATION SAMPLING TO BEGIN UPON EXTENT REACHED @ 004 PIT #3

JOB DISCREPANCIES

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann 	PROJECT: DSCR 014 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	<input checked="" type="checkbox"/> Continue <input type="checkbox"/> Completed

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: DSCR OU4 SOURCE REMOVAL DATE: 11-18-04

TED WITTEMAN

POWERSHOT S200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1.	100-0001	11-18-04/15:08 VIEW FACING EAST OVER STOCKPILES
2.	2	15:09 VIEW FACING WEST TOWARD PIT #3
3.	3	15:11 WEST WALL OF PIT #3
4.	4	15:11 VIEW FACING N. @ PIT #3
5.	5	15:12 EAST WALL OF PIT #3
6.	6	15:14 STAINING OF SOILS @ PIT #3 NORTH + EAST WALL
7.	7	15:14 FILM CLIP SHOWING STAINS AROUND PIT #3
8.	8	15:15 SOUTH WALL OF PIT #3
9.		
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33.		

**Upload to file at end of every day.

11.18.04
PIT #1 ACTIVITY
TED WITTMANN

Pit 1



APPROXIMATE
EXTENT OF
ORANGE BARRICADE
FENCE

LEGEND:

- MONITORING WELL LOCATION AND ID
- SOIL SAMPLING LOCATION AND ID - EXCEED SRC
- SOIL SAMPLING LOCATION AND ID
- SOIL SAMPLING LOCATION AND ID (LAW, 1992)
- SOIL SAMPLING LOCATION AND ID (ES, 1992)
- SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
- SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
- ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
- BUILDING IDENTIFICATION
- PROPOSED EXTENT OF SOIL REMOVAL

NOTES:

1. LOCATIONS FOR SUFOS-4, DMA-4 AND DMS-# SAMPLES ARE APPROXIMATE.
2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004.
4. STATEPLANE VA SOUTH, NAD83, FEET

SBFTA-16

OU4SBR

OU4SBQ

OU4SBN

SBFTA-14

DMS-62

DMS-63

OU4SBO

OU4SBT

OU4SBS

DMA-2

DMA-3

OU4SBO

OU4SBT

SBFTA-17

OU4SBP

OU4SBP

OU4SBP

OU4SBP

SBFTA-15

SBFTA-13

DMS-74

LEGEND
6/7
SAMPLING
LOCATION



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER PICHUGRA PICHUGRA, ALABAMA	
POTENTIAL SOURCE AND SOIL WASTEWATER REPORT (PSSRW) SHEET 1	
PROPOSED EXTENT OF SOIL REMOVAL - PIT 1	
FORNIA AND TRAINING AREA	
DATE: 7/15/04	SCALE: 9/15/04
BY: J.J.	NO. OF SHEETS: 9/15/04
PROJECT NO: 601-09-0011	SHEET NO: 3-2
DATE: 04-01-11 12:00Z	

DAILY AIR MONITORING FORM

CGA Instr. no. MACTEC
 LEL calibration gas FRESH AIR
 LEL calibration gas conc. ---
 LEL reading ---
 Oxygen background ZERO
 Alarm trigger (% LEL) ---
 Alarm trigger (% oxygen) ---

MIE PHD Instr. no. MACTEC D
 Range ---
 Zero air ZERO AIR
 Calibration gas AIR (FILTER BAG)
 Calibration gas conc. ZERO ppm
 Reading ZERO ppm

FID Instr. no. 04148 01352
 Range ---
 Zero air ZERO
 Calibration gas METHANE
 Calibration gas conc. 100 ppm
 Reading 99.8 ppm

Project No. 6201-03-0011
 Date 1/18/04
 Sheet 1 of 4
 Geol./Eng. DV

Monitoring Points
 BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

Wind direction	Wind speed	Temperature	Humidity	Barometric pressure
OVERCAST	40-50	HIGH	CALM	CALM

MIE (NO₂/M³)

Time	Location	Monitoring Point	CO (ppm)	CH ₄ (ppm)	O ₂ (ppm)	LEL	SV (ppm)	SO ₂ (ppm)	NO (ppm)	NO ₂ (ppm)	NO _x (ppm)	Other Gases	Remarks
7:55	PIT 3	BS	N/A	N/A	---	---	---	---	---	---	---	---	BEFORE DAILY EXCAVATION
7:46	W OF PIT 3	L1	N/A	N/A	20.9	0	---	---	---	0.08	---	---	
7:47	S OF PIT 3	L3	N/A	N/A	20.9	0	---	---	0.12	---	---		
7:49	S OF STERILE 1	L4	N/A	N/A	20.9	0	---	---	0.11	---	---		
7:51	SE OF PIT 1	L2	N/A	N/A	20.9	0	---	---	0.17	---	---		
---	---	---	N/A	N/A	---	---	---	---	---	---	---	F.I.D. MANUFACTURING 752	
8:20	W OF PIT 3	L1	N/A	N/A	20.9	0	---	---	0.18	0.19	---	---	
8:22	S OF PIT 3	L3	N/A	N/A	20.9	0	---	---	0.12	0.17	---	NO. 5/b 0	
8:24	S OF STERILE 1	L4	N/A	N/A	20.9	0	---	---	0.11	0.16	---	---	
8:26	SE OF PIT 1	L2	N/A	N/A	20.9	0	---	---	0.17	0.08	---	---	
8:47	W OF PIT 3	L1	N/A	N/A	20.9	0	---	---	0.18	0.17	---	---	
8:49	S OF PIT 3	BS	N/A	N/A	20.9	0	---	---	---	---	---	---	
8:50	S OF PIT 3	L3	N/A	N/A	20.9	0	---	---	0.12	0.18	---	---	
													(F.I.D. #1352) (LAMAR)

DAILY AIR MONITORING FORM

Project No. 6201-05-0011
 Date 11/13/04
 Sheet 2 of 4
 Geol/Eng. DV

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

FID Instr. no. 555
 Range 555
 Zero air 0.00
 Calibration gas 0.00
 Calibration gas conc. 5 ppm
 Reading 5 ppm

PID Instr. no. 555
 Range 555
 Zero air 0.00
 Calibration gas 0.00
 Calibration gas conc. 5 ppm
 Reading 5 ppm

CGA Instr. no. 555
 LEL calibration gas 555
 LEL calibration gas conc. 0.00
 LEL reading 0.00
 Oxygen background 5
 Alarm trigger (% LEL) 5
 Alarm trigger (% oxygen) 5

Weather	Temp (°C)	Humidity (%)	Wind direction	Wind speed
BS CLOUDY	40-50	AN	FROM SW	LIGHT

MIE (mg/m³)

Time	Location	Monitoring point	Depth (ft. BGS)	CO ₂ (%)	O ₂ (%)	CO (ppm)	NO _x (ppm)	SO ₂ (ppm)	Other	Comments
900	S OF STRIKE 1	L4	N/A	6	20.9	0.11	0.19	0.0	0.0	-
902	SE OF PIT 1 TRUCK	L2	N/A	0	20.9	0.17	0.021	0.0	0.0	-
910	BS (MATT)	-	N/A	-	-	-	-	-	SEE COMMENTS	RANGE 10-50 PPM WHEN DUMPING WITH WINDOWS OPEN
920	BS (TRUCK MATT)	-	N/A	-	-	-	-	-	SEE COMMENTS	RANGE 0-2 PPM WHEN DUMPING WITH WINDOWS CLOSED
930	W OF PIT 3	L1	N/A	0	20.9	0.18	0.25	0.0	0.0	-
932	S OF PIT 3	L3	N/A	0	20.9	0.12	0.27	0.0	0.0	-
934	PIT 3	PS	N/A	0	20.9	-	0.0	0.0	0.0	- (LAMAR)
938	SE OF PIT 1	L2	N/A	0	20.9	0.17	0.19	0.0	0.0	-
940	S OF STRIKE 1	L4	N/A	0	20.9	0.11	0.18	0.0	0.0	-

DAILY AIR MONITORING FORM

Project No. 6301-01-2011
 Date 11/19/11 of 4
 Sheet 3 of 4
 Geol/Eng. Jellys
DVS

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

FID Instr. no. SEE
 Range SEE
 Zero air PKS
 Calibration gas PKS
 Calibration gas conc. 1 ppm
 Reading 1 ppm

PID Instr. no. SEE
 Range SEE
 Zero air PKS
 Calibration gas PKS
 Calibration gas conc. 1 ppm
 Reading 1 ppm

CGA Instr. no. SEE
 LEL calibration gas SEE
 LEL calibration gas conc. PKS
 LEL reading PKS
 Oxygen background 1
 Alarm trigger (% LEL) 1
 Alarm trigger (% oxygen) 1

Wet/dry	Humidity	Wind
direction	(%)	direction
PKS	55	LIGHT
CLEAR	50-60	SW LIGHT

IME (ug/lp)

Location	Instrument	Reading	Background	Reading	Background	Reading	Background	Reading	Background
105	S of PIT 1	NA	0	0.11	0.19	0	0	NA	NA
110	SE of PIT 1	↓	0	0.08	0.08	0	3.6	↓	↓
112	W of PIT 3	↓	0	0.18	0.10	0	0	↓	↓
111	SE of PIT 3	↓	0	0.12	0.07	0	0	↓	↓
115	@ PIT 1	↓	0	—	0.10	0	3.2	↓	↓
1242	W of PIT 3	N/A	0	0.18	0.16	0	0.0	—	—
1243	S of PIT 3	N/A	0	0.12	0.16	0	0.0	—	—
1248	S of SAMPLE	N/A	0	0.11	0.009	0	0.0	—	—
1250	SE of PIT 1	N/A	0	0.08	0.11	0	0.0	—	—
1255	PIT 3	N/A	—	—	—	0	0.0	NO ₂ /D	(LAMAR)
1400	W of PIT 3	N/A	0	0.18	0.24	0	0.0	—	—
1401	PIT 3	N/A	—	—	—	0	0.0	—	(LAMAR)
1403	S of PIT 3	N/A	0	0.12	0.22	0	0.0	—	—

FID Faintest Substrate
 on 11/19/11 of 11/19/11

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11.19.04
 Site Address: DSCR, OU4

Client: AFCEE
 City: Richmond

Weather: PARTLY CLOUDY 50°F
 State: VA Zip: 23237

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	0600	0615	2030	2100		
Lindsey Maddox (LM)	Construction Coordinator	0615	0615	1730			
Dan Vass (DV)	Technician	0600	0615	1915	1945		
Lamar McNabb (LM)	Operator	0615	0615	1730			
Matt Wortman (MW)	Operator	0615	0615	1730			

Subcontractors/Visitors		
Name	Title	Company
S. EDVITICH (10:30)	DSCR CLEANUP PROGRAM	DSCR
BRIAN MARCILO (0930-1700)	CHEMIST	ESN

VEHICLES						
	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2	SEE EXPENSE / TRILEAGE FORMS				
Rental Vehicles	2					
Trackhoe	1	}		NOT REPORTED		
Backhoe	1					

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TW	0615	0630	
Calibrations (See Attached Form)	DV	0630	0645	
Daily Agenda/Goals Meeting	TW/LM	0615	0630	
Equipment Check	ALL	0615	0630	
Equipment Loading/Depart	ALL	0615	0630	
Additional Comments: • SEE SAFETY LOG (ATTACHED) FOR DAILY SPECIFIC TOPICS • AGENDA TO FINISH OUT PIT 3 AND COMPLETE CONF. SAMPLING • MOVE TO PIT #1 IN PM • TLP STOCKPILES A, B				

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction Inspection	TW/LM	0700	0730	NO MODS
EZ Construction Inspection	TW/LM	0700	0730	↓
Decontamination Zone Construction Inspection	TW/LM	0700	0730	
Stockpile Staging Construction Inspection	TW/LM	0700	0730	
Erosion Control Construction Inspection	TW/LM	0700	0730	
Posting and Signage Set-up Inspection	TW/LM	0700	0730	
Air Monitoring Zone Set-up Inspection	TW/DV	0700	0730	
Equipment check and start-up	MW/LMC	0700	0730	
Additional Comments: • INSPECTIONS COMPLETE AND WORK SITE READY.				

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments	
DEERE EXC	LMC	1230	1530	180 yds	C	• EXCAVATION OF PIT 1 IN PM • LM/DV CONDUCT SO SAMPLING • TW TLP STOCKPILES	
Summary of Removal Activity Pit # 1			Total Removed Daily		180 yds	Total Removed Project	334 yds
Total to Stockpile A		100 yds	Total to Stockpile B		NONE	Total to Stockpile C	234 yds

Daily Activities (Cont.)

Excavation Activity Pit # 2

NO WORK EXCAVATION @ PIT 2 ON 11.19.04					
Summary of Removal Activity Pit # 2		Total Removed Daily		Total Removed Project	
Total to Stockpile A		Total to Stockpile B		Total to Stockpile C	

Excavation Activity Pit # 3

DEEPS EXC.	LMC	0730	1030	72 yds	B	REMOVED MAT. ALONG EAST WALL ASSIST IN CONF. BARR. ; DEEPS UP PIT # 3 AREA
Summary of Removal Activity Pit # 3		Total Removed Daily		72 yds	Total Removed Project	
Total to Stockpile A	80 yds	Total to Stockpile B	378 yds	Total to Stockpile C	NONE	

Sampling Activities

TW/DV	004-PIT3-CS1	7.0'	870	161.1	C	ESN	PASS
TW/DV	004-PIT3-CS2	3.5'	845	162.7	C	ESN	FAIL (1,2 DCB / 1,3 DCB)
TW/DW	004-PIT3-CS3	8.0'	0900	839.3	C	ESN	
TW/DV	004-PIT3-CS4	3.0'	0915	4329 (OVER)	C (STAINED SOIL)	ESN	
TW/DV	004-PIT3-CS5	7.0'	0920	1003.6	C	ESN, ACCURA (MSMSD)	
TW/DV	004-PIT3-CS6	3.0'	0935	298.5	C (STAINED SOIL)	ESN	
TW/DV	004-PIT3-CS7	7.0'	1005	160.0	C	ESN	
TW/LM	004-PIT3-CS8	3.0'	1015	78.1	C	ESN	
TW/LM	004-PIT3-CS9	7.0'	1020	161.1	C	ESN, ACCURA (DUP)	
TW/LM	004-PIT3-CS10	3.5'	1025	1266	C	ESN	
TW/LM	004-PIT3-CS11	7.5'	1030	2869	C	ESN	
TW/LM	004-PIT3-CS12	3.5'	1040	417.7	C	ESN	
TW/LM	004-PIT3-CS13	7.5'	1045	874.5	C	ESN	
TW/LM	004-PIT3-CS14	3.5'	1050	574.3	C	ESN	
TW/LM	004-PIT3-CS15	7.5'	1055	237.0	C	ESN	
TW	004-PIT3-CS16	3.0'	1100	528.8	C	ESN	
DV/LM	004-PIT1-S08	8.0'	1300	193.4	S	ESN	
DV/LM	004-PIT1-S09	4.0'	1305	3248.	S	ESN	
DV	004-PIT1-S010	7.0'	1330	176.1	S	ESN	
DV	004-PIT1-S011	3.0'	1340	78.0	S	ESN	



MACTEC Engineering and Consulting
1606 Ownby Lane
Richmond, VA 23220

JOB NO. 0201-03-0011 SHEET _____ OF _____

PHASE 004 SOURCE REMOVAL TASK

JOB NAME _____

BY DAV VASS DATE 11/19/04

CHECKED BY _____ DATE _____

SAMPLING PERSONNEL	SAMPLE ID	SAMPLE DEPTH	SAMPLE TIME	FID	SAMPLE TYPE	SUBMITTED TO	RESULTS
DV	004-PTI-S012	7.0'	1400	25.8	C	ESNAC	
DV	004-PTI-S013	3.5'	1415	8.3	C	ESN	
TW	004-IDW-S0-1	COMP.	1400	N/A	TCLP	ACURA	
TW	004-IDW-S0-2	COMP.	1420	N/A	TCLP	ACURA	
TW	004-IDW-S0-3	COMP.	1520	N/A	TCLP	ACURA	
TW	004-IDW-S0-4	COMP.	1540	N/A	TCLP	ACURA	
TW	004-IDW-S05	COMP.	1550	N/A	TCLP	ACURA	
TW	TB-11-19-04	N/A	1730	N/A	TRIPBLANK	ACURA	
TW	TB-11-19-04 (2)	N/A	1730	N/A	TRIPBLANK	ACURA	

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to		Proposed limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1									
2									
3	X		X			YES	X		* CONF SAMPLING COMPLETED @ PIT #3
Summary of Removal Actions			<ul style="list-style-type: none"> • REMOVAL @ PIT #3 TO PROPOSED LIMITS OF EXCAVATION. PRELIMINARY FID RESULTS INDICATE CONTAMINANTS IN SOILS @ VARIOUS LEVELS! ALONG SIDEWALLS @ CONF. SAND LOCATIONS. • CONF. SAMPLING CONDUCTED AND RESULTS FROM ESN BY ADM. 						

11-20-04

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D. MODIFIED	0615	HASP	HASP	TEDW	0615	INITIAL LEVEL D MODIFIED THROUGHOUT DAY. NO ACTION LEVELS EXCEEDED

Additional Comments: SEE AIR MONITORING RESULTS FOR 11-19-04 (ATTACHED)

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
SAMPLING	TW	THROUGHOUT DAY	DECON SAMPLING EQUIP THROUGHOUT DAY

Additional Comments:

Additional Observations

- BEGIN 004 PIT#3 CONF SAMPLING @ 0830.
- TLP SAMPLING @ 1400

Daily Correspondence		
Name/Agency	Time	Topic
J. HARTNESS / MACTEC	1200	SAMPLING REQUIREMENT RE: EB AND DUP PLOG (RESOLVED)
D. KNAUB / MACTEC	1430	SAME AS ABOVE (RESOLVED)
J. ZOACKER	1400	COMMUNICATING FAX RESULTS TO FIELD PERSONNEL
S. EDLAVITCH	1300	CONFIRMING WEEKEND SCHEDULE

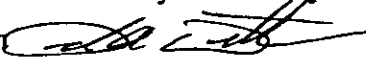
ACTIVITIES PLANNED FOR NEXT WORK DAY

- OUT PIT 1 CONTINUE EXC./SCREEN SAMPLING.
- CONFIRMATION SAMPLING @ PIT #1

JOB DISCREPANCIES

- NONE

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann 
Reviewed by	
Organization	MACTEC

PROJECT: DSCR OU 4 Principal Threat Source Material Removal

Continue
 Completed * OUT PIT 3 COMPLETE

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 11-19-04

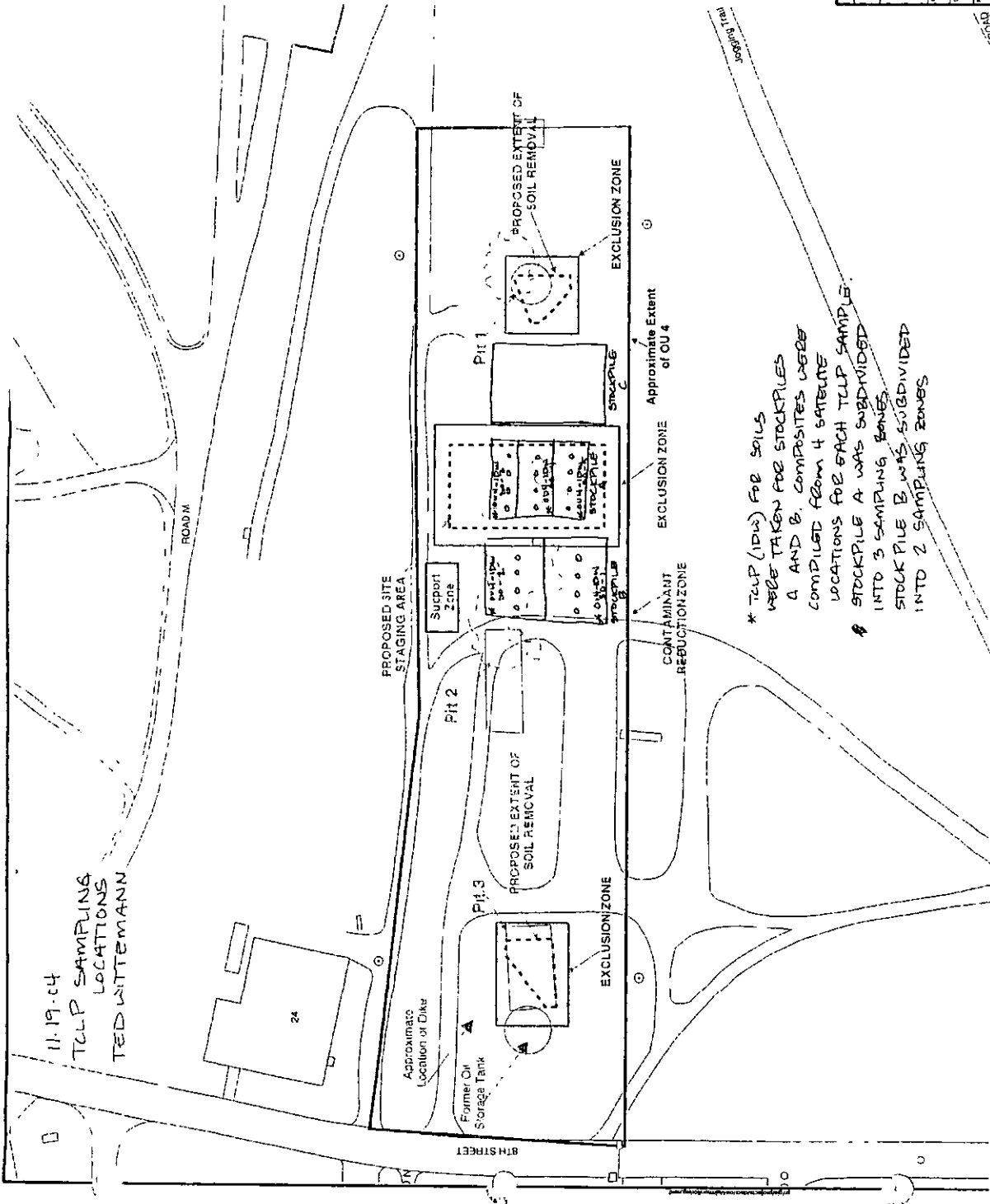
TED WITTEMANN

POWERSHOT S200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 100-0001	11-19-04 820	PHOTO OF OU4 ^{OU4} PIT3-CS-1,2 LOCATION
2. 2	924	PHOTO OF OU4-PIT3 CS 11,12 LOCATION
3. 3	924	PHOTO OF CS 1 AND 2. NOTE EXC. SCARS @ SAMPLING
4. 4	925	PHOTO CS 3,4. 3 DEEP 4 IN STAINED SOIL
5. 5	925	PHOTO CS 9,10 9 DEEP 10 SHALLOW
6. 6	925	PHOTO CS 7,8 7 DEEP 8 SHALLOW
7. 7	926	PHOTO CS 13 13 DURING SAMPLING
8. 8	926	PHOTO CS 14 DURING SAMPLING
9. 9	928	PHOTO CS 15
10. 10	931	PHOTO CS 16
11. 11	933	PIT PHOTO SHOWING EXTENT
12. 12	935	PIT #1 @ EOB
13. 13	1632	STOCKPILES FACING SW
14. 14	1633	STOCKPILE C @ EOB
15. 15	1633	
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		
29.		
30.		
31.		
32.		
33.		

PHOTO 8
IS FOR
QUALITY
PHOTO OF
CS 11,12
SAMPLING
LOC.

**Upload to file at end of every day.



11-19-04
 TCLP SAMPLING
 LOCATIONS
 TED WITTEMAN

- LEGEND:
- ⊙ AIR MONITORING STATION
 - ⊙ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION

NOTES

1. ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS
2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC. 2004. (STATEPLANE VA SOUTH, NAD83, FEET)



* TCLP (10s) FOR SOILS WERE TAKEN FOR STOCKPILES A AND B. COMPOSITES WERE COMPILED FROM 4 SAMPLE LOCATIONS FOR EACH TCLP SAMPLE. STOCKPILE A WAS SUBDIVIDED INTO 3 SAMPLING ZONES. STOCKPILE B WAS SUBDIVIDED INTO 2 SAMPLING ZONES.

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND	
RICHMOND, VIRGINIA	
FACIL REMOVAL ACTION WORKPLAN - OPERABLE UNIT 4	
PROPOSED SOIL STAGING PILE AND PERIMETER - AIR MONITORING LOCATIONS	
PREPARED BY: CLC	FILE DATE: 5/23/04
CHECKED BY: GW	FILE DATE: 5/20/04
PROJECT NO: 801-03-0111	FILE NAME: airmonitoring.mxd
H-2	

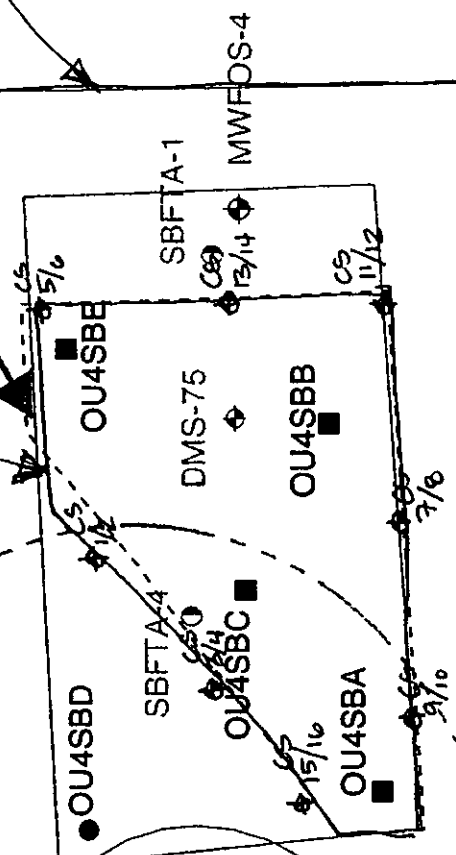
11-19-04
PIT 3 ACTIVITY
TED WITTMANN

Approximate
Location of Dike

Pit 3

APPROXIMATE
EXTENT OF
PIT EXCAVATION

APPROXIMATE
EXTENT OF
ORANGE
BARBERCADE
FENCING



- LEGEND:**
- ◆ MONITORING WELL LOCATION AND ID
 - SOIL SAMPLING LOCATION AND ID - EXCEED SRC
 - SOIL SAMPLING LOCATION AND ID (LAW, 1992)
 - SOIL SAMPLING LOCATION AND ID (ES, 1992)
 - ◆ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION
 - - - PROPOSED EXTENT OF SOIL REMOVAL

- NOTES:**
1. LOCATIONS FOR SUFOS-4, DMA-4 AND DMS-4 SAMPLES ARE APPROXIMATE.
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC. 2004.
 4. (STATE PLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
SOIL REMOVAL ESTIMATION REPORT - ORANGE TST 7	
PROPOSED EXTENT OF SOIL REMOVAL - PIT 3	
PROPOSED SOIL REMOVAL AREA	
DATE	7/15/04
SCALE	1" = 20'
PROJECT NO.	3-3
DATE	08-02-01
SCALE	0.4" = 10' (1:250)

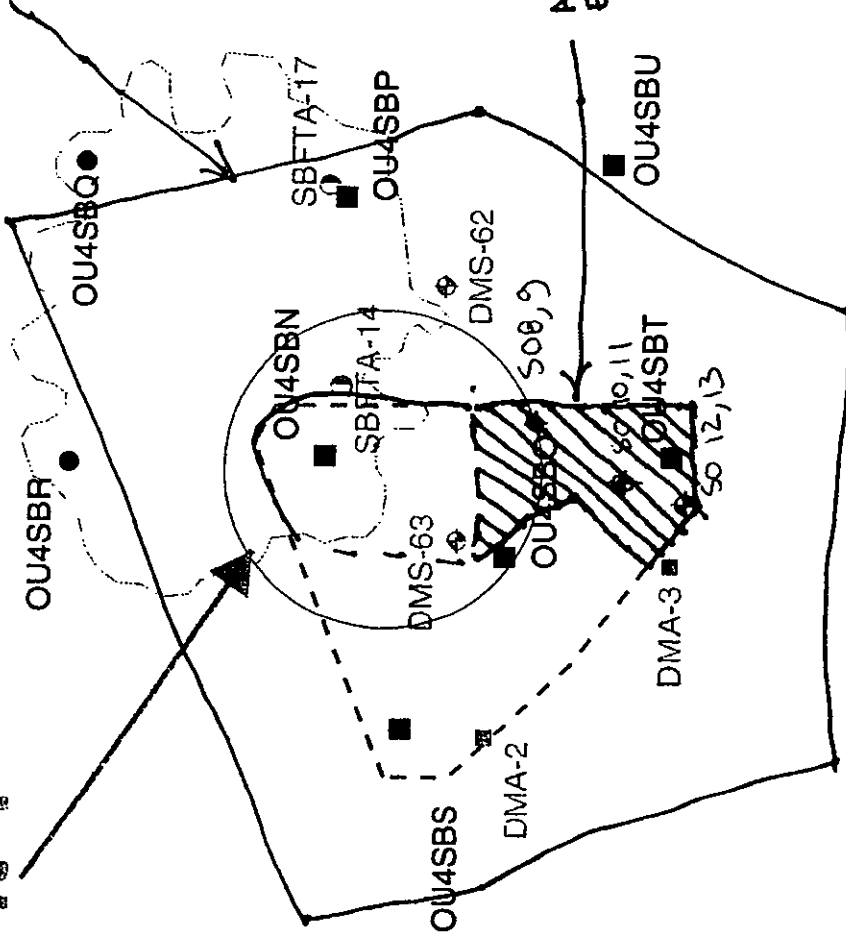
11-19-04
Pit #1 Activity
DAN VASS

Pit 1



APPROXIMATE
EXTENT OF
ORANGE
BARRICADE
FENCE

AREA
EXCAVATED
TODAY



- LEGEND:
- ◊ MONITORING WELL LOCATION AND ID
 - ◻ SOIL SAMPLING LOCATION AND ID - EXCEED SRC
 - SOIL SAMPLING LOCATION AND ID
 - SOIL SAMPLING LOCATION AND ID (LAW, 1992)
 - ◐ SOIL SAMPLING LOCATION AND ID (ES, 1992)
 - ◑ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ◒ SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ◓ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - ◔ BUILDING IDENTIFICATION
 - ◕ PROPOSED EXTENT OF SOIL REMOVAL

- NOTES:
1. LOCATIONS FOR SUFOS-#, DMA-# AND DMS-# SAMPLES ARE APPROXIMATE.
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)
 4. SRC = SOIL REMOVAL CRITERIA



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA			
POTENTIAL SOURCE MATERIAL CONTAMINATION REPORT - SUMMARY PART 7			
PROPOSED EXTENT OF SOIL REMOVAL - PIT 1			
PROJECT No.	711504	PLANS No.	011504
DATE	7/15/04	ISSUE No.	011504
FIGURE No.	711504	DATE	011504
PROJECT No.	8301-05-0011	FIGURE No.	041-011_1_v2.mxd
		3-2	

DAILY AIR MONITORING FORM

CGA Instr. no. MAKTEL
 LEL calibration gas FRESH AIR
 LEL calibration gas conc. ---
 LEL reading ---
 Oxygen background ZERO D
 Alarm trigger (% LEL) ---
 Alarm trigger (% oxygen) ---

MIE PID Instr. no. MAKTEC D
 Range ---
 Zero air FRESH AIR
 Calibration gas FRESH AIR BAG
 Calibration gas conc. --- ppm
 Reading ZERO D OK ppm

FID Instr. no. 01352 04148
 Range ---
 Zero air OK
 Calibration gas METH
 Calibration gas conc. 100 ppm
 Reading 99.7 ppm

Project No. 301-63-0011
 Date 11/19/04
 Sheet 1 of 3
 Geol./Eng. DV

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

WIND DIRECTION	WIND VELOCITY	TEMPERATURE	HUMIDITY	WIND DIRECTION	WIND VELOCITY
MOSTLY CLOUD	40-50	AV	FROM SW	LIGHT	AM

MIE (mg/m³)

Time	Location	Monitoring Point	Death (the 80)	O ₂ (%)	CO (%)	CO ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	Other
730	W OF PIT 3	L1	N/A	0	20.9	.021	.024	0	0.0	---	HIGHER BACKGROUND MIE, DUE TO HUMIDITY
732	S OF PIT 3	L3	N/A	0	20.9	.027	.027	0	0.0	---	
734	PIT 3	BS	N/A	0	20.9	---	---	0	0.0	---	(LAMAR)
738	NE OF STABLE 3	L5	N/A	0	20.9	.029	.029	0	0.0	---	
739	S OF STABLE 1	L4	N/A	0	20.9	.028	.028	0	0.0	---	
741	SE OF PIT 1	L2	N/A	0	20.9	.022	.022	0	0.0	---	
800	W OF PIT 3	L1	N/A	0	20.9	.021	.028	0	0.0	---	
802	BS PIT 3	BS	N/A	0	20.9	---	---	0	0.0	---	(LAMAR)
804	S OF PIT 3	L3	N/A	0	20.9	.027	.030	0	0.0	---	
807	NE OF STABLE 3	L5	N/A	0	20.9	.029	.033	0	0.0	---	
809	S OF STABLE 1	L4	N/A	0	20.9	.028	.028	0	0.0	---	
810	SE OF PIT 1	L2	N/A	0	20.9	.022	.022	0	0.0	---	

DAILY AIR MONITORING FORM

CGA Instr. no. 4561
 LEL calibration gas 4561
 LEL calibration gas conc. 4561
 LEL reading 4561
 Oxygen background 4561
 Alarm trigger (% LEL) _____
 Alarm trigger (% oxygen) _____

PID Instr. no. 4561
 Range _____
 Zero air 4561
 Calibration gas 4561
 Calibration gas conc. _____ ppm
 Reading _____ ppm

FID Instr. no. 4561
 Range _____
 Zero air 4561
 Calibration gas 4561
 Calibration gas conc. _____ ppm
 Reading _____ ppm

Project No. 050103-0011
 Date 11/19/04
 Sheet 2 of 3
 Geol./Eng. IN

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

Weather	Humidity	Wind
Direction	Speed	Direction
Mostly Cloudy	40-50	AV. CALM

M/E

Time	Location	Monitoring Point	Event (ppm)	Background (ppm)	Availability	Background (ppm)	Background (ppm)	Background (ppm)	Background (ppm)
840	PIT 3	BS	N/A	0	21.0	0	0.020	0	0.0
842	W of PIT 3	L1	N/A	0	21.0	0	0.021	0	0.0
843	S of PIT 3	L3	N/A	0	21.0	0	0.011	0	0.0
845	NE of STRIP 3	L5	N/A	0	21.0	0	0.018	0	0.0
846	S of STRIP 1	L4	N/A	0	21.0	0	0.017	0	0.0
847	SE of PIT 1	L2	N/A	0	21.0	0	0.018	0	0.0
920	W of PIT 3	L1	N/A	0	21.0	0	0.024	0	0.0
921	PIT 3	BS	N/A	0	21.0	0	0.022	0	0.0
923	S of PIT 3	L3	N/A	0	21.0	0	0.017	0	0.0
925	NE of STRIP 3	L5	N/A	0	21.0	0	0.007	0	0.0
926	S of STRIP 1	L4	N/A	0	21.0	0	0.028	0	0.0
928	SE of PIT 1	L2	N/A	0	21.0	0	0.022	0	0.0

(LAMAR)

(LAMAR)

DAILY AIR MONITORING FORM

Project No. 630103-0011
 Date 11/19/64
 Sheet 3 of 3
 Geol/Eng. RV

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

MIE
 Instr. no. CE FID Instr. no. CE
 Range 0-50 Range 0-50
 Zero air 0 Zero air 0
 Calibration gas 0 Calibration gas 0
 Calibration gas conc. 0 Calibration gas conc. 0 ppm
 Reading 0 Reading 0 ppm

CGA Instr. no. CE
 LEL calibration gas 0
 LEL calibration gas conc. 0
 LEL reading 0
 Oxygen background 0
 Alarm trigger (% LEL) 0
 Alarm trigger (% oxygen) 0

Weather	Temp	Humidity	Wind	Pressure	Barometric	Relative	Humidity
Mostly Cloudy	40-50	AV	CALM	CALM	CALM	CALM	CALM
Mostly Cloudy	40-55	AV	FROM SW	FROM SW	FROM SW	FROM SW	FROM SW

MIE

Time	Location	Monitoring Point	Oxygen (ppm)	CO (ppm)	CO2 (ppm)	NO (ppm)	NO2 (ppm)	SO2 (ppm)	HCN (ppm)	HCN (ppm)	HCN (ppm)	HCN (ppm)
1100	S OF PIT 3	L3	N/A	0	21.0	0.27	0.28	0	0.0	-	-	-
1102	W OF PIT 3	L1	N/A	0	21.0	0.21	0.34	0	0.0	-	-	-
1103	NE OF STRIPLE 3	L5	N/A	0	21.0	0.29	0.27	0	0.0	-	-	-
1105	S OF STRIPLE 1	L4	N/A	0	21.0	0.28	0.11	0	0.0	-	-	-
1106	SE OF PIT 1	L2	N/A	0	21.0	0.22	0.22	0	0.0	-	-	-
1301	W OF PIT 3	L1	N/A	0	21.0	0.21	0.26	0	0.0	-	-	-
1303	S OF PIT 3	L3	N/A	0	21.0	0.27	0.09	0	0.0	-	-	-
1305	NE OF STRIPLE 3	L5	N/A	0	21.0	0.29	0.21	0	0.0	-	-	-
1306	S OF STRIPLE 1	L4	N/A	0	21.0	0.23	0.28	0	0.0	-	-	-
1307	SE OF PIT 1	L2	N/A	0	21.0	0.22	0.21	0	0.0	-	-	-
1506	S OF PIT 3	L3	N/A	0	21.0	0.27	0.34	0	0.0	-	-	-
1508	NE OF STRIPLE 3	L5	N/A	0	21.0	0.29	0.37	0	0.0	-	-	-
1509	SE OF PIT 1	L2	N/A	0	21.0	0.22	0.36	0	0.0	-	-	-

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-20-04
 Site Address: DSCR, OU4

Client: AFCEE
 City: Richmond

Weather: PT CLOUDY
 State: VA Zip: 23237

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	-	-	-	-	-	-
Lindsey Maddox (LM)	Construction Coordinator	6:30	6:30	15:30	15:30		
Dan Vass (DV)	Technician	6:15	6:15	15:30	17:00		
Lamar McNabb (LM)	Operator	6:30	6:30	17:00	17:00		
Matt Wortman (MW)	Operator	6:30	6:30	17:00	17:00		

Subcontractors/Visitors		
Name	Title	Company
JEFF ZOECKLER	DSCR - CLEANUP PROGRAM	DSCR (ON & OFF THROUGHOUT THE DAY)

VEHICLES						
	Qty.	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2				NONE	FEED DV
Rental Vehicles 450H DOZER	2				NONE	LMC/MW
Trackhoe 200 c EXC	1				NONE	LMC/MW
Backhoe TC 54H LOADER	1				NONE	LMC/MW
FORD F-250	1				NONE	LMC/MW
H2O TRUCK	1				NONE	LMC/MW
DUMP TRUCK	1				NONE	LMC/MW

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	DV	6:40	6:50	
Calibrations (See Attached Form)	DV	7:00	7:10	
Daily Agenda/Goals Meeting	DV/LM	6:30	6:50	
Equipment Check	LMC/MW	7:00	7:40	
Equipment Loading/Depart				

Additional Comments:

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	DV	7:30	7:40	NO MODS ↓
EZ Construction/Inspection	DV	7:30	7:40	
Decontamination Zone Construction/Inspection	DV	7:20	7:20	
Stockpile Staging Construction/Inspection	PV	7:30	7:30	
Erosion Control Construction/Inspection	DV	7:30	7:30	
Posting and Signage Set-up/Inspection	DV	7:30	7:30	
Air Monitoring Zone Set-up/Inspection	DV	7:40	7:50	
Equipment check and start-up	ALL	7:15	7:45	

Additional Comments:

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments
TRACTOR	LAMAR	7:40	14:20	150 yd ³	STOCKPILE C	
DUMP TRUCK	MW	7:40	14:20	—	—	
Summary of Removal Activity Pit # 1		Total Removed Daily		150 yd ³	Total Removed Project	
Total to Stockpile A	100 yd ³	Total to Stockpile B		—	Total to Stockpile C	484 yd ³
						384 yd ³

Daily Activities (Cont.)

Excavation Activity Pit # 2

<i>No Activity Today</i>			
<i>[Signature]</i>			
Summary of Removal Activity Pit # 2		Total Removed Daily	Total Removed Project
Total to Stockpile A		Total to Stockpile B	Total to Stockpile C

Excavation Activity Pit # 3

<i>No Activity Today</i>			
<i>[Signature]</i>			
Summary of Removal Activity Pit # 3		Total Removed Daily	Total Removed Project
Total to Stockpile A		Total to Stockpile B	Total to Stockpile C

Sampling Activities

Sample ID	Depth (ft)	Weight (lb)	Volume (gal)	Notes	ESN
DV 004-PIT-S014	7.0	815	3.1	S	ESN
DV 004-PIT-S015	4.0	830	25.2	S	ESN
DV 004-PIT-S016	8.0	850	42.8	S (STAINED)	ESN
DV 004-PIT-S017	4.0	900	58.8	S (STAINED)	ESN
DV 004-PIT-S018	7.0	915	58.4	S	ESN
PV 004-PIT-S019	3.0	925	60.0	S	ESN, ACCURA
DV 004-PIT-S020	7.0	1000	384.1	S	ESN
PV 004-PIT-S021	4.0	1010	399.6	S (STAINED)	ESN
DV/LM 004-PIT-CS1	8.0	1110	32.4	C	ESN
DV/LM 004-PIT-CS2	4.0	1115	6780	C	ESN
DV/LM 004-PIT-CS3	8.0	1120	328.6	C	ESN
DV/LM 004-PIT-CS4	4.0	1130	6780	C	ESN
DV/LM 004-PIT-CS5	8.0	1135	27.7	C	ESN
DV/LM 004-PIT-CS6	4.0	1140	361.2	C	ESN
DV/LM 004-PIT-CS7	8.0	1142	3.6	C	ESN
DV/LM 004-PIT-CS8	4.0	1145	3.2	C	ESN, ACCURA
DV/LM 004-PIT-CS9	8.0	1150	1.0	C	ESN
DV/LM 004-PIT-CS10	4.0	1155	55.5	C	ESN
DV/LM 004-PIT-CS11	8.0	1400	159.8	C	ESN
DV/LM 004-PIT-CS12	4.0	1405	58.4	C	ESN

Daily Activities (Cont.)

Removal Action

Pit #	Screening Results		Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1	X		X				X		
2									
3	X		X						NO EXCAVATION THIS PIT
Summary of Removal Actions			REMOVAL AT PIT #1 TO PROPOSED LIMITS OF EXCAVATION.						

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D MODIFIED	0630	HASP	HASP	DV	0630	CONTINUAL
Additional Comments:						

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
SAMPLING	DV, LM, MW	—	DECON EQUIPMENT THROUGHOUT THE DAY
Additional Comments:			

Additional Observations

- BEGIN 004 PIT 1 CONFIRMATION SAMPLING AT 11:00.
- "HOT" AND "PIT 3" STOCKPILES COVERED

Daily Correspondence

Name / Agency	Time	Topic
J. ZOCKLER	9:30, 11:00	DRIVE-BY INSPECTION

ACTIVITIES PLANNED FOR NEXT WORK DAY

- ~~CONFIRMATION SAMPLING AT PIT #1~~ (COMPLETED TODAY)
- BEGIN PREPARATION FOR HOLIDAY WORK STOPPAGE
- REVIEW OF DATA ACCUMULATED
- POSSIBLY EXTENDING EXCAVATION BEYOND THE PROPOSED LIMITS

JOB DISCREPANCIES

NONE

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Fed Wittmann <i>Dan Vass (DANVASS)</i>	PROJECT: DSCR DU 4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	<input checked="" type="checkbox"/> Continue <input type="checkbox"/> Completed

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: DSCR 004DATE: 11-20-04

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1.	1050	PIT 1, FACING E: LOCATION OF CS-6
2.	1052	PIT 1, FACING E: ACQUIRING CS SAMPLE
3.	1053	PIT 1, FACING E: LOCATION OF CS-4
4.	1055	PIT 1, FACING SE: STAKED LOCATIONS OF CS-1 TO 10
5.	1320	PIT 1, FACING S: PIT 1 EXCAVATED TO PROPOSED LIMITS
6.	1320	PIT 1, FACING W: PIT 1 EXCAVATED TO PROPOSED LIMITS
7.	1320	PIT 1, FACING N: PIT 1 EXCAVATED TO PROPOSED LIMITS
8.	1320	PIT 1, FACING E: PIT 1 EXCAVATED TO PROPOSED LIMITS
9.	1350	PIT 1, FACING NW: STAKED LOCATIONS OF CS-11 TO 16
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**Upload to file at end of every day.

DAILY AIR MONITORING FORM

Project No. 630103-0011
 Date 11/20/04 of 2
 Sheet
 Geol./Eng. DV

BS - Breathing Space
 L1 - Location 1
 L2 - Location 2
 L3 - Location 3

Instr. no. CH148
 Range
 Zero air ZERO
 Calibration gas METHANE
 Calibration gas conc. 100 ppm
 Reading 100.2 ppm

Instr. no. MKT200 D
 Range
 Zero air ZERO OK
 Calibration gas FRESH AIR BAG
 Calibration gas conc. _____ ppm
 Reading _____ ppm

MIC
 PHD

Instr. no. MKT200
 LEL calibration gas FRESH AIR
 LEL calibration gas conc. _____
 LEL reading _____
 Oxygen background ZERO
 Alarm trigger (% LEL) _____
 Alarm trigger (% oxygen) _____

Weather	Humidity (%)	Wind direction	Wind speed
Prec. Cloudy	45-55	W/AV	From SW CALM

MIE (NO₂/m³)

ID	Location	Point	Depth (ft)	LEL (%)	O ₂ (%)	CO (ppm)	CO ₂ (ppm)	SO ₂ (ppm)	NO ₂ (ppm)	Temp (°F)	Humidity (%)	Wind direction	Wind speed	Notes
741	W OF PIT 3	L1	N/A	0	20.9	0	0.0	0.0	0.0	-	-	-	-	NO WORK IN AREA TODAY
743	S OF PIT 3	L3	N/A	0	20.9	0	0.0	0.0	0.0	-	-	-	-	NO WORK IN AREA TODAY
745	NE OF STRIPLE 3	L5	N/A	0	20.9	0	0.0	0.0	0.0	-	-	-	-	PRE-EXCAVATION
746	S OF STRIPLE 1	L4	N/A	0	20.9	0	0.0	0.0	0.0	-	-	-	-	PRE-EXCAVATION
748	SE OF PIT 1	L2	N/A	0	20.9	0	0.0	0.0	0.0	-	-	-	-	PRE-EXCAVATION
0951	W OF PIT 3	L1	1	0	20.9	0	0.0	0.0	0.0	-	-	-	-	Exc. Pit 1 + Stockpiling
953	SE OF PIT 1	L2	1	0	20.9	0	0.0	0.0	0.0	-	-	-	-	
955	S OF PIT 3	L3	1	0	20.9	0	0.0	0.0	0.0	-	-	-	-	
958	S OF STRIPLE 1	L4	1	0	20.9	0	0.0	0.0	0.0	-	-	-	-	
1000	NE OF STRIPLE 3	L5	1	0	20.9	0	0.0	0.0	0.0	-	-	-	-	
1240	Pit 1	BS	N/A	-	-	-	0	0.0	0.0	-	-	-	-	
1242	SE OF PIT 1	L2	N/A	0	21.0	0	0.0	0.0	0.0	-	-	-	-	
1243	NE OF STRIPLE 1	L5	N/A	0	21.0	0	0.0	0.0	0.0	-	-	-	-	

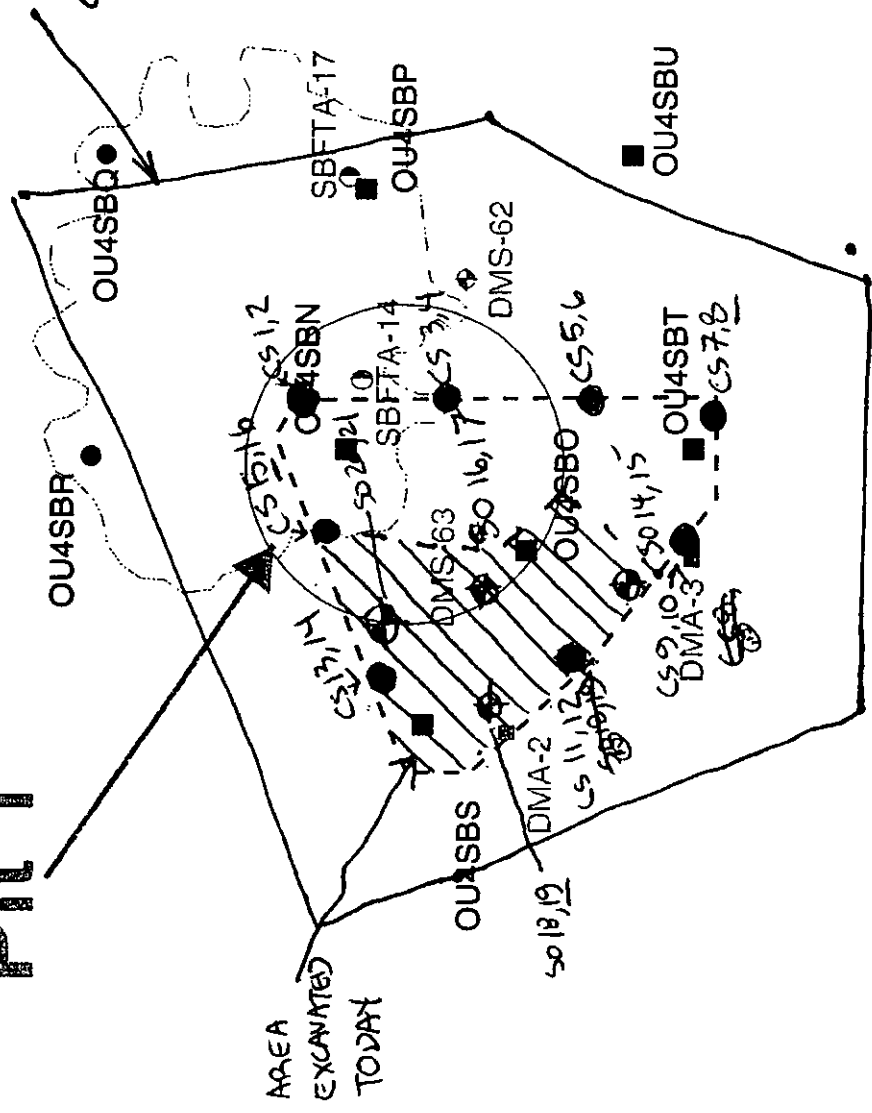
11-20-04
 PIT #1 ACTIVITY
 DAN VASS

Pit 1

APPROXIMATE
 EXTENT OF
 ORANGE BARRICADE
 FENCE

- ⊕ MONITORING WELL LOCATION AND ID
- SOIL SAMPLING LOCATION AND ID - EXCEED SRC
- SOIL SAMPLING LOCATION AND ID
- SOIL SAMPLING LOCATION AND ID (LAW, 1992)
- ◐ SOIL SAMPLING LOCATION AND ID (ES, 1992)
- ⊕ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1988)
- SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1988)
- ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
- 24 BUILDING IDENTIFICATION
- ⊕ PROPOSED EXTENT OF SOIL REMOVAL

NOTES:
 1. LOCATIONS FOR SUFOS-#, DMA-# AND DMS-# SAMPLES ARE APPROXIMATE.
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC. 2004.
 4. (STATEPLANE VA SOUTH, NAD83, FEET)
 SRC = SOIL REMOVAL CRITERIA



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
*FEDERAL SOURCE ESTIMATE REPORT: D60002047	
PROPOSED EXTENT OF SOIL REMOVAL - PIT 1	
FIGURE NUMBER:	3-2
FIGURE DATE:	9/15/04
FIGURE NUMBER:	7/15/04
FIGURE DATE:	9/15/04
FIGURE NUMBER:	3-2
FIGURE DATE:	04-01-01

DSCR OU4 THREAT SOURCE REMOVAL ACTION
6301-03-0011-1901-1000
DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: 004 DATE: 11-21-04

PHOTOGRAPH NO.	DATE/TIME	PHOTOGRAPH DESCRIPTION
1.	900	PIT 3, FACING NW: SLOUGHING OF SIDE WALL
2.	900	PIT 3, FACING NW: OVER EXCAVATION
3.	925	PIT 3, FACING W: ACQUIRING CS-3R & CS-4R
4.	926	PIT 3, FACING W: LOCATION OF CS-15R & CS-16R.
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**Upload to file at end of every day.

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, Suite 100
Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-21-04

Client: AFCEE

Weather: Mostly Cloudy, 50's

Site Address: DSCR, OU4

City: Richmond

State: VA Zip: 23237

MACTEC PERSONNEL

Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittmann (TW)	Site Manager	—	—	—	—		
Lindsey Maddox (LM)	Construction Coordinator	7:30	7:30	15:30	15:30		
Dan Vass (DV)	Technician	7:00	7:15	15:30	16:00		
Lamar McNabb (LM)	Operator	7:30	7:30	16:17:00	16:00		
Matt Wortman (MW)	Operator	7:30	7:30	16:00	16:00		

Subcontractors/Visitors

Name	Title	Company
JEFF ZDEKLER, STEVE EDLAVITCH	DSCR CLEAN UP	DSCR

VEHICLES

	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2					
Rental Vehicles 450 H DOZER	2					
Trackhoe 200 C EXC.	1					
Backhoe +C 54 H LOADED	1					
H ₂ O TRUCK	1					
DUMP TRUCK	1					
F250	1					

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	DV/LM	7:30	7:45	
Calibrations (See Attached Form)	DV	8:00	8:30	
Daily Agenda/Goals Meeting	DV/LM	7:30	7:45	
Equipment Check	LMc/MW	8:00	8:30	
Equipment Loading/Depart				

Additional Comments:

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	DV	8:00	8:00	
EZ Construction/Inspection	DV	8:00	8:00	
Decontamination Zone Construction/Inspection	DV	8:00	8:00	
Stockpile Staging Construction/Inspection	DV	8:15	8:20	
Erosion Control Construction/Inspection	DV	8:00	8:00	
Posting and Signage Set-up/Inspection	DV	8:00	8:00	
Air Monitoring Zone Set-up/Inspection	DV	8:30	8:45	
Equipment check and start-up	ALL	8:00	8:30	

Additional Comments:

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments
NO ACTIVITY TODAY						
Summary of Removal Activity Pit # 1			Total Removed Daily		0	Total Removed Project
Total to Stockpile A		100 yd ³	Total to Stockpile B		—	Total to Stockpile C
						484 yd ³
						384 yd ³

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to	Results	Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1	X	-	X	-	484 yd ³	Y	COMPLETED		
2	-	-	-	X	40	-	-	-	NO ACTIVITY
3			X	-	498 yd ³	Y	COMPLETED		
Summary of Removal Actions			ALL PROPOSED EXCAVATION LIMITS REACHED.						

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D MODIFIED	7:30	HASP	HASP	ALL	7:30	CONTINUAL

Additional Comments:

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
DUMP TRUCK	LMc/MW	1200-1300	DRY DECON - SHOVELS, BROOMS INTO STOCKPILE C.
LOADER	LMc/MW	1200-1300	" " " "
EXCAVATOR	LMc/MW	1200-1300	" " " "
ABOVE EQUIPMENT	LMc/MW	1400-1500	WET DECON - WATER HOSE/SPRAY INTO PIT 1.

Additional Comments:

ONLY BED OF TRUCK, LOADER BUCKET, EXCAVATOR BUCKET FULLY DECON'D. TRACKS AND WHEELS WERE ROUGH DECON'D.

Additional Observations

- TIGHTENED UP BARRICADE FENCING AROUND EXCAVATION PITS
- INSTALLED FENCING AROUND STOCK PILES WITH "KEEP OUT" SIGNAGE.

Daily Correspondence

Name / Agency	Time	Topic
S. EDANTON, J. ZOEGLER JOSE JENKINS	10:00-10:45	WORK PLAN FOR IMMEDIATE NEXT FEW DAYS, POSSIBLE EXPAND THE LIMITS OF EXCAVATION (PHONE CONFERENCE).

ACTIVITIES PLANNED FOR NEXT WORK DAY

- ACQUIRE CHARACTERIZATION SAMPLES FOR STOCKPILE C (PT 1).
- PREPARE FOR HOLIDAY WORK STOPPAGE.
- ACQUIRE REPLACEMENT SAMPLES IF NEEDED (SEE JOB DISCREPANCIES).

JOB DISCREPANCIES

- DELTA DASH (COURIER) LOST SAMPLES ~~AND~~ COLLECTED ON 11-20-04. IF SAMPLES ARE NOT FOUND, WE WILL RECOLLECT AND RESUBMIT THE SAMPLES, AS DEEMED NECESSARY.

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittmann <i>DAN VASS</i>	PROJECT: DSCROU 4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	<input checked="" type="checkbox"/> Continue <input type="checkbox"/> Completed

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, Suite 100
Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11.22.04

Client: AFCEE

Weather:

Site Address: DSCR, OU4

City: Richmond

State: VA

Zip: 23237

MACTEC PERSONNEL

Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittmann (TW)	Site Manager	0630	0700	1630	1700		
Lindsey Maddox (LM)	Construction Coordinator	0630	0630	1200	1200		
Dan Vass (DV)	Technician	0600	0630	1400	1400		
Lamar McNabb (LM)	Operator	0630	0630	1500	1500		
Matt Wortman (MW)	Operator	0630	0630	1500	1500		

Subcontractors/Visitors

Name	Title	Company
J. ZOELKNER / S. EDLAVICH	DSCR CLEANUP PROGRAM	USCR
HERTZ REPAIR (1400-1500)	REPAIR MAN/SERVICE	HERTZ

VEHICLES

	Qty.	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	2					
Rental Vehicles : ²⁰⁰⁶ FORD F150	1		161.5		NONE	LM
Trackhoe LOADER	1		5450		NONE	MW
Backhoe DOZEEL	1		2263		NONE	LM
DUMP TRUCK	1	20661	→		NONE	MW
1.0 TRUCK	1		NOT USED		NONE	MW

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	DV	0630	0645	
Calibrations (See Attached Form)	DV	0630	0645	
Daily Agenda/Goals Meeting	LM	0630	0645	
Equipment Check	ALL	0630	0645	
Equipment Loading/Depart	ALL	0645	0655	
Additional Comments:				

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	TW	0700	0730	
EZ Construction/Inspection	TW	0700	0730	
Decontamination Zone Construction/Inspection	TW	0700	0730	
Stockpile Staging Construction/Inspection	TW	0700	0730	
Erosion Control Construction/Inspection	TW	0700	0730	
Posting and Signage Set-up/Inspection	TW	0700	0730	
Air Monitoring Zone Set-up/Inspection	DV	0700	0730	
Equipment check and start-up	MW/LM	0700	0730	
Additional Comments:				

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpiled Location (A, B, C)	Comments
NO EXCAVATION PIT # 1						
11-22-04						
Summary of Removal Activity Pit # 1				Total Removed Daily		Total Removed Project
Total to Stockpile A		100 yds	Total to Stockpile B	NONE	Total to Stockpile C	484 yds
						384 yds

Daily Activities (Cont.)

Removal Action

Pit #	Screening Results		Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1	X		X		484 yd ³	Y		COMPLETED	
2	N/A		X		5 yd ³	Y		N/A	5 YDS REMOVED NO SAMPLING
3	X		X		498 yd ³	Y		COMPLETED	
Summary of Removal Actions			ALL PROPOSED EXCAVATION LIMITS REACHED						

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D MODIFIED	7:00	HASP	HASP	ALL	07:00	CONTINUAL

Additional Comments:

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
N/A			

Additional Comments:

Additional Observations

--

Daily Correspondence		
Name / Agency	Time	Topic

ACTIVITIES PLANNED FOR NEXT WORK DAY

• NONE

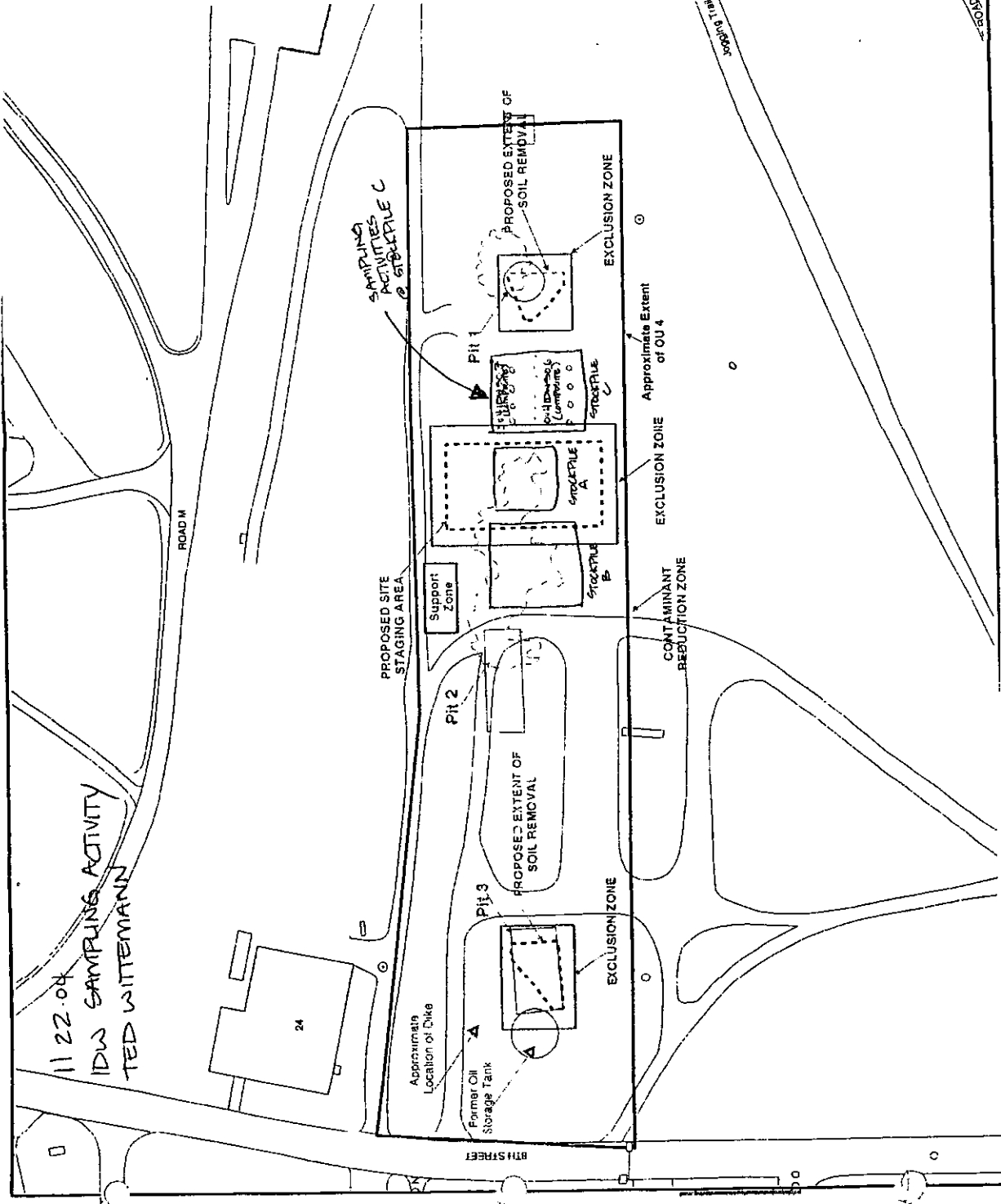
JOB DISCREPANCIES

• NONE

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann	PROJECT: DSCR OU4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	

Continue
 Completed



LEGEND:
 ○ AIR MONITORING STATION
 ○ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 24 BUILDING IDENTIFICATION

NOTES:
 1. ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004, (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE	
DEFENSE SUPPLY CENTER RICHMOND	
RICHMOND, VIRGINIA	
FINAL REMOVAL ACTION WORKPLAN - CORREABLE UNIT 4	
PROPOSED SOIL STAGING PILE AND PERIMETER - AIR MONITORING LOCATIONS	
PREPARED BY: 922004	FILE DATE: 9/20/04
DATE: 9/20/04	FIGURE NUMBER: B2004
PROJECT NO: 8301-03-0011	FILE NAME: airmonitoring.mxd
H-2	

11 22 04
 IDW SAMPLING ACTIVITY
 TED WITTMANN

DAILY SAFETY LOG

Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>11-22-04</u>
City, State: <u>Richmond, Virginia</u>	Weather: <u>OVERCAST</u>
Client Name: <u>DLA</u>	Temperature: (am) <u>30'S</u> (pm) <u>60EF</u>

SECTION I: DAILY TAILGATE SAFETY MEETING

Meeting Lead by: <u>DV, LM</u>	Tailgate Topic: <u>FOCUS ON SAFETY</u>
Time of Meeting: <u>6:45</u> (am) (pm)	Type of Project: <u>W4 SOURCE REMOVAL</u>
Contaminant(s): <u>CVOC</u>	

(Describe in Detail Specific Items Discussed Under the Following Categories)

1. Protective Clothing/Equipment: LEVEL D MODIFIED
2. Chemical Hazards: CVOC'S
3. Physical Hazards: SAME AS 11-21-04
4. Emergency Procedures: SAME AS 11-21-04
5. Special Equipment/Other: NONE
6. Tailgate Safety Topic: STAY FOCUSED ON SAFETY @ END OF JOB

ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.

Printed Name	Signature	Printed Name	Signature
<u>DAN VASS</u>	<u>[Signature]</u>		
<u>ZAMAR MISHKAT</u>	<u>[Signature]</u>		
<u>ANDREW WILSON</u>	<u>[Signature]</u>		
<u>TED WITTEKAMP</u>	<u>[Signature]</u>		

SECTION II: COMMENTS/CONCERNS **SECTION III: SAFE BEHAVIOR**

- | | |
|--|---|
| | <input checked="" type="checkbox"/> Exposure monitoring being conducted per HASP?
<input checked="" type="checkbox"/> Decontamination procedures being followed?
<input checked="" type="checkbox"/> Housekeeping tasks being conducted daily?
<input checked="" type="checkbox"/> PPE being worn as specified in the HSP?
<input checked="" type="checkbox"/> safety glasses or goggles
<input checked="" type="checkbox"/> hard hats
<input checked="" type="checkbox"/> gloves (chemical or work)
<input checked="" type="checkbox"/> respirator & cartridges
<input checked="" type="checkbox"/> tyvek or PPE suits

<input checked="" type="checkbox"/> Lifting - Associates maintain good work habits
<input checked="" type="checkbox"/> Moving of loads -Maintenance of good work habits
<input checked="" type="checkbox"/> Daily walk-around inspection of heavy equipment?
<input checked="" type="checkbox"/> Check for clear work area around heavy equipment?
<input checked="" type="checkbox"/> Look before backing when using heavy equipment?
<input checked="" type="checkbox"/> Unobstructed vision maintained by operators?
<input checked="" type="checkbox"/> Maintain traction - no slipping or skidding equipment?
<input checked="" type="checkbox"/> Traverse slopes vertically when using equipment? |
|--|---|

Project Safety Officer: [Signature] Date: 11-22-04

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 11-30-04

Client: AFCEE

Weather: PARTLY SUNNY 50°F±

Site Address: DSCR, OU4

City: Richmond

State: VA Zip: 23237

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	0545	0630				
Lindsey Maddox (LM)	Construction Coordinator						
Dan Vass (DV)	Technician						
Lamar McNabb (LM)	Operator		0615				
Matt Wortman (MW)	Operator		0615				

Subcontractors/Visitors		
Name	Title	Company
VARIOUS	TRUCK DRIVERS / DELIVERY	VOLCAN SUBS (ALL DAY SEE ATTACHED DELIVERY FORMS)

VEHICLES						
	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
Ford F150	1			SEE MILEAGE LOG, TRUCK 541		TED W
Rental Vehicles EXCAVATOR	1					LMC
Frackhoe DOZER	1					LMC, MW
Backhoe LOADER	1					LMC
FORD F250						

Daily Activities

Pre Excavation Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TW	0630	0650	TRUCK TRAFFIC
Calibrations (See Attached Form)				
Daily Agenda/Goals Meeting	TW	0630	0650	#57 STONE TO #4.0' BELOW GRADE @ BOTH PITS
Equipment Check	ALL	0630	0650	
Equipment Loading/Depart	ALL	0630	0650	
Additional Comments: DISCUSSED LOGISTICS OF TRUCK TRAFFIC ROUTES AND BACKFILL PLAN. BEGIN @ PIT #1. MATT W. WILL DIRECT LOADS, TW TO COLLECT DELIVERY INFO., LMC TO OPERATE EQUIPMENT w/ MW ASSISTANCE.				

Pre Excavation On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	TW	0700	0730	
EZ Construction/Inspection	TW	0700	0730	REPAIRS MADE 11-29-04 (ORANGE FENCE)
Decontamination Zone Construction/Inspection	TW	0700	0730	
Stockpile Staging Construction/Inspection	TW	0700	0730	SOME PONDING OF H ₂ O ON POLY NO OBSERVED DAMAGE
Erosion Control Construction/Inspection	TW	0700	0730	INTACT
Posting and Signage Set-up/Inspection	TW	0700	0730	SOME KEEP OUT SIGNS MISSING DUE TO WIND REPLACED.
Air Monitoring Zone Set-up/Inspection	N/A			
Equipment check and start-up	MW	0700	0730	SEE EQUIPMENT FORMS
Additional Comments: . SITE IN GOOD CONDITION. REPAIRS MADE TO ORANGE EXC. BARRICADE FENCE 11-29-04 AND SPERM H ₂ O IN DIKE AREA @ PIT #3 PUMPED OUT ON 11-29-04.				

BACKFILL

Excavation Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed (BACKFILLED)	Stockpiled Location (A, B, C)	Comments
DOZER	LMC	0745	1115	-	-	USED TO PUSH STONE INTO PIT
EXCAVATOR	LMC	0900	1115	317.72 TONS	-	USED TO MANIPULATE STONE IN PIT INTO EVEN DISTRIBUTION
BACKFILL						
Summary of Removal Activity Pit # 1			Total Removed Daily BACKFILL		317.72 TONS	Total Removed Project BACKFILL
Total to Stockpile A # 57 STONE	317.72 TONS	Total to Stockpile B # 21A STONE			Total to Stockpile C	317.72 TONS

Daily Activities (Cont.)

Excavation Activity Pit # 2

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpile Location	Comments
No BACKFILL ACTIVITY @ PIT #2 11-30-04						
Summary of Removal Activity Pit #2				Total Removed Daily	Total Removed Project	
Total to Stockpile A				Total to Stockpile B	Total to Stockpile C	

BACKFILL ACTIVITY
Excavation Activity Pit # 3

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Stockpile Location	Comments
EXCAVATOR	LMC	11:30		376.92 TONS	-	USED TO EVENLY DISTRIBUTE STONE IN PIT
DOZER	LMC/MW	11:35		-	-	USED TO PUSH STONES INTO PIT
Summary of Removal Activity Pit #3 STONE #3				Total Removed Daily BACKFILL #31A STONE	Total Removed Project BACKFILL	TONS 376.92
Total to Stockpile A				376.92 TONS	Total to Stockpile B	NONE
						390.49

Sampling Activities

Sample ID	Sample Location	Sample Depth	Time	Lab Results	Sample Cols. (Sieve Size, Gradation, etc.)	Submitted to (Agency, Name, etc.)	Results (pass/fail, etc.)
NO SAMPLING 11-30-04							
<i>[Handwritten signature]</i>							

Daily Correspondence

Name/Agency	Time	Topic
RANDY WIRT / MACTEC	0845	INSPECTION OF FILL @ PIT #1 AND PIT #3
DAVE GREN / ACF	1030	PURCHASE FABRIC

ACTIVITIES PLANNED FOR NEXT WORK DAY

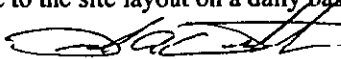
- HAVE RANDY WIRT (ENGINEER MACTEC) VISUALLY OBSERVE EXCAVATION AREAS AS BACKFILLED w/ #57 STONE AND PLACEMENT OF GEOFABRIC PRIOR TO #21A MATERIAL PLACEMENT.
- BEGIN PLACEMENT OF #21A MATERIAL, COMPACT 1' LOOSE LIFTS, TEST w/ DENSITY GUAGE TO ASSURE COMPACTION TO 95% PROCTOR \pm 3% OPT. MOISTURE.
- BRING TO SURFACE / FINAL GRADE

JOB DISCREPANCIES

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by

Ted Wittmann


PROJECT: DSCR 01-4 Principal Threat Source
Material Removal

Reviewed by

Organization

MACTEC

 Continue
 Completed

DAILY SAFETY LOG

Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>11-30-04</u>
City, State: <u>Richmond, Virginia</u>	Weather: <u>PARTLY SUNNY</u>
Client Name: <u>DLA</u>	Temperature: (am) <u>50°F</u> (pm) _____

SECTION I: DAILY TAILGATE SAFETY MEETING

Meeting Lead by: <u>TED WITTEMAN</u>	Tailgate Topic: <u>TRUCK TRAFFIC</u>
Time of Meeting: <u>0630</u> (am) (pm)	Type of Project: <u>OU4 SOURCE REMOVAL</u>
Contaminant(s): <u>NOC'S</u>	

(Describe in Detail Specific Items Discussed Under the Following Categories)

1. Protective Clothing/Equipment: LEVEL D
2. Chemical Hazards: NOC'S
3. Physical Hazards: HEAVY EQUIPMENT OPERATION, OVEREXERTION, TRUCK TRAFFIC, SLIPS TRIPS FALLS, OPEN EXCAVATION, & DEWALL CAVE'INS
4. Emergency Procedures: CALL 911 (IF NECESSARY), NOTIFY SHSD, APPLY 1ST AID (PPE OR CONTACT SOMEONE CERTIFIED, HOSPITAL, CONTACT DSCR
5. Special Equipment/Other: NONE
6. Tailgate Safety Topic: TRUCK TRAFFIC

ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.

Printed Name	Signature	Printed Name	Signature
LAMAR McNeill	<i>[Signature]</i>		
Mark W. [unclear]	<i>[Signature]</i>		
TED WITTEMAN	<i>[Signature]</i>		

SECTION II: COMMENTS/CONCERNS

SECTION III: SAFE BEHAVIOR

Blank lines for comments and concerns.

- Exposure monitoring being conducted per HASP?
- Decontamination procedures being followed?
- Housekeeping tasks being conducted daily?
- PPE being worn as specified in the HSP?
 - safety glasses or goggles
 - hard hats
 - gloves (chemical or work)
 - respirator & cartridges
 - tyvek or PPE suits
- Lifting - Associates maintain good work habits
- Moving of loads - Maintenance of good work habits
- Daily walk-around inspection of heavy equipment?
- Check for clear work area around heavy equipment?
- Look before backing when using heavy equipment?
- Unobstructed vision maintained by operators?
- Maintain traction - no slipping or skidding equipment?
- Traverse slopes vertically when using equipment?

Project Safety Officer: *[Signature]* Date: 11.30.04



MACTEC Engineering and Consulting
1606 Ownby Lane
Richmond, VA 23220

#57
FILL DELIVERY

JOB NO. 6701-00 0011 SHEET _____ OF _____

PHASE 1901 TASK 1000

JOB NAME 5512

BY TED W DATE 11 30 04

CHECKED BY _____ DATE _____

11/30/04

KIT # 1

TRUCK CO	TRUCK #	LOAD WT	TIME IN	TIME OUT	TICKET #
LEE HAULING	411020	20.11	0715	0750	225597
A.L. FIELDS	41173358	20.67	0805	0810	225615
JORDAN TRUCK	40682259	19.82	0800	0835	225605
A.L. FIELDS	41176651	19.31	0832	0837	225607
LEE HAULING	41006	19.99	0840	0845	225658
KNIGHT ENT	413146666	19.55	0850	0855	225645
A.L. FIELDS	40728358	20.22	0905	0910	225651
A.L. FIELDS	41176651	19.31	0925	0930	225664
LEE HAULING	41006	20.28	0935	0940	225667
JORDAN TRUCK	40682259	19.86	0945	0950	225663
KNIGHT ENT	413146666	19.47	0950	0955	225657
A.L. FIELDS	40728358	20.28	1005	1010	225690
LEE HAULING	411006	20.35	1020	1025	225679
A.L. FIELDS	41176651	19.30	1035	1040	225702
JORDAN TRUCK	40682259	19.82	1050	1055	225703
KNIGHT ENT	413146666	19.59	1055	1100	225713
		317.72	TONS # 1.5 SPILL		

KIT # 3

A.L. FIELDS	40728358	20.64	1105	1110	225725
A.L. FIELDS	41176651	19.15	1125	1130	225738
LEE HAULING	41006	20.17	1130	1135	225742
W.G. PARHAM	40603735	20.11	1155	1200	225740
JORDAN TRUCK	40682259	19.38	1210	1215	225752
A.L. FIELDS	40728358	20.21	1215	1220	225756
KNIGHT ENT	413146666	19.07	1220	1225	225752
LEE HAULING	41006	19.82	1225	1230	225774
KNIGHT ENT	413146666	19.70	1255	1300	225787
A.L. FIELDS	41176651	19.05	1305	1310	225791
A.L. FIELDS	40728358	20.44	1305	1310	225792
JORDAN TRUCK	40682259	19.57	1315	1320	225797
W.G. PARHAM	40603735	20.06	1325	1330	225803
LEE HAULING	41006	20.25	1330	1335	225810
KNIGHT ENT	413146666	19.57	1400	1405	225832
A.L. FIELDS	41176651	19.00	1405	1410	225837
A.L. FIELDS	40728358	20.38	1405	1410	225835
JORDAN TRUCK	40682259	19.72	1410	1415	225838
LEE HAULING	41006	19.80	1425	1430	225855
W.G. PARHAM	40603735	20.12	1430	1435	225857
		306.49			

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 11-30-04

TED WITTEMAN

POWER SHOTS 200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 100-0001	11-30-04 0824	PIT # 1 1ST LOAD #57 STONE
2. 0007	0824	PIT # 1 BUILDING STONE RAMP
3. 0003	1020	PIT # 1 EXCAVATOR DISPERSING STONE
4. 0004	1020	PIT # 1 EXCAVATOR DISPERSING STONE PIT # 1
5. 0005	1125	PIT # 3 STONE DRIVEWAY PLACED TO PIT # 3
6. 0006	1125	PIT # 3 PRIOR TO #57 STONE
7. 0007	1125	WATER IN BOTTOM OF PIT # 3
8. 0008	1243	PIT # 3 #57 STONE DISPERSED IN HOLE
9. 0009	1244	RAMP INTO PIT # 3
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33.		

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 12-1-04

Client: AFCEE

Weather: RAINING (AM)
SUNNY (PM)
 State: VA Zip: 23237

Site Address: DSCR, OU4

City: Richmond

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	0600	0630				
Lamar McNabb (LM)	Operator		0630				
Matt Wortman (MW)	Operator		0630				
RAND WIRT (RW)	ENGINEER	0600	0630	0730	0800		

Subcontractors/Visitors		
Name	Title	Company
VARIOUS	TRUCK DRIVERS/DELIVERY	VULCAN SUBS (ALL DAY SEE ATTACHED DELIVERY FORMS)

VEHICLES						
	Qty	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
FORD F150	1	SEE MILEAGE LOG TRUCK 541				TED W
FORD F250	1	SEE MILEAGE TRUCK LOG				
EXCAVATOR	1	}				
DOZER	1	}				
LOADER	1	}				
SMOOTH-DRUM	1	}				

Daily Activities

Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (See Attached Form)	TW	0630	0700	
Calibrations (See Attached Form)	N/A			
Daily Agenda/Goals Meeting	TW	0630	0700	BEGIN #21A STONE. RANDY WIET TO OBSERVE #57 STONE AND FABRIC PLACEMENT. DENSITY TESTING CONDUCTED
Equipment Check	ALL	0630	0700	
Equipment Loading/Depart	ALL	0630	0700	

Additional Comments: BACKFILL OF PITS W/ #21A STONE TO BEGIN TODAY. TRUCKS TO ARRIVE @ 0945 START @ PIT #3 AND THEN PIT #1 AFTER RANDY WIET INSPECTS STONE AND FABRIC PLACEMENT. DENSITY TESTS TO BE CONDUCTED ON #21A STONE TO ENSURE 95% OF PROCTOR. PROCTOR ATTACHED.

On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction Inspection	TW	0715	0745	
EZ Construction Inspection	TW	0715	0745	
Decontamination Zone Construction Inspection	TW	0715	0745	
Stockpile Staging Construction Inspection	TW	0715	0745	
Erosion Control Construction Inspection	TW	0715	0745	
Posting and Signage Set-up Inspection	TW	0715	0745	
Air Monitoring Zone Set-up/Inspection				
Equipment check and start-up	MIN	0715	0745	

Additional Comments: EZ AND FENCING AROUND EXCAVATION REPAIRED THROUGHOUT DAY DUE TO WIND DAMAGE

Backfill Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Backfill Location	Comments
EXCAVATOR	LMC	0920	1700	BACKFILL		
DOZER	LMC	0920	1700	241.85 TONS	PIT # 1	DOZER USED TO SPREAD UNIFORM 1.0' LIFTS IN EXCAVATION. SMOOTH DROM ON VIBRATE USED TO COMPACT. DENSITY TESTS INDICATE COMPACTIVE EFFORT EFFECTIVE
SMOOTH DROM	MWJ	0920	1700			
Summary of Backfill Activity Pit # 1			Total Backfill Daily	241.85 TONS	Total Backfill Project	559.57 TONS OF MATERIAL
Total #57 Stone	317.72 TONS	Total #21 A Stone	241.85 TONS			

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicators	Results	Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1		X	X						
2		X	X						
3		X	X						
Summary of Removal Actions			Removal ACTION COMPLETED. EXTENT OF PROPOSED EXCAVATION REACHED.						

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached as the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D	0630	HASP	HASP	TED W	0630	LEVEL D DURING BACKFILLING
Additional Comments:						

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
NONE	REQUIRED		
Additional Comments:			

Additional Observations

- RANDY WIRT OBSERVES #57 STONE AND MATERIAL PLACEMENT IN PIT #1 AND PIT #3. INDICATES SATISFACTION WITH VISUAL OBSERVATION OF BACKFILL. TW INDICATES TO RW THAT #57 STONE WAS DISPERSED IN EXC. IN A MANNER TO FILL FULL EXTENT OF EXCAVATION. (FABEC) MIPAFV 140 ML
- 21 A STONE BROUGHT INTO AREA. DOZER SPREAD TO 1.0' LIFTS (APPROX) AND COMPACTED BY VIBE SMOOTH DRUM ROLLER.
- NUCLEAR DENSITY GAUGE UTILIZED TO MEASURE DENSITY OF STONE AFTER COMPACTIVE EFFORT. (SEE ATTACHED DENSITY TESTING FORMS).

Daily Correspondence

Name/Agency	Time	Topic
JOSH JENKINS (MACTEC)	15:30	PROGRESS REPORT
LINDSEY MADDOX (MACTEC)	15:45	PROGRESS REPORT

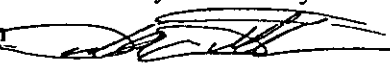
ACTIVITIES PLANNED FOR NEXT WORK DAY

- FINISH PIT #1 w/FINAL SMOOTHDRUM ROLLING AND DRESS UP OF EXCAVATION AREA.
- CONTINUE BACKFILL @ PIT #3 w/COMPACTIVE EFFORT TO 65'. SPEAK w/JOSH RE FINAL GRADE CONSTRUCTION @ PIT #3.
- HAVE RANDY WIRT RETURN FOR PROOFROLL OF BACKFILLED AREAS.
- FIX ALL FENCING/SIGNS/EXCLUSION TAPE ETC. UPON COMPLETION OF BACKFILL.
- DRESS WORKING AREAS TO BEFORE EXC. CONDITIONS (AS NEAR AS POSSIBLE).

JOB DISCREPANCIES

- NONE

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittmann 	PROJECT: DSCR OU-4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	

Continue
 Completed

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 12-1-04

TED WITTEMANN

POWERSHOT S200

PHOTOGRAPH NO.	DATE/TIME	PHOTOGRAPH DESCRIPTION
1. 100-0010	12-1-04 9:14	PIT #3 1ST LIFT #21A STONE
2. 11	9:14	VIEW OF PIT #3 1ST LIFT #21A STONE
3. 12	9:32	MIRAGY FABRIC IN PIT #1 PRIOR TO #21A STONE
4. 13	14:07	PIT #3 COMPACTIVE EFFORT @ PIT #3
5. 14	14:07	"
6. 15	14:08	PIT #2 PRIOR TO #21A STONE
7. 16	14:19	TW PERFORMING DENSITY TEST ON PIT #3 LIFT
8. 17	14:57	PIT #2 AFTER BACKFILL
9. 18	15:15	PIT #1 COMPACTIVE EFFORT
10. 19	15:18	PIT #1 COMPACTIVE EFFORT
11. 20	16:20	PIT #1 DOZER SPREADING #21A STONE
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**Upload to file at end of every day.



MACTEC Engineering and Consulting
1606 Ownby Lane
Richmond, VA 23220

JOB NO. _____ SHEET _____ OF _____

PHASE _____ TASK _____

JOB NAME _____

BY _____ DATE _____

CHECKED BY _____ DATE _____

		PIT #3 (#2: A STONE)				
TRUCK CO.	TRUCK #	LOAD WT.	TIME IN	TIME OUT	TICKET #	
AL FIELDS	40728 358	20.36	0750	0755	225947	
AL FIELDS	4380 1172	20.13	0750	0755	225950	
AL FIELDS	41380 1172	20.37	1040	1045	225999	
AL FIELDS	40728 358	20.44	1045	1050	225978	
AL FIELDS	40728 358	20.50	1340	1345	226006	
AL FIELDS	41330 1172	20.26	1140	1145	225993	
MJE	40816 6073	19.69	1645	1650	226039	
AL FIELDS	40728 358	20.21	1645	1650	226037	
		161.96				

		PIT #1 (#2: A STONE)				
TRUCK #	LOAD WT.	TIME IN	TIME OUT	TICKET #		
A.L. FIELDS	41380 1172	20.24	0920	0925	225972	
A.L. FIELDS	40728 358	20.66	0920	0925	225970	
A.L. FIELDS	40728 358	20.55	1130	1135	225988	
A.L. FIELDS	40728 358	20.57	1215	1220	225996	
A.L. FIELDS	40728 358	20.71	1440	1445	226022	
W.G. PARHAM	40603 735	19.89	1530	1535	226026	
KNIGHT ENT	4314 6006	19.22	1530	1535	226027	
MJE HAULING	40016 6073	19.71	1530	1535	226028	
AL FIELDS	41380 1172	20.32	1535	1540	226029	
AL FIELDS	40728 358	20.54	1540	1545	226030	
KNIGHT ENT	4314 6006	19.77	1650	1655	226038	
JORDAN	40682 259	19.67	1650	1655	226034	
		241.85				

		PIT #2 (#2: A STONE)				
TRUCK CO	TRUCK #	LOAD WT	TIME IN	TIME OUT	TICKET #	
AL FIELDS	41380 1172	20.37	1430	1435	226019	

12-1-04
PIT # 1
DENSITY TEST
LOCATIONS

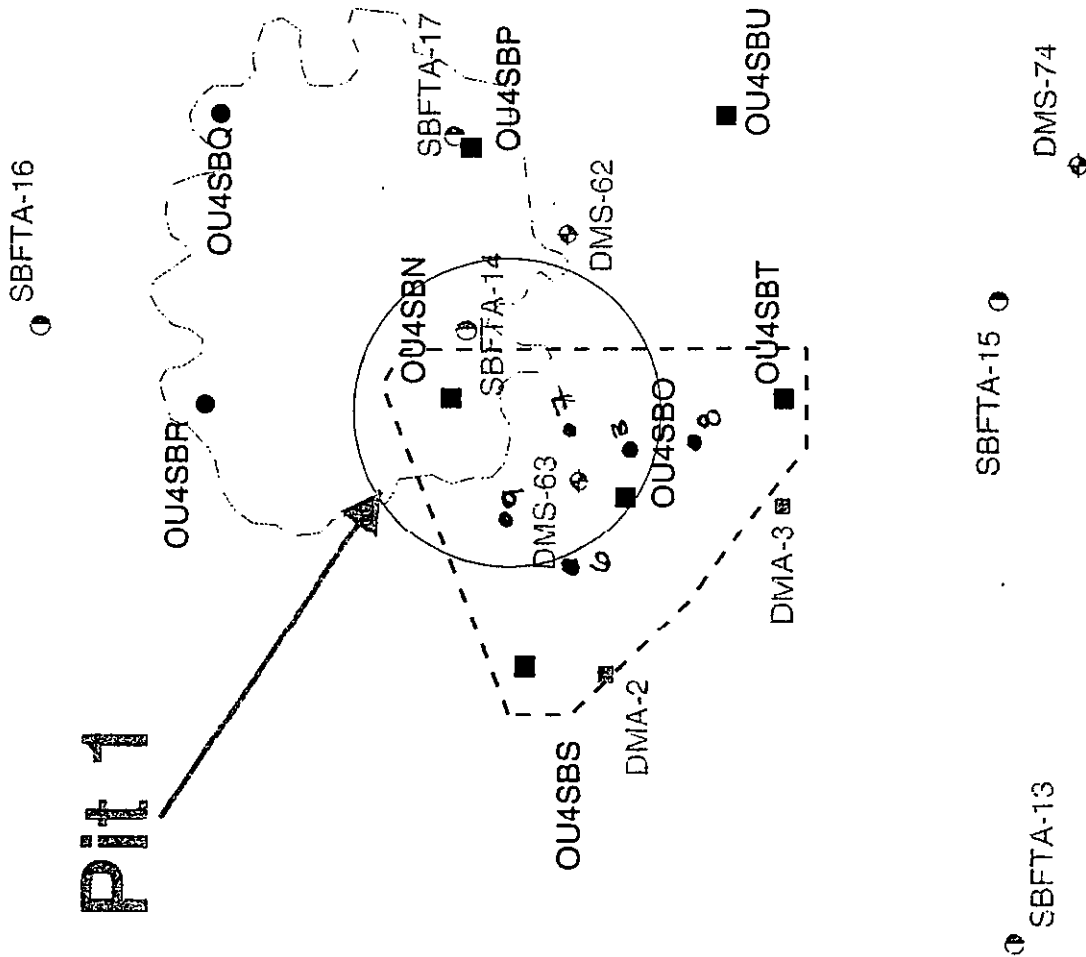
Pit 1



- LEGEND:**
- ⊕ MONITORING WELL LOCATION AND ID
 - SOIL SAMPLING LOCATION AND ID - EXCEED SRC
 - SOIL SAMPLING LOCATION AND ID (LAW, 1992)
 - SOIL SAMPLING LOCATION AND ID (ES, 1992)
 - ⊕ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊕ SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊕ ELECTROMAGNETIC SURVEY ANOMALY (MAGTEC, 2003)
 - 24 BUILDING IDENTIFICATION
 - ⊕ PROPOSED EXTENT OF SOIL REMOVAL

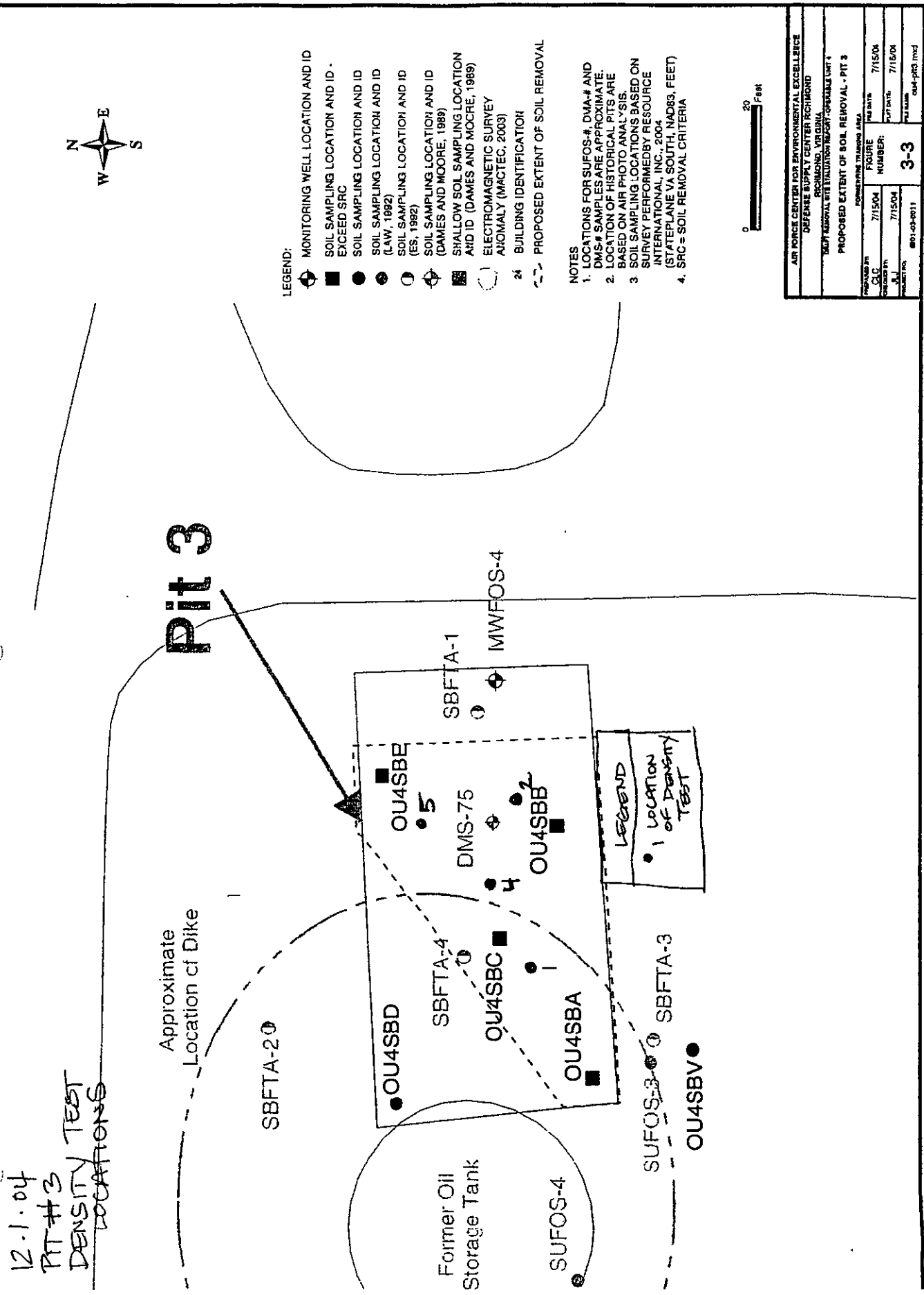
NOTES:

1. LOCATIONS FOR SUFOS-4, DMA-# AND DMS-# SAMPLES ARE APPROXIMATE.
2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004 (STATEPLANE VA SOUTH, NAD83, FEET)
4. SRC = SOIL REMOVAL CRITERIA



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA			
POTENTIAL SOURCE CONTROL INVESTIGATION REPORT - OPERATIONAL UNIT #			
PROPOSED EXTENT OF SOIL REMOVAL - PIT 1			
PROJECT NO.	FIGURE	DATE	REV
4891-03-0011	3-2	7/15/04	9/15/04
ISSUED BY	NUMBER	DATE	DATE
J.J.	3-2	7/15/04	9/15/04
PROJECT NO.	FIGURE	DATE	REV
4891-03-0011	3-2	7/15/04	9/15/04

044 DR1_Ext1_v2.mxd





MACTEC Engineering and Consulting, Inc.
1606 Ownby Lane
Richmond, VA 23220

REPORT OF FIELD DENSITY TESTS

JOB NO. 14301.02.001 SHEET _____ OF _____
PHASE 1901 TASK 1000
JOB NAME DESCR OUT SOURCE REMOVAL
BY TEC W DATE 12 1 04
CHECKED BY _____ DATE _____

MATERIAL TYPE : VULCANIZ A STONE
DRY DENSITY = 138.1 LBS/FT³
OPT MOISTURE = 6.8%

GRADE TYPE : TROY AR 3440
SERIAL # : 750 54
LAW/MACTEC # : 387

STANDARD RUN : PASS
D_s = 2607
m_s = 680

PIT # 3

DEPTH	MODE	WD	DD	m	%m	PROCTOR	OPT m%	PASS/FAIL
-3.0'	BS	139.1	132.4	6.8	4.9	138.1	6.8	PASS 95.8%
-3.0'	BS	140.7	134.1	6.6	4.6	138.1	6.8	PASS 97.1%
-2.0'	BS	141.1	133.7	7.4	5.2	138.1	6.8	PASS 96.5%
-2.0'	BS	140.0	132.6	7.4	5.3	138.1	6.8	PASS 96.0%

PIT # 1

DEPTH	MODE	WD	DD	m	%m	PROCTOR	OPT m%	PASS/FAIL
-4.0'	BS	142.2	136.1	6.0	4.2	138.1	6.8	PASS 98.6%
-3.0'	BS	142.6	137.0	5.6	3.9	138.1	6.8	PASS 99.2%
-2.0'	BS	140.7	134.0	6.7	4.6	138.1	6.8	PASS 97.0%
-1.0'	BS	141.2	135.4	5.8	4.1	138.1	6.8	PASS 95.9%
0.0'	BS	142.0	136.2	5.8	4.1	138.1	6.8	PASS 95.9%

Dale Plant
 11520 Iron bridge Rd.
 Chester, VA 23831
 Phone: 804 - 706 - 1212
 Fax: 804 - 706 - 1219



Vulcan Materials

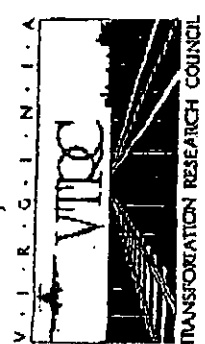
Fax

To: Ted or Randy Wirt	From: Tom Roberts
Fax: (804) 358-6646	Pages: 2
Phone:	Date: 11/30/2004
Re: DSC Richmond 21-A Procter	CC:

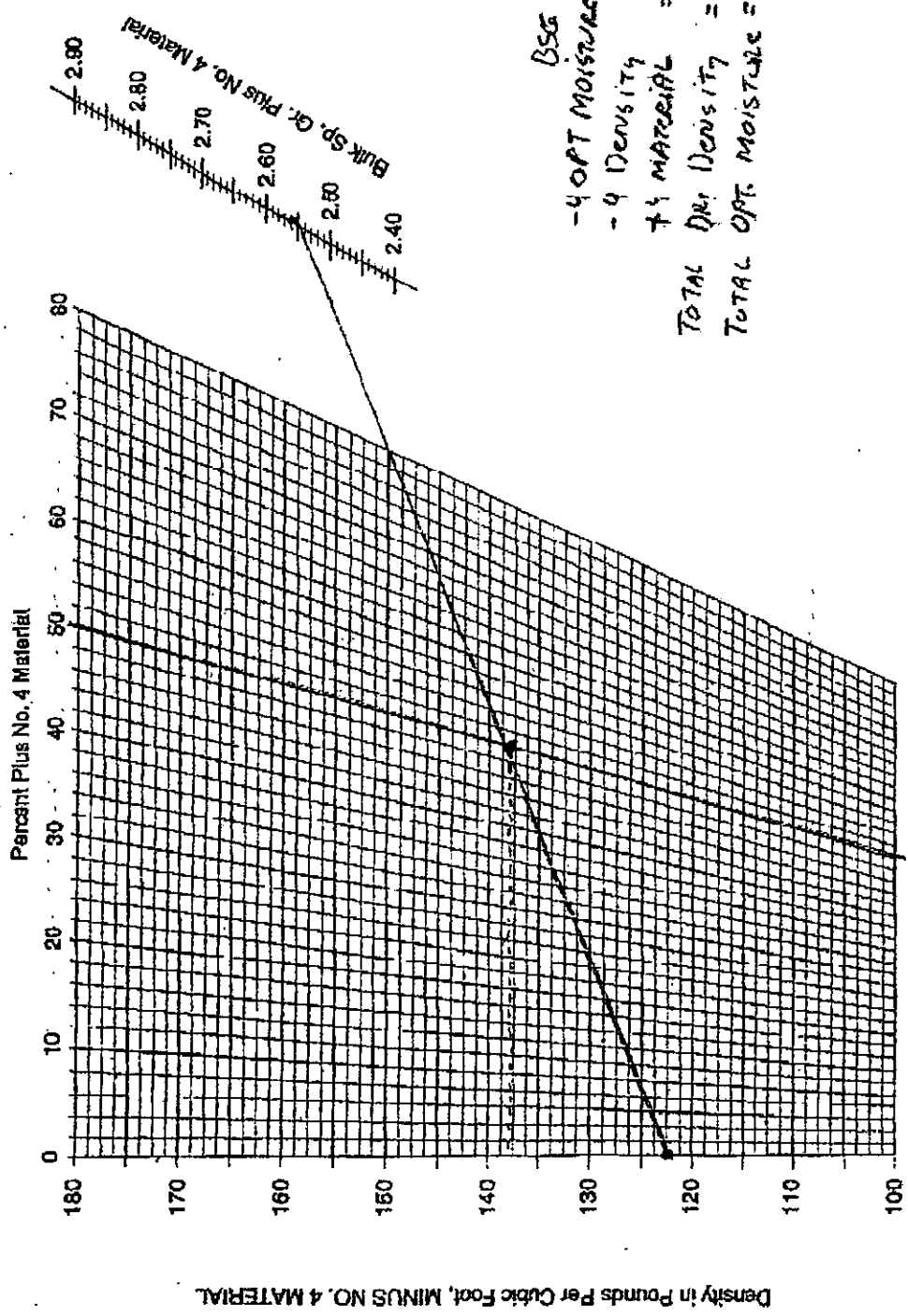
Urgent
 For Review
 Please Comment
 Please Reply
 Please Recycle

NOMOGRAPH FOR DETERMINING TOTAL DENSITIES OF SOILS

VTM-1



Revised 10/1/98



1-3

DAILY SAFETY LOG	
Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>12-1-04</u>
City, State: <u>Richmond, Virginia</u>	Weather: <u>PARTLY SUNNY</u>
Client Name: <u>DLA</u>	Temperature: (am) <u>55°F</u> (pm) _____
SECTION I. DAILY TAILGATE SAFETY MEETING	
Meeting Lead by: <u>TED WITTEMAN</u>	Tailgate Topic: <u>WET CONDITIONS</u>
Time of Meeting: <u>0630</u> (am) (pm)	Type of Project: <u>OU4 SOURCE REMOVAL</u>
Contaminant(s): <u>CNOC'S</u>	
<i>(Describe in Detail Specific Items Discussed Under the Following Categories)</i>	
1. Protective Clothing/Equipment: <u>LEVEL D, HARDHAT, STEEL TOE BOOTS, EYE AND EAR PROTECTION</u>	
2. Chemical Hazards: <u>CNOC'S (LIMITED DUE TO EXCAVATION BEING BACKFILLED TO -4.0' BGS w/ S7# STONE)</u>	
3. Physical Hazards: <u>HEAVY EQUIPMENT, TRUCK TRAFFIC, SUBS/TRIPS/FAILS OVEREXERTION, OPEN EXCAVATION</u>	
4. Emergency Procedures: <u>CALL 911 IF NECESSARY, APPLY 1ST AID CPR IF QUALIFIED OR CONTACT SHSO TO PERFORM CALL SHSO, TRANSPORT TO HOSPITAL IF NECESSARY, NOTIFY CLIENT</u>	
5. Special Equipment/Other: <u>TROXLER 240 NUKE DENSITY GAUGE</u>	
6. Tailgate Safety Topic: <u>WET CONDITIONS</u>	
ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.	
Printed Name / Signature	Printed Name / Signature
<u>TED WITTEMAN</u> / <u>[Signature]</u>	/
<u>MAT WERTMAN</u> / <u>[Signature]</u>	/
<u>LARRY M... [Signature]</u>	/
/	/
/	/
/	/
SECTION II. COMMENTS/CONCERNS	SECTION III. SAFE BEHAVIOR
	<input checked="" type="checkbox"/> Exposure monitoring being conducted per HASP? <input checked="" type="checkbox"/> Decontamination procedures being followed? <input checked="" type="checkbox"/> Housekeeping tasks being conducted daily? <input checked="" type="checkbox"/> PPE being worn as specified in the HSP? <input checked="" type="checkbox"/> safety glasses or goggles <input checked="" type="checkbox"/> hard hats <input checked="" type="checkbox"/> gloves (chemical or work) <input checked="" type="checkbox"/> respirator & cartridges <u>(NOT NEEDED)</u> <input checked="" type="checkbox"/> tyvek or PPE suits <u>(NOT NEEDED)</u> <input checked="" type="checkbox"/> Lifting - Associates maintain good work habits <input checked="" type="checkbox"/> Moving of loads - Maintenance of good work habits <input checked="" type="checkbox"/> Daily walk-around inspection of heavy equipment? <input checked="" type="checkbox"/> Check for clear work area around heavy equipment? <input checked="" type="checkbox"/> Look before backing when using heavy equipment? <input checked="" type="checkbox"/> Unobstructed vision maintained by operators? <input checked="" type="checkbox"/> Maintain traction - no slipping or skidding equipment? <input checked="" type="checkbox"/> Traverse slopes vertically when using equipment?
Project Safety Officer: <u>[Signature]</u>	Date: <u>12-1-04</u>

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, Suite 100
 Kennesaw, GA 30144

Job No.6301-03-0011 Task 1901-1000

Daily Job Report

Date: 12-2-04
 Site Address: DSCR, OU4

Client: AFCEE
 City: Richmond

Weather: PARTLY CLOUDY/SUNNY
 State: VA Zip: 23237 40°-55°

MACTEC PERSONNEL							
Name	Title	Time				Total	
		Started	Arrived	Departed	Completed	S.T.	O.T.
Ted Wittemann (TW)	Site Manager	0600	0630	1830	1900		
Lamar McNabb (LM)	Operator	0630	0630	1800	1800		
Matt Wortman (MW)	Operator	0630	0630	1800	1800		

Subcontractors/Visitors		
Name	Title	Company
VARIOUS	TRUCK DRIVERS/DELIVERY	VULCAN SUBS (A.M. SEE ATTACHED DELIVERY FORMS)

VEHICLES						
	Qty.	Hours Start	Hours End	Mileage	Maintenance Performed	Operators
FORD F150	1	SEE MILEAGE TRUCK LOG		TRUCK LOG	TRUCK 541	TEDW
FORD F250	1	SEE MILEAGE TRUCK LOG				LMC/MW
EXCAVATOR	1	}				
DOZER	1					
LOADER	1					
SMOOTH DRUM	1					

Daily Activities

Off Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
Safety Meeting (Sec Attached Form)	TW	0630	0645	
Calibrations (Sec Attached Form)	N/A			
Daily Agenda/Goals Meeting	TW	0630	0645	COMPLETE BACKFILLING, DRESS UP WORK AREAS, REMOVE EXC. FENCE, SAMPLE IF NEC.
Equipment Check	ALL	0630	0645	
Equipment Loading/Depart	ALL	0645	0700	

Additional Comments: FINAL DAY OF BACKFILL. RANDY WIET SCHEDULED TO PERFORM PROFFROLL UPON COMPLETION @ BOTH PIT # 1, 2, AND 3.

On Site Activity A.M.

Item	Conducted By	Time Started	Time End	Comments
CRZ Construction/Inspection	TW	0700	0730	
EZ Construction/Inspection	TW	0700	0730	
Decontamination Zone Construction/Inspection	TW	0700	0730	
Stockpile Staging Construction/Inspection	TW	0700	0730	
Erosion Control Construction/Inspection	TW	0700	0730	
Posting and Signage Set-up/Inspection	TW	0700	0730	
Air Monitoring Zone Set-up/Inspection				
Equipment check and start-up				

Additional Comments: CRZ, EZ, DECON ZONE, SIGNS TO BE EITHER REMOVED OR MODIFIED @ END OF BACKFILLING EFFORTS. ORANGE BARRICADE FENCE WILL REMAIN AROUND STOCKPILES, SIGNS WILL BE POSTED ON FENCE. EZ WILL BE STRUCTURED AROUND SOIL STOCKPILES.

Backfill Activity Pit # 1

Equipment	Operator	Start Time	Stop Time	Quantity Removed	Backfill Location	Comments
EXCAVATOR	Lmc	0730	0800	SCRAPE		DRESS UP OF PIT #1 AREA
DOZER	Lmc/mw	0730	0800			AND FINAL ROLL OF
SMOOTH DRUM	Lmc/mw	0730	0800			MATERIAL
Summary of Backfill Activity Pit # 1			Total Backfill Daily		0	Total Backfill Project
Total #57 Stone		Total #21 A Stone				

Daily Activities (Cont.)

Removal Action

Pit #	Screening Indicate to		Proposed excavation limits reached		Volume Removed to Present	Notification to DSCR personnel	Begin Confirmation Sampling		Comments
	Continue	Complete	Yes	No			Yes	No	
1		X	X						/
2		X	X						
3		X	X						
Summary of Removal Actions			REMOVAL COMPLETE. BACKFILL IN PROGRESS (NEAR COMPLETION)						

Air Monitoring/Health and Safety

Air monitoring was conducted according to the Addendum to Health and Safety Plan dated November 11, 2004. Attached is the daily air monitoring results from air monitoring activities conducted throughout the day. Action taken based on these results is indicated below.

Level of PPE at beginning of field activities.	Time of Action	Basis for Action	Type of Action Implemented	Implementing Personnel	Time of Action Completion	Comments
LEVEL D	0630	HASP	HASP	TW	0630	LEVEL D DURING BACKFILLING.

Additional Comments: LEVEL D MODIFIED DURING SAMPLING EFFORTS. FULL TYVEK FOR SAMPLING

Decontamination Activity (when required)

Equipment	Personnel	Time	Comments
NONE REQUIRED			
Additional Comments:			

Additional Observations

- BACKFILL COMPLETED @ PIT # 3 @ 1400. CONSTRUCTION OF TEMP BEEM AROUND PIT # 3 FROM OLD BEEM MATERIAL (RED CLAY) TO PREVENT STORM H₂O FROM PONDING ON OR AROUND EXCAVATION BACKFILL MATERIAL.
- 2 SAMPLES COLLECTED FROM STOCKPILE A (SOUTH END) COMPOSITE FOR DISPOSAL/TREATMENT FACILITY. SHIPPED FED-EX 12-2-04.
- RANDY WIRT OBSERVES PROOFROLL OF PIT # 1 AND # 3 @ 1600 HRS.

Daily Correspondence		
Name/ Agency	Time	Topic
JOSEPH JENKINS	11:15	PIT #3 FINAL BACKFILL / GRADING PLAN
LINDSEY MADDOX	12:30	SAMPLING OF STOCKPILE FOR TREATMENT / DISPOSAL ANALYSIS

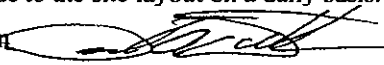
ACTIVITIES PLANNED FOR NEXT WORK DAY

• NONE

JOB DISCREPANCIES

• NONE

*See attached site drawings and other attachments for locations of CRZ, EZ, Decontamination Zones, Sampling locations, overall site layout and modifications made to the site layout on a daily basis.

Prepared by	Ted Wittemann 	PROJECT: DSCR OU-4 Principal Threat Source Material Removal
Reviewed by		
Organization	MACTEC	<input type="checkbox"/> Continue <input checked="" type="checkbox"/> Completed

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 12-2-04

TED WITTEMAN

POWERSHOT S200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 100-0001	12-2-04 0801	PIT #3 NEARING COMPLETION
2. 2	0816	COMPACTIVE EFFORT @ PIT #3
3. 3	1541	WATER TRUCK USED FOR PROOFROLL OF PIT #1
4. 4	1606	STOCKPILES FENCED @ EOB 12-2-04
5. 5	1606	EQUIPMENT BEING FUELED 12-2-04
6. 6	1606	PIT #3 COMPLETED
7. 7	1649	RANDY WIRT PROOFROLL PIT #3
8. 8	1650	PIT #3 SHOWING BERM CONST. AROUND FILL
9. 9	1650	PIT #3 SHOWING BERM AROUND SW SIDE OF FILL
10. 10	1650	RANDY WIRT PROOFROLLING PIT #3
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MACTEC Engineering and Consulting, Inc.
 1606 Ownby Lane
 Richmond, VA 23220

HAULING RECORD

JOB NO. _____ SHEET _____ OF _____
 PHASE 1071 TASK 1070
 JOB NAME DSCR OUT SOURCE REMOVAL
 BY TEC W. DATE 12-7-04
 CHECKED BY _____ DATE _____

PIT # 3 (#21A STONE)

TRUCK CO	TRUCK #	LOAD WT	TIME IN	TIME OUT	TICKET #
MANNING	40004	19.37	0755	0800	226042
KNIGHT ENT	41314 6666	19.67	0755	0800	226044
JORDAN	40682 259	19.76	0800	0805	226046
MANNING	40004	19.20	0925	0930	226072
JORDAN	40682 259	19.69	0925	0930	226071
KNIGHT ENT	41314 6666	19.51	0925	0930	226071
MANNING	40004	19.18	1045	1050	226093
MANNING	40004	18.76	1140	1145	226126
MANNING	40004	18.91	1300	1305	226148
		174			

DAILY SAFETY LOG

Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>12-2-04</u>
City, State: <u>Richmond, Virginia</u>	Weather: <u>PARTLY CLOUDY/SUNNY</u>
Client Name: <u>DLA</u>	Temperature: (am) <u>40°F</u> (pm) <u>55°F</u>

SECTION I: DAILY TAILGATE SAFETY MEETING

Meeting Lead by: <u>TED WITTEMAN</u>	Tailgate Topic: <u>KEEPING FOCUSED</u>
Time of Meeting: <u>0630</u> (am)(pm)	Type of Project: <u>OU4 SOURCE REMOVAL</u>
Contaminant(s): <u>CNDC'S</u>	

(Describe in Detail Specific Items Discussed Under the Following Categories)

1. Protective Clothing/Equipment: LEVEL D, HARDHAT, STEEL TOE BOOTS, EYE AND EAR PROTECTION
2. Chemical Hazards: WOODS (LIMITED DUE TO EXCAVATION BEING 80% BACKFILLED)
3. Physical Hazards: HEAVY EQUIPMENT, TRUCK TRAFFIC, SLIPS/TRIPS/FALLS, OVEREXERTION
4. Emergency Procedures: CALL 911 IF NECESSARY APPLY 1ST AID OR IF QUALIFIED OR CONTACT SHSO TO PERFORM, CALL SHSO, TRANSPORT TO HOSPITAL IF NECESSARY, NOTIFY CLIENT
5. Special Equipment/Other: TRUCK 3440 NUCLEAR DENSITY GUAGE
6. Tailgate Safety Topic: STAYING FOCUSED @ END OF PROJECT.

ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.

Printed Name	Signature	Printed Name	Signature
TED WITTEMAN	<i>[Signature]</i>		
M.E. WITTEMAN	<i>[Signature]</i>		
L.A. MANNING	<i>[Signature]</i>		

SECTION II: COMMENTS/CONCERNS

SECTION III: SAFE BEHAVIOR

Blank lines for handwritten comments and concerns.

- Exposure monitoring being conducted per HASP?
- Decontamination procedures being followed?
- Housekeeping tasks being conducted daily?
- PPE being worn as specified in the HSP?
 - safety glasses or goggles
 - hard hats
 - gloves (chemical or work)
 - respirator & cartridges (NOT NEEDED)
 - tyvek or PPE suits (WORN DURING SAMPLING)
- Lifting - Associates maintain good work habits
- Moving of loads - Maintenance of good work habits
- Daily walk-around inspection of heavy equipment?
- Check for clear work area around heavy equipment?
- Look before backing when using heavy equipment?
- Unobstructed vision maintained by operators?
- Maintain traction - no slipping or skidding equipment?
- Traverse slopes vertically when using equipment?

Project Safety Officer: <i>[Signature]</i>	Date: <u>12-2-04</u>
--	----------------------



MACTEC

MACTEC Engineering and Consulting
1606 Ownby Lane
Richmond, VA 23220

DAILY FIELD REPORT

JOB NO. 6301-03-0011 SHEET 1 OF

PHASE _____ TASK 1901.1000

JOB NAME DECL OIL SOURCE REMOVAL

BY TED WITTEMAN DATE 01.01.05

CHECKED BY _____ DATE _____

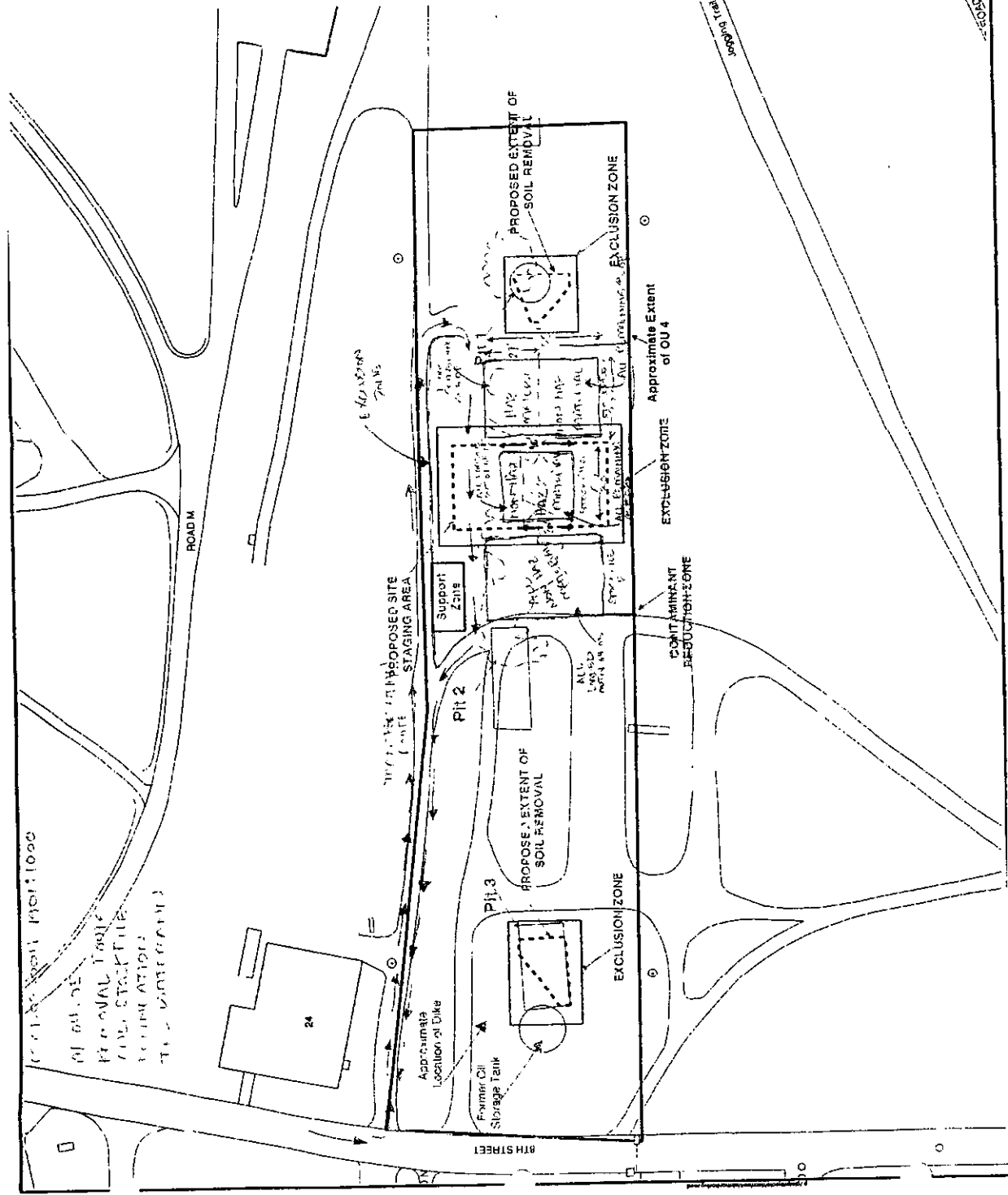
- 0600 DEPART FOR DECL FIELD OFFICE
- 0630 ARRIVE @ DECL FIELD OFFICE. MEET W/ ANDY ADAMS (ALL POINT LOGISTICS), MATT WOOTMAN (MACTEC) AND LARAK MONARD. CONDUCT DAILY SAFETY MEETING (SEE ATTACHED DAILY SAFETY LOG). DISCUSS AGENDA AND LOGISTICS.
- 0645 DEPART FOR DECL TO OBTAIN BASE REQUIREMENTS AND MEET REMOVAL SUBCONTRACT DRIVERS (US BULK, REECE, ETC.). BEGIN COORDINATING HAULERS TO GET ON BASE.
- 0715 LEAD GROUP OF DRIVERS TO OIL REMOVAL STOCKPILE AREA. COORDINATE W/ MATT W. AND LARAK MONARD WHERE WE SHOULD START. BEGIN W/ STOCKPILE B (NON HAZ FROM PIT #3) OR NEAREST MOST STOCKPILE. MOVE AND LOAD UNCOVERED STOCKPILES, DIRECT TRAFFIC, AND ANDY PREPARES MANIFESTS.
- 0730 1ST NON HAZ TRUCK LOADED. ATTEMPT TO CONTACT S. EDVAUGH FOR MANIFEST SIGNING. S.E. CONTACTED @ 0830. HE ARRIVES AND SIGNS MANIFESTS FOR (4) NON HAZ TRUCKS. HE INDICATES HE WOULD LIKE TO WEIGH LOADED VEHICLES FOR DOCUMENTATION OF LOADED WT. FOR EACH HAZ LOADED VEHICLE AND ONCE FOR EACH NON HAZ. WE LOCATE SCALES AND DIRECT LOADED VEHICLES TO SCALES FOR WEIGHING. S.E. AND A.A. STAY @ SCALES TO WEIGH AND DOCUMENT LOADS. AND SE SIGNS MANIFESTS AFTER COMPLET SCALE.
- 0830 I INDICATE W/ MARKING PAINT TO EACH STOCKPILE WHAT MATERIAL HAS BEEN CHNG. HAZARDOUS AND WHAT IS NON HAZ (SEE ATTACHED DRAWING). CONTINUE LOADING TRUCKS W/ MATERIAL. LOR MOVES B/W STOCKPILES TO ACCOMMODATE TRUCKS. I LEAD TRUCKS TO SCALES AND A.A. AND SE. FILE AND SIGN MANIFESTS.
- 1200 LAST HAZ MATERIAL TRUCK IS LOADED. LAND BAN DOCUMENTS PROVIDED TO 1ST 5 HAZ TRUCKS LEAVING DECL. CONTINUE TO LOAD NON HAZ MATERIAL FROM STOCKPILE B (PIT 3 MATERIAL).
- 1215 SE DEPARTS FOR LUNCH. TRUCKS CONTINUE TO BE LOADED FROM STOCKPILE C.
- 1430 SE ARRIVES AND WE DISCUSS REMEDIATION OF BEEM @ PIT 3 EXCAVATION. CALL JOSH JENKINS FOR DISCUSSION. WILL DISCUSS DIRECTLY W/ STEVE TO DETERMINE WHAT SHOULD BE DONE.
- 1700 LAST TRUCK LOADED FOR DAY. STOCKPILE B IS GONE AND FRONT THIRD OF STOCKPILE A IS GONE. STOCKPILE C IS 80% GONE. ~ 2 LOADS OF HAZ MATERIAL (40 TONS) AND 8 LOADS OF NON HAZ (160 TONS) MANIFESTS PRODUCED. 01-04-05 INCLUDE NON HAZ (BFI) 343551 - 343578 (28 LOADS) HAZ (EQ) 001 - 011 (11 LOADS). DEPART SITE
- 1745 DONE

TED WITTEMAN
PROJECT GEOLOGIST



- LEGEND:
- AIR MONITORING STATION
 - ⊖ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION

NOTES:
 1. ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS.
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA		PHIL REMOVAL ACTION WORKPLAN - ORDNANCE UNIT 1	
PROPOSED SOIL STAGING PILE AND PERIMETER - AIR MONITORING LOCATIONS		FIGURE NUMBER:	9/20/04
PREPARED BY:	CLC	FIGURE NUMBER:	9/20/04
CHECKED BY:	CW	FIGURE NUMBER:	9/20/04
PROJECT NO:	8307-02-0011	FILE NAME:	airmonitairing.dwg
		H-2	

---SOLD

DAILY SAFETY LOG			
Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03 0011</u>		
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>11/05</u>		
City, State: <u>Richmond, Virginia</u>	Weather: <u>Sunny</u>		
Client Name: <u>DLA</u>	Temperature: (am) <u>64°</u> (pm) <u>71°</u>		
SECTION I: DAILY TAILGATE SAFETY MEETING			
Meeting Lead by: <u>TED WATKINSON</u>	Tailgate Topic: <u>HEAVY EQUIPMENT</u>		
Time of Meeting: <u>0630</u> (am) (pm)	Type of Project: <u>OU4 SOURCE REMOVAL</u>		
Contaminant(s): <u>NOCS</u>			
<i>(Describe in Detail Specific Items Discussed Under the Following Categories)</i>			
1. Protective Clothing/Equipment: <u>LEISURE MOTIFIED, TYVEK IN EXCLUSION ZONES, HARD HAT, GLOVES, ETC.</u>			
2. Chemical Hazards: <u>NOCS</u>			
3. Physical Hazards: <u>HEAVY EQUIPMENT, TRUCK TRAFFIC, SLIP/TRIP/FALLS, OVEREXERTION, ETC.</u>			
4. Emergency Procedures: <u>CALL 911 IF NECESSARY, APPLY 1ST AID/CPR IF NECESSARY OR FIND CERTIFIED PERSONNEL (DON'T GUESS) AND CLIENT IF NECESSARY. TRANSPORT TO HOSPITAL IF NECESSARY.</u>			
5. Special Equipment/Other: <u>LIONS</u>			
6. Tailgate Safety Topic: <u>HEAVY EQUIPMENT OPERATION, BLIND SPOTS, ETC.</u>			
ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.			
Printed Name	Signature	Printed Name	Signature
<u>LA...</u>	<u>[Signature]</u>		
<u>Matt...</u>	<u>[Signature]</u>		
<u>Andy Adams</u>	<u>[Signature]</u>		
SECTION II: COMMENTS/CONCERNS		SECTION III: SAFE BEHAVIOR	
		<input checked="" type="checkbox"/> Exposure monitoring being conducted per HASP?	
		<input checked="" type="checkbox"/> Decontamination procedures being followed?	
		<input checked="" type="checkbox"/> Housekeeping tasks being conducted daily?	
		<input checked="" type="checkbox"/> PPE being worn as specified in the HSP?	
		<input checked="" type="checkbox"/> safety glasses or goggles	
		<input checked="" type="checkbox"/> hard hats	
		<input checked="" type="checkbox"/> gloves (chemical or work)	
		<input checked="" type="checkbox"/> respirator & cartridges	
		<input checked="" type="checkbox"/> tyvek or PPE suits	
		<input checked="" type="checkbox"/> Lifting - Associates maintain good work habits	
		<input checked="" type="checkbox"/> Moving of loads -Maintenance of good work habits	
		<input checked="" type="checkbox"/> Daily walk-around inspection of heavy equipment?	
		<input checked="" type="checkbox"/> Check for clear work area around heavy equipment?	
		<input checked="" type="checkbox"/> Look before backing when using heavy equipment?	
		<input checked="" type="checkbox"/> Unobstructed vision maintained by operators?	
		<input checked="" type="checkbox"/> Maintain traction - no slipping or skidding equipment?	
		<input checked="" type="checkbox"/> Traverse slopes vertically when using equipment?	
Project Safety Officer: <u>[Signature]</u>		Date: <u>01.04.05</u>	

DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 01.04.05DSCR
TED WITTEMANN

POWERSHOT E200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 100 - 0001	01.04.05 / 0809	LOADING OF HAZ MATERIAL @ STOCKPILE C (FRONT)
2. 0002	0815	HAZ TRUCK BEING LOADED @ FRONT OF STOCKPILE C
3. 0003	0940	PAINT ON SAND BAG DELIMITING HAZ/NON HAZ MAT. STOCKPILE C
4. 0004	0941	PAINT ON SAND BAG @ STOCKPILE A - HOLDING HAZ/NON HAZ MAT
5. 0005	0941	CONTINUING TO LOAD STOCKPILE C HAZ MATERIAL
6. 0006	1010	WEIGHING HAZ TRUCKS @ ON-SITE SCALE
7. 0007	1106	NON HAZ MATERIAL @ STOCKPILE B OFF LOADED
8. 0008	1107	CLOSE TO ALL HAZ MATERIAL TO LOAD OUT @ STOCKPILE C
9. 0009	1108	1/2 OF STOCKPILE C LOADED OUT / (1) LOAD REMAINS FOR
10. 0010	1108	LAST HAZ TRUCK ON 01.04.05 @ STOCKPILE C
11. 0011	1236	NON HAZ LOAD OUT @ STOCKPILE B
12. 0012	1404	CLOSE TO END OF NON HAZ LOADOUT @ STOCKPILE B
13. 0013	1515	STOCKPILE B LOADED OUT. ALL NON HAZ
14. 0014	1533	NON HAZ @ STOCKPILE A (FRONT 1/3)
15. 0015	1540	NON HAZ @ STOCKPILE A (CONTINUED)
16. 0016	1608	SAME
17. 0017	1701	STOCKPILE C @ EOB
18. 0018	1701	STOCKPILE A @ EOB
19.		
20.		
21.		
22.		
23.		
24.		
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26.		
27.		
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29.		
30.		
31.		
32.		
33.		

**Upload to file at end of every day.

HAZ MANIFESTS

01.04.05

MANIFEST NUMBER	Company	Empty	Loaded	
1) 001	(AR)	34,000	77,060	→ 21.53
2) 002	(AR)	33,500	76,820	→ 21.66
3) 003	(AR)	33,000	80,840	→ 23.92 ^{79,520} ₇ → 23.26 Off load
4) 003	(AR)	35,000	78,860	→ 21.93
5) 004	(AR)	34,500	78,600	→ 22.05
6) 005	(AR)	31,500	77,520	→ 23.01
7) 007	(US)	33,020	79,020	→ 23.50
8) 008	(US)	31,700	77,860	→ 23.38
9) 009	(US)	31,500	81,080	→ 24.79
010	(US)	33,800	79,620	→ 22.90
011			79,340	
011	(US)	33,500	81,140	→ 22.92 Off load

250.11

MACTEC - OUL-4 MANIFESTS 01/04/05

	Start #	End #	Total
Non-Haz -	343551	343578	28 Loads

HAZ -	001	001 011	11 Loads
-------	-----	--------------------	----------



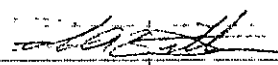
MACTEC Engineering and Consulting
1606 Ownby Lane
Richmond, VA 23220

DAILY FIELD REPORT

JOB NO. 6301-03-0011 SHEET 1 OF 1PHASE _____ TASK 1901.1000JOB NAME OU4 SOURCE REMOVALBY TED WITTMANN DATE 01.05.05

CHECKED BY _____ DATE _____

- 0600 DEPART FOR DSCR FIELD OFFICE
0630 ARRIVE @ DSCR FIELD OFFICE, MEET W/ ANDY ADAMS (ALL POINTS USINESS),
MATT WORTMAN (MACTEC) AND LAMAR MCNABB (MACTEC). CONDUCT
DAILY SAFETY MEETING
- 0645 DEPART FOR DSCR TP MEET REMOVAL SUB CONTRACT DRIVERS, COORDINATE
W/ HAZ TRUCK DRIVERS TO GET LINED UP FOR LOAD OUT.
- 0730 BEGIN LOADING HAZ MATERIAL FROM STOCKPILE C, LAST REMAINING
LOAD. MOVE TO HAZ MATERIAL @ STOCKPILE A. CONTINUE TO LOAD
TRUCKS UNTIL HAZ MATERIAL IS GONE LAMAR MCNABB OPERATING.
EDUP MATT COORDINATES TO GET PROPER TRUCKS LOADED ANDY ADAMS
@ WEIGH STATION W/ STEVE EDUAVICH AND MYSELF (SE ARRIVES @ 0815)
- 0930 LAST HAZ TRUCK LOADED @ 0930. BEGIN LOADING NON HAZ. FROM STOCKPILE
C. LAST LOAD DONE @ 11:30
- 11:30 BEGIN CLEANUP OF SITE. TW + AA MEET W/ SE IN OFFICE TO ORGANIZE
MANIFEST DOCUMENTS. ALL COPIES MADE. SE GETS GENERATOR
COPIES OF HAZ AND NON HAZ. AA COORDINATES ALL PAPERWORK.
- 1330 SE, TW, AND MW MEET @ PIT # EXCAVATION AREA. WE DISCUSS FINAL
DRESS UP OF AREA. MW AND LM TO PERFORM DRESSING UP OF PIT #2 AREA
ON 01.06.05. MW, LM, AND TW REMOVE REMAINING FENCE AND DEBRIS
FROM OU4 WORK AREA.
- 1530 DONE. ALL MATERIAL LOADED OUT AND MANIFESTS COMPLETE. COPIES
RETAINED.


TED WITTMANN
PROJECT GEOLOGIST



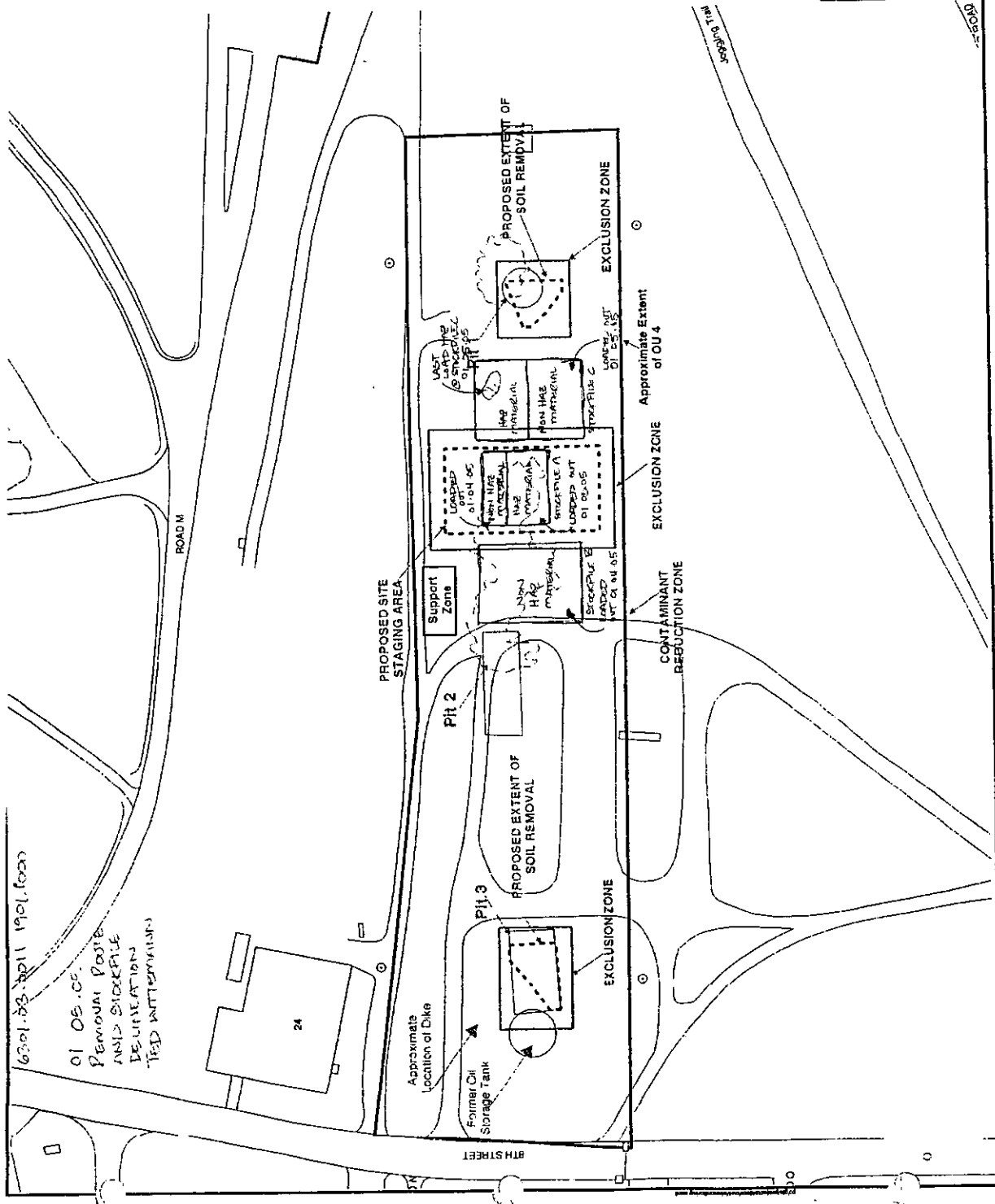
- LEGEND:
- ⊙ AIR MONITORING STATION
 - ⊖ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION

NOTES:

1. ALL LOCATIONS ARE APPROXIMATE AND MAY CHANGE BASED ON FIELD OBSERVATIONS AND SITE CONDITIONS.
2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
3. LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004, (STATEPLANE VA SOUTH, NAD83, FEET)



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE DEFENSE SUPPLY CENTER RICHMOND RICHMOND, VIRGINIA	
HAZARDOUS WASTE REMOVAL/RESTORATION UNIT 4 AIR MONITORING LOCATIONS	
PREPARED BY C.C. GUY	FIGURE NUMBER H-2
DATE 9/20/04	FILE DATE 9/20/04
PROJECT NO. 6301-03-0011	FILE NAME airmonitoring.rwd



DSCR OU4 THREAT SOURCE REMOVAL ACTION

6301-03-0011-1901-1000

DAILY PHOTOGRAPH DOCUMENTATION FORM

SITE LOCATION: OU4 SOURCE REMOVAL DATE: 01 05 05

TED WITTEMANN

POWERSHOT S200

PHOTOGRAPH NO.	DATE/ TIME	PHOTOGRAPH DESCRIPTION
1. 100 - 0013	01.05.2005 / 0914	LOADOUT OF NON HAZ @ STOCKPILE C
2. 0010	0915	LOADOUT OF NON HAZ @ STOCKPILE C CONT.
3. 0011	0915	STOCKPILES A AND B REMOVED
4. 0017	1122	STOCKPILES A, B (REMOVED) AND C LOAD OUT.
5. 0013	1122	LAST LOAD NON HAZ @ STOCKPILE C LOADED OUT.
6. 0024	1145	MEETING W/SE @ PIT #3 AREA TO DISCUSS WORK
7. 0025	1145	PHOTO SHOWING PIT #3 AREA B4 ALTERATIONS
8.		
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32.		
33.		

**Upload to file at end of every day.

DAILY SAFETY LOG			
Project Name: <u>DSCR OU4 Soil Excavation</u>	Project No.: <u>6301.03.0011</u>		
Street Address: <u>8000 Jefferson Davis Highway</u>	Date: <u>1.5.05</u>		
City, State: <u>Richmond, Virginia</u>	Weather: <u>M. CLOUDY</u>		
Client Name: <u>DLA</u>	Temperature: (am) <u>58°F</u> / (pm) <u>60°F</u>		
SECTION I: DAILY TAILGATE SAFETY MEETING			
Meeting Lead by: <u>TED WITTMANN</u>		Tailgate Topic: <u>TRUCK TRAFFIC</u>	
Time of Meeting: <u>12:30</u> (am)(pm)		Type of Project: <u>OU4 SOURCE REMEDIATION</u>	
Contaminant(s): <u>AVOC'S</u>			
<i>(Describe in Detail Specific Items Discussed Under the Following Categories)</i>			
1. Protective Clothing/Equipment: <u>TYVEK, HARDHAT, STEELTOES, ETC. WHEN WORKING IN EXCLUSION ZONES</u>			
2. Chemical Hazards: <u>AVOC'S</u>			
3. Physical Hazards: <u>TRUCK TRAFFIC, OVEREXHAUSTION, SLIP/TRIP/FALL, HEAVY EQUIP</u>			
4. Emergency Procedures: <u>CALL 911 IF NEEDED / CONTACT SHERO ATTEL. 12345 (PL OF. FIND CERTIFIED PERSONNEL WHO CAN IF NECESSARY, TELEPHONE NO. HOSPITAL IF NECESSARY. CONTACT USE CLIENT IF NEEDED)</u>			
5. Special Equipment/Other: <u>NONE</u>			
6. Tailgate Safety Topic: <u>TRUCK TRAFFIC</u>			
ALL ATTENDEES ARE REQUIRED TO SIGN THIS FORM ACKNOWLEDGING THEY HAVE BEEN INFORMED OF THE ABOVE ITEMS.			
Printed Name	Signature	Printed Name	Signature
<u>LAMAR M. S. 451</u>	<u>[Signature]</u>		
<u>Andy Adams</u>	<u>[Signature]</u>		
<u>Mike Williams</u>	<u>[Signature]</u>		
/		/	
/		/	
/		/	
/		/	
SECTION II: COMMENTS/CONCERNS		SECTION III: SAFE BEHAVIOR	
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		<input type="checkbox"/> respirator & cartridges	
		<input checked="" type="checkbox"/> tyvek or PPE suits	
		<input checked="" type="checkbox"/> Lifting - Associates maintain good work habits	
<input checked="" type="checkbox"/> Moving of loads - Maintenance of good work habits			
<input checked="" type="checkbox"/> Daily walk-around inspection of heavy equipment?			
<input checked="" type="checkbox"/> Check for clear work area around heavy equipment?			
<input checked="" type="checkbox"/> Look before backing when using heavy equipment?			
<input checked="" type="checkbox"/> Unobstructed vision maintained by operators?			
<input checked="" type="checkbox"/> Maintain traction - no slipping or skidding equipment?			
<input checked="" type="checkbox"/> Traverse slopes vertically when using equipment?			
Project Safety Officer: <u>TED WITTMANN</u>		Date: <u>1.5.05</u>	

US Bulk Transport 1/5/05

	<u>Empty</u>	<u>Gross</u>	<u>MANIFEST #</u>
1) Mike Poff	32,000	80,140 → 24.02 tons	012
2) Shawn Harmon	32,000	82,400 → 25.80 tons	013
3) Trent Harmon	32,500	81,360 → 24.43 tons	014
4) Julie Kerr	30,800	84,000 → 26.60 tons	015
5) Mike Fry	32,500	80,560 → 24.00 tons	016
6) Mark Strong	32,000	79,760 → 23.88 tons	017
7) Randy Akin	32,000	79,620 → 23.61 tons	018
8) Tom Dillon 436	33,000	75,320 → 21.16 tons	019
9) Jeff	31,000	80,140 → 24.57 tons	020
10) Erik Hartman	32,000	82,560 → 25. tons	021
11) Tom Scoville	33,700	77,060 → 21.68 tons	022

261.5

MACTEC - OU-d LOAD OUT - 1/5/05

	<u>START #</u>	<u>END #</u>	<u>Number of Loads</u>
Non-HAZARDOUS MANIFESTS - (Estimated 190.00 tons)	343579	343585	7
HAZARDOUS MANIFESTS - (Estimated tonnage - 264.15 tons)	00012	00022	11

LOAD OUT - 1/4/05 [Tuesday Recap]


	<u>START #</u>	<u>END #</u>	<u>Number of Loads</u>
Non-Hazardous MANIFESTS (Estimated - 775 tons)	343551	343578	28
HAZARDOUS MANIFESTS (Estimated 250.88 tons)	00001	00011	11

Combined Daily Tonnage Estimates:

Non-HAZARDOUS - 965 tons

HAZARDOUS - 515 tons

1/5/05


 Acc Points

*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

**APPENDIX C
DATA QUALITY EVALUATION REPORT**

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LIST OF ACRONYMS AND ABBREVIATIONS

AAL	Accura Analytical Laboratory
AFCEE	Air Force Center for Environmental Excellence
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
COPC	Compound of Potential Concern
DQE	Data Quality Evaluation
DQO	Data Quality Objectives
DSCR	Defense Supply Center Richmond
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LIMS	Laboratory Information Management System
MACTEC	MACTEC Engineering and Consulting, Inc.
MDL	Method Detection Limit
mg/kg	Milligrams Per Kilogram
mg/L	Milligram Per Liter
MS	Matrix Spike
MSD	Matrix Spike Duplicate
OU	Operable Unit
QAPP	Quality Assurance Project Plan
QC	Quality Control
RPD	Relative Percent Difference
RL	Reporting Limit
RRF	Relative Response Factor
RSD	Relative Standard Deviation
TCLP	Toxicity Characteristic Leaching Procedure
SMF	Sporadic Marginal Failure
SVOC	Semi-Volatile Organic Compound
SR	Source Removal
USACE	United States Army Corps of Engineers

LIST OF ACRONYMS AND ABBREVIATIONS
(Continued)

USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
°C	Degrees Celsius
µg/kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
%D	Percent Difference
%R	Percent Recovery

APPENDIX C - DATA QUALITY EVALUATION

C.1 INTRODUCTION

The following sections present the analytical laboratory used, the data quality objectives (DQOs) for the project, results of the analyses of the quality control (QC) samples, tabular summaries of the analytical data obtained, and a discussion of the quality of the analytical data for the Operable Unit (OU) 4 Source Removal (SR) at the Defense Supply Center Richmond (DSCR). This data quality evaluation (DQE) case narrative summarizes the data quality for the 2004 soil sampling event.

The data validation was performed in general accordance with the Final General Sampling and Analysis Plan (MACTEC Engineering and Consulting, Inc. [MACTEC], 2004a), United States Army Corps of Engineers (USACE) Shell for Analytical Chemistry Requirements (USACE, App. I, February 2001), United States Environmental Protection Agency (USEPA) and Region III National Functional Guidelines for Organic and Inorganic Data Review (USEPA, June 2001, October 1999, and February 1994, respectively), and the appropriate analytical method requirements as presented in Test Methods for Evaluating Solid Waste, USEPA SW-846, Update III and subsequent revisions (USEPA, 1996).

C.2 ANALYTICAL LABORATORY

Subsurface soil samples were collected using EnCore™ samplers and were analyzed by Accura Analytical Laboratory, Inc., (AAL) of Norcross, Georgia, for volatile organic compounds (VOCs). Backfill soil samples were collected and analyzed by AAL for VOCs and semi-volatile organics (SVOCs). All samples collected were analyzed using USEPA SW-846 methods when applicable. VOCs were analyzed by Method 8260B, and SVOCs by 8270C. In addition, seven soil sample composites were collected from the excavated materials and analyzed by various methods including toxicity characteristic leaching procedure (TCLP) VOCs by SW1311/8260B, TCLP SVOCs by SW1311/8270C, TCLP metals by SW1311/6010B/7470A, TOX by SW9020B, TPH by SW8015M, PCBs by SW8082, ignitability by SW1010, corrosivity and reactivity by SW Sec. 7.3, and paint filter liquids by SW9095A to determine disposal options.

C.2.1 DATA QUALITY OBJECTIVES

Project-specific DQOs are described in the OU 4 SR Work Plan (MACTEC, 2004b). Once the environmental data have been collected and analyzed, the consultants assess the laboratory data for its usability as prescribed by project goals. The criteria that measure the usability of environmental data as it relates to project objectives are data accuracy, precision, and completeness. Evaluation of these criteria ultimately reveals the representativeness and bias, if any, present in the sampling and analytical processes. These criteria are explained in detail in Section 3 of the Draft Quality Assurance Project Plan (QAPP) (MACTEC, 2003).

C.2.2 DATA QUALITY EVALUATION PROCEDURES

The procedures used by MACTEC for data evaluation and validation are described in the DQE standard operating procedures (Law Engineering and Environmental Services, Inc., 2001/2002). The primary DQE was performed by MACTEC's staff and project chemists. The DQE narrative and qualified (flagged) data tables were reviewed by a senior chemist.

The laboratory data, field QC data, and field notes provide the information to evaluate the analytical data for accuracy, precision, completeness, and representativeness with respect to the project-specific DQOs. The data are first evaluated based on field notes taken during collection of the samples to assess sampling conditions and sampling procedures or determine if changes to the planned procedures were necessary.

Secondly, each sample shipment sent to the laboratory is assessed for adherence to method-prescribed holding times, proper chain-of-custody documentation, correct usage of sample containers, and sample integrity upon receipt by the laboratory.

The laboratory's internal QC procedures for calibration, method validation, and performance evaluation include appraisal of method prescribed tune (for gas chromatograph/mass spectrometer) and calibration criteria, method blank analyses, laboratory control sample (LCS) analysis, matrix spike/matrix spike duplicate (MS/MSD) analyses, and assessment of surrogate and internal standard recovery where applicable. MACTEC's evaluation of the laboratory data focuses on exceptions to the planned QC activities, problems encountered, and the effectiveness of the methodologies used within the laboratory. The data are then evaluated overall with respect to the project DQOs, providing the completeness. The following sections present the evaluation procedures used for the analytical data with respect to the project-specific DQOs.

C.2.2.1 Evaluation of Field Data Quality

QC samples were collected to assess the quality and representativeness of the field sampling activities and the accuracy of analytical results from the primary laboratory. Field QC samples are required by the USACE protocols (USACE, 2001) and were specified for collection in the OU 4 Work Plan (MACTEC, 2004a).

C.2.2.2 Evaluation of Laboratory Data Quality

Laboratory data are evaluated to assess adherence to method prescribed calibration and/or continuing calibration criteria, method blank analysis results, analyte recoveries from LCS, MS/MSD recoveries and relative percent differences (RPDs), surrogate recoveries and ultimately, completeness. Except for completeness, these criteria are used to evaluate the accuracy and precision of the data generated by the laboratory. Furthermore, the USACE specified control limits for the major USEPA SW-846 methodologies are presented in the Shell document (USACE, App I, February 2001) and data were evaluated based on those limits. The analytical methods and the associated limits used for analysis of the environmental samples collected during the sampling event were included in the Shell document.

In general, control limits not addressed by the USACE in the Shell document default to laboratory generated limits. Laboratory-established control limits are based on the mean percent recovery (%R) plus or minus three standard deviations of the mean using a minimum population of 20 recovery values. Specific laboratory QC elements considered in the calculation of precision, accuracy, representativeness, and completeness are presented in Section 3 of the Draft QAPP (MACTEC, 2003).

C.2.3 DATA QUALITY EVALUATION

The following sections provide summary discussions of data quality for the OU4 Source Removal sampling events at DSCR performed in November of 2004. Each section highlights the main points of data quality indicators and identifies data points that require qualification. Data qualification flags and their descriptions are presented in Table C-1.

DQE forms were generated and used by MACTEC to document the evaluated data components. These forms are arranged so that parameters affecting all samples are reviewed first, such as proper execution of COC, temperature of the samples upon receipt at the lab, appropriate sample containers/preservatives, etc. These original forms and the respectively flagged data tables are filed with each sample delivery group after senior review. A Level II review was performed on sample data collected from OU 4.

Analytical results are quantitated at the reporting limit (RL) but evaluated down to the method detection limit (MDL). The MDL is defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the value is above zero. The RL is defined as the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions as defined by SW-846. Data points reported at concentrations above the MDL, but less than the RL, are qualified as estimated quantitative values and are flagged "JQ". RLs are adjusted by the sample weight/volume extracted and analyzed, moisture content (soils and sediments only), and/or dilution, and therefore may be different for each sample.

C.3 OU 4 SOURCE REMOVAL DATA QUALITY EVALUATION

The following sections provide summary discussions of data quality for samples collected during the 2004 OU 4 Source Removal sampling events at DSCR. Soil samples were collected to verify the suitability of the soil to be used to backfill the excavations at OU 4, to determine the chemical concentrations in soil removed from each pit location, to determine the concentrations in soils remaining in place at the periphery of the excavations, and to characterize the waste for disposal options. The comprehensive analytical results for samples associated with the OU 4 SR investigation are summarized in this Appendix. Comprehensive data summaries are presented in Tables C-2 through C-12.

C.3.1 SOIL

A total of 12 soil samples, two duplicates, five trip blanks, and three equipment blanks were collected for the OU4 Source Removal. All samples were assayed for VOCs and two for SVOCs. The samples are described below.

Two backfill soil samples with an associated trip blank and equipment blank were collected to verify the suitability of the soil to be used to backfill the excavations at OU 4. The samples were analyzed for VOCs and SVOCs. Three soil samples each (labeled as "SO") were collected from Pits 1 and 3 along with associated trip blanks and equipment blanks and sent to the fixed-based laboratory for comparison of results. Samples were collected to determine removal extent at each pit location. Soil and the QC samples were analyzed for VOCs. Once the removal was completed, confirmation soil samples (labeled as "CS") were collected from the walls of the excavation to determine the concentrations in soils still in place. Two confirmation soil samples with associated QC samples were collected from each pit and analyzed for VOCs.

The correct sample containers and preservatives were used for the analytical methods specified on the COC. Additionally, the correct methods were employed for both extraction/digestion and analysis as outlined in the work plan. The appropriate units, detection limits, and compounds were reported by the laboratory per the July 2003 subcontract agreement between MACTEC and AAL.

Three equipment blanks (OU4EB-1, OU4PIT-3SO-EB1, OU4PIT-3SO-EB2) were collected to assess possible contamination from the use of sampling equipment. Associated samples are listed below:

<u>Equipment Blank ID</u>	<u>Associated Samples</u>
OU4EB-1	OU4BACKFILL-1, OU4BACKFILL-2
OU4PIT-3SO-EB1	OU4PIT-1-SO-3, OU4PIT-1-SO-12, OU4PIT-1-SO-19, OU4PIT-3-SO-7, OU4PIT-3-SO-17, OU4PIT-3-SO-18, OU4PIT-3SO-DUP-1
OU4PIT-3SO-EB2	OU4PIT-3-CS-5, OU4PIT-3-CS-9, OU4PIT-3-CS-DUP1, OU4PIT-1-CS-15, OU4PIT-1-CS-8

Volatile Organic Compounds (SW8260B) – Volatiles data were evaluated using a Tier II approach that consisted of review of holding times, method blanks, LCS and MS/MSD recoveries and RPDs, internal standard responses, surrogate recoveries, field duplicate precision, trip blanks, and rinsate blanks. Any failures among the method listed are discussed below. Calibration information was assumed to be within QC limits.

The chain-of-custody did not indicate any problems with sample receipt or sample condition and there were no special circumstances affecting the quality of the data. The sample shipments were checked for internal temperature upon arrival and were at an appropriate temperature (4°C ± 2°C). No data qualifications were required based on custody. The sample analyses were performed within the fourteen (14) day holding time.

The batch specific preparation blanks (method blanks) associated with the samples did not have analytes of interest above the RL but did contain analytes above the MDL. The associated OU 4 soil samples with concentrations less than or equal to 10 times (x) for common contaminants and 5 x for other target analytes to the blank concentration were accordingly qualified as estimated with possible method blank contamination and flagged “JB” unless overridden by qualifications for other QC exceedences.

<u>Blank</u>	<u>Analyte</u>	<u>Concentration</u>	<u>Associated Samples</u>
24418BLK	1,2,3 trichlorobenzene, 1,2,4-trichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, naphthalene, n-butylbenzene, o-xylene		OU4PIT-3SO-17
24421BLK	naphthalene		OU4PIT-1SO-12

Batch specific LCSs were also analyzed and recoveries were within USACE QC limits and/or sporadic marginal failure (SMF) criteria. MS/MSDs were performed on sample OU4-BACKFILL-1 and

tetrachloroethene recoveries were outside QC limits. The original sample result was qualified as estimated and flagged "UJ". MS/MSDs were performed on sample OU4PIT-3CS-5 and cis-1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, and vinyl chloride were outside QC limits.

The original sample results for the above compounds were qualified as estimated and flagged "J" except for cis-1,2-dichloroethene, which was present in the original sample at greater than four times the spiked concentration. MS/MSDs were performed on sample OU4PIT-3SO-18 and trichloroethene was outside QC limits and on sample OU4PIT-3SO-17 and MS/MSD recoveries were outside QC limits for cis-1,2-dichloroethene and vinyl chloride. The original sample concentrations were greater than four times the spike concentrations so no qualifications were required. All other MS/MSDs were within QC limits for percent recoveries and RPDs. The surrogates and internal standards added to the samples by the laboratory were recovered within specified limits.

Two field duplicate pairs [OU4PIT-3SO-18/OU4PIT-3SO-DUP1 and OU4PIT-3CS-9(7.0)/OU4PIT-3CS-DUP1] were collected and analyzed for VOCs. The RPD between the parent and the duplicate was outside of QC limits for 1,2-dichlorobenzene, 1,4-dichlorobenzene, and trichloroethene for OU4PIT-3SO-18 and its duplicate, and for 1,3-dichlorobenzene, 1,4-dichlorobenzene, cis-1,2-dichloroethene, and trichloroethene for OU4PIT-3CS-9(7.0) and its duplicate. Associated results in both samples were qualified as estimated and flagged "J". All surrogates and internal standards added to the samples by the laboratory were recovered within specified limits.

Five trip blanks (TB-11-12-04, TB-11-17-04, TB-11-18-04, TB-11-19-04, TB-11-20-04) were associated with these samples. The samples with concentrations less than or equal to five times these concentrations (ten times for acetone and methylene chloride) were accordingly qualified as estimated based on blank contamination and flagged as "JB", unless overridden by qualifications for other QC exceedances. Associated samples that were non-detects required no qualification.

<u>Trip Blank ID</u>	<u>Compound</u>	<u>Associated Sample</u>
TB-11-12-04	Toluene	None
TB-11-17-04	Methylene chloride, 1,4-Dichlorobenzene Toluene	None
TB-11-18-04	Methylene chloride, 1,4-Dichlorobenzene Acetone Toluene	None OU4PIT-3SO-EB2 OU4PIT-3SO-17

<u>Trip Blank ID</u>	<u>Compound</u>	<u>Associated Sample</u>
TB-11-19-04	Toluene	OU4PIT-3CS-5, OU4PIT-3CS-9 OU4PIT-3CS-DUP1
TB-11-20-04	1,4-Dichlorobenzene Toluene	OU4PIT1-CS8 OU4-PIT1-SO19, OU4PIT1-CS8

Three equipment blanks, OU4EB-1, OU4PIT-3SO-EB1, and OU4PIT-3SO-EB2, associated with soil samples contained VOCs as indicated below. The samples with concentrations less than or equal to five times these concentrations (ten times for acetone and methylene chloride) were accordingly qualified as estimated based on blank contamination and flagged as "JB" unless overridden by qualifications for other QC exceedances. Associated samples that were non-detects required no qualification.

<u>Blank ID</u>	<u>Compound</u>	<u>Concentration</u>	<u>Flagged Samples</u>
OU4EB-1	Acetone	3.3 µg/L	None
	Chloroform	1.6 µg/L	None
	Trichloroethene	1.4 µg/L	None
OU4PIT-3SO-EB1	Chloroform	0.67 µg/L	None
OU4PIT-3SO-EB2	Acetone	1.1 µg/L	None
	Chloroform	1.2 µg/L	None
	Chloromethane	0.35 µg/L	None
	Trichloroethene	0.94 µg/L	None

The following samples required dilution to place sample results within the range of the calibration curve, resulting in elevated RLs.

<u>Sample ID</u>	<u>Dilution Factor</u>	<u>Affected Compounds</u>
OU4PIT-3-SO-7(5.0)	1000x	All
OU4PIT-1SO-3(4.0)	1000x	All except Tetrachloroethylene
OU4PIT-1SO-3(4.0)	10000x	Tetrachloroethylene
OU4PIT-3SO-DUP1	1000x	All except the following:
OU4PIT-3SO-DUP1	25000x	1,2-Dichlorobenzene, 1,4-Dichlorobenzene
OU4PIT-3SO-DUP1	50000x	Trichloroethene
OU4PIT-3SO-17	250x	cis-1,2-Dichloroethene, Vinyl chloride
OU4PIT-3SO-18	1000x	All except the following:
OU4PIT-3SO-18	25000x	1,2-Dichlorobenzene, 1,4-Dichlorobenzene, Trichlorobenzene

Some sample compounds exceeded the upper level of the linear calibration range of the instrument; therefore, the following samples results were qualified as estimated and flagged "J".

<u>Sample ID</u>	<u>Compound</u>
OU4-PIT1-SO19	4-Methyl-2-Pentanone, Acetone, cis-1,2-Dichloroethene
OU4-PIT1-CS15	Acetone, Trichloroethene
OU4PIT-3CS-5	cis-1,2-Dichloroethene

Additionally, the following data points were reported at concentrations above the MDL, but less than the RL, and were qualified as estimated and flagged as "JQ".

<u>Sample ID</u>	<u>Affected Compounds</u>
TB-11-12-04	Toluene
OU4PIT-3-SO-EB1	Chloroform
OU4PIT-1-SO-3(4.0)	1,1-Dichloroethane, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, cis-1,2-Dichloroethene, Toluene, Trichlorofluoromethane
OU4PIT-3-SO-7(5.0)	1,3-Dichlorobenzene,
TB-11-17-04	1,4-Dichlorobenzene, Methylene chloride
OU4PIT-3SO-17	1,2-Dichlorobenzene, 2-Butanone, p-Isopropyltoluene, trans-1,2-Dichloroethene
OU4PIT-3SO-18	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Tetrachloroethene, Toluene
OU4PIT-3SO-DUP1	1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, Tetrachloroethene, Toluene
OU4PIT-3-SO-EB2	Chloromethane, Trichloroethene
TB-11-18-04	1,4-Dichlorobenzene, Methylene chloride
OU4PIT-1SO-12	1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,2-Dichlorobenzene, 2-Butanone, Dichlorodifluoromethane
OU4PIT-3CS-5	1,1,1-Trichloroethane, Carbon disulfide, Chlorobenzene, Dichlorodifluoromethane
OU4PIT-3CS-9	1,1,1-Trichloroethane, 1,3-Dichlorobenzene, Trichloroethene
OU4PIT-3-CS-DUP1	1,1,1-Trichloroethane, 1,3-Dichlorobenzene, Dichlorodifluoromethane,
TB-11-20-04	1,4-Dichlorobenzene, Toluene
OU4PIT1-CS15	1,1-Dichloroethene, 1,2,4-Trimethylbenzene, 1,3-Dichlorobenzene, Bromochloromethane, Ethylbenzene, o-Xylene, Toluene

<u>Sample ID</u>	<u>Affected Compounds</u>
OU4-PIT1-CS8	1,1-Dichloroethane, 1,2-Dichlorobenzene, Carbon disulfide, m,p-xylenes, Naphthalene, Trichloroethene
OU4-PIT1-SO19	Naphthalene, trans-1,2-Dichloroethene

Any value reported below the RL but above the MDL that was previously flagged "J" was subsequently overridden by the "JQ" qualifier.

Semi-Volatile Organic Compounds (SW8270C) - SVOC data were evaluated using a Tier II approach that consisted of review of holding times, method blanks, LCS and MS/MSD recoveries and RPDs, internal standard responses, surrogate recoveries, field duplicate precision, and rinsate blanks. Any failures among the method listed are discussed below. Calibration information was assumed to be within QC limits.

The chain of custody did not indicate any problems with sample receipt or sample condition and there were no special circumstances affecting the quality of the data. The sample shipments were checked for internal temperature upon arrival and were at an appropriate temperature ($4^{\circ}\text{C} \pm 2^{\circ}\text{C}$). No data qualifications were required based on custody. The sample analyses were performed within the required holding time.

The batch specific method blanks associated with the samples were analyzed and reported to contain no SVOCs. Associated samples required no qualification.

Batch specific LCSs were analyzed and recoveries were below the acceptable QC criteria for 4-nitrophenol (R=42%) for the soil LCS and 1,4-dichlorobenzene (R=44%) for water LCSD. Associated 4-nitrophenol results in soil samples OU4BACKFILL-1 and OU4BACKFILL-2 were flagged "UL", and water samples were not qualified since an LCS/LCSD was analyzed and only the LCSD was below QC limits. Soil samples OU4-BACKFILL-1 and OU4BACKFILL-2 results for 4-nitrophenol were flagged "UL". Soil sample MS/MSDs were performed on sample OU4-BACKFILL-2 and the percent recoveries and relative percent differences (RPDs) were within QC limits.

The equipment blank sample was reported to contain no contaminants; therefore, no qualifications were required. The surrogates and internal standards added to the samples by the laboratory were recovered

within specified limits. Results were evaluated and reported down to the MDL. Flagging of results less than the RL but above the MDL (qualified as "JQ") was not necessary.

C.3.2 COMPLETENESS

Except as previously noted, the data quality indicators were within the USACE prescribed QC limits and required only the qualifications described. Percent completeness for the data collection efforts and DQO attainment was 100 percent. A discussion of compound and/or method completeness compared to project objectives, as well as the effects of field conditions on project objectives, is presented below.

Although analytical completeness was 100 percent, the correlation between the fixed-based laboratory and the mobile laboratory was unsatisfactory. A comparison of results is presented in Tables C-13 and C-14. RPDs were calculated and only two results were within 50%. Several factors are suspected as to why the split sample results did not compare within 50%. One of the most common problems when analyzing soil is the heterogeneous nature of soil and, consequently, the associated concentration. In addition, because the analysis was for VOCs, homogenation of the sample could not be performed. In addition, the samples contained percent level amounts of chlorinated VOCs that required extensive dilutions by both the fixed-base laboratory and the mobile laboratory. The fixed-base laboratory used dilutions of 1,000x, 25,000x, and 50,000x resulting in potentially biased high data. The mobile laboratory was subcontracted to report VOCs at a 25x higher RL than the fixed-base laboratory and therefore, used lesser dilutions of 250x, 500x, 1,000x, and 5,000x. The difference in dilutions may also result in varying concentrations. However, it must be noted that when the mobile lab reported a result above their RL, the fixed-base lab also reported a positive result for the same compound. The impacts to the project objectives were minimal because removal decisions were made using a combination of the previous data collected in May 2004 and the sample with the higher result between the fixed-base and mobile laboratory.

C.4 REFERENCES FOR CHEMISTRY CASE NARRATIVES

- LAW, 2001/2002. "Data Quality Evaluation Standard Operating Procedures for USEPA SW 846 Methods 8160B, 8270C, 8270C SIM, 8081A, 8082, 8151A, 6010B, 7471A, 7841, and Miscellaneous Wet Chemistry Methods", Defense General Supply Center, Richmond Virginia, Contract DACW87-90-D0023, Law Engineering and Environmental Services, Inc. January, 2001.
- MACTEC, 2003. "Draft General Sampling and Analyses Plan", Defense General Supply Center, Richmond Virginia, Contract DACW87-02-D-0007, MACTEC Engineering and Consulting, Inc. October, 2003.
- MACTEC, 2004a. "Appendix H: Principal Threat Source Material Removal Action Work Plan, Operable Unit 4", Defense General Supply Center, Richmond Virginia, Contract F41624-03-D-8606 T.O. 21, MACTEC Engineering and Consulting, Inc., September, 2004.
- MACTEC, 2004b. "Final Principal Threat Source Material Removal Action Site Evaluation Report, Operable Unit 4", Defense General Supply Center, Richmond Virginia, Contract F41624-03-D-8606 T.O. 21, MACTEC Engineering and Consulting, Inc., September, 2004.
- USACE, 2001. Requirements for the Preparation of Sampling and Analysis Plans, United States Army Corps of Engineers, E 200-1-3, 2001.
- USACE, 2001. USACE Shell For Analytical Chemistry Requirements, Appendix I, United States Army Corps of Engineers, February 1, 2001.
- USEPA, 1999/1994. USEPA Region III National Functional Guidelines for Organic and Inorganic Data Review, United States Environmental Protection Agency, October, 1999 and February 1994.
- USEPA, 1996. Test methods For Evaluating Solid Wastes, Physical/Chemical Methods SW-846, Update III and Subsequent Updates, United States Environmental Protection Agency, September, 1986 and December 1996.

USEPA, 2001. USEPA Contract Laboratory Program National Functional Guidelines For Low Concentration Organic Data Review, United States Environmental Protection Agency, EPA 540/R00/006, June 2001.

TABLES

TABLE C-1
DATA QUALIFICATION FLAGS
APPENDIX C
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia

Flag	Positive Results	Non-Detect Results
FLAGS FOR DATA WITHIN ACCEPTANCE LIMITS (Usable as Reported)		
(no flag)	{Use datum without qualification}	{Use datum without qualification}
FLAGS FOR DATA WITHIN ACTION LIMITS (Usable With Qualification)		
J	Estimated quantitation based upon QC data	Estimated quantitation based upon QC data
JB	Estimated quantitation: possibly biased high or false positive based upon blank data	(Not applicable)
JH	Estimated quantitation - possibly biased high based upon QC data	(Not applicable)
JL	Estimated quantitation - possibly biased low based upon QC data	Possible false non-detect based upon QC data
JQ	Estimated quantitation; value is between the reporting limit and the detection limit	(Not applicable)
UJ	(Not applicable)	Undetected; Reported detection limit is imprecise
UL	(Not applicable)	Undetected; Data biased low - Reported detection limit is higher than indicated
FLAGS FOR DATA OUTSIDE OF ACTION LIMITS (Unusable)		
R	Datum rejected based upon QC data: do not use	Datum rejected based upon QC data: do not use

Note that if the QC results suggest contradictory flags, the following hierarchy should be used to select the appropriate flag to assign:

R>JB>JH>JL> JQ
 JH + JL = J
 JQ > J

PREPARED/DATE: JAH 12/14/04
 CHECKED/DATE: WPB 12/17/04

TABLE C-2
 BACKFILL SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample Location: Sample Date:	Reporting Limit (a)	Sample OU4BACKFILL-1 11/12/2004	Sample OU4BACKFILL-2 11/12/2004
<u>Semi-Volatile Organic Compounds - SW8270C (mg/Kg)</u>			
1,2,4-Trichlorobenzene	0.33	<0.35	<0.35
1,2-Dichlorobenzene	0.33	<0.35	<0.35
1,3-Dichlorobenzene	0.33	<0.35	<0.35
1,4-Dichlorobenzene	0.33	<0.35	<0.35
2,4,5-Trichlorophenol	0.33	<0.35	<0.35
2,4,6-Trichlorophenol	0.33	<0.35	<0.35
2,4-Dichlorophenol	0.33	<0.35	<0.35
2,4-Dimethylphenol	0.33	<0.35	<0.35
2,4-Dinitrophenol	0.66	<0.7	<0.71
2,4-Dinitrotoluene	0.33	<0.35	<0.35
2,6-Dinitrotoluene	0.33	<0.35	<0.35
2-Chloronaphthalene	0.33	<0.35	<0.35
2-Chlorophenol	0.33	<0.35	<0.35
2-Methylnaphthalene	0.33	<0.35	<0.35
2-Methylphenol	0.33	<0.35	<0.35
2-Nitroaniline	0.66	<0.7	<0.71
2-Nitrophenol	0.33	<0.35	<0.35
3,3-Dichlorobenzidine	0.66	<0.7	<0.71
3,4-Methylphenol	0.66	<0.7	<0.71
3-Nitroaniline	0.66	<0.7	<0.71
4,6-Dinitro-2-methylphenol	1.67	<1.8	<1.8
4-Bromophenyl-phenylether	0.33	<0.35	<0.35
4-Chloro-3-methylphenol	0.33	<0.35	<0.35
4-Chloroaniline	0.33	<0.35	<0.35
4-Chlorophenyl-phenylether	0.33	<0.35	<0.35
4-Nitroaniline	0.66	<0.7	<0.71
4-Nitrophenol	0.66	<0.7 UL	<0.71 UL
Acenaphthene	0.33	<0.35	<0.35
Acenaphthylene	0.33	<0.35	<0.35
Anthracene	0.33	<0.35	<0.35
Benzo(a)anthracene	0.33	<0.35	<0.35
Benzo(a)pyrene	0.33	<0.35	<0.35
Benzo(b)fluoranthene	0.33	<0.35	<0.35
Benzo(g,h,i)perylene	0.33	<0.35	<0.35
Benzo(k)fluoranthene	0.33	<0.35	<0.35
Benzoic acid	0.66	<0.7	<0.71
Benzyl alcohol	0.33	<0.35	<0.35
bis(2-Chloroethoxy)methane	0.33	<0.35	<0.35
bis(2-chloroethyl)ether	0.33	<0.35	<0.35
bis(2-chloroisopropyl)ether	0.33	<0.35	<0.35
bis(2-Ethylhexyl)phthalate	0.33	<0.35	<0.35
Butylbenzylphthalate	0.33	<0.35	<0.35
Chrysene	0.33	<0.35	<0.35
Dibenz(a,h)anthracene	0.33	<0.35	<0.35
Dibenzofuran	0.33	<0.35	<0.35
Diethylphthalate	0.33	<0.35	<0.35
Dimethylphthalate	0.33	<0.35	<0.35
di-n-Butylphthalate	0.33	<0.35	<0.35
di-n-Octylphthalate	0.33	<0.35	<0.35
Fluoranthene	0.33	<0.35	<0.35
Fluorene	0.33	<0.35	<0.35
Hexachlorobenzene	0.33	<0.35	<0.35
Hexachlorobutadiene	0.33	<0.35	<0.35
Hexachlorocyclopentadiene	0.33	<0.35	<0.35
Hexachloroethane	0.33	<0.35	<0.35

TABLE C-2
 BACKFILL SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting	Sample	Sample
Sample Date:	Limit (a)	OU4BACKFILL-1	OU4BACKFILL-2	
		11/12/2004	11/12/2004	
Hexachloropropene	0.33	<0.35	<0.35	
Indeno(1,2,3-c,d)pyrene	0.33	<0.35	<0.35	
Isophorone	0.33	<0.35	<0.35	
Naphthalene	0.33	<0.35	<0.35	
Nitrobenzene	0.33	<0.35	<0.35	
N-Nitroso-di-n-propylamine	0.33	<0.35	<0.35	
N-Nitrosodiphenylamine	0.33	<0.35	<0.35	
Pentachlorophenol	0.66	<0.7	<0.71	
Phenanthrene	0.33	<0.35	<0.35	
Phenol	0.33	<0.35	<0.35	
Pyrene	0.33	<0.35	<0.35	
Surrogate - %				
2,4,6-Tribromophenol	--	66	42	
2-Fluorobiphenyl	--	71	51	
2-Fluorophenol	--	61	40	
Nitrobenzene-d5	--	51	36	
Phenol-d5	--	61	42	
p-Terphenyl-d14	--	85	71	
Volatile Organic Compounds - SW8260B (mg/Kg)				
1,1,1,2-Tetrachloroethane	0.005	<0.0052	<0.0052	
1,1,1-Trichloroethane	0.005	<0.0052	<0.0052	
1,1,2,2-Tetrachloroethane	0.005	<0.0052	<0.0052	
1,1,2-Trichloroethane	0.005	<0.0052	<0.0052	
1,1-Dichloroethane	0.005	<0.0052	<0.0052	
1,1-Dichloroethene	0.005	<0.0052	<0.0052	
1,1-Dichloropropene	0.005	<0.0052	<0.0052	
1,2,3-Trichlorobenzene	0.005	<0.0052	<0.0052	
1,2,3-Trichloropropane	0.005	<0.0052	<0.0052	
1,2,4-Trichlorobenzene	0.005	<0.0052	<0.0052	
1,2,4-Trimethylbenzene	0.005	<0.0052	<0.0052	
1,2-Dibromo-3-Chloropropane	0.005	<0.0052	<0.0052	
1,2-Dibromoethane	0.005	<0.0052	<0.0052	
1,2-Dichlorobenzene	0.005	<0.0052	<0.0052	
1,2-Dichloroethane	0.005	<0.0052	<0.0052	
1,2-Dichloropropane	0.005	<0.0052	<0.0052	
1,3,5-Trimethylbenzene	0.005	<0.0052	<0.0052	
1,3-Dichlorobenzene	0.005	<0.0052	<0.0052	
1,3-Dichloropropane	0.005	<0.0052	<0.0052	
1,4-Dichlorobenzene	0.005	<0.0052	<0.0052	
2,2-Dichloropropane	0.005	<0.0052	<0.0052	
2-Butanone	0.01	<0.01	<0.01	
2-Chlorotoluene	0.005	<0.0052	<0.0052	
2-Hexanone	0.01	<0.01	<0.01	
4-Chlorotoluene	0.005	<0.0052	<0.0052	
4-Methyl-2-Pentanone	0.005	<0.01	<0.01	
Acetone	0.01	<0.01	<0.01	
Benzene	0.005	<0.0052	<0.0052	
Bromobenzene	0.005	<0.0052	<0.0052	
Bromochloromethane	0.005	<0.0052	<0.0052	
Bromodichloromethane	0.005	<0.0052	<0.0052	
Bromoform	0.005	<0.0052	<0.0052	
Bromomethane	0.005	<0.0052	<0.0052	
Carbon Disulfide	0.005	<0.0052	<0.0052	
Carbon Tetrachloride	0.005	<0.0052	<0.0052	

TABLE C-2
 BACKFILL SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting	Sample	Sample
	Sample Date:	Limit (a)	OU4BACKFILL-1	OU4BACKFILL-2
			11/12/2004	11/12/2004
Chlorobenzene		0.005	<0.0052	<0.0052
Chloroethane		0.005	<0.0052	<0.0052
Chloroform		0.005	<0.0052	<0.0052
Chloromethane		0.005	<0.0052	<0.0052
cis-1,2-Dichloroethene		0.005	<0.0052	<0.0052
cis-1,3-Dichloropropene		0.005	<0.0052	<0.0052
Dibromochloromethane		0.005	<0.0052	<0.0052
Dibromomethane		0.005	<0.0052	<0.0052
Dichlorodifluoromethane		0.005	<0.0052	<0.0052
Ethylbenzene		0.005	<0.0052	<0.0052
Hexachlorobutadiene		0.005	<0.0052	<0.0052
Isopropylbenzene		0.005	<0.0052	<0.0052
m,p-Xylene		0.01	<0.01	<0.01
Methylene Chloride		0.005	<0.0052	<0.0052
Naphthalene		0.005	<0.0052	<0.0052
n-Butylbenzene		0.005	<0.0052	<0.0052
n-Propylbenzene		0.005	<0.0052	<0.0052
o-Xylene		0.005	<0.0052	<0.0052
p-Isopropyltoluene		0.005	<0.0052	<0.0052
Sec-Butylbenzene		0.005	<0.0052	<0.0052
Styrene		0.005	<0.0052	<0.0052
tert-Butylbenzene		0.005	<0.0052	<0.0052
Tetrachloroethylene		0.005	<0.0052 UJ	<0.0052
Toluene		0.005	<0.0052	<0.0052
trans-1,2-dichloroethene		0.005	<0.0052	<0.0052
trans-1,3-dichloropropene		0.005	<0.0052	<0.0052
Trichloroethene		0.005	<0.0052	<0.0052
Trichlorofluoromethane		0.005	<0.0052	<0.0052
Vinyl Chloride		0.005	<0.0052	<0.0052
Surrogate - %				
1,2-Dichloroethane-d4		--	98	97
Bromofluorobenzene		--	102	103
Toluene-D8		--	103	103

Notes:

- UJ Undetected; Reported Detection Limit is imprecise
 UL Undetected; Data biased low - Reported
 Detection Limit is higher than indicated
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05

CHECKED/DATE: JAH 1/13/05

TABLE C-3
 PIT I FIXED-BASE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample Location: Sample Depth (ft.): Sample Date:	Reporting Limit (a)	Sample OU4-PIT1-SO-3 4 11/17/2004	Sample OU4-PIT1-SO-12 7 11/19/2004	Sample OU4-PIT1-SO-19 3 11/20/2004
D2216 - Percent Solids (%)				
Percent Solids	--	87	88	89
Volatile Organic Compounds - SW8260B (mg/Kg)				
1,1,1,2-Tetrachloroethane	0.005	<5.7	<0.0048	<0.0047
1,1,1-Trichloroethane	0.005	11	0.0026 JQ	<0.0047
1,1,2,2-Tetrachloroethane	0.005	<5.7	<0.0048	<0.0047
1,1,2-Trichloroethane	0.005	<5.7	<0.0048	<0.0047
1,1-Dichloroethane	0.005	13 JQ	0.0018 JQ	0.083
1,1-Dichloroethene	0.005	<5.7	<0.0048	0.011
1,1-Dichloropropene	0.005	<5.7	<0.0048	<0.0047
1,2,3-Trichlorobenzene	0.005	<5.7	<0.0048	<0.0047
1,2,3-Trichloropropane	0.005	<5.7	<0.0048	<0.0047
1,2,4-Trichlorobenzene	0.005	<5.7	<0.0048	<0.0047
1,2,4-Trimethylbenzene	0.005	12 JQ	<0.0048	<0.0047
1,2-Dibromo-3-Chloropropane	0.005	<5.7	<0.0048	<0.0047
1,2-Dibromoethane	0.005	<5.7	<0.0048	<0.0047
1,2-Dichlorobenzene	0.005	0.98 JQ	0.0022 JQ	<0.0047
1,2-Dichloroethane	0.005	<5.7	<0.0048	<0.0047
1,2-Dichloropropane	0.005	<5.7	<0.0048	<0.0047
1,3,5-Trimethylbenzene	0.005	<5.7	<0.0048	<0.0047
1,3-Dichlorobenzene	0.005	<5.7	<0.0048	<0.0047
1,3-Dichloropropane	0.005	<5.7	<0.0048	<0.0047
1,4-Dichlorobenzene	0.005	<5.7	<0.0048	<0.0047
2,2-Dichloropropane	0.005	<5.7	<0.0048	<0.0047
2-Butanone	0.01	<11	0.0019 JQ	0.072
2-Chlorotoluene	0.005	<5.7	<0.0048	<0.0047
2-Hexanone	0.01	<11	<0.0095	<0.0094
4-Chlorotoluene	0.005	<5.7	<0.0048	<0.0047
4-Methyl-2-Pentanone	0.005	<11	<0.0095	0.25 J
Acetone	0.01	<11	0.052	0.61 J
Benzene	0.005	<5.7	<0.0048	<0.0047
Bromobenzene	0.005	<5.7	<0.0048	<0.0047
Bromochloromethane	0.005	<5.7	<0.0048	<0.0047
Bromodichloromethane	0.005	<5.7	<0.0048	<0.0047
Bromoform	0.005	<5.7	<0.0048	<0.0047
Bromomethane	0.005	<5.7	<0.0048	<0.0047
Carbon Disulfide	0.005	<5.7	<0.0048	<0.0047
Carbon Tetrachloride	0.005	<5.7	<0.0048	<0.0047
Chlorobenzene	0.005	<5.7	<0.0048	<0.0047
Chloroethane	0.005	<5.7	<0.0048	<0.0047
Chloroform	0.005	<5.7	<0.0048	<0.0047
Chloromethane	0.005	<5.7	<0.0048	<0.0047
cis-1,2-Dichloroethene	0.005	3.3 JQ	0.031	0.24 J
cis-1,3-Dichloropropene	0.005	<5.7	<0.0048	<0.0047
Dibromochloromethane	0.005	<5.7	<0.0048	<0.0047
Dibromomethane	0.005	<5.7	<0.0048	<0.0047
Dichlorodifluoromethane	0.005	<5.7	0.00065 JQ	<0.0047
Ethylbenzene	0.005	<5.7	<0.0048	<0.0047
Hexachlorobutadiene	0.005	<5.7	<0.0048	<0.0047
Isopropylbenzene	0.005	<5.7	<0.0048	<0.0047
m,p-Xylenes	0.01	<11	<0.0095	<0.0094
Methylene Chloride	0.005	<5.7	<0.0048	0.021
Naphthalene	0.005	7.7	0.0018 JB	0.0012 JQ
n-Butylbenzene	0.005	<5.7	<0.0048	<0.0047
n-Propylbenzene	0.005	<5.7	<0.0048	<0.0047
o-Xylene	0.005	<5.7	<0.0048	<0.0047
p-Isopropyltoluene	0.005	<5.7	<0.0048	<0.0047
sec-Butylbenzene	0.005	<5.7	<0.0048	<0.0047
Styrene	0.005	<5.7	<0.0048	<0.0047

TABLE C-3
 PIT 1 FIXED-BASE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample Location Sample Depth (ft) Sample Date:	Reporting Limit (a)	Sample OU4-PIT1-SO-3 4 11/17/2004	Sample OU4-PIT1-SO-12 7 11/19/2004	Sample OU4-PIT1-SO-19 3 11/20/2004
tert-Butylbenzene	0.005	<5.7	<0.0048	<0.0047
Tetrachloroethylene	0.005	400	0.0084	0.0086
Toluene	0.005	1.1 JQ	<0.0048	0.00079 JB
trans-1,2-Dichloroethene	0.005	<5.7	<0.0048	0.0011 JQ
trans-1,3-Dichloropropene	0.005	<5.7	<0.0048	<0.0047
Trichloroethene	0.005	41	0.0058	0.026
Trichlorofluoromethane	0.005	1.7 JQ	<0.0048	<0.0047
Vinyl Chloride	0.005	<5.7	<0.0048	<0.0047
Surrogate - %				
1,2-Dichloroethane-d4	--	106	95	97
Bromofluorobenzene	--	101	96	99
Toluene-D8	--	108	98	103

Notes:

- J Estimated, based on QC data
 JB Estimated; possibly biased high or false positive based on blank contamination
 JQ Estimated, Value is between reporting limit and detection limit
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-4

PIT 1 FIXED-BASE LABORATORY CONFIRMATION SAMPLES - SOIL
APPENDIX C
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type: Sample Location: Sample Depth (ft.): Sample Date:	Reporting Limit (a)	Sample OU4-PIT1-CS-8 4 11/20/2004	Sample OU4-PIT1-CS-15 8 11/20/2004
D2216 - Percent Solids (%)			
Percent Solids		92	89
Volatile Organic Compounds - SW8260B (mg/Kg)			
1,1,1,2-Tetrachloroethane	0.005	<0.0045	<0.0045
1,1,1-Trichloroethane	0.005	<0.0045	0.024
1,1,2,2-Tetrachloroethane	0.005	<0.0045	<0.0045
1,1,2-Trichloroethane	0.005	<0.0045	<0.0045
1,1-Dichloroethane	0.005	0.0025 JQ	0.018
1,1-Dichloroethene	0.005	<0.0045	0.0018 JQ
1,1-Dichloropropene	0.005	<0.0045	<0.0045
1,2,3-Trichlorobenzene	0.005	<0.0045	<0.0045
1,2,3-Trichloropropane	0.005	<0.0045	<0.0045
1,2,4-Trichlorobenzene	0.005	<0.0045	<0.0045
1,2,4-Trimethylbenzene	0.005	<0.0045	0.0024 JQ
1,2-Dibromo-3-Chloropropane	0.005	<0.0045	<0.0045
1,2-Dibromoethane	0.005	<0.0045	<0.0045
1,2-Dichlorobenzene	0.005	0.0052 JQ	0.14
1,2-Dichloroethane	0.005	<0.0045	<0.0045
1,2-Dichloropropane	0.005	<0.0045	<0.0045
1,3,5-Trimethylbenzene	0.005	<0.0045	<0.0045
1,3-Dichlorobenzene	0.005	<0.0045	0.0013 JQ
1,3-Dichloropropane	0.005	<0.0045	<0.0045
1,4-Dichlorobenzene	0.005	0.00097 JB	0.016
2,2-Dichloropropane	0.005	<0.0045	<0.0045
2-Butanone	0.01	<0.009	0.072
2-Chlorotoluene	0.005	<0.0045	<0.0045
2-Hexanone	0.01	<0.009	<0.009
4-Chlorotoluene	0.005	<0.0045	<0.0045
4-Methyl-2-Pentanone	0.005	<0.009	<0.009
Acetone	0.01	0.029	0.39 J
Benzene	0.005	<0.0045	<0.0045
Bromobenzene	0.005	<0.0045	<0.0045
Bromochloromethane	0.005	<0.0045	0.0011 JQ
Bromodichloromethane	0.005	<0.0045	<0.0045
Bromoform	0.005	<0.0045	<0.0045
Bromomethane	0.005	<0.0045	<0.0045
Carbon Disulfide	0.005	0.0013 JQ	<0.0045
Carbon Tetrachloride	0.005	<0.0045	<0.0045
Chlorobenzene	0.005	<0.0045	<0.0045
Chloroethane	0.005	<0.0045	<0.0045
Chloroform	0.005	<0.0045	<0.0045
Chloromethane	0.005	<0.0045	<0.0045
cis-1,2-Dichloroethene	0.005	0.052	0.015
cis-1,3-Dichloropropene	0.005	<0.0045	<0.0045
Dibromochloromethane	0.005	<0.0045	<0.0045
Dibromomethane	0.005	<0.0045	<0.0045
Dichlorodifluoromethane	0.005	<0.0045	<0.0045
Ethylbenzene	0.005	<0.0045	0.0035 JQ
Hexachlorobutadiene	0.005	<0.0045	<0.0045
Isopropylbenzene	0.005	<0.0045	<0.0045
m,p-Xylenes	0.01	0.0023 JQ	0.038
Methylene Chloride	0.005	0.011	0.048
Naphthalene	0.005	0.0016 JQ	0.032

TABLE C-4
 PIT 1 FIXED-BASE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample Location: Sample Depth (ft.): Sample Date:	Reporting Limit (a)	Sample	Sample
		OU4-PIT1-CS-8 4 11/20/2004	OU4-PIT1-CS-15 8 11/20/2004
n-Butylbenzene	0.005	<0.0045	<0.0045
n-Propylbenzene	0.005	<0.0045	<0.0045
o-Xylene	0.005	<0.0045	0.0023 JQ
p-Isopropyltoluene	0.005	<0.0045	<0.0045
Sec-Butylbenzene	0.005	<0.0045	<0.0045
Styrene	0.005	<0.0045	<0.0045
tert-Butylbenzene	0.005	<0.0045	<0.0045
Tetrachloroethylene	0.005	0.013	0.14
Toluene	0.005	0.00067 JB	0.0028 JQ
trans-1,2-dichloroethene	0.005	<0.0045	<0.0045
trans-1,3-dichloropropene	0.005	<0.0045	<0.0045
Trichloroethene	0.005	0.0044 JQ	0.31 J
Trichlorofluoromethane	0.005	<0.0045	<0.0045
Vinyl Chloride	0.005	<0.0045	<0.0045
Surrogate - %			
1,2-Dichloroethane-d4	--	97	97
Bromofluorobenzene	--	100	95
Toluene-D8	--	98	99

Notes:

- J Estimated; based on QC data
 JB Estimated; possibly biased high or false positive based on blank contamination
 JQ Estimated; Value is between reporting limit and detection limit
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05

CHECKED/DATE: JAH 1/13/05

TABLE C-5
 PJT I MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location:	Sample Depth (ft.)	Sample Date:	Sample		Sample		Sample		Sample		
				OU4-PIT1-SO-1	OU4-PIT1-SO-2	OU4-PIT1-SO-3	OU4-PIT1-SO-4	OU4-PIT1-SO-5	OU4-PIT1-SO-6	Reporting Limit (g)	Limit (g)	
Volatile Organic Compounds - SW8360B (mg/Kg)												
1,1,1-Trichloroethane	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
1,1-Dichloroethane	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
1,1-Dichloroethene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
1,2,4-Trichlorobenzene	OU4-PIT1-SO-1	4	11/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	0.025
1,2-Dichlorobenzene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
1,3-Dichlorobenzene	OU4-PIT1-SO-1	4	11/17/2004	34.9	2.47	5.08	0.307	0.28	0.28	0.307	0.307	0.025
1,4-Dichlorobenzene	OU4-PIT1-SO-1	4	11/17/2004	17.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Benzene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Carbon Tetrachloride	OU4-PIT1-SO-1	4	11/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	0.025
Chlorobenzene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Chloroethane	OU4-PIT1-SO-1	4	11/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	0.025
Chloroform	OU4-PIT1-SO-1	4	11/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	0.025
cis-1,2-Dichloroethene	OU4-PIT1-SO-1	4	11/17/2004	11.9	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Ethylbenzene	OU4-PIT1-SO-1	4	11/17/2004	18.8	1.9	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
m&p-Xylene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Methylene Chloride	OU4-PIT1-SO-1	4	11/17/2004	NA	NA	NA	NA	NA	NA	NA	NA	0.025
o-Xylene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Tetrachloroethene	OU4-PIT1-SO-1	4	11/17/2004	90.1	1.19	1.93	<0.0375	0.638	0.638	<0.0375	12.6	0.025
Toluene	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Trichloroethene	OU4-PIT1-SO-1	4	11/17/2004	72.6	1.34	1.6	<0.0375	1.58	1.58	<0.0375	9.36	0.025
Vinyl Chloride	OU4-PIT1-SO-1	4	11/17/2004	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.025
Surrogate - %												
4-Bromofluorobenzene	OU4-PIT1-SO-1	4	11/17/2004	108	83	93	114	83	83	120	120	--
Dibromofluoromethane	OU4-PIT1-SO-1	4	11/17/2004	96	92	91	95	89	89	91	91	--
Toluene-d8	OU4-PIT1-SO-1	4	11/17/2004	128	90	91	100	93	93	97	97	--

TABLE C-5
 PITT I MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type	Sample Location	Sample	Sample	Sample	Sample	Sample
Sample Depth (ft.)	Reporting Limit (a)	OU4-PITI-SO-7	OU4-PITI-SO-8	OU4-PITI-SO-9	OU4-PITI-SO-10	OU4-PITI-SO-11
Sample Date		11/18/2004	11/19/2004	11/19/2004	11/19/2004	11/19/2004
Volatile Organic Compounds - SW8360B (mg/kg)						
1,1,1-Trichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	<0.025	0.597	41.8	0.126	<0.025
1,3-Dichlorobenzene	0.025	<0.025	0.597	36.4	0.096	<0.025
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	0.025	<0.025	0.764	<0.025	0.222	0.168
m,p-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	<0.025	<0.025	158	<0.025	<0.025
Toluene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	<0.025	0.36	48.1	<0.025	<0.025
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %						
4-Bromofluorobenzene	--	114	115	91	116	115
Dibromofluoromethane	--	95	92	85	98	91
Toluene-d8	--	100	87	95	88	82

TABLE C-5
 PIT 1 MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample
Sample Location:	OU4-PIT1-SO-12	OU4-PIT1-SO-13	OU4-PIT1-SO-14	OU4-PIT1-SO-15	OU4-PIT1-SO-16
Sample Depth (ft.):	7	3.5	7	4	8
Sample Date:	11/19/2004	11/19/2004	11/20/2004	11/20/2004	11/20/2004
Reporting Limit (a)	0.025	0.025	0.025	0.025	0.025
Volatile Organic Compounds - SW82/608 (mg/Kg)					
1,1,1-Trichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	3.35
1,3-Dichlorobenzene	0.025	<0.025	0.036	<0.025	1.18
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.056	<0.025	<0.025	<0.025
Ethylbenzene	0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	<0.025	<0.025	<0.025	1.42
Methylene Chloride	0.025	<0.025	<0.025	<0.025	1.46
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	<0.025	<0.025	<0.025	1.65
Toluene	0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	<0.025	<0.025	<0.025	47.5
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %					
4-Bromofluorobenzene	--	119	106	108	113
Dibromofluoromethane	--	109	116	105	88
Toluene-d8	--	84	98	102	116

TABLE C-5
 PIT 1 MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample Location: Sample Depth (ft.): Sample Date:	Sample		Sample		Sample		Sample	
	OU4-PIT1-SO-17	OU4-PIT1-SO-18	OU4-PIT1-SO-19	OU4-PIT1-SO-20	OU4-PIT1-SO-21	Reporting Limit (g)	Sample	Sample
	4	7	3	7	4		11/20/2004	11/20/2004
Volatiles Organic Compounds - SW8260B (mg/kg)								
1,1,1-Trichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
1,1-Dichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
1,1-Dichloroethene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
1,2-Dichlorobenzene	3	<0.025	<0.025	<0.025	8.84	0.025	0.176	8.84
1,3-Dichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
1,4-Dichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	0.037	<0.025
Benzene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Carbon Tetrachloride	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Chlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Chloroethane	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Chloroform	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
cis-1,2-Dichloroethene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Ethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	0.029	<0.025
m&p-Xylene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Methylene Chloride	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
o-Xylene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Tetrachloroethene	77.5	<0.025	<0.025	<0.025	111	0.025	0.041	111
Toluene	79.4	<0.025	<0.025	<0.025	99.8	0.025	0.061	99.8
Trichloroethene	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Vinyl Chloride	<0.025	<0.025	<0.025	<0.025	<0.025	0.025	<0.025	<0.025
Surrogate - %								
4-Bromofluorobenzene	94	81	122	137	128	--	137	128
Dibromofluoromethane	84	98	110	96	104	--	96	104
Toluene-d8	106	86	102	107	92	--	107	92

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-6
 PIT 1 MOBILE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample	Sample
Sample Location:	OU4-PITI-CS-1	OU4-PITI-CS-2	OU4-PITI-CS-3	OU4-PITI-CS-4	OU4-PITI-CS-5	OU4-PITI-CS-6
Sample Depth (ft.):	8	4	8	4	8	4
Reporting Limit (a)	0.025	0.025	0.025	0.025	0.025	0.025
Sample Date:	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004
Volatile Organic Compounds - SW8260B (mg/Kg)						
1,1,1-Trichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025	0.071
1,1-Dichloroethene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	<0.025	0.058	0.058	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	<0.025	<0.025	0.129	<0.025	<0.025	1.99
Ethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m,p-Xylene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	60.7	0.971	332	<0.025	0.04
Toluene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	<0.025	6.38	1.39	381	<0.025	<0.025
Vinyl Chloride	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %						
4-Bromofluorobenzene	96	105	119	96	120	105
Dibromofluoromethane	92	87	86	87	90	91
Toluene-d8	98	108	104	102	97	103

TABLE C-6
 PIT 1 MOBILE LABORATORY CONFIRMATION SAMPLES- SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (g)	Sample OU4-PITI-CS-7	Sample OU4-PITI-CS-8	Sample OU4-PITI-CS-9	Sample OU4-PITI-CS-10	Sample OU4-PITI-CS-11
Sample Depth (ft.):	Sample Date:		8	4	8	4	8
			11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004
Volatile Organic Compounds - SW8260B (mg/Kg)							
1,1,1-Trichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	0.074	<0.025
Ethylbenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	<0.025	<0.025	<0.025	<0.025	0.025	0.096
Toluene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.073
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %							
4-Bromofluorobenzene	--	94	119	120	119	101	101
Dibromofluoromethane	--	89	88	88	89	91	91
Toluene-d8	--	93	95	95	97	97	97

TABLE C-6
 PIT 1 MOBILE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample
Sample Location:	OU4-PIT1-CS-12	OU4-PIT1-CS-13	OU4-PIT1-CS-14	OU4-PIT1-CS-15	OU4-PIT1-CS-16
Sample Depth (ft.):	4	8	4	8	4
Reporting Limit (b)	0.025	0.025	0.025	0.025	0.025
Sample Date:	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004
Volatile Organic Compounds - SW8760B (mg/Kg)					
1,1,1-Trichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.052	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	2.29	<0.025	<0.025	0.034	2.15
1,3-Dichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.209	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.026	14.5	45.9	0.029	5.77
Toluene	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.039	16.5	139	0.14	10.6
Vinyl Chloride	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %					
4-Bromofluorobenzene	122	101	106	97	109
Dibromofluoromethane	94	90	80	87	79
Toluene-d8	100	95	104	104	120

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-7
 PIT 3 FIXED-BASE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample Location: Sample Depth (ft): Sample Date:	Sample	Sample	Sample	Duplicate
	OU4-PIT3-SO-7 5 11/17/2004	OU4-PIT3-SO-17 8.5 11/18/2004	OU4-PIT3-SO-18 5 11/18/2004	OU4-PIT3-SO-18 5 11/18/2004
Reporting Limit (a)	88	NA	NA	NA
D2216 - Percent Solids (%)	--			
Percent Solids				
Volatile Organic Compounds - SW8260B (mg/Kg)				
1,1,1,2-Tetrachloroethane	<4.5	<0.0048	<6.1	<5.5
1,1,1-Trichloroethane	<4.5	<0.0048	<6.1	<5.5
1,1,2,2-Tetrachloroethane	<4.5	<0.0048	<6.1	<5.5
1,1,2-Trichloroethane	<4.5	<0.0048	<6.1	<5.5
1,1-Dichloroethane	<4.5	<0.0048	<6.1	<5.5
1,1-Dichloroethene	<4.5	<0.0048	<6.1	<5.5
1,1-Dichloropropene	<4.5	<0.0048	<6.1	<5.5
1,2,3-Trichlorobenzene	<4.5	<0.0048	<6.1	<5.5
1,2,3-Trichloropropane	<4.5	<0.0048	<6.1	<5.5
1,2,4-Trichlorobenzene	<4.5	<0.0048	<6.1	<5.5
1,2,4-Trimethylbenzene	<4.5	<0.0048	2.7 JQ	2.3 JQ
1,2-Dibromo-3-Chloropropane	<4.5	<0.0048	1.1 JQ	0.9 JQ
1,2-Dibromoethane	<4.5	<0.0048	<6.1	<5.5
1,2-Dichlorobenzene	32	0.0014 JQ	<6.1	<5.5
1,2-Dichloroethane	<4.5	<0.0048	410 J	230 J
1,2-Dichloropropane	<4.5	<0.0048	<6.1	<5.5
1,3,5-Trimethylbenzene	<4.5	<0.0048	<6.1	<5.5
1,3-Dichlorobenzene	<4.5	<0.0048	<6.1	<5.5
1,3-Dichloropropane	1.8 JQ	<0.0048	17	14
1,4-Dichlorobenzene	<4.5	<0.0048	<6.1	<5.5
2,2-Dichloropropane	20	0.0026 JB	260 J	150 J
2-Butanone	<4.5	<0.0048	<6.1	<5.5
2-Chlorotoluene	<8.9	0.0085 JQ	<12	<11
2-Hexanone	<8.9	<0.0048	<6.1	<5.5
4-Chlorotoluene	<8.9	<0.0096	<12	<11
4-Methyl-2-Pentanone	<4.5	<0.0048	<6.1	<5.5
Acetone	<8.9	<0.0096	<12	<11
Benzene	<8.9	0.043	<12	<11
Bromobenzene	<4.5	<0.0048	<6.1	<5.5
Bromochloromethane	<4.5	<0.0048	<6.1	<5.5
Bromodichloromethane	<4.5	<0.0048	<6.1	<5.5
Bromoform	<4.5	<0.0048	<6.1	<5.5
Bromomethane	<4.5	<0.0048	<6.1	<5.5

TABLE C-7
 PIT 3 FIXED-BASE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:		Sample		Sample		Sample		Duplicate	
	Sample Location:	Reporting Limit (a)	OU4-PIT3-SO-7	OU4-PIT3-SO-17	OU4-PIT3-SO-18	OU4-PIT3-SO-18	OU4-PIT3-SO-18	OU4-PIT3-SO-18	OU4-PIT3-SO-18	OU4-PIT3-SO-18
	Sample Depth (ft.):	Sample Date:	5	8.5	5	5	5	5	5	
Carbon Disulfide	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Carbon Tetrachloride	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Chlorobenzene	0.005	1/1/18/2004	<4.5	0.007	11	11	<6.1	<5.5	<6.1	<5.5
Chloroethane	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Chloroform	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Chloromethane	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
cis-1,2-Dichloroethene	0.005	1/1/18/2004	9.5	0.74	30	41	<6.1	<5.5	<6.1	<5.5
cis-1,3-Dichloropropene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Dibromochloromethane	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Dibromomethane	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Dichlorodifluoromethane	0.005	1/1/18/2004	<4.5	0.0008 JQ	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Ethylbenzene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Hexachlorobutadiene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Isopropylbenzene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
m,p-Xylenes	0.01	1/1/18/2004	<8.9	<0.0096	<12	<11	<6.1	<5.5	<6.1	<5.5
Methylene Chloride	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Naphthalene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
n-Butylbenzene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
n-Propylbenzene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
o-Xylene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
p-Isopropyltoluene	0.005	1/1/18/2004	<4.5	0.0017 JQ	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
sec-Butylbenzene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Styrene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
tert-Butylbenzene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Tetrachloroethylene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Toluene	0.005	1/1/18/2004	<4.5	<0.0048	1.7 JQ	<5.5	<6.1	<5.5	1.7 JQ	<5.5
trans-1,2-Dichloroethene	0.005	1/1/18/2004	<4.5	0.0017 JB	4 JQ	<5.5	<6.1	<5.5	4.9 JQ	<5.5
trans-1,3-Dichloropropene	0.005	1/1/18/2004	<4.5	0.0044 JQ	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Trichloroethene	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
Trichlorofluoromethane	0.005	1/1/18/2004	34	0.0052	860 J	<5.5	<6.1	<5.5	1200 J	<5.5
Vinyl Chloride	0.005	1/1/18/2004	<4.5	<0.0048	<6.1	<5.5	<6.1	<5.5	<6.1	<5.5
				0.35						

TABLE C-7

PIT 3 FIXED-BASE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Surrogate - %	Reporting Limit (a)	Sample Type:		Sample Depth (ft.)	Sample Date	Sample		Duplicate	
		OU4-PIT3-SO-7	OU4-PIT3-SO-17			OU4-PIT3-SO-18	OU4-PIT3-SO-18		
1,2-Dichloroethane-d4	--	5	8.5	5	11/17/2004	11/18/2004	103	5	96
Bromofluorobenzene	--	85	100	100	11/17/2004	11/18/2004	100	101	97
Toluene-D8	--	98	100	101	11/17/2004	11/18/2004	100	101	96

Notes:

- J Estimated; based on QC data
 JB Estimated; possibly biased high or false positive based on blank contamination
 JQ Estimated; Value is between reporting limit and detection limit
 (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-8
 PIT 3 FIXED-BASE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:		Sample		Duplicate	
	Sample Location:	Reporting	OU4-PT3-CS-5	OU4-PT3-CS-9	OU4-PT3-CS-9	OU4-PT3-CS-9
	Sample Depth (ft.):	Limit (a)	7	7.5	7.5	7.5
D2216 - Percent Solids (%)						
Percent Solids			88	89		89
Volatile Organic Compounds - SW8260B (mg/Kg)						
1,1,1,2-Tetrachloroethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,1,1-Trichloroethane	0.005		0.0022 JQ	0.0025 JQ	0.0025 JQ	0.0025 JQ
1,1,2,2-Tetrachloroethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,1,2-Trichloroethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,1-Dichloroethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,1-Dichloroethene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,1-Dichloropropene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2,3-Trichlorobenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2,3-Trichloropropane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2,4-Trichlorobenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2,4-Trimethylbenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2-Dibromo-3-Chloropropane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2-Dibromoethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2-Dichlorobenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2-Dichloroethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,2-Dichloropropane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,3,5-Trimethylbenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,3-Dichlorobenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,3-Dichloropropane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
1,4-Dichlorobenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
2,2-Dichloropropane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
2-Butanone	0.01		<0.0094	<0.0094	<0.0093	<0.0093
2-Chlorotoluene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
2-Hexanone	0.01		<0.0094	<0.0094	<0.0093	<0.0093
4-Chlorotoluene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
4-Methyl-2-Pentanone	0.005		<0.0094	<0.0094	<0.0093	<0.0093
Acetone	0.01		0.018 JQ	0.018 JQ	0.018 JQ	0.018 JQ
Benzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
Bromobenzene	0.005		<0.0047	<0.0045	<0.0047	<0.0047
Bromochloromethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
Bromodichloromethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047
Bromoform	0.005		<0.0047	<0.0045	<0.0047	<0.0047
Bromomethane	0.005		<0.0047	<0.0045	<0.0047	<0.0047

TABLE C-8
 PIT 3 FIXED-BASE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:	Sample	Sample	Duplicate
	Sample Location:	OU4-PIT3-CS-5	OU4-PIT3-CS-9	OU4-PIT3-CS-9
	Sample Depth (ft.): Sample Date:	7 11/19/2004	7.5 11/19/2004	7.5 11/19/2004
	Reporting Limit (g)			
Carbon Disulfide	0.005	0.0044 JQ	<0.0045	<0.0047
Carbon Tetrachloride	0.005	<0.0047	<0.0045	<0.0047
Chlorobenzene	0.005	0.0015 JQ	0.036	0.044
Chloroethane	0.005	<0.0047	<0.0045	<0.0047
Chloroform	0.005	<0.0047	<0.0045	<0.0047
Chloromethane	0.005	<0.0047	<0.0045	<0.0047
cis-1,2-Dichloroethene	0.005	1.7 J	0.011 J	0.017 J
cis-1,3-Dichloropropene	0.005	<0.0047	<0.0045	<0.0047
Dibromochloromethane	0.005	<0.0047	<0.0045	<0.0047
Dibromomethane	0.005	<0.0047	<0.0045	<0.0047
Dichlorodifluoromethane	0.005	0.00067 JQ	<0.0045	0.00074 JQ
Ethylbenzene	0.005	<0.0047	<0.0045	<0.0047
Hexachlorobutadiene	0.005	<0.0047	<0.0045	<0.0047
Isopropylbenzene	0.005	<0.0047	<0.0045	<0.0047
m,p-Xylenes	0.01	<0.0094	<0.009	<0.0093
Methylene Chloride	0.005	<0.0047	<0.0045	0.016
Naphthalene	0.005	<0.0047	<0.0045	<0.0047
n-Butylbenzene	0.005	<0.0047	<0.0045	<0.0047
n-Propylbenzene	0.005	<0.0047	<0.0045	<0.0047
o-Xylene	0.005	<0.0047	<0.0045	<0.0047
p-Isopropyltoluene	0.005	<0.0047	<0.0045	<0.0047
Sec-Butylbenzene	0.005	<0.0047	<0.0045	<0.0047
Styrene	0.005	<0.0047	<0.0045	<0.0047
tert-Butylbenzene	0.005	<0.0047	<0.0045	<0.0047
Tetrachloroethylene	0.005	<0.0047	<0.0045	<0.0047
Toluene	0.005	0.0012 JB	0.00074 JB	0.001 JB
trans-1,2-dichloroethene	0.005	0.015	<0.0045	<0.0047
trans-1,3-dichloropropene	0.005	<0.0047	<0.0045	<0.0047
Trichloroethene	0.005	0.027 J	0.004 JQ	0.0068 J
Trichlorofluoromethane	0.005	<0.0047	<0.0045	<0.0047
Vinyl Chloride	0.005	0.13 J	<0.0045	<0.0047

TABLE C-8
 PIT 3 FIXED-BASE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Surrogate - %	Reporting Limit (e)	Sample	Sample	Duplicate
		OU4-PIT3-CS-5	OU4-PIT3-CS-9	OU4-PIT3-CS-9
		7	7.5	7.5
		11/19/2004	11/19/2004	11/19/2004
1,2-Dichloroethane-d4	--	94	92	93
Bromofluorobenzene	--	94	94	94
Toluene-D8	--	98	96	97

Notes:

- J Estimated; based on QC data
- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-9

PIT 3 MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (g)	Sample 5	Sample 7	Sample 9	Sample 7	Sample 10	Sample 6
Sample Depth (ft.):	OU4-PIT3-SO-1		OU4-PIT3-SO-2	OU4-PIT3-SO-3	OU4-PIT3-SO-4	OU4-PIT3-SO-5	OU4-PIT3-SO-6	
Sample Date:	11/17/2004		11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004	11/17/2004
Volatile Organic Compounds - SW8260B (mg/kg)								
1,1,1-Trichloroethane	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	NA	0.025	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	<0.025	0.025	767	162	41.3	16.3	5.22	5.86
1,3-Dichlorobenzene	<0.025	0.025	469	400	59.6	20.7	<0.025	<0.025
1,4-Dichlorobenzene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	NA	0.025	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	NA	0.025	NA	NA	NA	NA	NA	NA
Chloroform	NA	0.025	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	2.35
m&p-Xylene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	NA	0.025	NA	NA	NA	NA	NA	NA
o-Xylene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	2500	0.025	25.3	16.5	461	21.1	31.5	31.5
Vinyl Chloride	<0.025	0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %								
4-Bromofluorobenzene	--	--	110	75	80	70	140	140
Dibromofluoromethane	--	--	109	80	96	93	91	91
Toluene-d8	--	--	85	80	92	95	98	98

TABLE C-9
 PIT 3 MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (b)	Sample	Sample	Sample	Sample
Sample Depth (ft.):	Sample Date:		OU4-PIT3-SO-7	OU4-PIT3-SO-8	OU4-PIT3-SO-9	OU4-PIT3-SO-10
			5	5	9	4
			11/17/2004	11/17/2004	11/18/2004	11/18/2004
Volatile Organic Compounds - SW-8260B (mg/Kg)						
I,1,1-Trichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	NA	NA	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	10.5	122	<0.025	<0.025	6.69
1,3-Dichlorobenzene	0.025	3.25	38.6	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	NA	NA	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	NA	NA	<0.025	<0.025	<0.025
Chloroform	0.025	NA	NA	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	5.01	35.4	<0.025	<0.025	25.2
Ethylbenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	0.025	NA	NA	<0.025	<0.025	<0.025
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	46.9	1760	<0.025	<0.025	17.6
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %						
4-Bromofluorobenzene	--	132	126	115	106	114
Dibromofluoromethane	--	87	84	97	88	95
Toluene-d8	--	98	98	94	98	100

TABLE C-9
 PIT 3 MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample	Sample	Sample	Sample	Sample
Sample Location:	OU4-PIT3-SO-12	OU4-PIT3-SO-13	OU4-PIT3-SO-14	OU4-PIT3-SO-15	OU4-PIT3-SO-16
Sample Depth (ft.):	3.5	8	3	2	5
Reporting Limit (a)	11/18/2004	11/18/2004	11/18/2004	11/18/2004	11/18/2004
Volatle Organic Compounds - SW8260B (mg/Kg)					
1,1,1-Trichloroethane	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	4.035	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.025	3.42	0.882	<0.025	0.386
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	0.025	5.63	1.19	<0.025	1.11
m&p-Xylene	0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	<0.025	<0.025	<0.025	<0.025
Toluene	0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	33.7	23.7	<0.025	<0.025
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %					
4-Bromofluorobenzene	--	114	114	117	117
Dibromofluoromethane	--	95	95	94	99
Toluene-d8	--	100	100	100	101

TABLE C-9
 PIT 3 MOBILE LABORATORY COMPARISON SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Sample	Sample	Sample	Sample	Sample
Sample Depth (ft):	Sample Date:	OU4-PTT3-SO-17	OU4-PTT3-SO-18	OU4-PTT3-SO-19	OU4-PTT3-SO-20	OU4-PTT3-SO-21
Reporting Limit (g)	Reporting Limit (g)	8.5	5	5	8.5	4.5
Sample Date:	Sample Date:	11/18/2004	11/18/2004	11/18/2004	11/18/2004	11/18/2004
Volatile Organic Compounds - SW8260B (mg/kg)						
1,1,1-Trichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	0.146	1.38	10.8	0.351	<0.025
1,3-Dichlorobenzene	0.025	<0.025	18.8	13	0.362	<0.025
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	0.361	53.9	2.21	1.83	0.486
Ethylbenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	<0.025	3110	12.3	<0.025	<0.025
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %						
4-Bromofluorobenzene	--	120	118	111	115	116
Dibromofluoromethane	--	94	93	96	101	110
Toluene-d8	--	100	100	91	100	96

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-10
 PIT 3 MOBILE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (g)	Sample	Sample	Sample	Sample	
			OU4-PIT3-CS-1	OU4-PIT3-CS-2	OU4-PIT3-CS-3	OU4-PIT3-CS-3R	OU4-PIT3-CS-4
Sample Depth (ft.):	Sample Date:		7	3.5	8	8	3
			11/19/2004	11/19/2004	11/19/2004	11/21/2004	11/19/2004
Volatile Organic Compounds - SW8260B (mg/Kg)							
1,1,1-Trichloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene		0.025	<0.0375	0.61	<0.025	0.061	<0.025
1,3-Dichlorobenzene		0.025	<0.0375	1.68	<0.025	<0.025	56.2
1,4-Dichlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene		0.025	0.178	<0.025	6.74	0.656	<0.025
m&p-Xylene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene		0.025	<0.0375	<0.025	<0.025	2.82	1080
Vinyl Chloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %							
4-Bromofluorobenzene		--	108	111	106	130	101
Dibromofluoromethane		--	91	116	88	89	119
Toluene-d8		--	101	92	98	109	98

TABLE C-10
 PIT 3 MOBILE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Location: Sample Depth (ft.): Sample Date:	Reporting Limit (a)	Sample	Sample	Sample	Sample	Sample
		OU4-PIT3-CS-4R	OU4-PIT3-CS-5	OU4-PIT3-CS-6	OU4-PIT3-CS-7	OU4-PIT3-CS-8
		4 11/21/2004	7 11/19/2004	3 11/19/2004	7 11/19/2004	3 11/19/2004
Volatile Organic Compounds - SW8260B (mg/kg)						
1,1,1-Trichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene	0.025	3.7	<0.025	<0.025	<0.025	<0.025
1,3-Dichlorobenzene	0.025	0.686	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene	0.025	59.8	<0.025	<0.025	<0.025	<0.025
Vinyl Chloride	0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %						
4-Bromofluorobenzene	--	122	92	103	106	117
Dibromofluoromethane	--	81	109	89	85	96
Toluene-d8	--	112	90	88	88	99

TABLE C-10
 PIT 3 MOBILE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	Sample	Sample	Sample	Sample	Sample
			OU4-PIT3-CS-9	OU4-PIT3-CS-10	OU4-PIT3-CS-11	OU4-PIT3-CS-12	OU4-PIT3-CS-13
Sample Depth (ft.):	Sample Date:		7	3.5	7.5	3.5	7.5
			11/19/2004	11/19/2004	11/19/2004	11/19/2004	11/19/2004
Volatile Organic Compounds - SW8260B (mg/Kg)							
1,1,1-Trichloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene		0.025	<0.025	0.237	<0.025	<0.025	<0.025
1,3-Dichlorobenzene		0.025	0.107	<0.025	<0.025	<0.025	<0.025
1,4-Dichlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Benzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethylbenzene		0.025	<0.025	<0.025	<0.025	<0.025	0.209
m&p-Xylene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Vinyl Chloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrogate - %							
4-Bromofluorobenzene		--	107	106	98	117	116
Dibromofluoromethane		--	96	88	84	83	84
Toluene-d8		--	96	98	93	89	94

TABLE C-10
 PIT 3 MOBILE LABORATORY CONFIRMATION SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

Sample Type:	Sample Location:	Reporting Limit (a)	OU 4 Defense Supply Center Richmond Richmond, Virginia				Sample
			OU4-PIT3-CS-14	OU4-PIT3-CS-15	OU4-PIT3-CS-15R	OU4-PIT3-CS-16	
Sample Depth (ft.):	Sample Date:		3.5	7.5	7.5	3	
			11/19/2004	11/19/2004	11/21/2004	11/19/2004	
Volatiles Organic Compounds - SW8260B (mg/Kg)							
1,1,1-Trichloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2,4-Trichlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,2-Dichlorobenzene		0.025	<0.025	0.343	0.956	5.55	2.91
1,3-Dichlorobenzene		0.025	<0.025	0.39	0.242	19.1	0.794
1,4-Dichlorobenzene		0.025	<0.025	<0.025	1.93	<0.025	5.39
Benzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Carbon Tetrachloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlorobenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroethane		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
cis-1,2-Dichloroethene		0.025	0.806	0.41	0.888	4.02	0.399
Ethylbenzene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
m&p-Xylene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Methylene Chloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
o-Xylene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Tetrachloroethene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Trichloroethene		0.025	<0.025	0.564	<0.025	<0.025	<0.025
Vinyl Chloride		0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Surrngate - %							
4-Bromofluorobenzene		--	119	109	128	123	121
Dibromofluoromethane		--	85	92	99	85	89
Toluene-d8		--	90	94	92	88	104

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-11
 INVESTIGATION DERIVED WASTE SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	Regulatory Criterion (mg/L)	Sample OU4-IDW-SO-1 11/19/2004	Sample OU4-IDW-SO-2 11/19/2004	Sample OU4-IDW-SO-3 11/19/2004
D2216 - Percent Solids (%)					
Percent Solids	--	--	87	89	87
Ignitability - Flashpoint (Closed Cup) - SW1010 (Deg F)					
Flash Point	65	<140	>140	>140	>140
Percent Free Liquid - SW9095A (%)					
Percent Free Liquid	--	--	<1	<1	<1
pH - SW9045C (pH Units)					
pH	--	≤ 2 or ≥ 12	4.39	4.32	4.09
Polychlorinated Biphenyls (PCBs) - SW8082 (mg/Kg)					
PCB-1016	0.033	--	<0.038	<0.037	<0.038
PCB-1221	0.033	--	<0.038	<0.037	<0.038
PCB-1232	0.033	--	<0.038	<0.037	<0.038
PCB-1242	0.033	--	<0.038	<0.037	<0.038
PCB-1248	0.033	--	<0.038	<0.037	<0.038
PCB-1254	0.033	--	<0.038	<0.037	<0.038
PCB-1260	0.033	--	<0.038	<0.037	<0.038
Surrogate - %					
Decachlorobiphenyl	--	--	85	77	74
Tetrachloro-m-xylene	--	--	68	47	108
Reactive Cyanide - SW Ch 7.3.4 (mg/Kg)					
Reactive Cyanide	1	250	<11	<1.1	<1.1
Reactive Sulfide - SW Ch 7.3.4 (mg/Kg)					
Reactive Sulfide	110	500	46 JQ	110 JQ	<110
TCLP Mercury - SW7470A (mg/L)					
Mercury	1	0.2	0.0211	<0.02	<0.02
TCLP Metals - SW6010B (mg/L)					
Arsenic	1	5	<1	<1	<1
Barium	1	100	0.19 JQ	0.19 JQ	0.12 JQ
Cadmium	1	1	0.0022 JQ	0.0024 JQ	<1
Chromium	1	5	<1	<1	<1
Copper	1	--	<1	<1	<1
Lead	1	5	<1	0.069 JQ	<1
Nickel	1	--	0.027 JQ	0.015 JQ	0.019 JQ
Selenium	1	1	<1	<1	<1

TABLE C-11
 INVESTIGATION DERIVED WASTE SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	Regulatory Criterion (mg/L)	Sample OU4-IDW-SO-1 11/19/2004	Sample OU4-IDW-SO-2 11/19/2004	Sample OU4-IDW-SO-3 11/19/2004
Silver		1	1	<1	<1	<1
Zinc		1	..	0.065 JQ	0.048 JQ	0.046 JQ
ICLP Semi-Volatile Organic Compounds - SW8270C (mg/L)						
1,4-Dichlorobenzene		0.1	75	<0.1	<0.1	0.013 JQ
2,4,5-Trichlorophenol		0.1	400	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol		0.1	2	<0.1	<0.1	<0.1
2,4-Dinitrotoluene		0.1	0.13	<0.1	<0.1	<0.1
2-Methylphenol		0.1	200	<0.1	<0.1	<0.1
3 & 4-Methylphenol		0.2	200	<0.2	<0.2	<0.2
Hexachlorobenzene		0.1	0.13	<0.1	<0.1	<0.1
Hexachlorobutadiene		0.1	0.5	<0.1	<0.1	<0.1
Hexachloroethane		0.1	3	<0.1	<0.1	<0.1
Nitrobenzene		0.1	2	<0.1	<0.1	<0.1
Pentachlorophenol		0.2	100	<0.1	<0.1	<0.1
Pyridine		0.1	5	<0.1	<0.1	<0.1
Surrogate - %						
2,4,6-Tribromophenol		59	59	67
2-Fluorobiphenyl		49	57	59
2-Fluorophenol		43	48	50
Nitrobenzene-d5		44	46	51
Phenol-d5		42	50	46
p-Terphenyl-d14		69	80	89
ICLP Volatile Organic Compounds - SW8260B (mg/L)						
1,1-Dichloroethene		0.05	0.7	<0.05	<0.05	<0.05
1,2-Dichloroethane		0.05	0.5	<0.05	<0.05	<0.05
2-Butanone		0.05	200	<0.5	<0.5	<0.5
Benzene		0.05	0.5	<0.05	<0.05	<0.05
Carbon Tetrachloride		0.05	0.5	<0.05	<0.05	<0.05
Chlorobenzene		0.05	100	<0.05	<0.05	<0.05
Chloroform		0.05	6	<0.05	<0.05	<0.05
Tetrachloroethylene		0.05	0.7	<0.05	<0.05	<0.05
Trichloroethene		0.05	0.5	0.056	<0.05	0.2
Vinyl Chloride		0.2	0.2	<0.02	<0.02	<0.02
Surrogate - %						
1,2-Dichloroethane-d4		104	101	100
4-Bromofluorobenzene		102	105	103
Toluene-D8		99	98	99

TABLE C-11
 INVESTIGATION DERIVED WASTE SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (g)	Regulatory Criterion (mg/L)	Sample	Sample	Sample
Sample Location:			OU4-IDW-SO-1	OU4-IDW-SO-2	OU4-IDW-SO-3
Sample Date:			11/19/2004	11/19/2004	11/19/2004
Total Organic Halides - EPA 9020B (mg/Kg)					
TOX, Total Organic Halogens	10	--	<37.5	<56.2	70.3
TPH DRO - SW8015M (mg/Kg)					
Diesel Range Organics (C10-C28)	10	--	44 JQ	29	230
Surrogate - %					
o-Terphenyl	--	--	73	101	72
TPH GRO - SW8015M (mg/Kg)					
Gasoline Range Organics (C6-C10)	10	--	3.4 JB	1.1 JB	16
Surrogate - %					
Isopropyltoluene	--	--	119	118	114

TABLE C-II
 INVESTIGATION DERIVED WASTE SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Sample Location:	Reporting Limit (a)	Regulatory Criterion (mg/L)	Sample OU4-IDW-SO-4 11/19/2004	Sample OU4-IDW-SO-5 11/19/2004	Sample OU4-IDW-SO-6 11/22/2004	Sample OU4-IDW-SO-7 11/22/2004
D2216 - Percent Solids (%)							
Percent Solids		--	--	87	84	89	87
Ignitability - Flashpoint (Closed Cup) - SW1010 (Deg F)							
Flash Point		65	<140	>140	>140	>140	>140
Percent Free Liquid - SW9095A (%)							
Percent Free Liquid		--	--	<1	<1	<1	<1
pH - SW9045C (pH Units)							
pH		--	≤ 2 or ≥ 12	4.27	4.22	5.01	4.2
Polychlorinated Biphenyls (PCBs) - SW8082 (mg/Kg)							
PCB-1016		0.033	--	<0.038	<0.04	<0.037	<0.038
PCB-1221		0.033	--	<0.038	<0.04	<0.037	<0.038
PCB-1232		0.033	--	<0.038	<0.04	<0.037	<0.038
PCB-1242		0.033	--	<0.038	<0.04	<0.037	<0.038
PCB-1248		0.033	--	<0.038	<0.04	<0.037	<0.038
PCB-1254		0.033	--	<0.038	<0.04	<0.037	<0.038
PCB-1260		0.033	--	<0.038	<0.04	<0.037	<0.038
Surrogate - %							
Decachlorobiphenyl		--	--	84	80	72	71
Tetrachloro-m-xylene		--	--	99	86	107	107
Reactive Cyanide - SW Ch 7.3.4 (mg/Kg)							
Reactive Cyanide		1	250	<1	<1.2	<1.1	<1.1
Reactive Sulfide - SW Ch 7.3.4 (mg/Kg)							
Reactive Sulfide		110	500	<110	48 JQ	160	92 JQ
TCLP Mercury - SW7470A (mg/L)							
Mercury		1	0.2	<0.02	<0.02	<0.02	<0.02
TCLP Metals - SW6010B (mg/L)							
Arsenic		1	5	<1	<1	<1	<1
Barium		1	100	0.13 JQ	0.17 JQ	0.087 JQ	0.15 JQ
Cadmium		1	1	<1	<1	0.0026 JQ	<1
Chromium		1	5	<1	<1	<1	<1
Copper		1	--	<1	<1	<1	<1
Lead		1	5	<1	<1	<1	<1
Nickel		1	--	0.032 JQ	0.021 JQ	0.021 JQ	0.026 JQ
Selenium		1	1	<1	<1	<1	<1

TABLE C-11
 INVESTIGATION DERIVED WASTE SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Location: Sample Date	Reporting Limit (a)	Regulatory Criterion (mg/L)	Sample OU4-IDW-SO-4 11/19/2004	Sample OU4-IDW-SO-5 11/19/2004	Sample OU4-IDW-SO-6 11/22/2004	Sample OU4-IDW-SO-7 11/22/2004
Silver	1	1	<1	<1	<1	<1
Zinc	1	--	0.075 JQ	0.13 JQ	0.13 JQ	0.078 JQ
ICLP Semi-Volatile Organic Compounds - SW8270C (mg/L)						
1,4-Dichlorobenzene	0.1	7.5	0.087 JQ	0.098 JQ	<0.1	0.16
2,4,5-Trichlorophenol	0.1	400	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	0.1	2	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrofluorene	0.1	0.13	<0.1	<0.1	<0.1	<0.1
2-Methylphenol	0.1	200	<0.1	<0.1	<0.1	<0.1
3 & 4-Methylphenol	0.2	200	<0.2	<0.2	<0.2	<0.2
Hexachlorobenzene	0.1	0.13	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	0.1	0.5	<0.1	<0.1	<0.1	<0.1
Hexachloroethane	0.1	3	<0.1	<0.1	<0.1	<0.1
Nitrobenzene	0.1	2	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.2	100	<0.2	<0.2	<0.2	<0.2
Pyridine	0.1	5	<0.1	<0.1	<0.1	<0.1
Surrogate - %						
2,4,6-Tribromophenol	--	--	69	74	75	70
2-Fluorobiphenyl	--	--	67	70	68	60
2-Fluorophenol	--	--	50	61	59	53
Nitrobenzene-d5	--	--	54	58	56	52
Phenol-d5	--	--	49	58	55	47
p-Terphenyl-d14	--	--	91	85	97	92
ICLP Volatile Organic Compounds - SW8260B (mg/L)						
1,1-Dichloroethene	0.05	0.7	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05	0.5	<0.05	<0.05	<0.05	<0.05
2-Butanone	0.05	200	<0.5	<0.5	<0.5	<0.5
Benzene	0.05	0.5	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	0.5	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05	100	<0.05	0.033 JQ	<0.05	0.035 JQ
Chloroform	0.05	6	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05	0.7	0.14	0.12	0.26	0.049 JQ
Trichloroethene	0.05	0.5	1.5	3.1	0.16	5.5
Vinyl Chloride	0.2	0.2	<0.02	<0.02	<0.02	<0.02
Surrogate - %						
1,2-Dichloroethane-d4	--	--	106	105	107	104
4-Bromofluorobenzene	--	--	100	103	102	99
Toluene-D8	--	--	102	100	100	100

TABLE C-11
 INVESTIGATION DERIVED WASTE SAMPLES - SOIL
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	Regulatory Criterion (mg/L)	Sample OU4-IDW-SO-4 11/19/2004	Sample OU4-IDW-SO-5 11/19/2004	Sample OU4-IDW-SO-6 11/22/2004	Sample OU4-IDW-SO-7 11/22/2004
Total Organic Halides - EPA 9020B (mg/Kg)						
TOX, Total Organic Halogens	10	--	111	88.2	28	48.2
TPH DRO - SW8015M (mg/Kg)						
Diesel Range Organics (C10-C28)	10	--	890	430	780	69
Surrogate - % o-Terphenyl	--	--	91	99	115	104
TPH GRO - SW8015M (mg/Kg)						
Gasoline Range Organics (C6-C10)	10	--	16	71	34	170
Surrogate - % Isopropyltoluene	--	--	127	126	124	123

Notes:

- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

TCLP Toxicity Characteristic Leaching Procedure

PREPARED/DATE: RMB 1/13/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-12
 DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	Equipment Blank OU4EB-1 11/12/2004	Equipment Blank OU4-PIT3-SO-EB1 11/17/2004	Equipment Blank OU4-PIT3-SO-EB2 11/18/2004	Trip Blank TB-11-12-04 11/12/2004	Trip Blank TB-11-17-04 11/17/2004
Semi-Volatile Organic Compounds - SW8270C (ug/L)						
1,2,4-Trichlorobenzene	10	<10	NA	NA	NA	NA
1,2-Dichlorobenzene	10	<10	NA	NA	NA	NA
1,3-Dichlorobenzene	10	<10	NA	NA	NA	NA
1,4-Dichlorobenzene	10	<10	NA	NA	NA	NA
2,4,5-Trichlorophenol	10	<10	NA	NA	NA	NA
2,4,6-Trichlorophenol	10	<10	NA	NA	NA	NA
2,4-Dichlorophenol	10	<10	NA	NA	NA	NA
2,4-Dimethylphenol	10	<10	NA	NA	NA	NA
2,4-Dinitrophenol	20	<20	NA	NA	NA	NA
2,4-Dinitrotoluene	10	<10	NA	NA	NA	NA
2,6-Dinitrotoluene	10	<10	NA	NA	NA	NA
2-Chloronaphthalene	10	<10	NA	NA	NA	NA
2-Chlorophenol	10	<10	NA	NA	NA	NA
2-Methylnaphthalene	10	<10	NA	NA	NA	NA
2-Methylphenol	10	<10	NA	NA	NA	NA
2-Nitroaniline	20	<20	NA	NA	NA	NA
2-Nitrophenol	10	<10	NA	NA	NA	NA
3&4-Methylphenol	20	<20	NA	NA	NA	NA
3,3-Dichlorobenzidine	20	<20	NA	NA	NA	NA
3-Nitroaniline	20	<20	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	50	<50	NA	NA	NA	NA
4-Bromophenyl-phenylether	10	<10	NA	NA	NA	NA
4-Chloro-3-methylphenol	10	<10	NA	NA	NA	NA
4-Chloroaniline	10	<10	NA	NA	NA	NA
4-Chlorophenyl-phenylether	10	<10	NA	NA	NA	NA
4-Nitroaniline	20	<20	NA	NA	NA	NA
4-Nitrophenol	10	<10	NA	NA	NA	NA
Acenaphthene	10	<10	NA	NA	NA	NA
Acenaphthylene	10	<10	NA	NA	NA	NA
Anthracene	10	<10	NA	NA	NA	NA
Benzo(a)anthracene	10	<10	NA	NA	NA	NA
Benzo(a)pyrene	10	<10	NA	NA	NA	NA
Benzo(b)fluoranthene	10	<10	NA	NA	NA	NA
Benzo(g,h,i)perylene	10	<10	NA	NA	NA	NA
Benzo(k)fluoranthene	10	<10	NA	NA	NA	NA
Benzoic acid	20	<20	NA	NA	NA	NA
Benzyl alcohol	10	<10	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	10	<10	NA	NA	NA	NA
bis(2-chloroethyl)ether	10	<10	NA	NA	NA	NA
bis(2-chloroisopropyl)ether	10	<10	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	10	<10	NA	NA	NA	NA
Butylbenzylphthalate	10	<10	NA	NA	NA	NA
Chrysene	10	<10	NA	NA	NA	NA

TABLE C-12
 DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample ID:	Reporting Limit (a)	Equipment Blank OU4EB-1 11/12/2004	Equipment Blank OU4-PIT3-SO-EB1 11/17/2004	Equipment Blank OU4-PIT3-SO-EB2 11/18/2004	Trip Blank TB-11-12-04 11/12/2004	Trip Blank TB-11-17-04 11/17/2004
Dibenz(a,h)anthracene	10	<10	NA	NA	NA	NA
Dibenzofuran	10	<10	NA	NA	NA	NA
Diethylphthalate	10	<10	NA	NA	NA	NA
Dimethylphthalate	10	<10	NA	NA	NA	NA
di-n-Butylphthalate	10	<10	NA	NA	NA	NA
di-n-Octylphthalate	10	<10	NA	NA	NA	NA
Fluoranthene	10	<10	NA	NA	NA	NA
Fluorene	10	<10	NA	NA	NA	NA
Hexachlorobenzene	10	<10	NA	NA	NA	NA
Hexachlorobutadiene	10	<10	NA	NA	NA	NA
Hexachlorocyclopentadiene	10	<10	NA	NA	NA	NA
Hexachloroethane	10	<10	NA	NA	NA	NA
Hexachloropropene	10	<10	NA	NA	NA	NA
Indeno(1,2,3-c,d)pyrene	10	<10	NA	NA	NA	NA
Isophorone	10	<10	NA	NA	NA	NA
Naphthalene	10	<10	NA	NA	NA	NA
Nitrobenzene	10	<10	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	10	<10	NA	NA	NA	NA
N-Nitrosodiphenylamine	20	<20	NA	NA	NA	NA
Pentaachlorophenol	10	<10	NA	NA	NA	NA
Phenanthrene	10	<10	NA	NA	NA	NA
Phenol	10	<10	NA	NA	NA	NA
Pyrene	10	<10	NA	NA	NA	NA
Sarregate - %	--	66	NA	NA	NA	NA
2,4,6-Tribromophenol	--	68	NA	NA	NA	NA
2-Fluorobiphenyl	--	62	NA	NA	NA	NA
2-Fluorophenol	--	57	NA	NA	NA	NA
Nitrobenzene-d5	--	59	NA	NA	NA	NA
Phenol-d5	--	67	NA	NA	NA	NA
p-Terphenyl-d14	--					
Volatile Organic Compounds - SW 846.8260B ug/L						
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	1	<1	<1	<1	<1	<1
1,1-Dichloroethane	1	<1	<1	<1	<1	<1
1,1-Dichloroethene	1	<1	<1	<1	<1	<1
1,1-Dichloropropene	1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	1	<1	<1	<1	<1	<1

TABLE C-12

DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
APPENDIX C
PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
Defense Supply Center Richmond
Richmond, Virginia

Sample Type:	Reporting Limit (g)	Equipment Blank OJ4EB-1 11/12/2004	Equipment Blank OJ4-PIT3-SO-EB1 11/17/2004	Equipment Blank OJ4-PIT3-SO-EB2 11/18/2004	Trp Blank TB-11-12-04 11/12/2004	Trp Blank TB-11-17-04 11/17/2004
1,2,4-Trichlorobenzene	1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	1	<1	<1	<1	<1	<1
1,2-Dibromo-3-Chloropropane	1	<1	<1	<1	<1	<1
1,2-Dibromoethane	1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	<1	<1	<1
1,2-Dichloroethane	1	<1	<1	<1	<1	<1
1,2-Dichloropropane	1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	1	<1	<1	<1	<1	<1
1,3-Dichloropropane	1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	1	<1	<1	<1	<1	<1
2,2-Dichloropropane	1	<1	<1	<1	<1	<1
2-Butanone	10	<10	<10	<10	<10	0.39 JQ
2-Chlorotoluene	1	<1	<1	<1	<1	<10
2-Hexanone	10	<10	<10	<10	<10	<10
4-Chlorotoluene	1	<1	<1	<1	<1	<1
4-Methyl-2-Pentanone	10	<10	<10	<10	<10	<10
Acetone	1	3.3 JQ	<10	1.1 JB	<10	<10
Benzene	1	<1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1	<1
Bromochloromethane	1	<1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1	<1
Bromomethane	1	<1	<1	<1	<1	<1
Carbon Disulfide	1	<1	<1	<1	<1	<1
Carbon Tetrachloride	1	<1	<1	<1	<1	<1
Chlorobenzene	1	<1	<1	<1	<1	<1
Chloroethane	1	<1	<1	<1	<1	<1
Chloroform	1	1.6	0.67 JQ	1.2	<1	<1
Chloromethane	1	<1	<1	0.35 JQ	<1	<1
cis-1,2-Dichloroethane	1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	1	<1	<1	<1	<1	<1
Dibromochloromethane	1	<1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1	<1
Ethylbenzene	1	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	<1	<1	<1	<1	<1
Isopropylbenzene	1	<1	<1	<1	<1	<1
m,p-Xylenes	2	<2	<2	<2	<2	<2
Methylene Chloride	1	<1	<1	<1	<1	0.65 JQ
Naphthalene	1	<1	<1	<1	<1	<1
n-Butylbenzene	1	<1	<1	<1	<1	<1
n-Propylbenzene	1	<1	<1	<1	<1	<1

TABLE C-12
 DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	Trip Blank TB-11-18-04 11/18/2004	Trip Blank TB-11-19-04 11/19/2004	Trip Blank TB-11-19-04 (2) 11/19/2004	Trip Blank TB-11-20-04 11/20/2004	Trip Blank TB-11-22-04 11/22/2004
Semi-Volatile Organic Compounds - SW8270C (ug/L)						
1,2,4-Trichlorobenzene	10	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	10	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	10	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	10	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	10	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	10	NA	NA	NA	NA	NA
2,4-Dichlorophenol	10	NA	NA	NA	NA	NA
2,4-Dimethylphenol	10	NA	NA	NA	NA	NA
2,4-Dinitrophenol	20	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	10	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	10	NA	NA	NA	NA	NA
2-Chloronaphthalene	10	NA	NA	NA	NA	NA
2-Chlorophenol	10	NA	NA	NA	NA	NA
2-Methylnaphthalene	10	NA	NA	NA	NA	NA
2-Methylphenol	10	NA	NA	NA	NA	NA
2-Nitroaniline	20	NA	NA	NA	NA	NA
2-Nitrophenol	10	NA	NA	NA	NA	NA
3&4-Methylphenol	20	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	20	NA	NA	NA	NA	NA
3-Nitroaniline	20	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	50	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	10	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	10	NA	NA	NA	NA	NA
4-Chloroaniline	10	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	10	NA	NA	NA	NA	NA
4-Nitroaniline	20	NA	NA	NA	NA	NA
4-Nitrophenol	10	NA	NA	NA	NA	NA
Acenaphthene	10	NA	NA	NA	NA	NA
Acenaphthylene	10	NA	NA	NA	NA	NA
Anthracene	10	NA	NA	NA	NA	NA
Benzo(a)anthracene	10	NA	NA	NA	NA	NA
Benzo(a)pyrene	10	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	10	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	10	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	10	NA	NA	NA	NA	NA
Benzoic acid	20	NA	NA	NA	NA	NA
Benzyl alcohol	10	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)acethane	10	NA	NA	NA	NA	NA
bis(2-chloroethyl)ether	10	NA	NA	NA	NA	NA
bis(2-chloroisopropyl)ether	10	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	10	NA	NA	NA	NA	NA
Burylbenzylphthalate	10	NA	NA	NA	NA	NA
Chrysene	10	NA	NA	NA	NA	NA

TABLE C-12
 DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type: Sample ID: Sample Date:	Reporting Limit (g)	Trip Blank TB-11-18-04 11/18/2004	Trip Blank TB-11-19-04 11/19/2004	Trip Blank TB-11-19-04 (2) 11/19/2004	Trip Blank TB-11-20-04 11/20/2004	Trip Blank TB-11-22-04 11/22/2004
Dibenz(a,h)anthracene	10	NA	NA	NA	NA	NA
Dibenzofuran	10	NA	NA	NA	NA	NA
Diethylphthalate	10	NA	NA	NA	NA	NA
Dimethylphthalate	10	NA	NA	NA	NA	NA
di-n-Butylphthalate	10	NA	NA	NA	NA	NA
di-n-Octylphthalate	10	NA	NA	NA	NA	NA
Fluoranthene	10	NA	NA	NA	NA	NA
Fluorene	10	NA	NA	NA	NA	NA
Hexachlorobenzene	10	NA	NA	NA	NA	NA
Hexachlorobutadiene	10	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	10	NA	NA	NA	NA	NA
Hexachloroethane	10	NA	NA	NA	NA	NA
Hexachloropropene	10	NA	NA	NA	NA	NA
Indeno(1,2,3-c,d)pyrene	10	NA	NA	NA	NA	NA
Isophorone	10	NA	NA	NA	NA	NA
Naphthalene	10	NA	NA	NA	NA	NA
Nitrobenzene	10	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	10	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	10	NA	NA	NA	NA	NA
Pentachlorophenol	20	NA	NA	NA	NA	NA
Phenanthrene	10	NA	NA	NA	NA	NA
Phenol	10	NA	NA	NA	NA	NA
Pyrene	10	NA	NA	NA	NA	NA
Surrogate - %	--	NA	NA	NA	NA	NA
2,4,6-Tribromophenol	--	NA	NA	NA	NA	NA
2-Fluorobiphenyl	--	NA	NA	NA	NA	NA
2-Fluorophenol	--	NA	NA	NA	NA	NA
Nitrobenzene-d5	--	NA	NA	NA	NA	NA
Phenol-d5	--	NA	NA	NA	NA	NA
p-Terphenyl-d14	--	NA	NA	NA	NA	NA
Volatle Organic Compounds - SW 846.8260B ug/L						
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	1	<1	<1	<1	<1	<1
1,1-Dichloroethane	1	<1	<1	<1	<1	<1
1,1-Dichloroethene	1	<1	<1	<1	<1	<1
1,1-Dichloropropene	1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	1	<1	<1	<1	<1	<1

TABLE C-12
 DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	Trip Blank TB-11-18-04 11/18/2004	Trip Blank TB-11-19-04 11/19/2004	Trip Blank TB-11-19-04 (2) 11/19/2004	Trip Blank TB-11-20-04 11/20/2004	Trip Blank TB-11-22-04 11/22/2004
1,2,4-Trichlorobenzene	1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	1	<1	<1	<1	<1	<1
1,2-Dibromo-3-Chloropropane	1	<1	<1	<1	<1	<1
1,2-Dibromoethane	1	<1	<1	<1	<1	<1
1,2-Dichloroethane	1	<1	<1	<1	<1	<1
1,2-Dichloropropane	1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	1	<1	<1	<1	<1	<1
1,3-Dichloropropane	1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	1	<1	<1	<1	<1	<1
2,2-Dichloropropane	1	<1	<1	<1	<1	<1
2-Butanone	10	<10	<10	<10	<10	<10
2-Chlorotoluene	1	<1	<1	<1	<1	<1
2-Hexanone	10	<10	<10	<10	<10	<10
4-Chlorotoluene	1	<1	<1	<1	<1	<1
4-Methyl-2-Pentanone	10	<10	<10	<10	<10	<10
Acetone	1	<1	<1	<1	<1	<1
Benzene	1	<1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1	<1
Bromochloromethane	1	<1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1	<1
Bromomethane	1	<1	<1	<1	<1	<1
Carbon Disulfide	1	<1	<1	<1	<1	<1
Carbon Tetrachloride	1	<1	<1	<1	<1	<1
Chlorobenzene	1	<1	<1	<1	<1	<1
Chloroethane	1	<1	<1	<1	<1	<1
Chloroform	1	<1	<1	<1	<1	<1
Chloromethane	1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	1	<1	<1	<1	<1	<1
Dibromochloromethane	1	<1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1	<1
Ethylbenzene	1	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	<1	<1	<1	<1	<1
Isopropylbenzene	1	<1	<1	<1	<1	<1
m,p-Xylenes	2	<2	<2	<2	<2	<2
Methylene Chloride	1	<1	<1	<1	<1	<1
Naphthalene	1	<1	<1	<1	<1	<1
n-Butylbenzene	1	<1	<1	<1	<1	<1
n-Propylbenzene	1	<1	<1	<1	<1	<1

TABLE C-12
 DATA SUMMARY TABLE FOR FIELD QUALITY CONTROL SAMPLES
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

Sample Type:	Reporting Limit (a)	Trip Blank TB 11-18-04 11/18/2004	Trip Blank TB 11-19-04 11/19/2004	Trip Blank TB 11-19-04 (2) 11/19/2004	Trip Blank TB 11-20-04 11/20/2004	Trip Blank TB 11-22-04 11/22/2004
o-Xylen	1	<1	<1	<1	<1	<1
p-Isopropyltoluene	1	<1	<1	<1	<1	<1
sec-Butylbenzene	1	<1	<1	<1	<1	<1
Styrene	1	<1	<1	<1	<1	<1
tert-Butylbenzene	1	<1	<1	<1	<1	<1
Tetrachlorobylene	1	<1	<1	<1	<1	<1
Toluene	1	1.3	0.4 JQ	0.53 JQ	<1	<1
trans-1,2-Dichloroethene	1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	1	<1	<1	<1	<1	<1
Trichloroethene	1	<1	<1	<1	<1	<1
Trichlorofluoromethane	1	<1	<1	<1	<1	<1
Vinyl Chloride	1	<1	<1	<1	<1	<1
Surrogate - %						
1,2-Dichloroethane-d4	--	108	110	112	116	117
Bromofluorobenzene	--	89	87	91	91	86
Toluene-D8	--	110	105	105	111	110

Notes:

- JB Estimated; possibly biased high or false positive based on blank contamination
- JQ Estimated; Value is between reporting limit and detection limit
- NA Not Analyzed
- (a) Reporting limits presented are the best that can be achieved under normal operating procedures with the method-required sample volume extracted and analyzed. Sample reporting limits may vary due to sample volume/sample weight extracted and/or sample dilutions.

PREPARED/DATE: RMB 1/19/05
 CHECKED/DATE: JAH 1/19/05

TABLE C-13
 COMPARISON OF FIXED-BASE RESULTS TO MOBILE LABORATORY RESULTS - PIT 1
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:	Sample	Sample	RPD
	Laboratory:	Fixed-Base	Orsite	
	Sample Location:	OU4PIT-1-SO-3	OU4PIT-1-SO-3	OU4PIT-1-SO-3
	Sample Depth (ft.):	4.0'	4.0'	
	Sample Date:	11/17/2004	11/17/2004	
<u>Volatile Organic Compounds - SW846 8260B mg/kg</u>				
1,1,1-Trichloroethane		11	<0.025	
1,1-Dichloroethane		1.3 JQ	<0.025	
1,1-Dichloroethene		<5.7	<0.025	
1,2,4-Trichlorobenzene		1.2 JQ	NA	
1,2-Dichlorobenzene		0.98 JQ	<0.025	
1,3-Dichlorobenzene		<5.7	5.08	
1,4-Dichlorobenzene		<5.7	<0.025	
Benzene		<5.7	<0.025	
Chlorobenzene		<5.7	<0.025	
cis-1,2-Dichloroethene		3.3 JQ	<0.025	
Ethylbenzene		<5.7	<0.025	
m,p-Xylene		<5.7	<0.025	
o-Xylene		<5.7	<0.025	
Tetrachloroethylene		400	1.93	198.1
Toluene		1.1 JQ	<0.025	
Trichloroethene		41	1.6	185.0
Vinyl Chloride		<5.7	<0.025	

TABLE C-13
 COMPARISON OF FIXED-BASE RESULTS TO MOBILE LABORATORY RESULTS - PIT 1
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type: Sample		Sample		Sample		Sample
	Fixed-Base	Onsite	Fixed-Base	Onsite	Fixed-Base	Onsite	
Laboratory:	OU4PIT-ISO-12	OU4PIT-ISO-12	OU4PIT-ISO-12	OU4PIT-ISO-12	OU4PIT-ISO-19	OU4PIT-ISO-19	OU4PIT-ISO-19
Sample Location:	7.0'	7.0'	3'	3'			
Sample Depth (ft.):							
Sample Date:	11/19/2004	11/19/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	RPD
Volatile Organic Compounds - SW846 §260B mg/kg							
1,1,1-Trichloroethane	0.0026	<0.025	JQ	<0.0047	<0.025	<0.025	
1,1-Dichloroethane	0.0018	<0.025	JQ	0.083	<0.025	<0.025	
1,1-Dichloroethene	<0.0048	<0.025		0.011	<0.025	<0.025	
1,2,4-Trichlorobenzene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
1,2-Dichlorobenzene	0.0022	<0.025	JQ	<0.0047	<0.025	<0.025	
1,3-Dichlorobenzene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
1,4-Dichlorobenzene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
Benzene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
Chlorobenzene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
cis-1,2-Dichloroethene	0.031	<0.025		0.24	0.028	0.028	158.2
Ethylbenzene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
m,p-Xylene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
o-Xylene	<0.0048	<0.025		<0.0047	<0.025	<0.025	
Tetrachloroethylene	0.0084	<0.025		0.0086	<0.025	<0.025	
Toluene	<0.0048	<0.025		0.00079	<0.025	<0.025	
Trichloroethene	0.0058	<0.025		0.026	<0.025	<0.025	
Vinyl Chloride	<0.0048	<0.025		<0.0047	<0.025	<0.025	

TABLE C-13
 COMPARISON OF FIXED-BASE RESULTS TO MOBILE LABORATORY RESULTS - PIT 1
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type: Sample		Sample		Sample		Sample
	Fixed-Base	Onsite	Fixed-Base	Onsite	Fixed-Base	Onsite	
Laboratory:	OU4PITI-CS-8	OU4PITI-CS-8	OU4PITI-CS-8	OU4PITI-CS-8	OU4PITI-CS-15	OU4PITI-CS-15	OU4PITI-CS-15
Sample Location:	4'	4'	4'	8'	8'	8'	8'
Sample Depth (ft.):							
Sample Date:	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	11/20/2004	RPD
Volatile Organic Compounds - SW846 8260B mg/kg							
1,1,1-Trichloroethane	<0.0045	<0.025	0.024	<0.025	<0.025	<0.025	
1,1-Dichloroethane	0.0025 JQ	<0.025	0.018	<0.025	<0.025	<0.025	
1,1-Dichloroethene	<0.0045	<0.025	0.0018 JQ	<0.025	<0.025	<0.025	
1,2,4-Trichlorobenzene	<0.0045	<0.025	0.0024 JQ	<0.025	<0.025	<0.025	
1,2-Dichlorobenzene	0.0052 JQ	<0.025	0.14	0.034	0.034	0.034	121.8
1,3-Dichlorobenzene	<0.0045	<0.025	0.0013 JQ	<0.025	<0.025	<0.025	
1,4-Dichlorobenzene	0.00097 JB	<0.025	0.016	<0.025	<0.025	<0.025	
Benzene	<0.0045	<0.025	<0.0045	<0.025	<0.025	<0.025	
Chlorobenzene	<0.0045	<0.025	<0.0045	<0.025	<0.025	<0.025	
cis-1,2-Dichloroethene	0.052	<0.025	0.015	<0.025	<0.025	<0.025	
Ethylbenzene	<0.0045	<0.025	0.0035 JQ	<0.025	<0.025	<0.025	
m,p-Xylene	0.0023 JQ	<0.025	0.038	<0.025	<0.025	<0.025	
o-Xylene	<0.0045	<0.025	0.0023 JQ	<0.025	<0.025	<0.025	
Tetrachloroethylenes	0.013	<0.025	0.14	<0.025	0.029	0.029	131.4
Toluene	0.00067 JB	<0.025	0.0028 JQ	<0.025	<0.025	<0.025	
Trichloroethene	0.0044 JQ	<0.025	0.31 JQ	<0.025	0.14	0.14	75.6
Vinyl Chloride	<0.0045	<0.025	<0.0045	<0.025	<0.025	<0.025	

Notes:
 J Estimated; based on QC data
 JB Estimated; possibly biased high or false
 JQ positive based on blank contamination
 Estimated; Value is between reporting limit and detection limit
 RPD Relative Percent Difference

PREPARED/DATE: DH 1/10/05
 CHECKED/DATE: JAH 1/13/05

TABLE C-14
 COMPARISON OF FIXED-BASE RESULTS TO MOBILE LABORATORY RESULTS - PIT 3
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:	Sample Laboratory:	Sample Location:	Sample Depth (ft.):	Sample Date:	Sample Onsite	
	Fixed-Base	OU4PIT-3-SO-7	OU4PIT-3-SO-7	5.0'	11/17/2004	OU4PIT-3-SO-7	OU4PIT-3-SO-7
							RPD
Volatile Organic Compounds - SW846 8160B mg/kg							
1,1,1-Trichloroethane				<4.5		<0.025	
1,1-Dichloroethane				<4.5		<0.025	
1,1-Dichloroethene				<4.5		<0.025	
1,2,4-Trichlorobenzene				32		NA	
1,2-Dichlorobenzene				1.8	JQ	10.5	101.2
1,3-Dichlorobenzene				20		3.25	57.4
1,4-Dichlorobenzene				<4.5		<0.025	
Benzene				<4.5		<0.025	
Chlorobenzene				9.5		5.01	
cis-1,2-Dichloroethene				<4.5		<0.025	
Ethylbenzene				<4.5		<0.025	
m,p-Xylene				<4.5		<0.025	
o-Xylene				<4.5		<0.025	
Tetrachloroethylene				<4.5		<0.025	
Toluene				<4.5		<0.025	
Trichloroethene				54		46.9	14.1
Vinyl Chloride				<4.5		<0.025	

TABLE C-14

COMPARISON OF FIXED-BASE RESULTS TO MOBILE LABORATORY RESULTS - PIT 3
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT

OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:	Sample Laboratory:	Sample Onsite:	Sample Date:	RPD
	Fixed-Base	OU4PIT-3CS-5	OU4PIT-3CS-5	11/19/2004	
	7.0'	7.0'	7.0'		
				11/19/2004	
Volatile Organic Compounds - SW846 8260B mg/kg					
1,1,1-Trichloroethane	0.0022	JQ	<0.025		
1,1-Dichloroethane	<0.0047		<0.025		
1,1-Dichloroethene	<0.0047		<0.025		
1,2,4-Trichlorobenzene	<0.0047		<0.025		
1,2-Dichlorobenzene	<0.0047		<0.025		
1,3-Dichlorobenzene	<0.0047		<0.025		
1,4-Dichlorobenzene	<0.0047		<0.025		
Benzene	<0.0047		<0.025		
Chlorobenzene	0.0015		<0.025		
cis-1,2-Dichloroethene	1.7	J	<0.025		
Ethylbenzene	<0.0047		<0.025		
m,p-Xylene	<0.0047		<0.025		
o-Xylene	<0.0047		<0.025		
Tetrachloroethylene	<0.0047		<0.025		
Toluene	0.0012	JB	<0.025		
Trichloroethene	0.027	J	<0.025		
Vinyl Chloride	<0.0047		<0.025		

TABLE C-14
 COMPARISON OF FIXED-BASE RESULTS TO MOBILE LABORATORY RESULTS - PIT 3
 APPENDIX C
 PRINCIPAL THREAT SOURCE MATERIAL REMOVAL ACTION COMPLETION REPORT
 OU 4
 Defense Supply Center Richmond
 Richmond, Virginia

	Sample Type:	Sample Laboratory:	Sample Fixed-Base Laboratory:	Sample Onsite:	
	OU4PIT-3CS-9	OU4PIT-3CS-9	OU4PIT-3CS-9	OU4PIT-3CS-9	OU4PIT-3CS-9
	7.5'	7.5'	7.0'		
	Sample Depth (ft.):	Sample Date:	11/19/2004	11/19/2004	RPD
Volatile Organic Compounds - SW846 8260B mg/kg					
1,1,1-Trichloroethane	0.0025	JQ	<0.025	<0.025	
1,1-Dichloroethane	<0.0045		<0.025	<0.025	
1,1-Dichloroethene	<0.0045		<0.025	<0.025	
1,2,4-Trichlorobenzene	<0.0045		<0.025	<0.025	
1,2-Dichlorobenzene	<0.0045		<0.025	<0.025	
1,3-Dichlorobenzene	0.0018	JQ	0.107	0.107	193.4
1,4-Dichlorobenzene	0.024	J	<0.025	<0.025	
Benzene	<0.0045		<0.025	<0.025	
Chlorobenzene	0.036		<0.025	<0.025	
cis-1,2-Dichloroethene	0.011	J	<0.025	<0.025	
Ethylbenzene	<0.0045		<0.025	<0.025	
m,p-Xylene	<0.0045		<0.025	<0.025	
o-Xylene	<0.0045		<0.025	<0.025	
Tetrachloroethylene	<0.0045		<0.025	<0.025	
Toluene	0.00074	JB	<0.025	<0.025	
Trichloroethene	0.004	JQ	<0.025	<0.025	
Vinyl Chloride	<0.0045		<0.025	<0.025	

Notes:
 J Estimated; based on QC data
 JB Estimated; possibly biased high or false positive based on blank contamination
 JQ Estimated; Value is between reporting limit and detection limit
 RPD Relative Percent Difference

PREPARED/DATE: DH 1/10/05
 CHECKED/DATE: JAH 1/13/05

*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

APPENDIX D

ESN SOUTHEAST, MOBILE LABORATORY CERTIFICATE OF ANALYSIS REPORT

Case Narrative

Client Information:

Client: **Mactec**
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Client Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittemann

Laboratory Project Information:

Lab Number: 041117-01-ML(VA)
Date Collected: 11/17/04-11/21/04
Date Received: 11/17/04-11/21/04

Case Summary:

- 1) Samples were received in good condition and between 0 and 8°C.
- 2) Samples were analyzed following current EPA Methodologies and the standards of NELAP.
- 3) No QA/QC problems were encountered during the analysis of the samples.

Data Approved by: _____ Date: _____

Phillip Hathcock
Laboratory Manager

- * For questions or comments, please contact Marvin Woods, Laboratory Manager at (800)865-7547.
- * Estimated uncertainties for test results are found in laboratory SOPs and are available upon request.
- * Sample results are calculated on a wet weight basis unless otherwise noted.
- * ESN Southeast adheres to the standards set forth by the National Environmental Laboratory Accreditation Program (NELAP).

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-SO-1
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	2500***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1000C

Surrogate Compounds % Recovery

Dibromofluoromethane	89
Toluene-d8	80
4-Bromofluorobenzene	87

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-SO-2
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	767***	0.117
1,4-Dichlorobenzene	0.025	469***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	25.3***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500C

Surrogate Compounds	% Recovery
Dibromofluoromethane	109
Toluene-d8	85
4-Bromofluorobenzene	110

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-SO-3
Depth:	9'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	162***	0.117
1,4-Dichlorobenzene	0.025	400***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	16.5***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5000

Surrogate Compounds	% Recovery
Dibromofluoromethane	80
Toluene-d8	80
4-Bromofluorobenzene	75

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pr13-SO-4
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	41.3***	0.117
1,4-Dichlorobenzene	0.025	59.6***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	461***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1000

Surrogate Compounds	% Recovery
Dibromofluoromethane	96
Toluene-d8	92
4-Bromofluorobenzene	80

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit3-SO-5
Depth:	10'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	16.3***	0.117
1,4-Dichlorobenzene	0.025	20.7***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	21.1***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1000

Surrogate Compounds	% Recovery
Dibromofluoromethane	93
Toluene-d8	95
4-Bromofluorobenzene	70

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-SO-1
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	18.8***	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	34.9***	0.117
1,4-Dichlorobenzene	0.025	17.8***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	11.9***	0.358
Trichloroethene	0.025	72.6***	1.177
Tetrachloroethene	0.025	90.1***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:2500

Surrogate Compounds	% Recovery
Dibromofluoromethane	96
Toluene-d8	128
4-Bromofluorobenzene	108

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-SO-2
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	1.9***	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	2.47***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	1.34***	1.177
Tetrachloroethene	0.025	1.19***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as "ND" were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:250

Surrogate Compounds % Recovery

Dibromofluoromethane	92
Toluene-d8	90
4-Bromofluorobenzene	83

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pt1-SO-3
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	5.08***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	1.60***	1.177
Tetrachloroethene	0.025	1.93***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	91
4-Bromofluorobenzene	93

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/17/2004
Date Received: 11/17/2004
Date Analyzed: 11/17/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittemann

Sample Information:

Sample ID: OU4-P17-SO-4
Depth: 8.5'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.280***	0.187
1,3-Dichlorobenzene	0.025	0.307***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	1.30***	1.177
Tetrachloroethene	0.025	0.451***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5C

Surrogate Compounds	% Recovery
Dibromofluoromethane	95
Toluene-d8	100
4-Bromofluorobenzene	114

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No :	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit1-SO-5
Depth:	9'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	1.58***	1.177
Tetrachloroethene	0.025	0.638***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:200

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	93
4-Bromofluorobenzene	83

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pr3-SO-6
Depth:	6'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	5.22***	0.187
1,3-Dichlorobenzene	0.025	5.86***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	2.35***	0.358
Trichloroethene	0.025	31.5***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	98
4-Bromofluorobenzene	140

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-SO-7
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	10.5***	0.187
1,3-Dichlorobenzene	0.025	3.25***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	5.01***	0.358
Trichloroethene	0.025	46.9***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	87
Toluene-d8	98
4-Bromofluorobenzene	132

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit3-SO-8
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	122***	0.187
1,3-Dichlorobenzene	0.025	38.6***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	35.4***	0.358
Trichloroethene	0.025	1760***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1000

Surrogate Compounds	% Recovery
Dibromofluoromethane	84
Toluene-d8	98
4-Bromofluorobenzene	126

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/18/2004
Date Received: 11/18/2004
Date Analyzed: 11/18/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittemann

Sample Information:

Sample ID: JU4-Pit3-SO-10
Depth: 4'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	88
Toluene-d8	98
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-SO-12
Depth:	3.5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	4.04***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	5.63***	0.358
Trichloroethene	0.025	4.47***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	95
Toluene-d8	100
4-Bromofluorobenzene	120

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittmann

Sample Information:

Sample ID:	JU4-Pit3-SO-14
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.882***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	0.534***	0.358
Trichloroethene	0.025	23.7***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:100

Surrogate Compounds	% Recovery
Dibromofluoromethane	95
Toluene-d8	100
4-Bromofluorobenzene	114

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/18/2004
Date Received: 11/18/2004
Date Analyzed: 11/18/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittermann

Sample Information:

Sample ID: OU4-Pr13-SO-9
Depth: 9'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	97
Toluene-d8	94
4-Bromofluorobenzene	115

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittmann

Sample Information:

Sample ID:	JU4-Pit3-SO-11
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	6.69***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	25.2***	0.358
Trichloroethene	0.025	17.6***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:100C

Surrogate Compounds	% Recovery
Dibromofluoromethane	95
Toluene-d8	100
4-Bromofluorobenzene	114

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wiltemann

Sample Information:

Sample ID:	JU4-Pit3-SO-13
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	3.42***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	1.19***	0.358
Trichloroethene	0.025	33.7***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	95
Toluene-d8	100
4-Bromofluorobenzene	114

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-SO-15
Depth:	2'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	94
Toluene-d8	100
4-Bromofluorobenzene	117

CERTIFICATE OF ANALYSISVolatile Organic Compounds by GC/MS
EPA Method 8260B**Client Information:**

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-SO-16
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.386***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	1.11***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5C

Surrogate Compounds % Recovery

Dibromofluoromethane	99
Toluene-d8	101
4-Bromofluorobenzene	117

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-SO-17
Depth:	8.5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.146***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.361***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5C

Surrogate Compounds	% Recovery
Dibromofluoromethane	94
Toluene-d8	100
4-Bromofluorobenzene	120

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-SO-6
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	9.36***	1.177
Tetrachloroethene	0.025	12.6***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:50C

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	97
4-Bromofluorobenzene	120

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit1-SO-7
Depth:	10'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	95
Toluene-d8	100
4-Bromofluorobenzene	114

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	DU4-Pit3-SO-19
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	10.8***	0.187
1,3-Dichlorobenzene	0.025	13.0***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	2.21***	0.358
Trichloroethene	0.025	12.3***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:100X

Surrogate Compounds	% Recovery
Dibromofluoromethane	96
Toluene-d8	91
4-Bromofluorobenzene	111

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Willemann

Sample Information:

Sample ID:	JU4-Pit3-SO-20
Depth:	8.5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.351***	0.187
1,3-Dichlorobenzene	0.025	0.362***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	1.83***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:100

Surrogate Compounds	% Recovery
Dibromofluoromethane	101
Toluene-d8	100
4-Bromofluorobenzene	115

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: **Mactec**
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/18/2004
Date Received: 11/18/2004
Date Analyzed: 11/18/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03 0011.1901
Collected by: Ted Wittemann

Sample Information:

Sample ID: JU4-Pit3-SO-21
Depth: 4.5'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.486	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	110
Toluene-d8	96
4-Bromofluorobenzene	116

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wiltemann

Sample Information:

Sample ID:	JU4-Pit3-SO-18
Depth:	5'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	138***	0.187
1,3-Dichlorobenzene	0.025	18.8***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	53.9***	0.358
Trichloroethene	0.025	3110***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds % Recovery

Dibromofluoromethane	93
Toluene-d8	100
4-Bromofluorobenzene	118

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-1
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.178***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	101
4-Bromofluorobenzene	108

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-2
Depth:	3.5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.610***	0.187
1,3-Dichlorobenzene	0.025	1.68***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:250

Surrogate Compounds	% Recovery
Dibromofluoromethane	116
Toluene-d8	92
4-Bromofluorobenzene	111

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-3
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	6.74***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:250

Surrogate Compounds	% Recovery
Dibromofluoromethane	88
Toluene-d8	98
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-4
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	56.2***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	1080***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5000

Surrogate Compounds	% Recovery
Dibromofluoromethane	119
Toluene-d8	98
4-Bromofluorobenzene	101

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-5
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10

Surrogate Compounds	% Recovery
Dibromofluoromethane	109
Toluene-d8	90
4-Bromofluorobenzene	92

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-6
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.222***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10C

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	88
4-Bromofluorobenzene	103

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-7
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	85
Toluene-d8	88
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit3-CS-8
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	0.060***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:2

Surrogate Compounds	% Recovery
Dibromofluoromethane	96
Toluene-d8	99
4-Bromofluorobenzene	117

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit3-CS-9
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	0.107***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	96
Toluene-d8	96
4-Bromofluorobenzene	107

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-CS-10
Depth:	3 5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.237	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	88
Toluene-d8	98
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-CS-11
Depth:	7 5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	84
Toluene-d8	93
4-Bromofluorobenzene	98

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/19/2004
Date Received: 11/19/2004
Date Analyzed: 11/19/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittermann

Sample Information:

Sample ID: DU4-Pit3-CS-12
Depth: 3.5'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	83
Toluene-d8	89
4-Bromofluorobenzene	117

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-CS-13
Depth:	7.5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.209***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1C

Surrogate Compounds	% Recovery
Dibromofluoromethane	84
Toluene-d8	94
4-Bromofluorobenzene	116

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011 1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit3-CS-14
Depth:	3.5'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	0.806***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10

Surrogate Compounds	% Recovery
Dibromofluoromethane	85
Toluene-d8	90
4-Bromofluorobenzene	119

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/19/2004
Date Received: 11/19/2004
Date Analyzed: 11/19/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittemann

Sample Information:

Sample ID: JU4-Pit3-CS-15
Depth: 7.5'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.343***	0.187
1,3-Dichlorobenzene	0.025	0.390***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.410***	0.358
Trichloroethene	0.025	0.564***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1C

Surrogate Compounds	% Recovery
Dibromofluoromethane	92
Toluene-d8	94
4-Bromofluorobenzene	109

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/19/2004
Date Received: 11/19/2004
Date Analyzed: 11/19/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittemann

Sample Information:

Sample ID: DU4-Pit3-CS-16
Depth: 3'
Sample Matrix: Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	5.55***	0.187
1,3-Dichlorobenzene	0.025	19.1***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	4.02***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1C

Surrogate Compounds	% Recovery
Dibromofluoromethane	85
Toluene-d8	88
4-Bromofluorobenzene	123

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-SO-8
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.597***	0.187
1,3-Dichlorobenzene	0.025	0.597***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.764***	0.358
Trichloroethene	0.025	0.360***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	92
Toluene-d8	87
4-Bromofluorobenzene	115

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-SO-9
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	41.8***	0.187
1,3-Dichlorobenzene	0.025	36.4***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	48.1***	1.177
Tetrachloroethene	0.025	158***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:100C

Surrogate Compounds	% Recovery
Dibromofluoromethane	85
Toluene-d8	95
4-Bromofluorobenzene	91

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-10
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.126***	0.187
1,3-Dichlorobenzene	0.025	0.096***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.222***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	98
Toluene-d8	88
4-Bromofluorobenzene	116

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	DU4-Pit1-SO-11
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	0.168	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as "ND" were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	82
4-Bromofluorobenzene	115

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pt1-SO-12
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	102
Toluene-d8	85
4-Bromofluorobenzene	120

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittmann

Sample Information:

Sample ID:	DU4-Pit1-SO-13
Depth:	3.5'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.056	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	109
Toluene-d8	84
4-Bromofluorobenzene	119

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-14
Depth:	7'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	0.036	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	116
Toluene-d8	98
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-15
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	105
Toluene-d8	102
4-Bromofluorobenzene	108

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-16
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	1.42***	
m & p -Xylene	0.025	1.46***	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	3.35***	0.187
1,3-Dichlorobenzene	0.025	1.18***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	47.5***	1.177
Tetrachloroethene	0.025	165***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as "ND" were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	88
Toluene-d8	116
4-Bromofluorobenzene	113

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-17
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	3.00***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	79.4***	1.177
Tetrachloroethene	0.025	77.5***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:100C

Surrogate Compounds	% Recovery
Dibromofluoromethane	84
Toluene-d8	106
4-Bromofluorobenzene	94

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-18
Depth:	7
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	98
Toluene-d8	86
4-Bromofluorobenzene	81

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-19
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.028	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	118
Toluene-d8	102
4-Bromofluorobenzene	122

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: Mactec
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: Josh Jenkins

Laboratory Information:

Lab Number: 041117-01-ML
Date Collected: 11/20/2004
Date Received: 11/20/2004
Date Analyzed: 11/20/2004

Project Information:

Project: Richmond, VA
Project No.: 6301.03.0011.1901
Collected by: Ted Wittemann

Sample Information:

Sample ID: DU4-P11-SO-20
Depth: 7'
Sample Matrix: Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.176***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	0.037***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.029***	0.358
Trichloroethene	0.025	0.061***	1.177
Tetrachloroethene	0.025	0.041***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	96
Toluene-d8	107
4-Bromofluorobenzene	137

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-SO-21
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	8.84***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	99.8***	1.177
Tetrachloroethene	0.025	111***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1500

Surrogate Compounds	% Recovery
Dibromofluoromethane	104
Toluene-d8	92
4-Bromofluorobenzene	128

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-CS-1
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	92
Toluene-d8	98
4-Bromofluorobenzene	96

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pt1-CS-2
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	6.38***	1.177
Tetrachloroethene	0.025	60.7***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:15000

Surrogate Compounds	% Recovery
Dibromofluoromethane	87
Toluene-d8	108
4-Bromofluorobenzene	105

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit1-CS-3
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.058***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	0.129***	0.358
Trichloroethene	0.025	1.39***	1.177
Tetrachloroethene	0.025	0.971***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10

Surrogate Compounds	% Recovery
Dibromofluoromethane	86
Toluene-d8	104
4-Bromofluorobenzene	119

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011 1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-CS-4
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	381***	1.177
Tetrachloroethene	0.025	332***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1000

Surrogate Compounds	% Recovery
Dibromofluoromethane	87
Toluene-d8	102
4-Bromofluorobenzene	96

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	OU4-Pit1-CS-5
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:2

Surrogate Compounds	% Recovery
Dibromofluoromethane	90
Toluene-d8	97
4-Bromofluorobenzene	120

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-CS-6
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	0.071***	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	1.99***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	0.040***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	103
4-Bromofluorobenzene	105

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactac
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-CS-7
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	93
4-Bromofluorobenzene	94

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-CS-8
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	88
Toluene-d8	95
4-Bromofluorobenzene	119

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	OU4-Pit1-CS-9
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	88
Toluene-d8	95
4-Bromofluorobenzene	120

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-CS-10
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	0.074***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	0.025***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	97
4-Bromofluorobenzene	119

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03 0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	JU4-Pit1-CS-11
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	0.063***	0.358
Trichloroethene	0.025	0.073***	1.177
Tetrachloroethene	0.025	0.096***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:2

Surrogate Compounds	% Recovery
Dibromofluoromethane	91
Toluene-d8	97
4-Bromofluorobenzene	101

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-CS-12
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL* RESULTS		SRC
	mg/kg	mg/kg	
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p-Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	0.052	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.209	0.358
Trichloroethene	0.025	0.039	1.177
Tetrachloroethene	0.025	0.026	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	94
Toluene-d8	100
4-Bromofluorobenzene	122

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	DU4-Pit1-CS-13
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	2.29***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	16.5***	1.177
Tetrachloroethene	0.025	14.5***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	90
Toluene-d8	95
4-Bromofluorobenzene	101

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	DU4-PH1-CS-14
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	139***	1.177
Tetrachloroethene	0.025	45.9***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:1000

Surrogate Compounds	% Recovery
Dibromofluoromethane	80
Toluene-d8	104
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pr1-CS-15
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.034***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	0.140***	1.177
Tetrachloroethene	0.025	0.029***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as "ND" were **NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds % Recovery

Dibromofluoromethane	87
Toluene-d8	104
4-Bromofluorobenzene	97

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-Pit1-CS-16
Depth:	4'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	2.15***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	10.6***	1.177
Tetrachloroethene	0.025	5.77***	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:500

Surrogate Compounds	% Recovery
Dibromofluoromethane	79
Toluene-d8	120
4-Bromofluorobenzene	109

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/21/2004
Date Received:	11/21/2004
Date Analyzed:	11/21/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	JU4-P13-CS-3R
Depth:	8'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.061***	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	0.656***	0.358
Trichloroethene	0.025	2.82***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	109
4-Bromofluorobenzene	130

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client: **Mactec**
9625 Jeff Davis Highway
Richmond, VA 23220
Project Mgr: **Josh Jenkins**

Laboratory Information:

Lab Number: **041117-01-ML**
Date Collected: **11/21/2004**
Date Received: **11/21/2004**
Date Analyzed: **11/21/2004**

Project Information:

Project: **Richmond, VA**
Project No.: **6301.03.0011.1901**
Collected by: **Ted Wittmann**

Sample Information:

Sample ID: **JU4-Pit3-CS-4R**
Depth: **4'**
Sample Matrix: **Soil**

CONSTITUENT	PQL* mg/kg	RESULTS mg/kg	SRC mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	3.70***	0.187
1,3-Dichlorobenzene	0.025	0.686***	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	59.8***	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit
Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.
***Dilution factor of 1:200

Surrogate Compounds	% Recovery
Dibromofluoromethane	81
Toluene-d8	112
4-Bromofluorobenzene	122

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/21/2004
Date Received:	11/21/2004
Date Analyzed:	11/21/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	U4-Pr3-CS-15R
Depth:	7.5'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	0.956***	0.187
1,3-Dichlorobenzene	0.025	0.242***	0.117
1,4-Dichlorobenzene	0.025	1.93***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.888***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:5

Surrogate Compounds	% Recovery
Dibromofluoromethane	99
Toluene-d8	92
4-Bromofluorobenzene	128

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/21/2004
Date Received:	11/21/2004
Date Analyzed:	11/21/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittermann

Sample Information:

Sample ID:	U4-Pr3-CS-16R
Depth:	3'
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	2.91***	0.187
1,3-Dichlorobenzene	0.025	0.794***	0.117
1,4-Dichlorobenzene	0.025	5.39***	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	0.399***	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

***Dilution factor of 1:10

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	104
4-Bromofluorobenzene	121

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittmann

Sample Information:

Sample ID:	Method Blank
Depth:	
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	104
Toluene-d8	97
4-Bromofluorobenzene	82

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No :	6301.03.0011.1901
Collected by:	Ted Wiltemann

Sample Information:

Sample ID:	Method Blank
Depth:	
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis - 1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	94
Toluene-d8	94
4-Bromofluorobenzene	105

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	Method Blank
Depth:	
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
m & p -Xylene	0.025	ND	
o-Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
cis-1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	87
Toluene-d8	105
4-Bromofluorobenzene	127

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301 03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	Method Blank
Depth:	
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	104
4-Bromofluorobenzene	121

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/21/2004
Date Received:	11/21/2004
Date Analyzed:	11/21/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	Method Blank
Depth:	
Sample Matrix:	Soil

CONSTITUENT	PQL*	RESULTS	SRC
	mg/kg	mg/kg	mg/kg
Carbon Tetrachloride	0.025	ND	3.276
Chloroethane	0.025	ND	1.521
Benzene	0.025	ND	
Toluene	0.025	ND	
Ethylbenzene	0.025	ND	
<i>m</i> & <i>p</i> -Xylene	0.025	ND	
<i>o</i> -Xylene	0.025	ND	
Chlorobenzene	0.025	ND	0.745
1,2-Dichlorobenzene	0.025	ND	0.187
1,3-Dichlorobenzene	0.025	ND	0.117
1,4-Dichlorobenzene	0.025	ND	0.077
1,1-Dichloroethane	0.025	ND	1.650
1,1-Dichloroethene	0.025	ND	1.463
1,1,1-Trichloroethane	0.025	ND	4.620
<i>cis</i> -1,2-Dichloroethene	0.025	ND	0.358
Trichloroethene	0.025	ND	1.177
Tetrachloroethene	0.025	ND	0.368
Vinyl Chloride	0.025	ND	0.028
Methylene Chloride	0.025	ND	5.432
Chloroform	0.025	ND	2.240
1,2,4-Trichlorobenzene	0.025	ND	0.698

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL

Surrogate Compounds	% Recovery
Dibromofluoromethane	89
Toluene-d8	104
4-Bromofluorobenzene	102

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wiltemann

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L

Carbon Tetrachloride	5 000	90 14
Chloroethane	5 000	96 8
Benzene	5 000	95 57
Toluene	5 000	89 55
Ethylbenzene	5 000	92.37
<i>m</i> & <i>p</i> -Xylene	5 000	109 3
<i>o</i> -Xylene	5,000	93 65
Chlorobenzene	5 000	80 95
1,2-Dichlorobenzene	5 000	95 76
1,3-Dichlorobenzene	5 000	104.2
1,4-Dichlorobenzene	5 000	198 25
1,1-Dichloroethane	5 000	104 65
1,1-Dichloroethene	5 000	104.14
1,1,1-Trichloroethane	5 000	102.1
<i>cis</i> -1,2-Dichloroethene	5 000	95 2
Trichloroethene	5,000	89 38
Tetrachloroethene	5 000	84 68
Vinyl Chloride	5 000	103 3
Methylene Chloride	5 000	91 50
Chloroform	5 000	93.99
1,2,4-Trichlorobenzene	5 000	94 01

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	104
Toluene-d8	102
4-Bromofluorobenzene	106

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL* RESULTS	
	ug/L	ug/L
Carbon Tetrachloride	5 000	105.58
Chloroethane	5 000	99.4
Benzene	5.000	117.29
Toluene	5,000	96.48
Ethylbenzene	5,000	103.7
<i>m</i> & <i>p</i> -Xylene	5 000	108
<i>o</i> -Xylene	5 000	105
Chlorobenzene	5 000	135.64
1,2-Dichlorobenzene	5,000	91.1
1,3-Dichlorobenzene	5 000	101.5
1,4-Dichlorobenzene	5 000	90.6
1,1-Dichloroethane	5 000	119.61
1,1-Dichloroethene	5 000	112.09
1,1,1-Trichloroethane	5,000	107.4
<i>cis</i> -1,2-Dichloroethene	5 000	97.18
Trichloroethene	5 000	111.77
Tetrachloroethene	5,000	101.30
Vinyl Chloride	5 000	105.3
Methylene Chloride	5 000	104.88
Chloroform	5 000	116.02
1,2,4-Trichlorobenzene	5,000	105.4

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	103
Toluene-d8	97
4-Bromofluorobenzene	102

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/17/2004
Date Received:	11/17/2004
Date Analyzed:	11/17/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L

Carbon Tetrachloride	5 000	90 94
Chloroethane	5.000	119 55
Benzene	5 000	99 13
Toluene	5 000	86 39
Ethylbenzene	5.000	26 99
<i>m</i> & <i>p</i> -Xylene	5 000	96 23
<i>o</i> -Xylene	5 000	103.4
Chlorobenzene	5 000	92.17
1,2-Dichlorobenzene	5 000	93 81
1,3-Dichlorobenzene	5 000	90.6
1,4-Dichlorobenzene	5.000	122.76
1,1-Dichloroethane	5 000	108 70
1,1-Dichloroethene	5 000	116.16
1,1,1-Trichloroethane	5 000	106.6
<i>cis</i> -1,2-Dichloroethene	5 000	86 61
Trichloroethene	5 000	104.33
Tetrachloroethene	5.000	90.20
Vinyl Chloride	5.000	72.38
Methylene Chloride	5 000	97.28
Chloroform	5.000	102.75
1,2,4-Trichlorobenzene	5.000	105 7

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	111
Toluene-d8	92
4-Bromofluorobenzene	96

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL* RESULTS	
	ug/L	ug/L
Carbon Tetrachloride	5 000	89.88
Chloroethane	5 000	83.49
Benzene	5 000	112.67
Toluene	5 000	91.03
Ethylbenzene	5 000	91.63
m & p -Xylene	5 000	104.2
o -Xylene	5 000	103.3
Chlorobenzene	5 000	83.07
1,2-Dichlorobenzene	5 000	93.86
1,3-Dichlorobenzene	5 000	97.05
1,4-Dichlorobenzene	5 000	107.8
1,1-Dichloroethane	5 000	120.41
1,1-Dichloroethene	5 000	109.6
1,1,1-Trichloroethane	5 000	103.6
cis - 1,2-Dichloroethene	5 000	94.09
Trichloroethene	5 000	98.92
Tetrachloroethene	5 000	87.91
Vinyl Chloride	5,000	101.10
Methylene Chloride	5 000	111.83
Chloroform	5 000	107.37
1,2,4-Trichlorobenzene	5,000	104.1

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	116
Toluene-d8	98
4-Bromofluorobenzene	94

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L

Carbon Tetrachloride	5 000	116.53
Chloroethane	5 000	106.83
Benzene	5 000	94.28
Toluene	5.000	83.77
Ethylbenzene	5 000	101.1
m & p -Xylene	5 000	117.04
o-Xylene	5 000	103.5
Chlorobenzene	5 000	81.28
1,2-Dichlorobenzene	5 000	104.4
1,3-Dichlorobenzene	5 000	96.35
1,4-Dichlorobenzene	5 000	94.5
1,1-Dichloroethane	5 000	101.23
1,1-Dichloroethene	5 000	92.99
1,1,1-Trichloroethane	5 000	101.83
cis-1,2-Dichloroethene	5 000	83.45
Trichloroethene	5 000	97.47
Tetrachloroethene	5 000	92.63
Vinyl Chloride	5 000	109.8
Methylene Chloride	5 000	78.27
Chloroform	5 000	109.61
1,2,4-Trichlorobenzene	5 000	112.6

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	103
Toluene-d8	97
4-Bromofluorobenzene	102

CERTIFICATE OF ANALYSIS

*Volatile Organic Compounds by GC/MS
EPA Method 8260B*

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/18/2004
Date Received:	11/18/2004
Date Analyzed:	11/18/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03 0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L
Carbon Tetrachloride	5 000	124 06
Chloroethane	5 000	135 45
Benzene	5 000	105 36
Toluene	5 000	87 22
Ethylbenzene	5 000	102 6
<i>m</i> & <i>p</i> -Xylene	5 000	116.6
<i>o</i> -Xylene	5,000	103 6
Chlorobenzene	5 000	81 65
1,2-Dichlorobenzene	5 000	92 18
1,3-Dichlorobenzene	5 000	91.8
1,4-Dichlorobenzene	5 000	125 36
1,1-Dichloroethane	5,000	114 81
1,1-Dichloroethene	5 000	104 23
1,1,1-Trichloroethane	5,000	107.8
<i>cis</i> -1,2-Dichloroethene	5,000	92.21
Trichloroethene	5 000	100.71
Tetrachloroethene	5 000	87 59
Vinyl Chloride	5 000	70 11
Methylene Chloride	5 000	100 05
Chloroform	5 000	116 50
1,2,4-Trichlorobenzene	5 000	104.3

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	118
Toluene-d8	93
4-Bromofluorobenzene	80

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/19/2004
Date Received:	11/19/2004
Date Analyzed:	11/19/2004

Project Information:

Project:	Richmond, VA
Project No :	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L
Carbon Tetrachloride	5.000	98.40
Chloroethane	5.000	68.40
Benzene	5.000	120.44
Toluene	5.000	93.90
Ethylbenzene	5.000	101.2
m & p -Xylene	5.000	117.6
o-Xylene	5.000	103.7
Chlorobenzene	5.000	84.70
1,2-Dichlorobenzene	5.000	93.59
1,3-Dichlorobenzene	5.000	102.9
1,4-Dichlorobenzene	5.000	99.53
1,1-Dichloroethane	5.000	129.61
1,1-Dichloroethene	5.000	105.2
1,1,1-Trichloroethane	5.000	105.6
cis-1,2-Dichloroethene	5.000	102.67
Trichloroethene	5.000	99.99
Tetrachloroethene	5.000	91.34
Vinyl Chloride	5.000	101.53
Methylene Chloride	5.000	106.3
Chloroform	5.000	126.47
1,2,4-Trichlorobenzene	5.000	103.8

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	126
Toluene-d8	98
4-Bromofluorobenzene	84

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L

Carbon Tetrachloride	5.000	102.05
Chloroethane	5.000	117.82
Benzene	5.000	98.35
Toluene	5.000	93.54
Ethylbenzene	5.000	31.95
<i>m</i> & <i>p</i> -Xylene	5.000	29.59
<i>o</i> -Xylene	5.000	106.8
Chlorobenzene	5.000	103.8
1,2-Dichlorobenzene	5.000	97.8
1,3-Dichlorobenzene	5.000	103.8
1,4-Dichlorobenzene	5.000	108.3
1,1-Dichloroethane	5.000	90.87
1,1-Dichloroethene	5.000	83.28
1,1,1-Trichloroethane	5.000	107.2
<i>cis</i> -1,2-Dichloroethene	5.000	85.78
Trichloroethene	5.000	115.26
Tetrachloroethene	5.000	113.80
Vinyl Chloride	5.000	87.42
Methylene Chloride	5.000	84.73
Chloroform	5.000	118.65
1,2,4-Trichlorobenzene	5.000	107.2

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

**Results listed as 'ND' were NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	103
Toluene-d8	97
4-Bromofluorobenzene	105

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL* RESULTS	
	ug/L	ug/L

Carbon Tetrachloride	5 000	104 1
Chloroethane	5 000	92.2
Benzene	5,000	105 3
Toluene	5 000	103 3
Ethylbenzene	5 000	94.2
m & p -Xylene	5 000	92.23
o -Xylene	5 000	106 6
Chlorobenzene	5,000	106 6
1,2-Dichlorobenzene	5 000	70.03
1,3-Dichlorobenzene	5,000	109 3
1,4-Dichlorobenzene	5,000	107 2
1,1-Dichloroethane	5 000	103 3
1,1-Dichloroethene	5 000	104.2
1,1,1-Trichloroethane	5,000	98 62
cis -1,2-Dichloroethene	5 000	103 5
Trichloroethene	5 000	108 3
Tetrachloroethene	5 000	102 3
Vinyl Chloride	5 000	111.04
Methylene Chloride	5 000	102.34
Chloroform	5 000	185 45
1,2,4-Trichlorobenzene	5 000	90.75

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	101
Toluene-d8	100
4-Bromofluorobenzene	87

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS
EPA Method 8260B

Client Information:

Client:	Mactec 9625 Jeff Davis Highway Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No :	6301.03.0011.1901
Collected by:	Ted Wiltemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L
Carbon Tetrachloride	5 000	109 8
Chloroethane	5 000	88 67
Benzene	5 000	110 8
Toluene	5 000	107 4
Ethylbenzene	5 000	94 3
m & p -Xylene	5 000	93 7
o-Xylene	5,000	117 7
Chlorobenzene	5,000	107 2
1,2-Dichlorobenzene	5,000	127 51
1,3-Dichlorobenzene	5 000	105 2
1,4-Dichlorobenzene	5 000	102.3
1,1-Dichloroethane	5 000	105.3
1,1-Dichloroethene	5 000	104.2
1,1,1-Trichloroethane	5 000	105 7
cis-1,2-Dichloroethene	5 000	107.2
Trichloroethene	5 000	108 7
Tetrachloroethene	5 000	107 2
Vinyl Chloride	5 000	109.3
Methylene Chloride	5,000	103 8
Chloroform	5,000	105 5
1,2,4-Trichlorobenzene	5 000	83 24

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as "ND" were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	103
Toluene-d8	97
4-Bromofluorobenzene	101

CERTIFICATE OF ANALYSIS

Volatile Organic Compounds by GC/MS

EPA Method 8260B

Client Information:

Client:	Mactec
	9625 Jeff Davis Highway
	Richmond, VA 23220
Project Mgr:	Josh Jenkins

Laboratory Information:

Lab Number:	041117-01-ML
Date Collected:	11/20/2004
Date Received:	11/20/2004
Date Analyzed:	11/20/2004

Project Information:

Project:	Richmond, VA
Project No.:	6301.03.0011.1901
Collected by:	Ted Wittemann

Sample Information:

Sample ID:	CCV
Depth:	
Sample Matrix:	Water

CONSTITUENT	PQL*	RESULTS
	ug/L	ug/L

Carbon Tetrachloride	5 000	103 4
Chloroethane	5 000	92 94
Benzene	5 000	108.2
Toluene	5 000	103 6
Ethylbenzene	5 000	117 2
m & p -Xylene	5 000	103 3
o-Xylene	5 000	106.3
Chlorobenzene	5 000	100 6
1,2-Dichlorobenzene	5.000	102 9
1,3-Dichlorobenzene	5 000	104 2
1,4-Dichlorobenzene	5 000	105 2
1,1-Dichloroethane	5 000	107 2
1,1-Dichloroethene	5 000	100 4
1,1,1-Trichloroethane	5 000	111 06
cis -1,2-Dichloroethene	5 000	109 4
Trichloroethene	5 000	102.5
Tetrachloroethene	5 000	100.9
Vinyl Chloride	5 000	106 3
Methylene Chloride	5 000	105 3
Chloroform	5 000	104 4
1,2,4-Trichlorobenzene	5 000	101.3

DATA QUALIFIERS:

*PQL - Practical Quantitation Limit

Results listed as 'ND' were **NOT DETECTED
at or above the listed PQL.

Surrogate Compounds	% Recovery
Dibromofluoromethane	103
Toluene-d8	97
4-Bromofluorobenzene	101

APPENDIX E

**ACCURA ANALYTICAL LABORATORY, FIXED-BASE LABORATORY CERTIFICATE OF
ANALYSIS REPORT**



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
 6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

AAL Work Order # 7192

Client Project: DSCR OU4 Source Removal / 6301-03-0011-1901-1000

Accura Analytical Laboratory Inc. certifies that the results meet all requirements of the NELAC Standards.

The data package includes a total of **49** pages including: case narrative, Chain of Custody, Request for Analysis Forms, Sample Receipt Checklist, analytical results pages, QC surrogate recovery pages, QC Blank Spike / Blank Spike Duplicate recovery pages, QC MS/MSD recovery pages, Internal Standard Results Forms, and a list of common EPA qualifier codes used by AAL.

The following items were noted concerning this work order:

Receiving Notations:

1. The samples were received at 2°C.

Michele Ruiz

Michele Ruiz

Receiving

November 13, 2004

Date

SVOCs by SW8270C Notations:

1. The following surrogates were outside the laboratory-derived limit as indicated by the "Z" qualifier:

Nitrobenzene-d5-	24380 BSD, 24393 BLK, OU4BACKFILL-1
2-Fluorobiphenyl-	24380 BSD

All of these would have been Sporadic Marginal Failures (SMF). However, since the water BSD had two low surrogates, they are not SMFs.

Chris Pittman

Chris Pittman

SVOC Analyst

November 23, 2004

Date



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
FL Certification #E87429 NC Certification #483 SC Certification #98015
Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

VOCs by SW8260B Notations:

1. The following spike recoveries were outside the method specified limits due to possible matrix interference:

Matrix Spike - Tetrachloroethene

Matrix Spike Duplicate - Tetrachloroethene

Thomas A. Gatch

December 03, 2004

Thomas A. Gatch

Date

VOC Analyst

Project Manager's Notations:

1. The soil sample results are reported on a dry weight basis.

These case narrative notations have been reviewed/edited by:

A handwritten signature in black ink, appearing to read 'David C. Fuller', written over a horizontal line.

December 07, 2004

David C. Fuller

Date

VP - Client Services

783 406

MACTEC Engineering and Consulting of Georgia
3200 Town Point Drive Suite 100
Kennesaw, Georgia 30144
Request for Analysis Form

Project Manager: J. Jenkins
Project Chemist: J. Hartness
Project: DSCR

Matrix: SOIL
Sample ID: OU4EB- 1

7192-001

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA Vial	2	HCl to pH<2 (No Headspace) Cool to 4°C	VOCs	SW8260B	SW5030B
Amber Glass	2	Cool to 4°C	SVOCs	SW8270C	SW3520C

Comments:

Prepared By:

TED WITTEWANN

Checked By:

MACTEC Engineering and Consulting of Georgia
 3200 Town Point Drive Suite 100
 Kennesaw, Georgia 30144

Request for Analysis Form

Project Manager: J. Jenkins
Project Chemist: J. Hartness
Project: DSCR

Matrix: SOIL
Sample ID: OU4-Backfill-1

7192-002

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
2 or 4oz jar	2	(No Headspace) Cool to 4°C	VOCs	SW8260B	SW5030B
8 oz jar	1	Cool to 4°C	SVOCs	SW8270C	SW3545
2 oz jar	1	(No Headspace) Cool to 4°C	Moisture content	ASTM D2216	method

Comments:
 Prepared By:

TED WITTEMAN

Checked By:

MACTEC Engineering and Consulting of Georgia
3200 Town Point Drive Suite 100
Kennesaw, Georgia 30144
Request for Analysis Form

Project Manager: J. Jenkins
Project Chemist: J. Hartness
Project: DSCR

Matrix: SOIL
Sample ID: OU4-Backfill-2

7192-003

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
2 or 4oz jar	2	(No Headspace) Cool to 4°C	VOCs	SW8260B	SW5030B
8 oz jar	1	Cool to 4°C	SVOCs	SW8270C	SW3545
2 oz jar	1	(No Headspace) Cool to 4°C	Moisture content	ASTM D2216	method

Comments:
Prepared By:

TED WITTEMAN

Checked By: _____

MACTEC Engineering and Consulting of Georgia
3200 Town Point Drive Suite 100
Kennesaw, Georgia 30144

Request for Analysis Form

Project Manager: J. Jenkins
Project Chemist: J. Hartness
Project: DSCR

Matrix: SOIL
Sample ID: TB- 11.12.04

7192-004

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA Vial	2	HCl to pH<2 (No Headspace) Cool to 4°C	VOCs	SW8260B	SW5030B

Comments:
Prepared By:

TED WITTEMANN

Checked By: _____

ACCURA ANALYTICAL LABORATORY, INC.

SAMPLE RECEIPT CHECKLIST VERSION 6 Client Code: 1405-3 AAL Project Mgr: DCF

Client Project Name: DSCR ACCURA Work Order#: 7192

Are there EnCores, tests with < 48Hr hold times, or RUSH TAT's requested? YES NO
 If YES, you must communicate RUSH analyses to the appropriate analyst(s) immediately!!! / or preserve EnCores (see #16 below)!!!
 Preliminary Examination: Initials: km Date received: 11/12/04 Date cooler was opened: 11/15/04

1. Did cooler/package come with a shipping slip (airbill, Etc.)? YES NO
 If YES, enter carrier name and airbill number here: FedEx - 8434 5844 5321
 Describe type of packing in cooler: _____
 ****If cooler was hand delivered, CIRCLE HERE, skip to item #5****
2. Were custody seals on outside of cooler? YES NO
 If YES, how many: _____ seal dated: _____ seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? YES N/A NO
4. Were custody papers sealed in a plastic bag to prevent damage to chain of custody? YES NO
5. If required, was enough ice used? (Internal cooler temperature, 2°) YES N/A NO
6. Did you sign custody papers in the appropriate place? YES NO
7. Was project identifiable from custody papers? YES NO
 If YES, enter project name at the top.

Complete project file with green sheet, proper file tag, and shipping documentation. Line up samples following chain. Complete Container Receipt Verification form (include extra containers for dissolved metals filtrates). Complete login in XENCO and generate AAL ID Labels.

8. Did all containers arrive unbroken and were labels in good condition? YES NO
9. Were custody papers filled out properly and did all labels agree with custody papers? YES NO
10. Were correct containers and sufficient amount of sample sent for the test indicated? YES NO
11. All samples collected within three days of date received for these analyses (Reactive Cn & S, Solids in H2O, Sulfide, Sulfite, IALLI Extractable Organic Waters)? YES N/A NO
 If NO, coordinate with the project manager to ensure that no samples go out of hold!!!
12. No residual chlorine found in waters for these analyses: (Cyanide, PAH, SVOC, Pesticides, PCB's, Herbicides)? YES N/A NO
 Checked by: km (Initials)
13. Were samples properly chemically preserved, if required, upon receipt? YES N/A NO
 (For example: pH checked for waters for all Metals, Wet Chemistry, Pesticides, PCB's, Herbicides, and VOC/BTEX samples submitted with HCL for waters and in either Encore samplers or NaHSO4 labeled vials for soils)
 Preservation checked by: km (Initials)
14. Were air bubbles (>1/4 inch) absent in VOC/BTEX samples? YES N/A NO
 If NO, list ID # on back and label vials with ~~Do Not Write On This Label~~
15. If there are samples for dissolved metals, were they field filtered? YES N/A NO
 If NO, list date and time samples were filtered and preserved in lab: _____

16. Were Encore samplers included? YES NO
 If YES, date and time preserved with NaHSO4: _____ By whom: _____
17. Does this submittal contain soil NaHSO4 vials for BTEX/GRO/VOC'S? YES NO
 If YES, vials weighed by and entered into vial database by: _____
18. Initials of laboratory personnel responsible for labeling laboratory I.D. numbers on containers: km

Keep samples and chain out. Before moving samples to their appropriate location, another person must review the entire project ensuring that information on the AAL ID Barcode label matches the container label, and that all information is consistent with the chain.
 Final check and samples logged to locations by: _____ (Initials)

19. Was it necessary to call the assigned project manager in order to proceed with login? YES NO
 If YES, give details on the back of this form.
20. Who was called? _____ By whom? _____ Date/Time: _____

Project Mgr. Review: km (Initials) 11/15/04 (Date) Page 1 of 2



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4EB-1	Matrix: WATER	% Moisture:
Lab Sample Id: 7192-001	Date Collected: Nov-12-04 11:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: SVOCs by SW8270C	Prep Method: SW3520C
Date Analyzed: Nov-18-04 14:36	Analyst: CTP01
Seq Number: 24498	Date Prep: Nov-17-04 14:47
	Tech: NNF01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,2,4-Trichlorobenzene	120-82-1	BRL	10	1.8	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	10	1.8	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	10	1.7	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	10	1.6	ug/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	10	4.9	ug/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	10	4.6	ug/L	U	1
2,4-Dichlorophenol	120-83-2	BRL	10	2.0	ug/L	U	1
2,4-Dimethylphenol	105-67-9	BRL	10	3.5	ug/L	U	1
2,4-Dinitrophenol	51-28-5	BRL	20	7.7	ug/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	10	2.3	ug/L	U	1
2,6-Dinitrotoluene	606-20-2	BRL	10	1.2	ug/L	U	1
2-Chloronaphthalene	91-58-7	BRL	10	1.5	ug/L	U	1
2-Chlorophenol	95-57-8	BRL	10	2.5	ug/L	U	1
2-Methylnaphthalene	91-57-6	BRL	10	1.6	ug/L	U	1
2-Methylphenol	95-48-7	BRL	10	1.7	ug/L	U	1
2-Nitroaniline	88-74-4	BRL	20	2.8	ug/L	U	1
2-Nitrophenol	88-75-5	BRL	10	2.2	ug/L	U	1
3,3-Dichlorobenzidine	91-94-1	BRL	20	3.2	ug/L	U	1
3&4-Methylphenol		BRL	20	2.8	ug/L	U	1
3-Nitroaniline	99-09-2	BRL	20	2.9	ug/L	U	1
4,6-Dinitro-2-methylphenol	534-52-1	BRL	50	6.2	ug/L	U	1
4-Bromophenyl-phenylether	101-55-3	BRL	10	1.4	ug/L	U	1
4-Chloro-3-methylphenol	59-50-7	BRL	10	1.4	ug/L	U	1
4-Chloroaniline	106-47-8	BRL	10	1.5	ug/L	U	1
4-Chlorophenyl-phenylether	7005-72-3	BRL	10	1.1	ug/L	U	1
4-Nitroaniline	100-01-6	BRL	20	2.2	ug/L	U	1
4-Nitrophenol	100-02-7	BRL	20	7.2	ug/L	U	1
Acenaphthene	83-32-9	BRL	10	1.2	ug/L	U	1
Acenaphthylene	208-96-8	BRL	10	1.2	ug/L	U	1
Anthracene	120-12-7	BRL	10	1.4	ug/L	U	1
Benzo(a)anthracene	56-55-3	BRL	10	1.1	ug/L	U	1
Benzo(a)pyrene	50-32-8	BRL	10	2.3	ug/L	U	1
Benzo(b)fluoranthene	205-99-2	BRL	10	1.2	ug/L	U	1
Benzo(g,h,i)perylene	191-24-2	BRL	10	1.9	ug/L	U	1
Benzo(k)fluoranthene	207-08-9	BRL	10	1.7	ug/L	U	1
Benzoic acid	65-85-0	BRL	20	10	ug/L	U	1
Benzyl alcohol	100-51-6	BRL	10	2.2	ug/L	U	1
bis(2-Chloroethoxy)methane	111-91-1	BRL	10	1.4	ug/L	U	1
bis(2-chloroethyl)ether	111-44-4	BRL	10	2.3	ug/L	U	1
bis(2-chloroisopropyl)ether	108-60-1	BRL	10	1.8	ug/L	U	1
bis(2-Ethylhexyl)phthalate	117-81-7	BRL	10	2.7	ug/L	U	1
Butylbenzylphthalate	85-68-7	BRL	10	1.2	ug/L	U	1
Chrysene	218-01-9	BRL	10	1.4	ug/L	U	1
Dibenz(a,h)anthracene	53-70-3	BRL	10	2.3	ug/L	U	1
Dibenzofuran	132-64-9	BRL	10	1.7	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4EB-1	Matrix: WATER	% Moisture:
Lab Sample Id: 7192-001	Date Collected: Nov-12-04 11:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: SVOCs by SW8270C		Prep Method: SW3520C	
Date Analyzed: Nov-18-04 14:36	Analyst: CTP01	Date Prep: Nov-17-04 14:47	Tech: NNF01
	Seq Number: 24498		

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Diethylphthalate	84-66-2	BRL	10	2.0	ug/L	U	1
Dimethylphthalate	131-11-3	BRL	10	1.1	ug/L	U	1
di-n-Butylphthalate	84-74-2	BRL	10	1.3	ug/L	U	1
di-n-Octylphthalate	117-84-0	BRL	10	1.3	ug/L	U	1
Fluoranthene	206-44-0	BRL	10	1.0	ug/L	U	1
Fluorene	86-73-7	BRL	10	1.3	ug/L	U	1
Hexachlorobenzene	118-74-1	BRL	10	1.4	ug/L	U	1
Hexachlorobutadiene	87-68-3	BRL	10	1.4	ug/L	U	1
Hexachlorocyclopentadiene	77-47-4	BRL	10	3.1	ug/L	U	1
Hexachloroethane	67-72-1	BRL	10	1.9	ug/L	U	1
Hexachloropropene	1888-71-7	BRL	10	1.1	ug/L	U	1
Indeno(1,2,3-c,d)pyrene	193-39-5	BRL	10	1.1	ug/L	U	1
Isophorone	78-59-1	BRL	10	2.2	ug/L	U	1
Naphthalene	91-20-3	BRL	10	1.8	ug/L	U	1
Nitrobenzene	98-95-3	BRL	10	1.0	ug/L	U	1
N-Nitroso-di-n-propylamine	621-64-7	BRL	10	1.8	ug/L	U	1
N-Nitrosodiphenylamine	86-30-6	BRL	10	1.4	ug/L	U	1
Pentachlorophenol	87-86-5	BRL	20	5.2	ug/L	U	1
Phenanthrene	85-01-8	BRL	10	1.2	ug/L	U	1
Phenol	108-95-2	BRL	10	4.3	ug/L	U	1
Pyrene	129-00-0	BRL	10	1.3	ug/L	U	1

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Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4EB-1	Matrix: WATER	% Moisture:
Lab Sample Id: 7192-001	Date Collected: Nov-12-04 11:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-17-04 13:02	Analyst: MVRR01	Date Prep: Nov-17-04 10:11	Tech: MVRR01
Seq Number: 24475			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	3.3	10	0.34	ug/L	J	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	1.6	1.0	0.14	ug/L		1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4EB-1	Matrix: WATER	% Moisture:
Lab Sample Id: 7192-001	Date Collected: Nov-12-04 11:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-17-04 13:02	Analyst: MVRR01	Date Prep: Nov-17-04 10:11	Tech: MVRR01
Seq Number: 24475			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	1.4	1.0	0.12	ug/L		1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-1	Matrix: SOIL	% Moisture: 5
Lab Sample Id: 7192-002	Date Collected: Nov-12-04 12:00	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: SVOCs by SW8270C	Prep Method: SW3545
Date Analyzed: Nov-18-04 13:39	Analyst: CTP01
Seq Number: 24499	Date Prep: Nov-17-04 16:00
	Tech: MSN01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,2,4-Trichlorobenzene	120-82-1	BRL	0.35	0.035	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.35	0.028	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.35	0.029	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.35	0.039	mg/kg	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.35	0.044	mg/kg	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.35	0.037	mg/kg	U	1
2,4-Dichlorophenol	120-83-2	BRL	0.35	0.054	mg/kg	U	1
2,4-Dimethylphenol	105-67-9	BRL	0.35	0.035	mg/kg	U	1
2,4-Dinitrophenol	51-28-5	BRL	0.70	0.48	mg/kg	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.35	0.056	mg/kg	U	1
2,6-Dinitrotoluene	606-20-2	BRL	0.35	0.047	mg/kg	U	1
2-Chloronaphthalene	91-58-7	BRL	0.35	0.036	mg/kg	U	1
2-Chlorophenol	95-57-8	BRL	0.35	0.038	mg/kg	U	1
2-Methylnaphthalene	91-57-6	BRL	0.35	0.039	mg/kg	U	1
2-Methylphenol	95-48-7	BRL	0.35	0.051	mg/kg	U	1
2-Nitroaniline	88-74-4	BRL	0.70	0.050	mg/kg	U	1
2-Nitrophenol	88-75-5	BRL	0.35	0.041	mg/kg	U	1
3,3-Dichlorobenzidine	91-94-1	BRL	0.70	0.041	mg/kg	U	1
3,4-Methylphenol		BRL	0.70	0.10	mg/kg	U	1
3-Nitroaniline	99-09-2	BRL	0.70	0.045	mg/kg	U	1
4,6-Dinitro-2-methylphenol	534-52-1	BRL	1.8	0.046	mg/kg	U	1
4-Bromophenyl-phenylether	101-55-3	BRL	0.35	0.039	mg/kg	U	1
4-Chloro-3-methylphenol	59-50-7	BRL	0.35	0.060	mg/kg	U	1
4-Chloroaniline	106-47-8	BRL	0.35	0.054	mg/kg	U	1
4-Chlorophenyl-phenylether	7005-72-3	BRL	0.35	0.045	mg/kg	U	1
4-Nitroaniline	100-01-6	BRL	0.70	0.092	mg/kg	U	1
4-Nitrophenol	100-02-7	BRL	0.70	0.43	mg/kg	U	1
Acenaphthene	83-32-9	BRL	0.35	0.037	mg/kg	U	1
Acenaphthylene	208-96-8	BRL	0.35	0.046	mg/kg	U	1
Anthracene	120-12-7	BRL	0.35	0.038	mg/kg	U	1
Benzo(a)anthracene	56-55-3	BRL	0.35	0.027	mg/kg	U	1
Benzo(a)pyrene	50-32-8	BRL	0.35	0.038	mg/kg	U	1
Benzo(b)fluoranthene	205-99-2	BRL	0.35	0.035	mg/kg	U	1
Benzo(g,h,i)perylene	191-24-2	BRL	0.35	0.029	mg/kg	U	1
Benzo(k)fluoranthene	207-08-9	BRL	0.35	0.044	mg/kg	U	1
Benzoic acid	65-85-0	BRL	0.70	0.27	mg/kg	U	1
Benzyl alcohol	100-51-6	BRL	0.35	0.056	mg/kg	U	1
Butylbenzylphthalate	85-68-7	BRL	0.35	0.039	mg/kg	U	1
bis(2-Chloroethoxy)methane	111-91-1	BRL	0.35	0.042	mg/kg	U	1
bis(2-chloroethyl)ether	111-44-4	BRL	0.35	0.040	mg/kg	U	1
bis(2-chloroisopropyl)ether	108-60-1	BRL	0.35	0.042	mg/kg	U	1
bis(2-Ethylhexyl)phthalate	117-81-7	BRL	0.35	0.036	mg/kg	U	1
Chrysene	218-01-9	BRL	0.35	0.037	mg/kg	U	1
Dibenz(a,h)anthracene	53-70-3	BRL	0.35	0.027	mg/kg	U	1
Dibenzofuran	132-64-9	BRL	0.35	0.053	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-1	Matrix: SOIL	% Moisture: 5
Lab Sample Id: 7192-002	Date Collected: Nov-12-04 12:00	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: SVOCs by SW8270C				Prep Method: SW3545			
Date Analyzed: Nov-18-04 13:39		Analyst: CTP01		Date Prep: Nov-17-04 16:00		Tech: MSN01	
Seq Number: 24499							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Diethylphthalate	84-66-2	BRL	0.35	0.048	mg/kg	U	1
Dimethylphthalate	131-11-3	BRL	0.35	0.055	mg/kg	U	1
di-n-Butylphthalate	84-74-2	BRL	0.35	0.036	mg/kg	U	1
di-n-Octylphthalate	117-84-0	BRL	0.35	0.042	mg/kg	U	1
Fluoranthene	206-44-0	BRL	0.35	0.046	mg/kg	U	1
Fluorene	86-73-7	BRL	0.35	0.046	mg/kg	U	1
Hexachlorobenzene	118-74-1	BRL	0.35	0.035	mg/kg	U	1
Hexachlorobutadiene	87-68-3	BRL	0.35	0.035	mg/kg	U	1
Hexachlorocyclopentadiene	77-47-4	BRL	0.35	0.023	mg/kg	U	1
Hexachloroethane	67-72-1	BRL	0.35	0.040	mg/kg	U	1
Hexachloropropene	1888-71-7	BRL	0.35	0.039	mg/kg	U	1
Indeno(1,2,3-c,d)pyrene	193-39-5	BRL	0.35	0.035	mg/kg	U	1
Isophorone	78-59-1	BRL	0.35	0.036	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.35	0.032	mg/kg	U	1
Nitrobenzene	98-95-3	BRL	0.35	0.040	mg/kg	U	1
N-Nitroso-di-n-propylamine	621-64-7	BRL	0.35	0.046	mg/kg	U	1
N-Nitrosodiphenylamine	86-30-6	BRL	0.35	0.054	mg/kg	U	1
Pentachlorophenol	87-86-5	BRL	0.70	0.049	mg/kg	U	1
Phenanthrene	85-01-8	BRL	0.35	0.042	mg/kg	U	1
Phenol	108-95-2	BRL	0.35	0.060	mg/kg	U	1
Pyrene	129-00-0	BRL	0.35	0.039	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-1	Matrix: SOIL	% Moisture: 5
Lab Sample Id: 7192-002	Date Collected: Nov-12-04 12:00	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035MOD		
Date Analyzed: Nov-19-04 17:37	Analyst: TAG01	Date Prep: Nov-19-04 10:25	Tech: TAG01
Seq Number: 24506			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0052	0.00078	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0052	0.00064	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0052	0.00089	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0052	0.00076	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0052	0.00055	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0052	0.00071	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0052	0.00058	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0052	0.0011	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0052	0.00096	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0052	0.0010	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0052	0.0011	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0052	0.00054	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0052	0.00054	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0052	0.00070	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0052	0.00068	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0052	0.00058	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0052	0.0010	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0052	0.00052	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0052	0.00068	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0052	0.0011	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0052	0.00092	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.010	0.00054	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0052	0.0011	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.010	0.00071	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0052	0.00092	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.010	0.00067	mg/kg	U	1
Acetone	67-64-1	BRL	0.010	0.0014	mg/kg	U	1
Benzene	71-43-2	BRL	0.0052	0.00066	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0052	0.00099	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0052	0.00099	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0052	0.00070	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0052	0.00063	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0052	0.00052	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0052	0.0015	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0052	0.00084	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0052	0.00077	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0052	0.0017	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0052	0.00082	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0052	0.00063	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	0.0052	0.00083	mg/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0052	0.00071	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0052	0.00073	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0052	0.00065	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0052	0.00066	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0052	0.00072	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-1	Matrix: SOIL	% Moisture: 5
Lab Sample Id: 7192-002	Date Collected: Nov-12-04 12:00	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035MOD

Date Analyzed: **Nov-19-04 17:37**

Analyst: **TAG01**

Date Prep: **Nov-19-04 10:25**

Tech: **TAG01**

Seq Number: **24506**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0052	0.00068	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0052	0.00087	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.010	0.0019	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0052	0.0014	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.0052	0.00099	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0052	0.00053	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0052	0.0011	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0052	0.00066	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0052	0.0010	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0052	0.00099	mg/kg	U	1
Styrene	100-42-5	BRL	0.0052	0.0011	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0052	0.00069	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0052	0.00080	mg/kg	U	1
Toluene	108-88-3	BRL	0.0052	0.00076	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0052	0.00070	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0052	0.00091	mg/kg	U	1
Trichloroethene	79-01-6	BRL	0.0052	0.00085	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0052	0.00053	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0052	0.00055	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-2	Matrix: SOIL	% Moisture: 6
Lab Sample Id: 7192-003	Date Collected: Nov-12-04 12:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: SVOCs by SW8270C	Prep Method: SW3545
Date Analyzed: Nov-18-04 16:08	Analyst: CTP01
	Date Prep: Nov-17-04 16:00
	Tech: MSN01
Seq Number: 24499	

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,2,4-Trichlorobenzene	120-82-1	BRL	0.35	0.036	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.35	0.029	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.35	0.029	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.35	0.039	mg/kg	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.35	0.045	mg/kg	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.35	0.037	mg/kg	U	1
2,4-Dichlorophenol	120-83-2	BRL	0.35	0.055	mg/kg	U	1
2,4-Dimethylphenol	105-67-9	BRL	0.35	0.035	mg/kg	U	1
2,4-Dinitrophenol	51-28-5	BRL	0.71	0.48	mg/kg	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.35	0.057	mg/kg	U	1
2,6-Dinitrotoluene	606-20-2	BRL	0.35	0.048	mg/kg	U	1
2-Chloronaphthalene	91-58-7	BRL	0.35	0.037	mg/kg	U	1
2-Chlorophenol	95-57-8	BRL	0.35	0.038	mg/kg	U	1
2-Methylnaphthalene	91-57-6	BRL	0.35	0.039	mg/kg	U	1
2-Methylphenol	95-48-7	BRL	0.35	0.052	mg/kg	U	1
2-Nitroaniline	88-74-4	BRL	0.71	0.051	mg/kg	U	1
2-Nitrophenol	88-75-5	BRL	0.35	0.041	mg/kg	U	1
3,3-Dichlorobenzidine	91-94-1	BRL	0.71	0.041	mg/kg	U	1
3,4-Methylphenol		BRL	0.71	0.10	mg/kg	U	1
3-Nitroaniline	99-09-2	BRL	0.71	0.046	mg/kg	U	1
4,6-Dinitro-2-methylphenol	534-52-1	BRL	1.8	0.046	mg/kg	U	1
4-Bromophenyl-phenylether	101-55-3	BRL	0.35	0.039	mg/kg	U	1
4-Chloro-3-methylphenol	59-50-7	BRL	0.35	0.060	mg/kg	U	1
4-Chloroaniline	106-47-8	BRL	0.35	0.055	mg/kg	U	1
4-Chlorophenyl-phenylether	7005-72-3	BRL	0.35	0.046	mg/kg	U	1
4-Nitroaniline	100-01-6	BRL	0.71	0.093	mg/kg	U	1
4-Nitrophenol	100-02-7	BRL	0.71	0.44	mg/kg	U	1
Acenaphthene	83-32-9	BRL	0.35	0.038	mg/kg	U	1
Acenaphthylene	208-96-8	BRL	0.35	0.046	mg/kg	U	1
Anthracene	120-12-7	BRL	0.35	0.039	mg/kg	U	1
Benzo(a)anthracene	56-55-3	BRL	0.35	0.027	mg/kg	U	1
Benzo(a)pyrene	50-32-8	BRL	0.35	0.038	mg/kg	U	1
Benzo(b)fluoranthene	205-99-2	BRL	0.35	0.035	mg/kg	U	1
Benzo(g,h,i)perylene	191-24-2	BRL	0.35	0.029	mg/kg	U	1
Benzo(k)fluoranthene	207-08-9	BRL	0.35	0.044	mg/kg	U	1
Benzoic acid	65-85-0	BRL	0.71	0.27	mg/kg	U	1
Benzyl alcohol	100-51-6	BRL	0.35	0.057	mg/kg	U	1
Butylbenzylphthalate	85-68-7	BRL	0.35	0.039	mg/kg	U	1
bis(2-Chloroethoxy)methane	111-91-1	BRL	0.35	0.042	mg/kg	U	1
bis(2-chloroethyl)ether	111-44-4	BRL	0.35	0.040	mg/kg	U	1
bis(2-chloroisopropyl)ether	108-60-1	BRL	0.35	0.043	mg/kg	U	1
bis(2-Ethylhexyl)phthalate	117-81-7	BRL	0.35	0.037	mg/kg	U	1
Chrysene	218-01-9	BRL	0.35	0.038	mg/kg	U	1
Dibenz(a,h)anthracene	53-70-3	BRL	0.35	0.027	mg/kg	U	1
Dibenzofuran	132-64-9	BRL	0.35	0.054	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-2	Matrix: SOIL	% Moisture: 6
Lab Sample Id: 7192-003	Date Collected: Nov-12-04 12:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: SVOCs by SW8270C		Prep Method: SW3545
Date Analyzed: Nov-18-04 16:08	Analyst: CTP01	Date Prep: Nov-17-04 16:00
	Seq Number: 24499	Tech: MSN01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Diethylphthalate	84-66-2	BRL	0.35	0.049	mg/kg	U	1
Dimethylphthalate	131-11-3	BRL	0.35	0.056	mg/kg	U	1
di-n-Butylphthalate	84-74-2	BRL	0.35	0.036	mg/kg	U	1
di-n-Octylphthalate	117-84-0	BRL	0.35	0.043	mg/kg	U	1
Fluoranthene	206-44-0	BRL	0.35	0.047	mg/kg	U	1
Fluorene	86-73-7	BRL	0.35	0.046	mg/kg	U	1
Hexachlorobenzene	118-74-1	BRL	0.35	0.036	mg/kg	U	1
Hexachlorobutadiene	87-68-3	BRL	0.35	0.035	mg/kg	U	1
Hexachlorocyclopentadiene	77-47-4	BRL	0.35	0.024	mg/kg	U	1
Hexachloroethane	67-72-1	BRL	0.35	0.040	mg/kg	U	1
Hexachloropropene	1888-71-7	BRL	0.35	0.039	mg/kg	U	1
Indeno(1,2,3-c,d)pyrene	193-39-5	BRL	0.35	0.035	mg/kg	U	1
Isophorone	78-59-1	BRL	0.35	0.037	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.35	0.032	mg/kg	U	1
Nitrobenzene	98-95-3	BRL	0.35	0.041	mg/kg	U	1
N-Nitroso-di-n-propylamine	621-64-7	BRL	0.35	0.046	mg/kg	U	1
N-Nitrosodiphenylamine	86-30-6	BRL	0.35	0.055	mg/kg	U	1
Pentachlorophenol	87-86-5	BRL	0.71	0.049	mg/kg	U	1
Phenanthrene	85-01-8	BRL	0.35	0.043	mg/kg	U	1
Phenol	108-95-2	BRL	0.35	0.061	mg/kg	U	1
Pyrene	129-00-0	BRL	0.35	0.039	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-2	Matrix: SOIL	% Moisture: 6
Lab Sample Id: 7192-003	Date Collected: Nov-12-04 12:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5035MOD	
Date Analyzed: Nov-19-04 18:03	Analyst: TAG01	Date Prep: Nov-19-04 10:25	Tech: TAG01
Seq Number: 24506			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0052	0.00077	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0052	0.00063	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0052	0.00088	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0052	0.00075	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0052	0.00055	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0052	0.00070	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0052	0.00058	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0052	0.0011	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0052	0.00095	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0052	0.0010	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0052	0.0011	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0052	0.00054	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0052	0.00054	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0052	0.00069	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0052	0.00067	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0052	0.00058	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0052	0.0010	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0052	0.00052	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0052	0.00067	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0052	0.0011	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0052	0.00091	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.010	0.00054	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0052	0.0010	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.010	0.00070	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0052	0.00091	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.010	0.00066	mg/kg	U	1
Acetone	67-64-1	BRL	0.010	0.0013	mg/kg	U	1
Benzene	71-43-2	BRL	0.0052	0.00065	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0052	0.00098	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0052	0.00098	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0052	0.00069	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0052	0.00062	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0052	0.00052	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0052	0.0014	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0052	0.00084	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0052	0.00076	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0052	0.0017	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0052	0.00082	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0052	0.00062	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	0.0052	0.00083	mg/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0052	0.00070	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0052	0.00072	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0052	0.00064	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0052	0.00065	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0052	0.00071	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4BACKFILL-2	Matrix: SOIL	% Moisture: 6
Lab Sample Id: 7192-003	Date Collected: Nov-12-04 12:15	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5035MOD	
Date Analyzed: Nov-19-04 18:03	Analyst: TAG01	Date Prep: Nov-19-04 10:25	Tech: TAG01
Seq Number: 24506			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0052	0.00067	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0052	0.00086	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.010	0.0019	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0052	0.0013	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.0052	0.00098	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0052	0.00053	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0052	0.0011	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0052	0.00065	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0052	0.0010	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0052	0.00098	mg/kg	U	1
Styrene	100-42-5	BRL	0.0052	0.0011	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0052	0.00068	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0052	0.00080	mg/kg	U	1
Toluene	108-88-3	BRL	0.0052	0.00075	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0052	0.00069	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0052	0.00090	mg/kg	U	1
Trichloroethene	79-01-6	BRL	0.0052	0.00085	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0052	0.00053	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0052	0.00055	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: TB-11-12-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7192-004	Date Collected: Nov-12-04 17:00	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-17-04 13:27	Analyst: MVRRO1	Date Prep: Nov-17-04 10:11	Tech: MVRRO1
Seq Number: 24475			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: TB-11-12-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7192-004	Date Collected: Nov-12-04 17:00	Date Received: Nov-13-04 09:30
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-17-04 13:27	Analyst: MVRR01	Date Prep: Nov-17-04 10:11	Tech: MVRR01
Seq Number: 24475			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	0.43	1.0	0.16	ug/L	J	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24380 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24380 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: SVOCs by SW8270C		Prep Method: SW3520C	
Date Analyzed: Nov-18-04 12:07	Analyst: CTP01	Date Prep: Nov-17-04 14:47	Tech: NNF01
Seq Number: 24498			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,2,4-Trichlorobenzene	120-82-1	BRL	10	1.8	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	10	1.8	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	10	1.7	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	10	1.6	ug/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	10	4.9	ug/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	10	4.6	ug/L	U	1
2,4-Dichlorophenol	120-83-2	BRL	10	2.0	ug/L	U	1
2,4-Dimethylphenol	105-67-9	BRL	10	3.5	ug/L	U	1
2,4-Dinitrophenol	51-28-5	BRL	20	7.7	ug/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	10	2.3	ug/L	U	1
2,6-Dinitrotoluene	606-20-2	BRL	10	1.2	ug/L	U	1
2-Chloronaphthalene	91-58-7	BRL	10	1.5	ug/L	U	1
2-Chlorophenol	95-57-8	BRL	10	2.5	ug/L	U	1
2-Methylnaphthalene	91-57-6	BRL	10	1.6	ug/L	U	1
2-Methylphenol	95-48-7	BRL	10	1.7	ug/L	U	1
2-Nitroaniline	88-74-4	BRL	20	2.8	ug/L	U	1
2-Nitrophenol	88-75-5	BRL	10	2.2	ug/L	U	1
3,3-Dichlorobenzidine	91-94-1	BRL	20	3.2	ug/L	U	1
3&4-Methylphenol		BRL	20	2.8	ug/L	U	1
3-Nitroaniline	99-09-2	BRL	20	2.9	ug/L	U	1
4,6-Dinitro-2-methylphenol	534-52-1	BRL	50	6.2	ug/L	U	1
4-Bromophenyl-phenylether	101-55-3	BRL	10	1.4	ug/L	U	1
4-Chloro-3-methylphenol	59-50-7	BRL	10	1.4	ug/L	U	1
4-Chloroaniline	106-47-8	BRL	10	1.5	ug/L	U	1
4-Chlorophenyl-phenylether	7005-72-3	BRL	10	1.1	ug/L	U	1
4-Nitroaniline	100-01-6	BRL	20	2.2	ug/L	U	1
4-Nitrophenol	100-02-7	BRL	20	7.2	ug/L	U	1
Acenaphthene	83-32-9	BRL	10	1.2	ug/L	U	1
Acenaphthylene	208-96-8	BRL	10	1.2	ug/L	U	1
Anthracene	120-12-7	BRL	10	1.4	ug/L	U	1
Benzo(a)anthracene	56-55-3	BRL	10	1.1	ug/L	U	1
Benzo(a)pyrene	50-32-8	BRL	10	2.3	ug/L	U	1
Benzo(b)fluoranthene	205-99-2	BRL	10	1.2	ug/L	U	1
Benzo(g,h,i)perylene	191-24-2	BRL	10	1.9	ug/L	U	1
Benzo(k)fluoranthene	207-08-9	BRL	10	1.7	ug/L	U	1
Benzoic acid	65-85-0	BRL	20	10	ug/L	U	1
Benzyl alcohol	100-51-6	BRL	10	2.2	ug/L	U	1
bis(2-Chloroethoxy)methane	111-91-1	BRL	10	1.4	ug/L	U	1
bis(2-chloroethyl)ether	111-44-4	BRL	10	2.3	ug/L	U	1
bis(2-chloroisopropyl)ether	108-60-1	BRL	10	1.8	ug/L	U	1
bis(2-Ethylhexyl)phthalate	117-81-7	BRL	10	2.7	ug/L	U	1
Butylbenzylphthalate	85-68-7	BRL	10	1.2	ug/L	U	1
Chrysene	218-01-9	BRL	10	1.4	ug/L	U	1
Dibenz(a,h)anthracene	53-70-3	BRL	10	2.3	ug/L	U	1
Dibenzofuran	132-64-9	BRL	10	1.7	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24380 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24380 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: SVOCs by SW8270C

Prep Method: SW3520C

Date Analyzed: Nov-18-04 12:07

Analyst: CTP01

Date Prep: Nov-17-04 14:47

Tech: NNF01

Seq Number: 24498

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Diethylphthalate	84-66-2	BRL	10	2.0	ug/L	U	1
Dimethylphthalate	131-11-3	BRL	10	1.1	ug/L	U	1
di-n-Butylphthalate	84-74-2	BRL	10	1.3	ug/L	U	1
di-n-Octylphthalate	117-84-0	BRL	10	1.3	ug/L	U	1
Fluoranthene	206-44-0	BRL	10	1.0	ug/L	U	1
Fluorene	86-73-7	BRL	10	1.3	ug/L	U	1
Hexachlorobenzene	118-74-1	BRL	10	1.4	ug/L	U	1
Hexachlorobutadiene	87-68-3	BRL	10	1.4	ug/L	U	1
Hexachlorocyclopentadiene	77-47-4	BRL	10	3.1	ug/L	U	1
Hexachloroethane	67-72-1	BRL	10	1.9	ug/L	U	1
Hexachloropropene	1888-71-7	BRL	10	1.1	ug/L	U	1
Indeno(1,2,3-c,d)pyrene	193-39-5	BRL	10	1.1	ug/L	U	1
Isophorone	78-59-1	BRL	10	2.2	ug/L	U	1
Naphthalene	91-20-3	BRL	10	1.8	ug/L	U	1
Nitrobenzene	98-95-3	BRL	10	1.0	ug/L	U	1
N-Nitroso-di-n-propylamine	621-64-7	BRL	10	1.8	ug/L	U	1
N-Nitrosodiphenylamine	86-30-6	BRL	10	1.4	ug/L	U	1
Pentachlorophenol	87-86-5	BRL	20	5.2	ug/L	U	1
Phenanthrene	85-01-8	BRL	10	1.2	ug/L	U	1
Phenol	108-95-2	BRL	10	4.3	ug/L	U	1
Pyrene	129-00-0	BRL	10	1.3	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24388 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24388 BLK	Date Collected: 1	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-17-04 11:08	Analyst: MVRR01
Seq Number: 24475	Date Prep: Nov-17-04 10:11
	Tech: MVRR01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24388 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24388 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-17-04 11:08	Analyst: MVRR01	Date Prep: Nov-17-04 10:11	Tech: MVRR01
Seq Number: 24475			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24393 BLK	Matrix:SOIL	% Moisture:
Lab Sample Id: 24393 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: SVOCs by SW8270C	Prep Method:SW3545	
Date Analyzed:Nov-18-04 13:08	Analyst: CTP01	Date Prep:Nov-17-04 16:00
Seq Number: 24499		Tech: MSN01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,2,4-Trichlorobenzene	120-82-1	BRL	0.330	0.034	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.330	0.027	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.330	0.028	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.330	0.037	mg/kg	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.330	0.042	mg/kg	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.330	0.035	mg/kg	U	1
2,4-Dichlorophenol	120-83-2	BRL	0.330	0.052	mg/kg	U	1
2,4-Dimethylphenol	105-67-9	BRL	0.330	0.033	mg/kg	U	1
2,4-Dinitrophenol	51-28-5	BRL	0.670	0.450	mg/kg	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.330	0.053	mg/kg	U	1
2,6-Dinitrotoluene	606-20-2	BRL	0.330	0.045	mg/kg	U	1
2-Chloronaphthalene	91-58-7	BRL	0.330	0.034	mg/kg	U	1
2-Chlorophenol	95-57-8	BRL	0.330	0.036	mg/kg	U	1
2-Methylnaphthalene	91-57-6	BRL	0.330	0.037	mg/kg	U	1
2-Methylphenol	95-48-7	BRL	0.330	0.049	mg/kg	U	1
2-Nitroaniline	88-74-4	BRL	0.670	0.048	mg/kg	U	1
2-Nitrophenol	88-75-5	BRL	0.330	0.039	mg/kg	U	1
3,3-Dichlorobenzidine	91-94-1	BRL	0.670	0.039	mg/kg	U	1
3,4-Methylphenol		BRL	0.670	0.099	mg/kg	U	1
3-Nitroaniline	99-09-2	BRL	0.670	0.043	mg/kg	U	1
4,6-Dinitro-2-methylphenol	534-52-1	BRL	1.7	0.044	mg/kg	U	1
4-Bromophenyl-phenylether	101-55-3	BRL	0.330	0.037	mg/kg	U	1
4-Chloro-3-methylphenol	59-50-7	BRL	0.330	0.057	mg/kg	U	1
4-Chloroaniline	106-47-8	BRL	0.330	0.051	mg/kg	U	1
4-Chlorophenyl-phenylether	7005-72-3	BRL	0.330	0.043	mg/kg	U	1
4-Nitroaniline	100-01-6	BRL	0.670	0.088	mg/kg	U	1
4-Nitrophenol	100-02-7	BRL	0.670	0.410	mg/kg	U	1
Acenaphthene	83-32-9	BRL	0.330	0.035	mg/kg	U	1
Acenaphthylene	208-96-8	BRL	0.330	0.043	mg/kg	U	1
Anthracene	120-12-7	BRL	0.330	0.036	mg/kg	U	1
Benzo(a)anthracene	56-55-3	BRL	0.330	0.026	mg/kg	U	1
Benzo(a)pyrene	50-32-8	BRL	0.330	0.036	mg/kg	U	1
Benzo(b)fluoranthene	205-99-2	BRL	0.330	0.033	mg/kg	U	1
Benzo(g,h,i)perylene	191-24-2	BRL	0.330	0.028	mg/kg	U	1
Benzo(k)fluoranthene	207-08-9	BRL	0.330	0.042	mg/kg	U	1
Benzoic acid	65-85-0	BRL	0.670	0.260	mg/kg	U	1
Benzyl alcohol	100-51-6	BRL	0.330	0.053	mg/kg	U	1
Butylbenzylphthalate	85-68-7	BRL	0.330	0.037	mg/kg	U	1
bis(2-Chloroethoxy)methane	111-91-1	BRL	0.330	0.040	mg/kg	U	1
bis(2-chloroethyl)ether	111-44-4	BRL	0.330	0.038	mg/kg	U	1
bis(2-chloroisopropyl)ether	108-60-1	BRL	0.330	0.040	mg/kg	U	1
bis(2-Ethylhexyl)phthalate	117-81-7	BRL	0.330	0.034	mg/kg	U	1
Chrysene	218-01-9	BRL	0.330	0.035	mg/kg	U	1
Dibenz(a,h)anthracene	53-70-3	BRL	0.330	0.025	mg/kg	U	1
Dibenzofuran	132-64-9	BRL	0.330	0.050	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24393 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24393 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: SVOCs by SW8270C		Prep Method: SW3545	
Date Analyzed: Nov-18-04 13:08	Analyst: CTP01	Date Prep: Nov-17-04 16:00	Tech: MSN01
	Seq Number: 24499		

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Diethylphthalate	84-66-2	BRL	0.330	0.046	mg/kg	U	1
Dimethylphthalate	131-11-3	BRL	0.330	0.052	mg/kg	U	1
di-n-Butylphthalate	84-74-2	BRL	0.330	0.034	mg/kg	U	1
di-n-Octylphthalate	117-84-0	BRL	0.330	0.040	mg/kg	U	1
Fluoranthene	206-44-0	BRL	0.330	0.044	mg/kg	U	1
Fluorene	86-73-7	BRL	0.330	0.044	mg/kg	U	1
Hexachlorobenzene	118-74-1	BRL	0.330	0.034	mg/kg	U	1
Hexachlorobutadiene	87-68-3	BRL	0.330	0.033	mg/kg	U	1
Hexachlorocyclopentadiene	77-47-4	BRL	0.330	0.022	mg/kg	U	1
Hexachloroethane	67-72-1	BRL	0.330	0.038	mg/kg	U	1
Hexachloropropene	1888-71-7	BRL	0.330	0.037	mg/kg	U	1
Indeno(1,2,3-c,d)pyrene	193-39-5	BRL	0.330	0.033	mg/kg	U	1
Isophorone	78-59-1	BRL	0.330	0.034	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.330	0.030	mg/kg	U	1
Nitrobenzene	98-95-3	BRL	0.330	0.038	mg/kg	U	1
N-Nitroso-di-n-propylamine	621-64-7	BRL	0.330	0.044	mg/kg	U	1
N-Nitrosodiphenylamine	86-30-6	BRL	0.330	0.052	mg/kg	U	1
Pentachlorophenol	87-86-5	BRL	0.670	0.046	mg/kg	U	1
Phenanthrene	85-01-8	BRL	0.330	0.040	mg/kg	U	1
Phenol	108-95-2	BRL	0.330	0.057	mg/kg	U	1
Pyrene	129-00-0	BRL	0.330	0.037	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24413 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24413 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035MOD		
Date Analyzed: Nov-19-04 15:52	Analyst: TAG01	Date Prep: Nov-19-04 10:25	Tech: TAG01
	Seq Number: 24506		

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0050	0.00075	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0050	0.00061	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0050	0.00085	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0050	0.00073	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0050	0.00053	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0050	0.00068	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0050	0.00056	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0050	0.00092	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0050	0.00098	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0050	0.00067	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0050	0.00065	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0050	0.00056	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0050	0.00098	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0050	0.00050	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0050	0.00065	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0050	0.0010	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0050	0.00088	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.010	0.00052	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0050	0.0010	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.010	0.00068	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0050	0.00088	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.010	0.00064	mg/kg	U	1
Acetone	67-64-1	BRL	0.010	0.0013	mg/kg	U	1
Benzene	71-43-2	BRL	0.0050	0.00063	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0050	0.00095	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0050	0.00095	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0050	0.00067	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0050	0.00060	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0050	0.00050	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0050	0.0014	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0050	0.00081	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0050	0.00074	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0050	0.0016	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0050	0.00079	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0050	0.00060	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	0.0050	0.00080	mg/kg	U	1
cis-1,3-Dichloropropane	10061-01-5	BRL	0.0050	0.00068	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0050	0.00070	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0050	0.00062	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0050	0.00063	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0050	0.00069	mg/kg	U	1



Certificate of Analytical Results 7192

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24413 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24413 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035MOD
Date Analyzed: Nov-19-04 15:52	Analyst: TAG01
	Date Prep: Nov-19-04 10:25
	Tech: TAG01
	Seq Number: 24506

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0050	0.00065	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0050	0.00083	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.010	0.0018	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0050	0.0013	mg/kg	U	1
Naphthalene	91-20-3	0.0010	0.0050	0.00095	mg/kg	J	1
n-Butylbenzene	104-51-8	BRL	0.0050	0.00051	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0050	0.0010	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0050	0.00063	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0050	0.0010	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0050	0.00095	mg/kg	U	1
Styrene	100-42-5	BRL	0.0050	0.0010	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0050	0.00066	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0050	0.00077	mg/kg	U	1
Toluene	108-88-3	BRL	0.0050	0.00073	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0050	0.00067	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0050	0.00087	mg/kg	U	1
Trichloroethene	79-01-6	BRL	0.0050	0.00082	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0050	0.00051	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0050	0.00053	mg/kg	U	1



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/09/04 13:09

Work Order #: 7192

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24498

Sample: 24380 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

	SURROGATE RECOVERY STUDY				
SVOCs by SW8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	72.4	100	72	45-135	
2-Fluorobiphenyl	36.4	50.0	73	60-120	
2-Fluorophenol	68.4	100	68	45-135	
Nitrobenzene-d5	33.0	50.0	66	60-120	
Phenol-d5	63.4	100	63	45-135	
p-Terphenyl-d14	44.8	50.0	90	60-120	

Lab Batch #: 24498

Sample: 7192-001 / SMP

Batch: 1 Matrix: W

Units: ug/L

	SURROGATE RECOVERY STUDY				
SVOCs by SW8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	65.8	100	66	35-140	
2-Fluorobiphenyl	33.8	50.0	68	45-135	
2-Fluorophenol	62.1	100	62	35-140	
Nitrobenzene-d5	28.5	50.0	57	45-135	
Phenol-d5	58.5	100	59	35-140	
p-Terphenyl-d14	33.7	50.0	67	45-135	

Lab Batch #: 24499

Sample: 24393 BLK / BLK

Batch: 1 Matrix: S

Units: ug/kg

	SURROGATE RECOVERY STUDY				
SVOCs by SW8270C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2,4,6-Tribromophenol	2368	3333	71	45-135	
2-Fluorobiphenyl	1200	1667	72	60-120	
2-Fluorophenol	2097	3333	63	45-135	
Nitrobenzene-d5	954.6	1667	57	60-120	Z
Phenol-d5	1905	3333	57	45-135	
p-Terphenyl-d14	1525	1667	91	60-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits, data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/09/04 13:09

Work Order #: 7192

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24499

Sample: 7192-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
SVOCs by SW8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	2.212	3.330	66	35-140	
2-Fluorobiphenyl	1.181	1.665	71	45-135	
2-Fluorophenol	2.025	3.330	61	35-140	
Nitrobenzene-d5	0.8487	1.665	51	45-135	
Phenol-d5	2.039	3.330	61	35-140	
p-Terphenyl-d14	1.415	1.665	85	45-135	

Lab Batch #: 24499

Sample: 7192-003 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
SVOCs by SW8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	1.398	3.331	42	35-140	
2-Fluorobiphenyl	0.8439	1.666	51	45-135	
2-Fluorophenol	1.334	3.331	40	35-140	
Nitrobenzene-d5	0.6077	1.666	36	45-135	Z
Phenol-d5	1.393	3.331	42	35-140	
p-Terphenyl-d14	1.189	1.666	71	45-135	

Lab Batch #: 24506

Sample: 24413 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0512	0.0500	102	75-125	
Bromofluorobenzene	0.0523	0.0500	105	75-125	
Toluene-D8	0.0510	0.0500	102	75-125	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/09/04 13:09

Project ID: 6301-03-0011-1901-1000

Work Order #: 7192

Lab Batch #: 24506

Sample: 7192-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0483	0.0495	98	70-130	
Bromofluorobenzene	0.0507	0.0495	102	70-130	
Toluene-D8	0.0511	0.0495	103	70-130	

Lab Batch #: 24506

Sample: 7192-003 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0470	0.0485	97	70-130	
Bromofluorobenzene	0.0501	0.0485	103	70-130	
Toluene-D8	0.0501	0.0485	103	70-130	

Lab Batch #: 24475

Sample: 24388 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	10.8	10.0	108	80-120	
Bromofluorobenzene	9.41	10.0	94	80-120	
Toluene-D8	11.5	10.0	115	80-120	

Lab Batch #: 24475

Sample: 7192-001 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	12.7	10.0	127	70-130	
Bromofluorobenzene	9.09	10.0	91	70-130	
Toluene-D8	10.9	10.0	109	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/09/04 13:09

Work Order #: 7192

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24475

Sample: 7192-004 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.0	10.0	110	70-130	
Bromofluorobenzene	9.21	10.0	92	70-130	
Toluene-D8	10.6	10.0	106	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = $100 * A / B$
 All results are based on MDL and validated for QC purposes
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Work Order #: 7192
 Lab Batch #: 24499
 Reporting Units: ug/kg

Sample: 24393 BKS
 Batch #: 1

Report Date: 12/08/04 14:38
 Project ID: 6301-03-0011-1901-1000
 Matrix: S

SVOCs by SW8270C		BLANK /BLANK SPIKE RECOVERY STUDY				
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,2,4-Trichlorobenzene	<34	1700	1000	59	45-135	
1,4-Dichlorobenzene	<37	1700	970	57	45-135	
2,4-Dinitrotoluene	<53	1700	1200	71	45-135	
2-Chlorophenol	<36	3300	2100	64	45-135	
4-Chloro-3-methylphenol	<57	3300	2300	70	45-135	
4-Nitrophenol	<410	3300	1400	42	45-135	Z
Acenaphthene	<35	1700	1200	71	45-135	
N-Nitroso-di-n-propylamine	<44	1700	1200	71	45-135	
Pentachlorophenol	<46	3300	1800	55	45-135	
Phenol	<57	3300	2000	61	45-135	
Pyrene	<37	1700	1200	71	45-135	

Lab Batch #: 24506
 Reporting Units: mg/kg

Sample: 24413 BKS
 Batch #: 1

Matrix: S

VOCs by SW8260B		BLANK /BLANK SPIKE RECOVERY STUDY				
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.00061	0.050	0.052	104	75-125	
1,1-Dichloroethane	<0.00053	0.050	0.054	108	75-125	
1,1-Dichloroethene	<0.00068	0.050	0.054	108	75-125	
Benzene	<0.00063	0.050	0.051	102	75-125	
Bromodichloromethane	<0.00067	0.050	0.050	100	75-125	
Chlorobenzene	<0.00074	0.050	0.050	100	75-125	
cis-1,2-Dichloroethene	<0.00080	0.050	0.054	108	75-125	
Tetrachloroethylene	<0.00077	0.050	0.051	102	75-125	
Toluene	<0.00073	0.050	0.049	98	75-125	
Trichloroethene	<0.00082	0.050	0.051	102	75-125	
Vinyl Chloride	<0.00053	0.050	0.051	102	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date 12/08/04 14:38
Project ID: 6301-03-0011-1901-1000
Matrix: W

Work Order #: 7192

Lab Batch ID: 24475

Sample: 24388 BKS

Batch #: 1

Units: ug/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
VOCs by SW8260B (25ml purge)											
1,1,1-Trichloroethane	<0.33	10	11	110	10	11	110	0	80-120	30	
1,1-Dichloroethane	<0.31	10	11	110	10	10	100	10	80-120	30	
1,1-Dichloroethene	<0.16	10	11	110	10	11	110	0	80-120	30	
Benzene	<0.16	10	10	100	10	9.8	98	2	80-120	30	
Bromodichloromethane	<0.090	10	10	100	10	9.8	98	2	80-120	30	
Chlorobenzene	<0.13	10	9.6	96	10	10	100	4	80-120	30	
cis-1,2-Dichloroethene	<0.19	10	11	110	10	10	100	10	80-120	30	
Tetrachloroethylene	<0.35	10	11	110	10	11	110	0	80-120	30	
Toluene	<0.16	10	11	110	10	11	110	0	80-120	30	
Trichloroethene	<0.12	10	11	110	10	10	100	10	80-120	30	
Vinyl Chloride	<0.17	10	11	110	10	9.6	96	14	80-120	30	

Relative Percent Difference RPD = 200*(D-G)/(D+G)
 Blank Spike Recovery [D] = 100*(C)/[B]
 Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
 All results are based on MDL and Validated for QC Purposes

F = RPD exceeded the laboratory control limits



BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Work Order #: 7192

Report Date 12/08/04 14:38

Lab Batch ID: 24498

Project ID: 6301-03-0011-1901-1000

Sample: 24380 BKS

Batch #: 1

Matrix: W

Units: ug/L

Analytes	BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,2,4-Trichlorobenzene	<1.8	50	28	56	50	24	48	15	45-135	50	
1,4-Dichlorobenzene	<1.6	50	27	54	50	22	44	20	45-135	50	Z
2,4-Dinitrotoluene	<2.3	50	38	76	50	31	62	20	45-135	50	
2-Chlorophenol	<2.5	100	67	67	100	52	52	25	45-135	50	
4-Chloro-3-methylphenol	<1.4	100	73	73	100	57	57	25	45-135	50	
4-Nitrophenol	<7.2	100	60	60	100	52	52	14	45-135	50	
Acenaphthene	<1.2	50	36	72	50	30	60	18	45-135	50	
N-Nitroso-di-n-propylamine	<1.8	50	35	70	50	27	54	26	45-135	50	
Pentachlorophenol	<5.2	100	66	66	100	55	55	18	45-135	50	
Phenol	<4.3	100	63	63	100	48	48	27	45-135	50	
Pyrene	<1.3	50	38	76	50	31	62	20	45-135	50	

Relative Percent Difference RPD = $200 * [(D-G)/(D+G)]$
 Blank Spike Recovery [D] = $100 * (C)/[B]$
 Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$
 All results are based on MDL and Validated for QC Purposes
 F = RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/08/04 14:38
Project ID: 6301-03-0011-1901-1000

Work Order #: 7192
Lab Batch ID: 24499
Reporting Units: ug/kg

QC-Sample ID: 7192-003 MS Batch #: 1 Matrix: S

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,2,4-Trichlorobenzene	<36	1800	1100	61	1800	1000	56	9	45-135	60	
1,4-Dichlorobenzene	<39	1800	1100	61	1800	960	53	14	45-135	60	
2,4-Dinitrotoluene	<57	1800	1300	72	1800	1200	67	7	45-135	60	
2-Chlorophenol	<38	3500	2300	66	3500	2100	60	10	45-135	60	
4-Chloro-3-methylphenol	<60	3500	2600	74	3500	2300	66	11	45-135	60	
4-Nitrophenol	<440	3500	2000	57	3500	1800	51	11	45-135	60	
Acenaphthene	<38	1800	1300	72	1800	1200	67	7	45-135	60	
N-Nitroso-di-n-propylamine	<46	1800	1400	78	1800	1200	67	15	45-135	60	
Pentachlorophenol	<49	3500	1900	54	3500	1900	54	0	45-135	60	
Phenol	<61	3500	2200	63	3500	2000	57	10	45-135	60	
Pyrene	<39	1800	1300	72	1800	1300	72	0	45-135	60	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)
RPD = RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/08/04 14:38

Project ID: 6301-03-0011-1901-1000

Work Order #: 7192

Lab Batch ID: 24506

Reporting Units: mg/kg

QC - Sample ID: 7192-002 MS

Batch #: 1 Matrix: S

VOCs by SW8260B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1,1-Trichloroethane	<0.0010	0.052	0.050	96	0.052	0.047	90	6	70-130	30	
1,1-Dichloroethane	<0.0010	0.052	0.057	110	0.052	0.055	106	4	70-130	30	
1,1-Dichloroethene	<0.0010	0.052	0.056	108	0.052	0.054	104	4	70-130	30	
Benzene	<0.0010	0.052	0.052	100	0.052	0.050	96	4	70-130	30	
Bromodichloromethane	<0.0010	0.052	0.046	88	0.052	0.044	85	3	70-130	30	
Chlorobenzene	<0.0010	0.052	0.052	100	0.052	0.049	94	6	70-130	30	
cis-1,2-Dichloroethene	<0.0010	0.052	0.057	110	0.052	0.054	104	6	70-130	30	
Tetrachloroethylene	<0.0010	0.052	0.074	142	0.052	0.070	135	5	70-130	30	Z
Toluene	<0.0010	0.052	0.052	100	0.052	0.049	94	6	70-130	30	
Trichloroethene	<0.0010	0.052	0.054	104	0.052	0.052	100	4	70-130	30	
Vinyl Chloride	<0.0010	0.052	0.055	106	0.052	0.053	102	4	70-130	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference RPD = 200*(D-G)/(D+G)
 Z = RPD exceeded the laboratory control limits

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7192SAS No. : _____ SDG No. N/AInstrument ID: AG-MSDDate Analyzed: 11/18/04Lab File ID: 1C111804\C14894Time Analyzed : 10:21EPA Sample No. SSTD050C59GC Column: ZB-D5ID: 25 (mm)

	IS1 (DCB) AREA	RT #	IS2 (NPT) AREA	RT #	IS3 (ANT) AREA	RT #
12 HOUR STD	111418	6.83	440661	8.47	242219	10.66
UPPER LIMIT	222836	7.33	881322	8.97	484438	11.16
LOWER LIMIT	55709	6.33	220331	7.97	121110	10.16
EPA SAMPLE						
1 24380 BLK	94235	6.83	358659	8.47	202647	10.66
2 OU4EB-I	98053	6.83	375620	8.47	203074	10.66
3 24380 BKS	90170	6.83	353448	8.47	198073	10.66
4 24380 BSD	117380	6.83	434371	8.47	242322	10.66

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = acenaphthene-d10

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7192SAS No. : _____ SDG No. N/AInstrument ID: AG-MSDate Analyzed: 11/18/04Lab File ID: IC111804\C14894Time Analyzed : 10:21EPA Sample No. SSTD050C59GC Column: ZB-D5ID: 25 (mm)

	IS1 (DCB) AREA	RT #	IS2 (NPT) AREA	RT #	IS3 (ANT) AREA	RT #
12 HOUR STD	111418	6.83	440661	8.47	242219	10.66
UPPER LIMIT	222836	7.33	881322	8.97	484438	11.16
LOWER LIMIT	55709	6.33	220331	7.97	121110	10.16
EPA SAMPLE						
1 24393 BLK	81062	6.83	302108	8.47	169527	10.66
2 OU4BACKFILL-1	77476	6.83	302502	8.47	174065	10.66
3 24393 BKS	89178	6.83	340279	8.47	183318	10.66
4 OU4BACKFILL-2	79403	6.83	317139	8.47	178833	10.66
5 OU4BACKFILL-2	91813	6.83	359120	8.47	194281	10.66
6 OU4BACKFILL-2	101666	6.83	395452	8.47	214086	10.66

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = acenaphthene-d10

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7192SAS No. : _____ SDG No. N/AInstrument ID: AG-MSDate Analyzed: 11/11/04Lab File ID: 1C111104\C14807Time Analyzed : 14:34EPA Sample No. SSTD050C49GC Column: ZB-D5ID: .25 (mm)

	IS1 (DCB) AREA	RT #	IS2 (NPT) AREA	RT #	IS3 (ANT) AREA	RT #
12 HOUR STD	101269	6.71	394716	8.34	214081	10.52
UPPER LIMIT	202538	7.21	789432	8.84	428162	11.02
LOWER LIMIT	50635	6.21	197358	7.84	107041	10.02
EPA SAMPLE						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NPT) = Naphthalene-d8

IS3 (ANT) = acenaphthene-d10

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7192SAS No. : _____ SDG No. N/AInstrument ID: AG-MSDDate Analyzed: 11/18/04Lab File ID: 1C111804\C14894Time Analyzed : 10:21EPA Sample No. : SSTD050C59GC Column: ZB-D5ID: .25 (mm)

	IS4 (PHN) AREA	RT #	IS5 (CRY) AREA	RT #	IS6 (PRY) AREA	RT #
12 HOUR STD	419445	12.46	322280	15.69	243288	17.50
UPPER LIMIT	838890	12.96	644560	16.19	486576	18.00
LOWER LIMIT	209723	11.96	161140	15.19	121644	17.00
EPA SAMPLE						
1 24380 BLK	334577	12.46	238474	15.69	170473	17.50
2 OU4EB-1	337140	12.46	249161	15.69	174893	17.50
3 24380 BKS	327258	12.46	251068	15.69	173280	17.49
4 24380 BSD	407834	12.46	324396	15.69	226610	17.50

IS4 (PHN) = phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7192SAS No. : _____ SDG No. N/AInstrument ID: AG-MSDate Analyzed: 11/18/04Lab File ID: 1C111804\C14894Time Analyzed : 10:21EPA Sample No. : SSTD050C59GC Column: ZB-D5ID: .25 (mm)

	IS4 (PHN) AREA	RT #	IS5 (CRY) AREA	RT #	IS6 (PRY) AREA	RT #	
	12 HOUR STD	419445	12.46	322280	15.69	243288	17.50
	UPPER LIMIT	838890	12.96	644560	16.19	486576	18.00
	LOWER LIMIT	209723	11.96	161140	15.19	121644	17.00
	EPA SAMPLE						
1	24393 BLK	270807	12.46	211943	15.69	130592	17.50
2	OU4BACKFILL-1	281248	12.46	217536	15.69	146709	17.50
3	24393 BKS	295509	12.46	226502	15.69	149291	17.50
4	OU4BACKFILL-2	300246	12.46	231766	15.69	167749	17.50
5	OU4BACKFILL-2	323125	12.46	242673	15.69	162864	17.50
6	OU4BACKFILL-2	353855	12.46	263458	15.69	181920	17.50

IS4 (PHN) = phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits

783 448



8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABS

Contract : 6301-03-0011-1901-1000

Lab Code : ACCURA

Case No. : 7192

SAS No. : _____ SDG No. N/A

Instrument ID: AG-MS

Date Analyzed: 11/11/04

Lab File ID: 1C111104\C14807

Time Analyzed : 14:34

EPA Sample No. : SSTD050C49

GC Column: ZB-D5

ID: .25 (mm)

	IS4 (PHN) AREA	RT #	IS5 (CRY) AREA	RT #	IS6 (PRY) AREA	RT #
12 HOUR STD	364637	12.32	268083	15.55	178706	17.38
UPPER LIMIT	729274	12.82	536166	16.05	357412	17.88
LOWER LIMIT	182319	11.82	134042	15.05	89353	16.88
EPA SAMPLE						

IS4 (PHN) = phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7192

SAS No. : _____

Instrument ID: HP-MSJSDG No. N/ALab File ID: J111704\J14354Date Analyzed: 11/17/04EPA Sample No. : VSTD010J19Time Analyzed : 10:30GC Column: ZB-624ID: .25 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	568299	5.94	740395	11.42	213667	14.64
UPPER LIMIT	1136598	6.44	1480790	11.92	427334	15.14
LOWER LIMIT	284150	5.44	370198	10.92	106834	14.14
EPA SAMPLE						
1 24388 BLK	552936	5.94	682775	11.43	188700	14.64
2 24388 BKS	565639	5.95	760176	11.42	210576	14.64
3 24388 BSD	591215	5.94	749431	11.42	208168	14.64
4 OU4EB-1	405947	5.95	536700	11.43	152774	14.64
5 TB-11-12-04	536613	5.95	680062	11.43	179683	14.64

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABS

Contract : 6301-03-0011-1901-1000

Lab Code : ACCURA

Case No. : 7192

SAS No. : _____

Instrument ID: AG-MSK

SDG No. N/A

Lab File ID: K111904\K012865

Date Analyzed: 11/19/04

EPA Sample No. : VSTD010K96

Time Analyzed : 11:57

GC Column: DB-624

ID: .18 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	508326	3.97	739888	8.37	441287	10.89
UPPER LIMIT	1016652	4.47	1479776	8.87	882574	11.39
LOWER LIMIT	254163	3.47	369944	7.87	220644	10.39
EPA SAMPLE						
1 VSTD010K96	508326	3.97	739888	8.37	441287	* 10.89
2 24413 BLK	435696	3.97	632680	8.36	368771	* 10.88
3 24413 BKS	453160	3.97	655678	8.37	400604	* 10.89
4 OU4BACKFILL-1	394138	3.97	571633	8.37	335057	* 10.89
5 OU4BACKFILL-2	392609	3.97	558642	8.37	324266	* 10.89
6 OU4BACKFILL-1	405929	3.97	574327	8.37	334869	* 10.89
7 OU4BACKFILL-1	400702	3.96	572674	8.37	346636	* 10.89

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits

**Accura Analytical Laboratory**

EPA Defined Qualifiers Codes used by AAL

- BRL:** This abbreviation indicates that the analytical results were Below the Reporting Limit (BRL).
- U:** The compound was analyzed for but not detected.
- J:** This indicates an estimated value. This flag is used in 3 incidences.
- (1) When estimating a concentration for tentatively identified compounds where 1:1 response is assumed.
 - (2) When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the Contract Required Detection Limit (CRDL) – or Reporting Limit - but greater than the MDL.
 - (3) When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL – or Reporting Limit- but greater than MDL.
- N:** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" flag is not used.
- P:** This is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with "P"
- C:** This applies to pesticide result where the identification has been confirmed by GC/MS. Do not apply if this flag if analyte(s) were not confirmed. Used the laboratory-defined flag instead (see the X qualifier).
- B:** This is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The flag shall be used for a tentatively identified compound as well as for a positively identified target compound.
- E:** This identifies compounds whose concentrations exceed the upper level of the linear calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract should be diluted and re-analyzed.
- Note: For Total xylene, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately.*
- X:** Defined by the laboratory
- Z:** Surrogates/Spikes results exceeds quality control limits
- ZZ:** Surrogates/Spikes results exceeds quality control limits in multiple samples
- ***:** Surrogate recoveries were diluted out
- M:** Manual integrations were necessary and an "m" qualifying code is present on the quantitation report next to the analyte.
- D:** This flag indicates that the identified compound is reported from the dilution run.



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
 6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

AAL Work Order # 7220

Client Project: DSCR OU4 Source Removal / 6301-03-0011-1901-1000

Accura Analytical Laboratory Inc. certifies that the results meet all requirements of the NELAC Standards.

The data package includes a total of **33** pages including: case narrative, Chain of Custody, Request for Analysis Forms, Sample Receipt Checklist, analytical results pages, QC surrogate recovery pages, QC Blank Spike / Blank Spike Duplicate recovery pages, QC MS/MSD recovery pages, Internal Standard Results Forms, and a list of common EPA qualifier codes used by AAL.

The following items were noted concerning this work order:

Receiving Notations:

1. The samples were received at 2°C.

Michele Ruiz
 Michele Ruiz
 Receiving

November 18, 2004
 Date

VOCs by SW8260B Notations:

1. The following spike recoveries were outside the method specified limits due to possible matrix interference:
 7227-005MS – Trichloroethene
 7227-005MSD – Trichloroethene
2. The relative percent difference between the matrix spike and matrix spike duplicate was outside the method specified limit for the following analytes:
 7227-005MS/MSD – Trichloroethene

Thomas A. Gatch
 Thomas A. Gatch
 VOC Analyst

December 09, 2004
 Date



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
FL Certification #E87429 NC Certification #483 SC Certification #98015
Utah Certification #AAL11 USACE Approved Navy Certification code NFESC 413
Case Narrative

Project Manager's Notations:

1. The soil sample results are reported on a dry weight basis.

These case narrative notations have been reviewed/edited by:

A handwritten signature in black ink, appearing to read 'David C. Fuller'.

David C. Fuller
VP - Client Services

December 09, 2004
Date



ACCURA ANALYTICAL LABORATORY, INC.
Environmental Analytical Services

40264

783 454

Page 1 of 1
6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: MACTEL Billing address: 3100 TOWNPOINT DR. KENNESAW, GA, 30144
 Address: 9625 JEFF DAVIS HWY P.O.# (if required): 6301-03-0011-1901-1000
 Results Sent to: (Client Contact): JUDY HARNISS For Laboratory Use Only: AAAL LIMS System ID: 11976
 Email address: JHARNISS@MACTEL.COM Receiver's Initials/Temp: BA 72
 Contact Phone #: 770-421-3336 Fax #: 770-421-3343 Custody Seal(s): 2 AAL Work Order #: 7220
 Project (Site) Name: D50R

Project Number: 6301-03-0011-1901-1000 Preservation Code: (See below)

Sampler(s): (signature) [Signature] Sampler(s): (printed) TED A. WITTMANN

Line No.	Sample ID #	Sample Date / Time	Composite	Grab	Matrix (See below)	Sample Location	No. of Containers	Analysis Requested	Field Comments:	AAAL Lab ID:
1	TB-11-17-04	11-17-04/1730			W	TRIB BLANK	2	VOCs SWBZ6B-1		7220
2	004 PIT-3-SO-EB1	11-17-04/0810			W	EQUIPMENT BLANK	2	VOCs SWBZ6B-1		- 001
3	004 PIT-3-SO-7(50)	11-17-04/1600	X		S	004 PIT-3	5	VOCs SWBZ6B-1		- 002
4	004 PIT-1-SO-3(4.0)	11-17-04/1425	X		S	004 PIT-1	5	VOCs SWBZ6B-1		- 003
5										✓ 004
6										-
7										-
8										-
9										-
10										-

1) Relinquished By: [Signature] Date / Time: 11-17-04 1930 2) Received By: Fed Ex Date / Time: 11/16/04 0955
 Delivered by: (Circle One) Fed Ex UPS / DHL / AAL Pickup / Hand / Other

3) Relinquished By: Fed Ex Date / Time: 11/16/04 0955 4) Received By: [Signature] Date / Time: 11/16/04 0955
 Turnaround Time Requested: 24 HR

Matrix Guide: (W=Water) (DW=Drinking Water) (GW=Groundwater) (SW=Surface Water) (L=Liquid) (S=Soil) (SD=Solid) (SL=Sludge) (A=Air) (C=Air Cartridge)
 Preservation Codes: 1=HCL / 2=HNO₃ / 3=H₂SO₄ / 4=NaOH+NaAsO₂ / 5=NaOH+ZnAc / 6=Na₂S₂O₈ / 7=NaHSO₄ / 8=MeOH

783 455

Wo # 7220

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: TB- 11-17-04

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	7220-001

Comments: _____

Prepared By: TED A. WITTEMAN

Checked By: _____

783 456

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

wo # 7220

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3-SO-EB1

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	7220-002

Comments: _____

Prepared By: _____

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

783 457
WO# 7220

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3-SO-7 (5.0')

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	7220-00
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

783 458

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

WO # 7220

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-1-SO-3(4.0')

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	7220- 00.
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

ACCURA ANALYTICAL LABORATORY, INC.

SAMPLE RECEIPT CHECKLIST VERSION 6 Client Code: 1405-3 AAL Project Mgr: DCF

Client Project Name: DSCR ACCURA Work Order#: 7220

Are there EnCores, tests with < 48Hr hold times, or RUSH TAT's requested? YES NO
 If YES, you must communicate RUSH analyses to the appropriate analyst(s) immediately!!! / or preserve EnCores (see #16 below)!!!
 Preliminary Examination: Initials: Ym Date received: 11/18/04 Date cooler was opened: 11/18/04

1. Did cooler/package come with a shipping slip (airbill, Etc.)? YES NO
 If YES, enter carrier name and airbill number here: Fed Ex - 0434 5694 5284
 Describe type of packing in cooler: Bubble Wrap, Ice
 ****If cooler was hand delivered, CIRCLE HERE, skip to item #5****
2. Were custody seals on outside of cooler? YES NO
 If YES, how many: 2 seal dated: 11/17/04 seal name: C. Scott
3. Were custody seals unbroken and intact at the date and time of arrival? YES N/A NO
4. Were custody papers sealed in a plastic bag to prevent damage to chain of custody? YES NO
5. If required, was enough ice used? (Internal cooler temperature, 2°C) YES N/A NO
6. Did you sign custody papers in the appropriate place? YES NO
7. Was project identifiable from custody papers? YES NO
 If YES, enter project name at the top.

Complete project file with green sheet, proper file tag, and shipping documentation. Line up samples following chain. Complete Container Receipt Verification form (include extra containers for dissolved metals filtrates). Complete login in XENCO and generate AAL ID Labels.

8. Did all containers arrive unbroken and were labels in good condition? YES NO
9. Were custody papers filled out properly and did all labels agree with custody papers? YES NO
10. Were correct containers and sufficient amount of sample sent for the test indicated? YES NO
11. All samples collected within three days of date received for these analyses (Reactive Cn & S, Solids in H2O, Sulfide, Sulfite, IALL! Extractable Organic Waters)? YES N/A NO
 If NO, coordinate with the project manager to ensure that no samples go out of hold!!!
12. No residual chlorine found in waters for these analyses: (Cyanide, PAH, SVOC, Pesticides, PCB's, Herbicides)? YES N/A NO
 Checked by: _____ (Initials)
13. Were samples properly chemically preserved, if required, upon receipt? YES N/A NO
 (For example: pH checked for waters for all Metals, Wet Chemistry, Pesticides, PCB's, Herbicides, and VOC/BTEX samples submitted with HCL for waters and in either Encore samplers or NaHSO₄ labeled vials for soils)
 Preservation checked by: _____ (Initials)
14. Were air bubbles (>1/4 inch) absent in VOC/BTEX samples? YES N/A NO
 If NO, list ID # on back and label vials with ~~NO AIR BUBBLES~~
15. If there are samples for dissolved metals, were they field filtered? YES N/A NO
 If NO, list date and time samples were filtered and preserved in lab: _____
16. Were Encore samplers included? YES NO
 If YES, date and time preserved with NaHSO₄: 11/18/04 1050 By whom: Ym
17. Does this submittal contain soil NaHSO₄ vials for BTEX/GRO/VOC'S? YES NO
 If YES, vials weighed by and entered into vial database by: Ym/MR
18. Initials of laboratory personnel responsible for labeling laboratory I.D. numbers on containers: Ym

Keep samples and chain out. Before moving samples to their appropriate location, another person must review the entire project ensuring that information on the AAL ID Barcode label matches the container label, and that all information is consistent with the chain.
 Final check and samples logged to locations by: _____ (Initials)

19. Was it necessary to call the assigned project manager in order to proceed with login? YES NO
 If YES, give details on the back of this form.
20. Who was called? Ym By whom? _____ Date/Time: _____

Project Mgr. Review: Ym (Initials) 11/18/04 (Date) Page 1 of 2



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: TB-11-17-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7220-001	Date Collected: Nov-17-04 17:30	Date Received: Nov-18-04 09:55
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-18-04 16:12	Analyst: MVRR01
Seq Number: 24491	Date Prep: Nov-18-04 12:09
	Tech: MVRR01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	0.39	1.0	0.17	ug/L	J	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: FB-11-17-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7220-001	Date Collected: Nov-17-04 17:30	Date Received: Nov-18-04 09:55
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-18-04 16:12	Analyst: MVRR01	Date Prep: Nov-18-04 12:09	Tech: MVRR01
Seq Number: 24491			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	0.65	1.0	0.30	ug/L	J	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	1.4	1.0	0.16	ug/L		1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3-SO-EB1	Matrix: WATER	% Moisture:
Lab Sample Id: 7220-002	Date Collected: Nov-17-04 08:40	Date Received: Nov-18-04 09:55
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-18-04 16:37	Analyst: MVRR01
	Date Prep: Nov-18-04 12:09
	Tech: MVRR01
Seq Number: 24491	

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	0.67	1.0	0.14	ug/L	J	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3-SO-EB1	Matrix: WATER	% Moisture:
Lab Sample Id: 7220-002	Date Collected: Nov-17-04 08:40	Date Received: Nov-18-04 09:55
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-18-04 16:37	Analyst: MVRR01	Date Prep: Nov-18-04 12:09	Tech: MVRR01
Seq Number: 24491			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3-SO-7 (5.0)	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7220-003	Date Collected: Nov-17-04 16:00	Date Received: Nov-18-04 09:55
Sample Depth: 5 ft		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5030B**

Date Analyzed: **Nov-19-04 18:51**

Analyst: **TAG01**

Date Prep: **Nov-19-04 13:40**

Tech: **MVR01**

Seq Number: **24507**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	4.5	0.46	mg/kg	U	1000
1,1,1-Trichloroethane	71-55-6	BRL	4.5	0.65	mg/kg	U	1000
1,1,2,2-Tetrachloroethane	79-34-5	BRL	4.5	0.76	mg/kg	U	1000
1,1,2-Trichloroethane	79-00-5	BRL	4.5	0.54	mg/kg	U	1000
1,1-Dichloroethane	75-34-3	BRL	4.5	0.47	mg/kg	U	1000
1,1-Dichloroethene	75-35-4	BRL	4.5	2.6	mg/kg	U	1000
1,1-Dichloropropene	563-58-6	BRL	4.5	0.70	mg/kg	U	1000
1,2,3-Trichlorobenzene	87-61-6	BRL	4.5	1.5	mg/kg	U	1000
1,2,3-Trichloropropane	96-18-4	BRL	4.5	0.37	mg/kg	U	1000
1,2,4-Trichlorobenzene	120-82-1	BRL	4.5	1.5	mg/kg	U	1000
1,2,4-Trimethylbenzene	95-63-6	BRL	4.5	0.64	mg/kg	U	1000
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	4.5	1.8	mg/kg	U	1000
1,2-Dibromoethane (EDB)	106-93-4	BRL	4.5	0.53	mg/kg	U	1000
1,2-Dichlorobenzene	95-50-1	32	4.5	0.63	mg/kg		1000
1,2-Dichloroethane	107-06-2	BRL	4.5	0.45	mg/kg	U	1000
1,2-Dichloropropane	78-87-5	BRL	4.5	0.45	mg/kg	U	1000
1,3,5-Trimethylbenzene	108-67-8	BRL	4.5	0.63	mg/kg	U	1000
1,3-Dichlorobenzene	541-73-1	1.8	4.5	0.76	mg/kg	J	1000
1,3-Dichloropropane	142-28-9	BRL	4.5	0.46	mg/kg	U	1000
1,4-Dichlorobenzene	106-46-7	20	4.5	0.81	mg/kg		1000
2,2-Dichloropropane	594-20-7	BRL	4.5	0.66	mg/kg	U	1000
2-Butanone	78-93-3	BRL	8.9	2.6	mg/kg	U	1000
2-Chlorotoluene	95-49-8	BRL	4.5	0.67	mg/kg	U	1000
2-Hexanone	591-78-6	BRL	8.9	1.5	mg/kg	U	1000
4-Chlorotoluene	106-43-4	BRL	4.5	0.73	mg/kg	U	1000
4-Methyl-2-Pentanone	108-10-1	BRL	8.9	2.0	mg/kg	U	1000
Acetone	67-64-1	BRL	8.9	3.5	mg/kg	U	1000
Benzene	71-43-2	BRL	4.5	0.56	mg/kg	U	1000
Bromobenzene	108-86-1	BRL	4.5	0.85	mg/kg	U	1000
Bromochloromethane	74-97-5	BRL	4.5	0.53	mg/kg	U	1000
Bromodichloromethane	75-27-4	BRL	4.5	0.55	mg/kg	U	1000
Bromoform	75-25-2	BRL	4.5	0.53	mg/kg	U	1000
Bromomethane	74-83-9	BRL	4.5	1.3	mg/kg	U	1000
Carbon Disulfide	75-15-0	BRL	4.5	2.8	mg/kg	U	1000
Carbon Tetrachloride	56-23-5	BRL	4.5	0.72	mg/kg	U	1000
Chlorobenzene	108-90-7	BRL	4.5	4.0	mg/kg	U	1000
Chloroethane	75-00-3	BRL	4.5	1.5	mg/kg	U	1000
Chloroform	67-66-3	BRL	4.5	0.51	mg/kg	U	1000
Chloromethane	74-87-3	BRL	4.5	0.80	mg/kg	U	1000
cis-1,2-Dichloroethene	156-59-2	9.5	4.5	0.72	mg/kg		1000
cis-1,3-Dichloropropene	10061-01-5	BRL	4.5	0.30	mg/kg	U	1000
Dibromochloromethane	124-48-1	BRL	4.5	0.40	mg/kg	U	1000
Dibromomethane	74-95-3	BRL	4.5	0.36	mg/kg	U	1000
Dichlorodifluoromethane	75-71-8	BRL	4.5	0.94	mg/kg	U	1000
Ethylbenzene	100-41-4	BRL	4.5	0.65	mg/kg	U	1000



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3-SO-7 (5.0)	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7220-003	Date Collected: Nov-17-04 16:00	Date Received: Nov-18-04 09:55
Sample Depth: 5 ft		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5030B**

Date Analyzed: **Nov-19-04 18:51**

Analyst: **TAG01**

Date Prep: **Nov-19-04 13:40**

Tech: **MVRR01**

Seq Number: **24507**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	4.5	0.70	mg/kg	U	1000
Isopropylbenzene	98-82-8	BRL	4.5	0.69	mg/kg	U	1000
m,p-Xylenes	136777-61-2	BRL	8.9	1.4	mg/kg	U	1000
Methylene Chloride	75-09-2	BRL	4.5	0.62	mg/kg	U	1000
Naphthalene	91-20-3	BRL	4.5	0.73	mg/kg	U	1000
n-Butylbenzene	104-51-8	BRL	4.5	0.67	mg/kg	U	1000
n-Propylbenzene	103-65-1	BRL	4.5	0.91	mg/kg	U	1000
o-Xylene	95-47-6	BRL	4.5	0.56	mg/kg	U	1000
p-Isopropyltoluene	99-87-6	BRL	4.5	0.71	mg/kg	U	1000
sec-Butylbenzene	135-98-8	BRL	4.5	0.71	mg/kg	U	1000
Styrene	100-42-5	BRL	4.5	0.62	mg/kg	U	1000
tert-Butylbenzene	98-06-6	BRL	4.5	0.61	mg/kg	U	1000
Tetrachloroethylene	127-18-4	BRL	4.5	0.61	mg/kg	U	1000
Toluene	108-88-3	BRL	4.5	0.65	mg/kg	U	1000
trans-1,2-Dichloroethene	156-60-5	BRL	4.5	0.69	mg/kg	U	1000
trans-1,3-Dichloropropene	10061-02-6	BRL	4.5	0.77	mg/kg	U	1000
Trichloroethene	79-01-6	54	45	31	mg/kg	D	10000
Trichlorofluoromethane	75-69-4	BRL	4.5	0.65	mg/kg	U	1000
Vinyl Chloride	75-01-4	BRL	4.5	0.77	mg/kg	U	1000



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4PIT-1-SO-3 (4.0)	Matrix: SOIL	% Moisture: 13
Lab Sample Id: 7220-004	Date Collected: Nov-17-04 14:25	Date Received: Nov-18-04 09:55
Sample Depth: 4 ft		

Analytical Method: VOCs by SW8260B		Prep Method: SW5030B
Date Analyzed: Nov-19-04 18:26	Analyst: TAG01	Date Prep: Nov-19-04 13:40
	Seq Number: 24507	Tech: MVRR01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	5.7	0.59	mg/kg	U	1000
1,1,1-Trichloroethane	71-55-6	11	5.7	0.83	mg/kg		1000
1,1,2,2-Tetrachloroethane	79-34-5	BRL	5.7	0.96	mg/kg	U	1000
1,1,2-Trichloroethane	79-00-5	BRL	5.7	0.69	mg/kg	U	1000
1,1-Dichloroethane	75-34-3	1.3	5.7	0.60	mg/kg	J	1000
1,1-Dichloroethene	75-35-4	BRL	5.7	3.3	mg/kg	U	1000
1,1-Dichloropropene	563-58-6	BRL	5.7	0.89	mg/kg	U	1000
1,2,3-Trichlorobenzene	87-61-6	BRL	5.7	1.9	mg/kg	U	1000
1,2,3-Trichloropropane	96-18-4	BRL	5.7	0.48	mg/kg	U	1000
1,2,4-Trichlorobenzene	120-82-1	BRL	5.7	1.9	mg/kg	U	1000
1,2,4-Trimethylbenzene	95-63-6	1.2	5.7	0.81	mg/kg	J	1000
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	5.7	2.3	mg/kg	U	1000
1,2-Dibromoethane (EDB)	106-93-4	BRL	5.7	0.67	mg/kg	U	1000
1,2-Dichlorobenzene	95-50-1	0.98	5.7	0.80	mg/kg	J	1000
1,2-Dichloroethane	107-06-2	BRL	5.7	0.58	mg/kg	U	1000
1,2-Dichloropropane	78-87-5	BRL	5.7	0.57	mg/kg	U	1000
1,3,5-Trimethylbenzene	108-67-8	BRL	5.7	0.80	mg/kg	U	1000
1,3-Dichlorobenzene	541-73-1	BRL	5.7	0.96	mg/kg	U	1000
1,3-Dichloropropane	142-28-9	BRL	5.7	0.59	mg/kg	U	1000
1,4-Dichlorobenzene	106-46-7	BRL	5.7	1.0	mg/kg	U	1000
2,2-Dichloropropane	594-20-7	BRL	5.7	0.84	mg/kg	U	1000
2-Butanone	78-93-3	BRL	11	3.3	mg/kg	U	1000
2-Chlorotoluene	95-49-8	BRL	5.7	0.85	mg/kg	U	1000
2-Hexanone	591-78-6	BRL	11	1.9	mg/kg	U	1000
4-Chlorotoluene	106-43-4	BRL	5.7	0.93	mg/kg	U	1000
4-Methyl-2-Pentanone	108-10-1	BRL	11	2.5	mg/kg	U	1000
Acetone	67-64-1	BRL	11	4.4	mg/kg	U	1000
Benzene	71-43-2	BRL	5.7	0.71	mg/kg	U	1000
Bromobenzene	108-86-1	BRL	5.7	1.1	mg/kg	U	1000
Bromochloromethane	74-97-5	BRL	5.7	0.68	mg/kg	U	1000
Bromodichloromethane	75-27-4	BRL	5.7	0.70	mg/kg	U	1000
Bromoform	75-25-2	BRL	5.7	0.68	mg/kg	U	1000
Bromomethane	74-83-9	BRL	5.7	1.7	mg/kg	U	1000
Carbon Disulfide	75-15-0	BRL	5.7	3.5	mg/kg	U	1000
Carbon Tetrachloride	56-23-5	BRL	5.7	0.92	mg/kg	U	1000
Chlorobenzene	108-90-7	BRL	5.7	5.1	mg/kg	U	1000
Chloroethane	75-00-3	BRL	5.7	1.9	mg/kg	U	1000
Chloroform	67-66-3	BRL	5.7	0.64	mg/kg	U	1000
Chloromethane	74-87-3	BRL	5.7	1.0	mg/kg	U	1000
cis-1,2-Dichloroethene	156-59-2	3.3	5.7	0.92	mg/kg	J	1000
cis-1,3-Dichloropropene	10061-01-5	BRL	5.7	0.38	mg/kg	U	1000
Dibromochloromethane	124-48-1	BRL	5.7	0.51	mg/kg	U	1000
Dibromomethane	74-95-3	BRL	5.7	0.45	mg/kg	U	1000
Dichlorodifluoromethane	75-71-8	BRL	5.7	1.2	mg/kg	U	1000
Ethylbenzene	100-41-4	BRL	5.7	0.83	mg/kg	U	1000



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-1-SO-3 (4.0)	Matrix: SOIL	% Moisture: 13
Lab Sample Id: 7220-004	Date Collected: Nov-17-04 14:25	Date Received: Nov-18-04 09:55
Sample Depth: 4 ft		

Analytical Method: VOCs by SW8260B

Prep Method: SW5030B

Date Analyzed: **Nov-19-04 18:26**

Analyst: **TAG01**

Date Prep: **Nov-19-04 13:40**

Tech: **MVRR01**

Seq Number: **24507**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	5.7	0.89	mg/kg	U	1000
Isopropylbenzene	98-82-8	BRL	5.7	0.88	mg/kg	U	1000
m,p-Xylenes	136777-61-2	BRL	11	1.8	mg/kg	U	1000
Methylene Chloride	75-09-2	BRL	5.7	0.79	mg/kg	U	1000
Naphthalene	91-20-3	7.7	5.7	0.93	mg/kg		1000
n-Butylbenzene	104-51-8	BRL	5.7	0.85	mg/kg	U	1000
n-Propylbenzene	103-65-1	BRL	5.7	1.2	mg/kg	U	1000
o-Xylene	95-47-6	BRL	5.7	0.71	mg/kg	U	1000
p-Isopropyltoluene	99-87-6	BRL	5.7	0.91	mg/kg	U	1000
sec-Butylbenzene	135-98-8	BRL	5.7	0.91	mg/kg	U	1000
Styrene	100-42-5	BRL	5.7	0.79	mg/kg	U	1000
tert-Butylbenzene	98-06-6	BRL	5.7	0.77	mg/kg	U	1000
Tetrachloroethylene	127-18-4	400	57	7.8	mg/kg	D	10000
Toluene	108-88-3	1.1	5.7	0.83	mg/kg	J	1000
trans-1,2-Dichloroethene	156-60-5	BRL	5.7	0.88	mg/kg	U	1000
trans-1,3-Dichloropropene	10061-02-6	BRL	5.7	0.98	mg/kg	U	1000
Trichloroethene	79-01-6	41	5.7	3.9	mg/kg		1000
Trichlorofluoromethane	75-69-4	1.7	5.7	0.83	mg/kg	J	1000
Vinyl Chloride	75-01-4	BRL	5.7	0.98	mg/kg	U	1000



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24403 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24403 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)

Prep Method: SW5030B

Date Analyzed: Nov-18-04 14:17

Analyst: MVRRO1

Date Prep: Nov-18-04 12:09

Tech: MVRRO1

Seq Number: 24491

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1

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Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24403 BLK	Matrix: WATER	% Moisture:					
Lab Sample Id: 24403 BLK	Date Collected:	Date Received:					
Sample Depth:							
Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B					
Date Analyzed: Nov-18-04 14:17	Analyst: MVRR01	Date Prep: Nov-18-04 12:09					
	Seq Number: 24491	Tech: MVRR01					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1

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Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24414 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24414 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5030B		
Date Analyzed: Nov-19-04 15:14	Analyst: MVRR01	Date Prep: Nov-19-04 13:40	Tech: MVRR01
Seq Number: 24507			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.3	0.13	mg/kg	U	250
1,1,1-Trichloroethane	71-55-6	BRL	1.3	0.18	mg/kg	U	250
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.3	0.21	mg/kg	U	250
1,1,2-Trichloroethane	79-00-5	BRL	1.3	0.15	mg/kg	U	250
1,1-Dichloroethane	75-34-3	BRL	1.3	0.13	mg/kg	U	250
1,1-Dichloroethene	75-35-4	BRL	1.3	0.72	mg/kg	U	250
1,1-Dichloropropene	563-58-6	BRL	1.3	0.20	mg/kg	U	250
1,2,3-Trichlorobenzene	87-61-6	BRL	1.3	0.42	mg/kg	U	250
1,2,3-Trichloropropane	96-18-4	BRL	1.3	0.11	mg/kg	U	250
1,2,4-Trichlorobenzene	120-82-1	BRL	1.3	0.42	mg/kg	U	250
1,2,4-Trimethylbenzene	95-63-6	BRL	1.3	0.18	mg/kg	U	250
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.3	0.51	mg/kg	U	250
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.3	0.15	mg/kg	U	250
1,2-Dichlorobenzene	95-50-1	BRL	1.3	0.18	mg/kg	U	250
1,2-Dichloroethane	107-06-2	BRL	1.3	0.13	mg/kg	U	250
1,2-Dichloropropane	78-87-5	BRL	1.3	0.13	mg/kg	U	250
1,3,5-Trimethylbenzene	108-67-8	BRL	1.3	0.18	mg/kg	U	250
1,3-Dichlorobenzene	541-73-1	BRL	1.3	0.21	mg/kg	U	250
1,3-Dichloropropane	142-28-9	BRL	1.3	0.13	mg/kg	U	250
1,4-Dichlorobenzene	106-46-7	BRL	1.3	0.23	mg/kg	U	250
2,2-Dichloropropane	594-20-7	BRL	1.3	0.19	mg/kg	U	250
2-Butanone	78-93-3	BRL	2.5	0.73	mg/kg	U	250
2-Chlorotoluene	95-49-8	BRL	1.3	0.19	mg/kg	U	250
2-Hexanone	591-78-6	BRL	2.5	0.42	mg/kg	U	250
4-Chlorotoluene	106-43-4	BRL	1.3	0.21	mg/kg	U	250
4-Methyl-2-Pentanone	108-10-1	BRL	2.5	0.56	mg/kg	U	250
Acetone	67-64-1	BRL	2.5	0.98	mg/kg	U	250
Benzene	71-43-2	BRL	1.3	0.16	mg/kg	U	250
Bromobenzene	108-86-1	BRL	1.3	0.24	mg/kg	U	250
Bromochloromethane	74-97-5	BRL	1.3	0.15	mg/kg	U	250
Bromodichloromethane	75-27-4	BRL	1.3	0.16	mg/kg	U	250
Bromoform	75-25-2	BRL	1.3	0.15	mg/kg	U	250
Bromomethane	74-83-9	BRL	1.3	0.38	mg/kg	U	250
Carbon Disulfide	75-15-0	BRL	1.3	0.78	mg/kg	U	250
Carbon Tetrachloride	56-23-5	BRL	1.3	0.20	mg/kg	U	250
Chlorobenzene	108-90-7	BRL	1.3	1.1	mg/kg	U	250
Chloroethane	75-00-3	BRL	1.3	0.43	mg/kg	U	250
Chloroform	67-66-3	BRL	1.3	0.14	mg/kg	U	250
Chloromethane	74-87-3	BRL	1.3	0.23	mg/kg	U	250
cis-1,2-Dichloroethene	156-59-2	BRL	1.3	0.20	mg/kg	U	250
cis-1,3-Dichloropropene	10061-01-5	BRL	1.3	0.085	mg/kg	U	250
Dibromochloromethane	124-48-1	BRL	1.3	0.11	mg/kg	U	250
Dibromomethane	74-95-3	BRL	1.3	0.10	mg/kg	U	250
Dichlorodifluoromethane	75-71-8	BRL	1.3	0.26	mg/kg	U	250
Ethylbenzene	100-41-4	BRL	1.3	0.18	mg/kg	U	250



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24414 BLK	Matrix: SOIL	% Moisture:					
Lab Sample Id: 24414 BLK	Date Collected:	Date Received:					
Sample Depth:							
Analytical Method: VOCs by SW8260B		Prep Method: SW5030B					
Date Analyzed: Nov-19-04 15:14	Analyst: MVRR01	Date Prep: Nov-19-04 13:40					
	Seq Number: 24507	Tech: MVRR01					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.3	0.20	mg/kg	U	250
Isopropylbenzene	98-82-8	BRL	1.3	0.20	mg/kg	U	250
m,p-Xylenes	136777-61-2	BRL	2.5	0.40	mg/kg	U	250
Methylene Chloride	75-09-2	BRL	1.3	0.18	mg/kg	U	250
Naphthalene	91-20-3	BRL	1.3	0.21	mg/kg	U	250
n-Butylbenzene	104-51-8	BRL	1.3	0.19	mg/kg	U	250
n-Propylbenzene	103-65-1	BRL	1.3	0.26	mg/kg	U	250
o-Xylene	95-47-6	BRL	1.3	0.16	mg/kg	U	250
p-Isopropyltoluene	99-87-6	BRL	1.3	0.20	mg/kg	U	250
sec-Butylbenzene	135-98-8	BRL	1.3	0.20	mg/kg	U	250
Styrene	100-42-5	BRL	1.3	0.18	mg/kg	U	250
tert-Butylbenzene	98-06-6	BRL	1.3	0.17	mg/kg	U	250
Tetrachloroethylene	127-18-4	BRL	1.3	0.17	mg/kg	U	250
Toluene	108-88-3	BRL	1.3	0.18	mg/kg	U	250
trans-1,2-Dichloroethene	156-60-5	BRL	1.3	0.20	mg/kg	U	250
trans-1,3-Dichloropropene	10061-02-6	BRL	1.3	0.22	mg/kg	U	250
Trichloroethene	79-01-6	BRL	1.3	0.87	mg/kg	U	250
Trichlorofluoromethane	75-69-4	BRL	1.3	0.18	mg/kg	U	250
Vinyl Chloride	75-01-4	BRL	1.3	0.22	mg/kg	U	250



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24584 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24584 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5030B**

Date Analyzed: **Nov-20-04 09:39**

Analyst: **TAG01**

Date Prep: **Nov-20-04 08:41**

Tech: **TAG01**

Seq Number: **24738**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.3	0.13	mg/kg	U	250
1,1,1-Trichloroethane	71-55-6	BRL	1.3	0.18	mg/kg	U	250
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.3	0.21	mg/kg	U	250
1,1,2-Trichloroethane	79-00-5	BRL	1.3	0.15	mg/kg	U	250
1,1-Dichloroethane	75-34-3	BRL	1.3	0.13	mg/kg	U	250
1,1-Dichloroethene	75-35-4	BRL	1.3	0.72	mg/kg	U	250
1,1-Dichloropropene	563-58-6	BRL	1.3	0.20	mg/kg	U	250
1,2,3-Trichlorobenzene	87-61-6	BRL	1.3	0.42	mg/kg	U	250
1,2,3-Trichloropropane	96-18-4	BRL	1.3	0.11	mg/kg	U	250
1,2,4-Trichlorobenzene	120-82-1	BRL	1.3	0.42	mg/kg	U	250
1,2,4-Trimethylbenzene	95-63-6	BRL	1.3	0.18	mg/kg	U	250
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.3	0.51	mg/kg	U	250
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.3	0.15	mg/kg	U	250
1,2-Dichlorobenzene	95-50-1	BRL	1.3	0.18	mg/kg	U	250
1,2-Dichloroethane	107-06-2	BRL	1.3	0.13	mg/kg	U	250
1,2-Dichloropropane	78-87-5	BRL	1.3	0.13	mg/kg	U	250
1,3,5-Trimethylbenzene	108-67-8	BRL	1.3	0.18	mg/kg	U	250
1,3-Dichlorobenzene	541-73-1	BRL	1.3	0.21	mg/kg	U	250
1,3-Dichloropropane	142-28-9	BRL	1.3	0.13	mg/kg	U	250
1,4-Dichlorobenzene	106-46-7	BRL	1.3	0.23	mg/kg	U	250
2,2-Dichloropropane	594-20-7	BRL	1.3	0.19	mg/kg	U	250
2-Butanone	78-93-3	BRL	2.5	0.73	mg/kg	U	250
2-Chlorotoluene	95-49-8	BRL	1.3	0.19	mg/kg	U	250
2-Hexanone	591-78-6	BRL	2.5	0.42	mg/kg	U	250
4-Chlorotoluene	106-43-4	BRL	1.3	0.21	mg/kg	U	250
4-Methyl-2-Pentanone	108-10-1	BRL	2.5	0.56	mg/kg	U	250
Acetone	67-64-1	BRL	2.5	0.98	mg/kg	U	250
Benzene	71-43-2	BRL	1.3	0.16	mg/kg	U	250
Bromobenzene	108-86-1	BRL	1.3	0.24	mg/kg	U	250
Bromochloromethane	74-97-5	BRL	1.3	0.15	mg/kg	U	250
Bromodichloromethane	75-27-4	BRL	1.3	0.16	mg/kg	U	250
Bromoform	75-25-2	BRL	1.3	0.15	mg/kg	U	250
Bromomethane	74-83-9	BRL	1.3	0.38	mg/kg	U	250
Carbon Disulfide	75-15-0	BRL	1.3	0.78	mg/kg	U	250
Carbon Tetrachloride	56-23-5	BRL	1.3	0.20	mg/kg	U	250
Chlorobenzene	108-90-7	BRL	1.3	1.1	mg/kg	U	250
Chloroethane	75-00-3	BRL	1.3	0.43	mg/kg	U	250
Chloroform	67-66-3	BRL	1.3	0.14	mg/kg	U	250
Chloromethane	74-87-3	BRL	1.3	0.23	mg/kg	U	250
cis-1,2-Dichloroethene	156-59-2	BRL	1.3	0.20	mg/kg	U	250
cis-1,3-Dichloropropene	10061-01-5	BRL	1.3	0.085	mg/kg	U	250
Dibromochloromethane	124-48-1	BRL	1.3	0.11	mg/kg	U	250
Dibromomethane	74-95-3	BRL	1.3	0.10	mg/kg	U	250
Dichlorodifluoromethane	75-71-8	BRL	1.3	0.26	mg/kg	U	250
Ethylbenzene	100-41-4	BRL	1.3	0.18	mg/kg	U	250



Certificate of Analytical Results 7220

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24584 BLK	Matrix: SOIL	% Moisture:					
Lab Sample Id: 24584 BLK	Date Collected:	Date Received:					
Sample Depth:							
Analytical Method: VOCs by SW8260B		Prep Method: SW5030B					
Date Analyzed: Nov-20-04 09:39	Analyst: TAG01	Date Prep: Nov-20-04 08:41					
	Seq Number: 24738	Tech: TAG01					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.3	0.20	mg/kg	U	250
Isopropylbenzene	98-82-8	BRL	1.3	0.20	mg/kg	U	250
m,p-Xylenes	136777-61-2	BRL	2.5	0.40	mg/kg	U	250
Methylene Chloride	75-09-2	BRL	1.3	0.18	mg/kg	U	250
Naphthalene	91-20-3	BRL	1.3	0.21	mg/kg	U	250
n-Butylbenzene	104-51-8	BRL	1.3	0.19	mg/kg	U	250
n-Propylbenzene	103-65-1	BRL	1.3	0.26	mg/kg	U	250
o-Xylene	95-47-6	BRL	1.3	0.16	mg/kg	U	250
p-Isopropyltoluene	99-87-6	BRL	1.3	0.20	mg/kg	U	250
sec-Butylbenzene	135-98-8	BRL	1.3	0.20	mg/kg	U	250
Styrene	100-42-5	BRL	1.3	0.18	mg/kg	U	250
tert-Butylbenzene	98-06-6	BRL	1.3	0.17	mg/kg	U	250
Tetrachloroethylene	127-18-4	BRL	1.3	0.17	mg/kg	U	250
Toluene	108-88-3	BRL	1.3	0.18	mg/kg	U	250
trans-1,2-Dichloroethene	156-60-5	BRL	1.3	0.20	mg/kg	U	250
trans-1,3-Dichloropropene	10061-02-6	BRL	1.3	0.22	mg/kg	U	250
Trichloroethene	79-01-6	BRL	1.3	0.87	mg/kg	U	250
Trichlorofluoromethane	75-69-4	BRL	1.3	0.18	mg/kg	U	250
Vinyl Chloride	75-01-4	BRL	1.3	0.22	mg/kg	U	250



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal Report Date: 12/08/04 12:46

Work Order #: 7220

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24491

Sample: 24403 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	10.3	10.0	103	80-120	
Bromofluorobenzene	9.03	10.0	90	80-120	
Toluene-D8	11.1	10.0	111	80-120	

Lab Batch #: 24491

Sample: 7220-001 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.4	10.0	114	70-130	
Bromofluorobenzene	8.54	10.0	85	70-130	
Toluene-D8	10.6	10.0	106	70-130	

Lab Batch #: 24491

Sample: 7220-002 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.5	10.0	115	70-130	
Bromofluorobenzene	9.24	10.0	92	70-130	
Toluene-D8	10.5	10.0	105	70-130	

Lab Batch #: 24507

Sample: 24414 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	2.84	2.50	114	75-125	
Bromofluorobenzene	2.28	2.50	91	75-125	
Toluene-D8	2.78	2.50	111	75-125	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal Report Date: 12/08/04 12:46

Work Order #: 7220

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24507

Sample: 7220-003 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	8.66	7.84	110	70-130	
Bromofluorobenzene	6.70	7.84	85	70-130	
Toluene-D8	7.66	7.84	98	70-130	

Lab Batch #: 24507

Sample: 7220-004 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	10.4	9.84	106	70-130	
Bromofluorobenzene	9.96	9.84	101	70-130	
Toluene-D8	10.6	9.84	108	70-130	

Lab Batch #: 24738

Sample: 24584 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	2.98	2.50	119	75-125	
Bromofluorobenzene	2.53	2.50	101	75-125	
Toluene-D8	2.95	2.50	118	75-125	

Lab Batch #: 24738

Sample: 7220-003 DL1 / DIL

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	84.6	78.4	108	70-130	
Bromofluorobenzene	70.8	78.4	90	70-130	
Toluene-D8	82.4	78.4	105	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal Report Date: 12/08/04 12:46

Work Order #: 7220

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24738

Sample: 7220-004 DL2 / DIL

Batch: 1 Matrix: S

Units: mg/kg

	SURROGATE RECOVERY STUDY				
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	97.0	98.4	99	70-130	
Bromofluorobenzene	99.0	98.4	101	70-130	
Toluene-D8	113	98.4	115	70-130	

- Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = $100 \cdot A / B$
 All results are based on MDL and validated for QC purposes
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Report Date:

12/08/04 12:46

Work Order #: 7220

Project ID:

6301-03-0011-1901-1000

Lab Batch #: 24507

Sample: 24414 BKS

Matrix: S

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

VOCs by SW8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.18	2.5	2.8	112	75-125	
1,1-Dichloroethane	<0.13	2.5	2.6	104	75-125	
1,1-Dichloroethene	<0.72	2.5	2.6	104	75-125	
Benzene	<0.16	2.5	2.6	104	75-125	
Bromodichloromethane	<0.16	2.5	2.6	104	75-125	
Chlorobenzene	<1.1	2.5	2.5	100	75-125	
cis-1,2-Dichloroethene	<0.20	2.5	2.6	104	75-125	
Tetrachloroethylene	<0.17	2.5	2.8	112	75-125	
Toluene	<0.18	2.5	2.7	108	75-125	
Trichloroethene	<0.87	2.5	2.6	104	75-125	
Vinyl Chloride	<0.22	2.5	2.5	100	75-125	

Lab Batch #: 24738

Sample: 24584 BKS

Matrix: S

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

VOCs by SW8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.18	2.5	2.6	104	75-125	
1,1-Dichloroethane	<0.13	2.5	2.5	100	75-125	
1,1-Dichloroethene	<0.72	2.5	2.6	104	75-125	
Benzene	<0.16	2.5	2.4	96	75-125	
Bromodichloromethane	<0.16	2.5	2.5	100	75-125	
Chlorobenzene	<1.1	2.5	2.4	96	75-125	
cis-1,2-Dichloroethene	<0.20	2.5	2.5	100	75-125	
Tetrachloroethylene	<0.17	2.5	2.8	112	75-125	
Toluene	<0.18	2.5	2.6	104	75-125	
Trichloroethene	<0.87	2.5	2.6	104	75-125	
Vinyl Chloride	<0.22	2.5	2.3	92	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit

BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date 12/10/04 00:58
 Project ID: 6301-03-0011-1901-1000
 Matrix: W

Work Order #: 7220
 Lab Batch ID: 24491
 Sample: 24403 BKS
 Batch #: 1
 Units: ug/L

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
VOCs by SW8260B (25ml purge)											
1,1,1-Trichloroethane	<0.33	10	9.8	98	10	9.4	94	4	80-120	30	
1,1-Dichloroethane	<0.31	10	10	100	10	9.5	95	5	80-120	30	
1,1-Dichloroethene	<0.16	10	11	110	10	10	100	10	80-120	30	
Benzene	<0.16	10	9.8	98	10	9.5	95	3	80-120	30	
Bromodichloromethane	<0.090	10	9.0	90	10	8.7	87	3	80-120	30	
Chlorobenzene	<0.13	10	10	100	10	9.6	96	4	80-120	30	
cis-1,2-Dichloroethene	<0.19	10	9.8	98	10	9.2	92	6	80-120	30	
Tetrachloroethylene	<0.35	10	11	110	10	10	100	10	80-120	30	
Toluene	<0.16	10	11	110	10	10	100	10	80-120	30	
Trichloroethene	<0.12	10	10	100	10	9.2	92	8	80-120	30	
Vinyl Chloride	<0.17	10	9.7	97	10	8.8	88	10	80-120	30	

Relative Percent Difference RPD = $200 \times [(D-G)/(D+G)]$
 Blank Spike Recovery [D] = $100 \times (C)/(B)$
 Blank Spike Duplicate Recovery [G] = $100 \times (F)/(E)$
 All results are based on MDL and Validated for QC Purposes
 F = RPD exceeded the laboratory control limits



Form 3 - MS / MSD Recoveries

783 480

Work Order #: 7220

Lab Batch ID: 24507

Reporting Units: mg/kg

Project Name: DSCR OU4 Source Removal

Report Date: 12/08/04 12:46

Project ID: 6301-03-0011-1901-1000

QC-Sample ID: 7227-005 MS

Batch #: 1 Matrix: S

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1,1-Trichloroethane	<0.89	12	12	100	12	11	92	8	70-130	30	
1,1-Dichloroethane	<0.65	12	11	92	12	11	92	0	70-130	30	
1,1-Dichloroethene	<3.5	12	12	100	12	12	100	0	70-130	30	
Benzene	<0.77	12	12	100	12	12	100	0	70-130	30	
Bromodichloromethane	<0.76	12	11	92	12	11	92	0	70-130	30	
Chlorobenzene	11	12	24	108	12	24	108	0	70-130	30	
cis-1,2-Dichloroethene	30	12	41	92	12	41	92	0	70-130	30	
Tetrachloroethylene	1.7	12	14	103	12	14	103	0	70-130	30	
Toluene	4.0	12	16	100	12	16	100	0	70-130	30	
Trichloroethene	410	12	430	167	12	410	0	200	70-130	30	ZF
Vinyl Chloride	<1.1	12	11	92	12	10	83	10	70-130	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference RPD = 200*(D-G)/(D+G)
 F = RPD exceeded the laboratory control limits

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY



Lab Name : ACCURA ANALYTICAL LAB
 Lab Code : ACCURA Case No. : 7220
 Instrument ID: HP-MSJ
 Lab File ID: J111804J14378
 EPA Sample No. : VSTD010J20
 GC Column: ZB-624 ID: .25 (mm)

Contract : 6301-03-0011-1901-1000
 SAS No. : _____
 SDG No. N/A
 Date Analyzed: 11/18/04
 Time Analyzed : 13:38
 Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	417435	5.96	537010	11.43	149311	14.65
UPPER LIMIT	834870	6.46	1074020	11.93	298622	15.15
LOWER LIMIT	208718	5.46	268505	10.93	74656	14.15
EPA SAMPLE						
1 24403 BLK	507465	5.96	588259	11.44	159690	14.65
2 24403 BKS	397313	5.96	540766	11.44	154931	14.66
3 24403 BSD	481855	5.96	621763	11.44	173904	14.65
4 TB-11-17-04	470520	5.96	591280	11.43	175042	14.66
5 OU4PIT-3-SO-EB1	446770	5.96	561717	11.44	146512	14.66

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LAB Contract : 6301-03-0011-1901-1000
 Lab Code : ACCURA Case No. : 7220 SAS No. : _____
 Instrument ID: HP-MSJ SDG No. N/A
 Lab File ID: J111904VJ14387 Date Analyzed: 11/19/04
 EPA Sample No. : VSTD010J20 Time Analyzed : 13:59
 GC Column: ZB-624 ID: .25 (mm) Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #	
	12 HOUR STD	527319	5.98	620513	11.45	172569	14.67
	UPPER LIMIT	1054638	6.48	1241026	11.95	345138	15.17
	LOWER LIMIT	263660	5.48	310257	10.95	86285	14.17
	EPA SAMPLE						
1	24414 BLK	490931	5.98	550411	11.45	150021	14.67
2	24414 BKS	472826	5.98	635076	11.45	168902	14.67
3	OU4PIT-1-SO-3 (4.0)	486591	5.97	620646	11.45	156955	14.66
4	OU4PIT-3-SO-7 (5.0)	500020	5.98	644083	11.45	178639	14.66
5	OU4PIT-3SO-18 MS	571232	5.98	782124	11.46	219636	14.68
6	OU4PIT-3SO-18 MSD	633020	5.98	885090	11.45	260264	14.66

IS1 (PFB) = Pentafluorobenzene
 IS2 (CBZ) = Chlorobenzene-d5
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of the QC limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7220

SAS No. : _____

Instrument ID: HP-MSJSDG No. N/ALab File ID: J112004VJ14414Date Analyzed: 11/20/04EPA Sample No. : VSTD010J22Time Analyzed : 09:01GC Column: ZB-624ID: .25 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	484335	5.97	651979	11.44	181627	14.67
UPPER LIMIT	968670	6.47	1303958	11.94	363254	15.17
LOWER LIMIT	242168	5.47	325990	10.94	90814	14.17
EPA SAMPLE						
1 24584 BLK	507029	5.97	628586	11.45	159893	14.66
2 24584 BKS	496123	5.97	657604	11.44	184356	14.66
3 OU4PIT-3-SO-7 (5.0) DL1	562830	5.98	688211	11.44	186236	14.66
4 OU4PIT-1-SO-3 (4.0) DL2	438985	5.97	505533	11.44	128306	14.66

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



EPA Defined Qualifiers Codes used by AAL

- BRL:** This abbreviation indicates that the analytical results were Below the Reporting Limit (BRL).
- U:** The compound was analyzed for but not detected.
- J:** This indicates an estimated value. This flag is used in 3 incidences.
- (1) When estimating a concentration for tentatively identified compounds where 1:1 response is assumed.
 - (2) When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the Contract Required Detection Limit (CRDL) – or Reporting Limit - but greater than the MDL.
 - (3) When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL – or Reporting Limit- but greater than MDL.
- N:** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" flag is not used.
- P:** This is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with "P"
- C:** This applies to pesticide result where the identification has been confirmed by GC/MS. Do not apply if this flag if analyte(s) were not confirmed. Used the laboratory-defined flag instead (see the X qualifier).
- B:** This is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The flag shall be used for a tentatively identified compound as well as for a positively identified target compound.
- E:** This identifies compounds whose concentrations exceed the upper level of the linear calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract should be diluted and re-analyzed.
- Note: For Total xylene, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately.*
- X:** Defined by the laboratory
- Z:** Surrogates/Spikes results exceeds quality control limits
- ZZ:** Surrogates/Spikes results exceeds quality control limits in multiple samples
- ***:** Surrogate recoveries were diluted out
- M:** Manual integrations were necessary and an "m" qualifying code is present on the quantitation report next to the analyte.
- D:** This flag indicates that the identified compound is reported from the dilution run.



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
 6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AALII USACE Approved Navy Certification code NFESC 413
Case Narrative

AAL Work Order # 7227

Client Project: DSCR OU4 Source Removal / 6301-03-0011-1901-1000

Accura Analytical Laboratory Inc. certifies that the results meet all requirements of the NELAC Standards.

The data package includes a total of **43** pages including: case narrative, Chain of Custody, Request for Analysis Forms, Sample Receipt Checklist, analytical results pages, QC surrogate recovery pages, QC Blank Spike / Blank Spike Duplicate recovery pages, QC MS/MSD recovery pages, Internal Standard Results Forms, and a list of common EPA qualifier codes used by AAL.

The following items were noted concerning this work order:

Receiving Notations:

1. The samples were received at 3°C.

Michele Ruiz

Michele Ruiz

Receiving

November 19, 2004

Date

VOCs by SW8260B Notations:

1. The following spike recoveries were outside the method specified limits due to possible matrix interference:
 - 7227-005MS – Trichloroethene
 - 7227-005MSD – Trichloroethene
 - 7227-004MS – cis-1,2-Dichloroethene
 - 7227-004MSD – cis-1,2-Dichloroethene
 - 7227-004MS – Vinylchloride
 - 7227-004MSD – Vinylchloride
2. The relative percent difference between the matrix spike and matrix spike duplicate was outside the method specified limit for the following analytes:
 - 7227-005MS/MSD – Trichloroethene
 - 7227-004MS/MSD – cis-1,2-Dichloroethene

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Page 1 of 2

WO 7227CN



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 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AAL11 USACE Approved Navy Certification code NFESC 413
Case Narrative

Thomas A. Gatch
 Thomas A. Gatch
 VOC Analyst

December 09, 2004
 Date

Project Manager's Notations:

1. The soil sample results are reported on a dry weight basis.

These case narrative notations have been reviewed/edited by:

David C. Fuller
 David C. Fuller
 VP – Client Services

December 10, 2004
 Date



ACCURA ANALYTICAL LABORATORY, INC.
Environmental Analytical Services
CHAIN OF CUSTODY

40263

Page 1 of 1
6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

Company Name: MACTEC Billing address: 3200 TOWNS POINT DRIVE, #100
Address: 2625 JEFFERSON DAVIS HIGHWAY, RICHMOND VA 23237 # (if required): 63010300110100 KENNESAW, GA 30144
Results Sent to: (Client Contact): JUDY HARTNESS
Email address: JHARTNESS@MACTEC.COM
Contact Phone #: (770)-421-3336 Fax #: (770)421-3486
Project (Site) Name: D.S.C.R.

Project Number: 6301-03-0011-1901-1000 Preservation Code: (See below)
Sampler(s): (printed) TED A WITTMANN

Line No.	Sample ID #	Sample Date / Time	Composite	Grab	Matrix (See below)	Sample Location	No. of Containers	Field Comments:	Analysis Requested	Field Comments:	AAAL Lab ID:
1	TB-11-18-04	11/18/04 1600	X	X	W	TRIP BLANK	2				7227
2	004 PIT-3-50-EP2	11/18/04 1600	X	X	W	EQUIPMENT BLANK	2				-001
3	004 PIT-3-50-DUP	11/18/04 1600	X	X	S	PIT 3	5				-002
4	004 PIT-3										-003
5	004 PIT-3-50-17	11/18/04 1040	X	X	S	PIT 3-SO17E8.5'	5				-004
6	004 PIT-3-50-18	11/18/04 1325	X	X	S	PIT 3-SO18C5.0'	5				-005
7											-
8											-
9											-
10											-

1) Relinquished By: [Signature] Date / Time: 11-18-04 1900 2) Received By: [Signature] Date / Time: 11/30/04 0920
3) Relinquished By: [Signature] Date / Time: 11/30/04 0920 4) Received By: [Signature] Date / Time: 11/30/04 0920
Turnaround Time Requested: 24HR

Matrix Guide: (W=Water) (DW=Drinking Water) (GW=Groundwater) (SW=Surface Water) (L=Liquid) (S=Soil) (SD=Solid) (SL=Sludge) (A=Air) (C=Air Cartridge)
Preservation Codes: 1=HCL / 2=HNO3 / 3=H2SO4 / 4=NaOH+NaAsO2 / 5=NaOH+ZnAc / 6=Na2S2O5 / 7=NaHSO4 / 8=MeOH

783 488

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: TB- 11-18-04

7227-001

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	

Comments: _____

Prepared By: Dan Van (DANVASS)

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3SO-EB2

7227-002

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	

Comments: _____

Prepared By: Dan Hart (DAN HART)

Checked By: _____

783 490

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

SOIL 1/19/04

Matrix: GROUNDWATER *1/19/04*

Sample ID: OU4PIT-3SO-DUP1

7227-003

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: *Don Vass*

Checked By: _____

MACTEC Engineering & Consulting, Inc.
 3200 Town Point Drive, #100
 Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

SOIL
Matrix: GROUNDWATER *02*
Sample ID: OU4PIT-3-SO-17 *11/19*

7227-004

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: *Dan Van (DAN VASS)*

Checked By: _____

783 492

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

SOIL
Matrix: ~~GROUNDWATER~~ SOIL
11/19/04
DJ

Sample ID: OU4PIT-3SO-18

7227-005

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: Don Van (DAN VASS)

Checked By: _____

ACCURA ANALYTICAL LABORATORY, INC.

SAMPLE RECEIPT CHECKLIST VERSION 6 Client Code: 14053 AAL Project Mgr: DJF

Client Project Name: D.S.C.R ACCURA Work Order#: 7227

Are there EnCores, tests with < 48Hr hold times, or RUSH TAT's requested? YES NO
If YES, you must communicate RUSH analyses to the appropriate analyst(s) immediately!!! / or preserve EnCores (see #16 below)!!
Preliminary Examination: Initials: BCP Date received: 11/19/07 Date cooler was opened: 11/19/07

- 1. Did cooler/package come with a shipping slip (airbill, Etc.)? YES NO
Describe type of packing in cooler:
If cooler was hand delivered, CIRCLE HERE, skip to item #5
2. Were custody seals on outside of cooler? YES NO
3. Were custody seals unbroken and intact at the date and time of arrival? YES N/A NO
4. Were custody papers sealed in a plastic bag to prevent damage to chain of custody? YES NO
5. If required, was enough ice used? (Internal cooler temperature, 3C) YES N/A NO
6. Did you sign custody papers in the appropriate place? YES NO
7. Was project identifiable from custody papers? YES NO

Complete project file with green sheet, proper file tag, and shipping documentation. Line up samples following chain. Complete Container Receipt Verification form (include extra containers for dissolved metals filtrates). Complete login in XENCO and generate AAL ID Labels.

- 8. Did all containers arrive unbroken and were labels in good condition? YES NO
9. Were custody papers filled out properly and did all labels agree with custody papers? YES NO
10. Were correct containers and sufficient amount of sample sent for the test indicated? YES NO
11. All samples collected within three days of date received for these analyses (Reactive Cn & S, Solids in H2O, Sulfide, Sulfite, IALLI Extractable Organic Waters)? YES N/A NO
12. No residual chlorine found in waters for these analyses: (Cyanide, PAH, SVOC, Pesticides, PCB's, Herbicides)? YES N/A NO
13. Were samples properly chemically preserved, if required, upon receipt? YES N/A NO
14. Were air bubbles (>1/4 inch) absent in VOC/BTEX samples? YES N/A NO
15. If there are samples for dissolved metals, were they field filtered? YES N/A NO
16. Were Encore samplers included? YES NO
17. Does this submittal contain soil NaHSO4 vials for BTEX/GRO/VOC'S? YES NO
18. Initials of laboratory personnel responsible for labeling laboratory I.D. numbers on containers: HHL

Keep samples and chain out. Before moving samples to their appropriate location, another person must review the entire project ensuring that information on the AAL ID Barcode label matches the container label, and that all information is consistent with the chain. Final check and samples logged to locations by: (Initials)

- 19. Was it necessary to call the assigned project manager in order to proceed with login? YES NO
20. Who was called? By whom? Date/Time:
Project Mgr. Review: (Initials) 11/19/07 (Date)



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: TB-11-18-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7227-001	Date Collected: Nov-18-04 16:00	Date Received: Nov-19-04 09:20
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-19-04 17:36	Analyst: MVRR01
	Date Prep: Nov-19-04 13:40
Seq Number: 24508	Tech: TAG01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	0.37	1.0	0.17	ug/L	J	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	1.7	10	0.34	ug/L	J	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: TB-11-18-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7227-001	Date Collected: Nov-18-04 16:00	Date Received: Nov-19-04 09:20
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-19-04 17:36	Analyst: MVRR01
	Date Prep: Nov-19-04 13:40
	Tech: TAG01
	Seq Number: 24508

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	0.35	1.0	0.30	ug/L	J	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	1.3	1.0	0.16	ug/L		1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil									
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Sample Id: OU4PIT-3-SO-EB2</td> <td style="width: 33%;">Matrix: WATER</td> <td style="width: 33%;">% Moisture:</td> </tr> <tr> <td>Lab Sample Id: 7227-002</td> <td>Date Collected: Nov-18-04 16:00</td> <td>Date Received: Nov-19-04 09:20</td> </tr> <tr> <td colspan="3">Sample Depth:</td> </tr> </table>								Sample Id: OU4PIT-3-SO-EB2	Matrix: WATER	% Moisture:	Lab Sample Id: 7227-002	Date Collected: Nov-18-04 16:00	Date Received: Nov-19-04 09:20	Sample Depth:		
Sample Id: OU4PIT-3-SO-EB2	Matrix: WATER	% Moisture:														
Lab Sample Id: 7227-002	Date Collected: Nov-18-04 16:00	Date Received: Nov-19-04 09:20														
Sample Depth:																
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Analytical Method: VOCs by SW8260B (25ml purge)</td> <td style="width: 50%;">Prep Method: SW5030B</td> </tr> <tr> <td>Date Analyzed: Nov-19-04 18:01</td> <td>Analyst: MVRR01</td> </tr> <tr> <td>Seq Number: 24508</td> <td>Date Prep: Nov-19-04 13:40</td> </tr> <tr> <td></td> <td>Tech: TAG01</td> </tr> </table>								Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B	Date Analyzed: Nov-19-04 18:01	Analyst: MVRR01	Seq Number: 24508	Date Prep: Nov-19-04 13:40		Tech: TAG01	
Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B															
Date Analyzed: Nov-19-04 18:01	Analyst: MVRR01															
Seq Number: 24508	Date Prep: Nov-19-04 13:40															
	Tech: TAG01															
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1									
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1									
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1									
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1									
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1									
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1									
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1									
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1									
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1									
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1									
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1									
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1									
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1									
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1									
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1									
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1									
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1									
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1									
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1									
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1									
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1									
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1									
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1									
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1									
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1									
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1									
Acetone	67-64-1	1.1	10	0.34	ug/L	J	1									
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1									
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1									
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1									
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1									
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1									
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1									
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1									
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1									
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1									
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1									
Chloroform	67-66-3	1.2	1.0	0.14	ug/L	J	1									
Chloromethane	74-87-3	0.35	1.0	0.30	ug/L	J	1									
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1									
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1									
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1									
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1									
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1									
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1									



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3-SO-EB2	Matrix: WATER	% Moisture:
Lab Sample Id: 7227-002	Date Collected: Nov-18-04 16:00	Date Received: Nov-19-04 09:20
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-19-04 18:01	Analyst: MVRRO1	Date Prep: Nov-19-04 13:40	Tech: TAG01
Seq Number: 24508			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	0.94	1.0	0.12	ug/L	J	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3SO-DUP1	Matrix: SOIL	% Moisture: 19
Lab Sample Id: 7227-003	Date Collected: Nov-18-04 08:00	Date Received: Nov-19-04 09:20
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5030B
Date Analyzed: Nov-19-04 19:16	Analyst: MVRR01	Date Prep: Nov-19-04 13:40
	Seq Number: 24507	Tech: MVRR01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	5.5	0.57	mg/kg	U	1000
1,1,1-Trichloroethane	71-55-6	BRL	5.5	0.80	mg/kg	U	1000
1,1,2,2-Tetrachloroethane	79-34-5	BRL	5.5	0.93	mg/kg	U	1000
1,1,2-Trichloroethane	79-00-5	BRL	5.5	0.67	mg/kg	U	1000
1,1-Dichloroethane	75-34-3	BRL	5.5	0.58	mg/kg	U	1000
1,1-Dichloroethene	75-35-4	BRL	5.5	3.2	mg/kg	U	1000
1,1-Dichloropropene	563-58-6	BRL	5.5	0.86	mg/kg	U	1000
1,2,3-Trichlorobenzene	87-61-6	BRL	5.5	1.8	mg/kg	U	1000
1,2,3-Trichloropropane	96-18-4	BRL	5.5	0.46	mg/kg	U	1000
1,2,4-Trichlorobenzene	120-82-1	2.3	5.5	1.8	mg/kg	J	1000
1,2,4-Trimethylbenzene	95-63-6	0.90	5.5	0.79	mg/kg	J	1000
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	5.5	2.2	mg/kg	U	1000
1,2-Dibromoethane (EDB)	106-93-4	BRL	5.5	0.65	mg/kg	U	1000
1,2-Dichlorobenzene	95-50-1	230	140	19	mg/kg	D	25000
1,2-Dichloroethane	107-06-2	BRL	5.5	0.56	mg/kg	U	1000
1,2-Dichloropropane	78-87-5	BRL	5.5	0.55	mg/kg	U	1000
1,3,5-Trimethylbenzene	108-67-8	BRL	5.5	0.78	mg/kg	U	1000
1,3-Dichlorobenzene	541-73-1	14	5.5	0.93	mg/kg		1000
1,3-Dichloropropane	142-28-9	BRL	5.5	0.57	mg/kg	U	1000
1,4-Dichlorobenzene	106-46-7	150	140	25	mg/kg	D	25000
2,2-Dichloropropane	594-20-7	BRL	5.5	0.81	mg/kg	U	1000
2-Butanone	78-93-3	BRL	11	3.2	mg/kg	U	1000
2-Chlorotoluene	95-49-8	BRL	5.5	0.82	mg/kg	U	1000
2-Hexanone	591-78-6	BRL	11	1.8	mg/kg	U	1000
4-Chlorotoluene	106-43-4	BRL	5.5	0.90	mg/kg	U	1000
4-Methyl-2-Pentanone	108-10-1	BRL	11	2.4	mg/kg	U	1000
Acetone	67-64-1	BRL	11	4.3	mg/kg	U	1000
Benzene	71-43-2	BRL	5.5	0.69	mg/kg	U	1000
Bromobenzene	108-86-1	BRL	5.5	1.0	mg/kg	U	1000
Bromochloromethane	74-97-5	BRL	5.5	0.66	mg/kg	U	1000
Bromodichloromethane	75-27-4	BRL	5.5	0.68	mg/kg	U	1000
Bromoform	75-25-2	BRL	5.5	0.66	mg/kg	U	1000
Bromomethane	74-83-9	BRL	5.5	1.6	mg/kg	U	1000
Carbon Disulfide	75-15-0	BRL	5.5	3.4	mg/kg	U	1000
Carbon Tetrachloride	56-23-5	BRL	5.5	0.89	mg/kg	U	1000
Chlorobenzene	108-90-7	11	5.5	4.9	mg/kg		1000
Chloroethane	75-00-3	BRL	5.5	1.9	mg/kg	U	1000
Chloroform	67-66-3	BRL	5.5	0.62	mg/kg	U	1000
Chloromethane	74-87-3	BRL	5.5	0.99	mg/kg	U	1000
cis-1,2-Dichloroethene	156-59-2	41	5.5	0.89	mg/kg		1000
cis-1,3-Dichloropropene	10061-01-5	BRL	5.5	0.37	mg/kg	U	1000
Dibromochloromethane	124-48-1	BRL	5.5	0.49	mg/kg	U	1000
Dibromomethane	74-95-3	BRL	5.5	0.44	mg/kg	U	1000
Dichlorodifluoromethane	75-71-8	BRL	5.5	1.1	mg/kg	U	1000
Ethylbenzene	100-41-4	BRL	5.5	0.80	mg/kg	U	1000



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3SO-DUPI	Matrix: SOIL	% Moisture: 19
Lab Sample Id: 7227-003	Date Collected: Nov-18-04 08:00	Date Received: Nov-19-04 09:20
Sample Depth:		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5030B**

Date Analyzed: **Nov-19-04 19:16**

Analyst: **MVRR01**

Date Prep: **Nov-19-04 13:40**

Tech: **MVRR01**

Seq Number: **24507**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	5.5	0.86	mg/kg	U	1000
Isopropylbenzene	98-82-8	BRL	5.5	0.85	mg/kg	U	1000
m,p-Xylenes	136777-61-2	BRL	11	1.7	mg/kg	U	1000
Methylene Chloride	75-09-2	BRL	5.5	0.77	mg/kg	U	1000
Naphthalene	91-20-3	BRL	5.5	0.90	mg/kg	U	1000
n-Butylbenzene	104-51-8	BRL	5.5	0.82	mg/kg	U	1000
n-Propylbenzene	103-65-1	BRL	5.5	1.1	mg/kg	U	1000
o-Xylene	95-47-6	BRL	5.5	0.69	mg/kg	U	1000
p-Isopropyltoluene	99-87-6	BRL	5.5	0.88	mg/kg	U	1000
sec-Butylbenzene	135-98-8	BRL	5.5	0.88	mg/kg	U	1000
Styrene	100-42-5	BRL	5.5	0.77	mg/kg	U	1000
tert-Butylbenzene	98-06-6	BRL	5.5	0.74	mg/kg	U	1000
Tetrachloroethylene	127-18-4	1.7	5.5	0.76	mg/kg	J	1000
Toluene	108-88-3	4.9	5.5	0.80	mg/kg	J	1000
trans-1,2-Dichloroethene	156-60-5	BRL	5.5	0.85	mg/kg	U	1000
trans-1,3-Dichloropropene	10061-02-6	BRL	5.5	0.95	mg/kg	U	1000
Trichloroethene	79-01-6	1200	270	190	mg/kg	D	50000
Trichlorofluoromethane	75-69-4	BRL	5.5	0.80	mg/kg	U	1000
Vinyl Chloride	75-01-4	BRL	5.5	0.95	mg/kg	U	1000



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3SO-17	Matrix: SOIL	% Moisture: 12					
Lab Sample Id: 7227-004	Date Collected: Nov-18-04 10:40	Date Received: Nov-19-04 09:20					
Sample Depth: 8.5 ft							
Analytical Method: VOCs by SW8260B		Prep Method: SW5035					
Date Analyzed: Nov-20-04 17:35	Analyst: TAG01	Date Prep: Nov-20-04 09:43					
Seq Number: 24515		Tech: TAG01					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0048	0.00072	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0048	0.00059	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0048	0.00082	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0048	0.00070	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0048	0.00051	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0048	0.00065	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0048	0.00054	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0048	0.00099	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0048	0.00088	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0048	0.00094	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0048	0.0010	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0048	0.00050	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0048	0.00050	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	0.0014	0.0048	0.00064	mg/kg	JB	1
1,2-Dichloroethane	107-06-2	BRL	0.0048	0.00062	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0048	0.00054	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0048	0.00094	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0048	0.00048	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0048	0.00062	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	0.0026	0.0048	0.00098	mg/kg	JB	1
2,2-Dichloropropane	594-20-7	BRL	0.0048	0.00084	mg/kg	U	1
2-Butanone	78-93-3	0.0085	0.0096	0.00050	mg/kg	J	1
2-Chlorotoluene	95-49-8	BRL	0.0048	0.00097	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0096	0.00065	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0048	0.00084	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0096	0.00061	mg/kg	U	1
Acetone	67-64-1	0.043	0.0096	0.0012	mg/kg		1
Benzene	71-43-2	BRL	0.0048	0.00060	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0048	0.00091	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0048	0.00091	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0048	0.00064	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0048	0.00058	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0048	0.00048	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0048	0.0013	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0048	0.00078	mg/kg	U	1
Chlorobenzene	108-90-7	0.0070	0.0048	0.00071	mg/kg		1
Chloroethane	75-00-3	BRL	0.0048	0.0015	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0048	0.00076	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0048	0.00058	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.84	0.0048	0.00077	mg/kg	E	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0048	0.00065	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0048	0.00067	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0048	0.00060	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	0.00080	0.0048	0.00060	mg/kg	J	1
Ethylbenzene	100-41-4	BRL	0.0048	0.00066	mg/kg	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4PIT-3SO-17	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7227-004	Date Collected: Nov-18-04 10:40	Date Received: Nov-19-04 09:20
Sample Depth: 8.5 ft		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035

Date Analyzed: **Nov-20-04 17:35**

Analyst: **TAG01**

Date Prep: **Nov-20-04 09:43**

Tech: **TAG01**

Seq Number: **24515**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0048	0.00062	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0048	0.00080	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.0096	0.0018	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0048	0.0012	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.0048	0.00091	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0048	0.00049	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0048	0.00098	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0048	0.00060	mg/kg	U	1
p-Isopropyltoluene	99-87-6	0.0017	0.0048	0.00096	mg/kg	J	1
Sec-Butylbenzene	135-98-8	BRL	0.0048	0.00091	mg/kg	U	1
Styrene	100-42-5	BRL	0.0048	0.00099	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0048	0.00063	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0048	0.00074	mg/kg	U	1
Toluene	108-88-3	0.0017	0.0048	0.00070	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	0.0044	0.0048	0.00064	mg/kg	J	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0048	0.00083	mg/kg	U	1
Trichloroethene	79-01-6	0.0052	0.0048	0.00079	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0048	0.00049	mg/kg	U	1
Vinyl Chloride	75-01-4	0.72	0.0048	0.00051	mg/kg	E	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3SO-18	Matrix: SOIL	% Moisture: 26
Lab Sample Id: 7227-005	Date Collected: Nov-18-04 13:25	Date Received: Nov-19-04 09:20
Sample Depth: 5.0 ft		

Analytical Method: VOCs by SW8260B		Prep Method: SW5030B	
Date Analyzed: Nov-19-04 20:07	Analyst: MVRR01	Date Prep: Nov-19-04 13:40	Tech: MVRR01
Seq Number: 24507			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	6.1	0.64	mg/kg	U	1000
1,1,1-Trichloroethane	71-55-6	BRL	6.1	0.89	mg/kg	U	1000
1,1,2,2-Tetrachloroethane	79-34-5	BRL	6.1	1.0	mg/kg	U	1000
1,1,2-Trichloroethane	79-00-5	BRL	6.1	0.75	mg/kg	U	1000
1,1-Dichloroethane	75-34-3	BRL	6.1	0.65	mg/kg	U	1000
1,1-Dichloroethene	75-35-4	BRL	6.1	3.5	mg/kg	U	1000
1,1-Dichloropropene	563-58-6	BRL	6.1	0.97	mg/kg	U	1000
1,2,3-Trichlorobenzene	87-61-6	BRL	6.1	2.0	mg/kg	U	1000
1,2,3-Trichloropropane	96-18-4	BRL	6.1	0.51	mg/kg	U	1000
1,2,4-Trichlorobenzene	120-82-1	2.7	6.1	2.0	mg/kg	J	1000
1,2,4-Trimethylbenzene	95-63-6	1.1	6.1	0.88	mg/kg	J	1000
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	6.1	2.5	mg/kg	U	1000
1,2-Dibromoethane (EDB)	106-93-4	BRL	6.1	0.72	mg/kg	U	1000
1,2-Dichlorobenzene	95-50-1	410	150	22	mg/kg	D	25000
1,2-Dichloroethane	107-06-2	BRL	6.1	0.62	mg/kg	U	1000
1,2-Dichloropropane	78-87-5	BRL	6.1	0.61	mg/kg	U	1000
1,3,5-Trimethylbenzene	108-67-8	BRL	6.1	0.87	mg/kg	U	1000
1,3-Dichlorobenzene	541-73-1	17	6.1	1.0	mg/kg		1000
1,3-Dichloropropane	142-28-9	BRL	6.1	0.64	mg/kg	U	1000
1,4-Dichlorobenzene	106-46-7	260	150	28	mg/kg	D	25000
2,2-Dichloropropane	594-20-7	BRL	6.1	0.91	mg/kg	U	1000
2-Butanone	78-93-3	BRL	12	3.6	mg/kg	U	1000
2-Chlorotoluene	95-49-8	BRL	6.1	0.92	mg/kg	U	1000
2-Hexanone	591-78-6	BRL	12	2.1	mg/kg	U	1000
4-Chlorotoluene	106-43-4	BRL	6.1	1.0	mg/kg	U	1000
4-Methyl-2-Pentanone	108-10-1	BRL	12	2.7	mg/kg	U	1000
Acetone	67-64-1	BRL	12	4.8	mg/kg	U	1000
Benzene	71-43-2	BRL	6.1	0.77	mg/kg	U	1000
Bromobenzene	108-86-1	BRL	6.1	1.2	mg/kg	U	1000
Bromochloromethane	74-97-5	BRL	6.1	0.73	mg/kg	U	1000
Bromodichloromethane	75-27-4	BRL	6.1	0.76	mg/kg	U	1000
Bromoform	75-25-2	BRL	6.1	0.73	mg/kg	U	1000
Bromomethane	74-83-9	BRL	6.1	1.8	mg/kg	U	1000
Carbon Disulfide	75-15-0	BRL	6.1	3.8	mg/kg	U	1000
Carbon Tetrachloride	56-23-5	BRL	6.1	0.99	mg/kg	U	1000
Chlorobenzene	108-90-7	11	6.1	5.5	mg/kg		1000
Chloroethane	75-00-3	BRL	6.1	2.1	mg/kg	U	1000
Chloroform	67-66-3	BRL	6.1	0.70	mg/kg	U	1000
Chloromethane	74-87-3	BRL	6.1	1.1	mg/kg	U	1000
cis-1,2-Dichloroethene	156-59-2	30	6.1	0.99	mg/kg		1000
cis-1,3-Dichloropropene	10061-01-5	BRL	6.1	0.42	mg/kg	U	1000
Dibromochloromethane	124-48-1	BRL	6.1	0.55	mg/kg	U	1000
Dibromomethane	74-95-3	BRL	6.1	0.49	mg/kg	U	1000
Dichlorodifluoromethane	75-71-8	BRL	6.1	1.3	mg/kg	U	1000
Ethylbenzene	100-41-4	BRL	6.1	0.89	mg/kg	U	1000



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3SO-18	Matrix: SOIL	% Moisture: 26
Lab Sample Id: 7227-005	Date Collected: Nov-18-04 13:25	Date Received: Nov-19-04 09:20
Sample Depth: 5.0 ft		

Analytical Method: VOCs by SW8260B

Prep Method: SW5030B

Date Analyzed: **Nov-19-04 20:07**

Analyst: **MVRR01**

Date Prep: **Nov-19-04 13:40**

Tech: **MVRR01**

Seq Number: **24507**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	6.1	0.97	mg/kg	U	1000
Isopropylbenzene	98-82-8	BRL	6.1	0.95	mg/kg	U	1000
m,p-Xylenes	136777-61-2	BRL	12	1.9	mg/kg	U	1000
Methylene Chloride	75-09-2	BRL	6.1	0.86	mg/kg	U	1000
Naphthalene	91-20-3	BRL	6.1	1.0	mg/kg	U	1000
n-Butylbenzene	104-51-8	BRL	6.1	0.92	mg/kg	U	1000
n-Propylbenzene	103-65-1	BRL	6.1	1.2	mg/kg	U	1000
o-Xylene	95-47-6	BRL	6.1	0.77	mg/kg	U	1000
p-Isopropyltoluene	99-87-6	BRL	6.1	0.98	mg/kg	U	1000
sec-Butylbenzene	135-98-8	BRL	6.1	0.98	mg/kg	U	1000
Styrene	100-42-5	BRL	6.1	0.86	mg/kg	U	1000
tert-Butylbenzene	98-06-6	BRL	6.1	0.83	mg/kg	U	1000
Tetrachloroethylene	127-18-4	1.7	6.1	0.84	mg/kg	J	1000
Toluene	108-88-3	4.0	6.1	0.89	mg/kg	J	1000
trans-1,2-Dichloroethene	156-60-5	BRL	6.1	0.95	mg/kg	U	1000
trans-1,3-Dichloropropene	10061-02-6	BRL	6.1	1.1	mg/kg	U	1000
Trichloroethene	79-01-6	860	150	110	mg/kg	D	25000
Trichlorofluoromethane	75-69-4	BRL	6.1	0.89	mg/kg	U	1000
Vinyl Chloride	75-01-4	BRL	6.1	1.1	mg/kg	U	1000



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Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24414 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24414 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5030B	
Date Analyzed: Nov-19-04 15:14	Analyst: MVRR01	Date Prep: Nov-19-04 13:40	Tech: MVRR01
Seq Number: 24507			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.3	0.13	mg/kg	U	250
1,1,1-Trichloroethane	71-55-6	BRL	1.3	0.18	mg/kg	U	250
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.3	0.21	mg/kg	U	250
1,1,2-Trichloroethane	79-00-5	BRL	1.3	0.15	mg/kg	U	250
1,1-Dichloroethane	75-34-3	BRL	1.3	0.13	mg/kg	U	250
1,1-Dichloroethene	75-35-4	BRL	1.3	0.72	mg/kg	U	250
1,1-Dichloropropene	563-58-6	BRL	1.3	0.20	mg/kg	U	250
1,2,3-Trichlorobenzene	87-61-6	BRL	1.3	0.42	mg/kg	U	250
1,2,3-Trichloropropane	96-18-4	BRL	1.3	0.11	mg/kg	U	250
1,2,4-Trichlorobenzene	120-82-1	BRL	1.3	0.42	mg/kg	U	250
1,2,4-Trimethylbenzene	95-63-6	BRL	1.3	0.18	mg/kg	U	250
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.3	0.51	mg/kg	U	250
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.3	0.15	mg/kg	U	250
1,2-Dichlorobenzene	95-50-1	BRL	1.3	0.18	mg/kg	U	250
1,2-Dichloroethane	107-06-2	BRL	1.3	0.13	mg/kg	U	250
1,2-Dichloropropane	78-87-5	BRL	1.3	0.13	mg/kg	U	250
1,3,5-Trimethylbenzene	108-67-8	BRL	1.3	0.18	mg/kg	U	250
1,3-Dichlorobenzene	541-73-1	BRL	1.3	0.21	mg/kg	U	250
1,3-Dichloropropane	142-28-9	BRL	1.3	0.13	mg/kg	U	250
1,4-Dichlorobenzene	106-46-7	BRL	1.3	0.23	mg/kg	U	250
2,2-Dichloropropane	594-20-7	BRL	1.3	0.19	mg/kg	U	250
2-Butanone	78-93-3	BRL	2.5	0.73	mg/kg	U	250
2-Chlorotoluene	95-49-8	BRL	1.3	0.19	mg/kg	U	250
2-Hexanone	591-78-6	BRL	2.5	0.42	mg/kg	U	250
4-Chlorotoluene	106-43-4	BRL	1.3	0.21	mg/kg	U	250
4-Methyl-2-Pentanone	108-10-1	BRL	2.5	0.56	mg/kg	U	250
Acetone	67-64-1	BRL	2.5	0.98	mg/kg	U	250
Benzene	71-43-2	BRL	1.3	0.16	mg/kg	U	250
Bromobenzene	108-86-1	BRL	1.3	0.24	mg/kg	U	250
Bromochloromethane	74-97-5	BRL	1.3	0.15	mg/kg	U	250
Bromodichloromethane	75-27-4	BRL	1.3	0.16	mg/kg	U	250
Bromoform	75-25-2	BRL	1.3	0.15	mg/kg	U	250
Bromomethane	74-83-9	BRL	1.3	0.38	mg/kg	U	250
Carbon Disulfide	75-15-0	BRL	1.3	0.78	mg/kg	U	250
Carbon Tetrachloride	56-23-5	BRL	1.3	0.20	mg/kg	U	250
Chlorobenzene	108-90-7	BRL	1.3	1.1	mg/kg	U	250
Chloroethane	75-00-3	BRL	1.3	0.43	mg/kg	U	250
Chloroform	67-66-3	BRL	1.3	0.14	mg/kg	U	250
Chloromethane	74-87-3	BRL	1.3	0.23	mg/kg	U	250
cis-1,2-Dichloroethene	156-59-2	BRL	1.3	0.20	mg/kg	U	250
cis-1,3-Dichloropropene	10061-01-5	BRL	1.3	0.085	mg/kg	U	250
Dibromochloromethane	124-48-1	BRL	1.3	0.11	mg/kg	U	250
Dibromomethane	74-95-3	BRL	1.3	0.10	mg/kg	U	250
Dichlorodifluoromethane	75-71-8	BRL	1.3	0.26	mg/kg	U	250
Ethylbenzene	100-41-4	BRL	1.3	0.18	mg/kg	U	250

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Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24414 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24414 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method: SW5030B

Date Analyzed: Nov-19-04 15:14

Analyst: MVRRO1

Date Prep: Nov-19-04 13:40

Tech: MVRRO1

Seq Number: 24507

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.3	0.20	mg/kg	U	250
Isopropylbenzene	98-82-8	BRL	1.3	0.20	mg/kg	U	250
m,p-Xylenes	136777-61-2	BRL	2.5	0.40	mg/kg	U	250
Methylene Chloride	75-09-2	BRL	1.3	0.18	mg/kg	U	250
Naphthalene	91-20-3	BRL	1.3	0.21	mg/kg	U	250
n-Butylbenzene	104-51-8	BRL	1.3	0.19	mg/kg	U	250
n-Propylbenzene	103-65-1	BRL	1.3	0.26	mg/kg	U	250
o-Xylene	95-47-6	BRL	1.3	0.16	mg/kg	U	250
p-Isopropyltoluene	99-87-6	BRL	1.3	0.20	mg/kg	U	250
sec-Butylbenzene	135-98-8	BRL	1.3	0.20	mg/kg	U	250
Styrene	100-42-5	BRL	1.3	0.18	mg/kg	U	250
tert-Butylbenzene	98-06-6	BRL	1.3	0.17	mg/kg	U	250
Tetrachloroethylene	127-18-4	BRL	1.3	0.17	mg/kg	U	250
Toluene	108-88-3	BRL	1.3	0.18	mg/kg	U	250
trans-1,2-Dichloroethene	156-60-5	BRL	1.3	0.20	mg/kg	U	250
trans-1,3-Dichloropropene	10061-02-6	BRL	1.3	0.22	mg/kg	U	250
Trichloroethene	79-01-6	BRL	1.3	0.87	mg/kg	U	250
Trichlorofluoromethane	75-69-4	BRL	1.3	0.18	mg/kg	U	250
Vinyl Chloride	75-01-4	BRL	1.3	0.22	mg/kg	U	250



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24415 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24415 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-19-04 14:37	Analyst: MVRRO1
Seq Number: 24508	Date Prep: Nov-19-04 13:40
	Tech: TAG01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24415 BLK
Lab Sample Id: 24415 BLK
Sample Depth:

Matrix: WATER
Date Collected:

% Moisture:
Date Received:

Analytical Method: VOCs by SW8260B (25ml purge)

Prep Method: SW5030B

Date Analyzed: Nov-19-04 14:37

Analyst: MVRRO1

Date Prep: Nov-19-04 13:40

Tech: TAG01

Seq Number: 24508

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24418 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24418 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035
Date Analyzed: Nov-20-04 16:17	Analyst: TAG01
	Date Prep: Nov-20-04 09:43
	Tech: TAG01
	Seq Number: 24515

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0050	0.00075	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0050	0.00061	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0050	0.00085	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0050	0.00073	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0050	0.00053	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0050	0.00068	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0050	0.00056	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	0.0015	0.0050	0.0010	mg/kg	J	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0050	0.00092	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	0.0015	0.0050	0.00098	mg/kg	J	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	0.00093	0.0050	0.00067	mg/kg	J	1
1,2-Dichloroethane	107-06-2	BRL	0.0050	0.00065	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0050	0.00056	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0050	0.00098	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	0.0010	0.0050	0.00050	mg/kg	J	1
1,3-Dichloropropane	142-28-9	BRL	0.0050	0.00065	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	0.0012	0.0050	0.0010	mg/kg	J	1
2,2-Dichloropropane	594-20-7	BRL	0.0050	0.00088	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.010	0.00052	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0050	0.0010	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.010	0.00068	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0050	0.00088	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.010	0.00064	mg/kg	U	1
Acetone	67-64-1	BRL	0.010	0.0013	mg/kg	U	1
Benzene	71-43-2	BRL	0.0050	0.00063	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0050	0.00095	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0050	0.00095	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0050	0.00067	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0050	0.00060	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0050	0.00050	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0050	0.0014	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0050	0.00081	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0050	0.00074	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0050	0.0016	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0050	0.00079	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0050	0.00060	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	0.0050	0.00080	mg/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0050	0.00068	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0050	0.00070	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0050	0.00062	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0050	0.00063	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0050	0.00069	mg/kg	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24418 BLK	Matrix:SOIL	% Moisture:
Lab Sample Id: 24418 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method:SW5035

Date Analyzed:Nov-20-04 16:17

Analyst: TAG01

Date Prep:Nov-20-04 09:43

Tech: TAG01

Seq Number: 24515

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0050	0.00065	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0050	0.00083	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.010	0.0018	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0050	0.0013	mg/kg	U	1
Naphthalene	91-20-3	0.0019	0.0050	0.00095	mg/kg	J	1
n-Butylbenzene	104-51-8	0.00059	0.0050	0.00051	mg/kg	J	1
n-Propylbenzene	103-65-1	BRL	0.0050	0.0010	mg/kg	U	1
o-Xylene	95-47-6	0.00066	0.0050	0.00063	mg/kg	J	1
p-Isopropyltoluene	99-87-6	BRL	0.0050	0.0010	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0050	0.00095	mg/kg	U	1
Styrene	100-42-5	BRL	0.0050	0.0010	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0050	0.00066	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0050	0.00077	mg/kg	U	1
Toluene	108-88-3	BRL	0.0050	0.00073	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0050	0.00067	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0050	0.00087	mg/kg	U	1
Trichloroethene	79-01-6	BRL	0.0050	0.00082	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0050	0.00051	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0050	0.00053	mg/kg	U	1



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24584 BLK	Matrix:SOIL	% Moisture:
Lab Sample Id: 24584 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method:SW5030B	
Date Analyzed:Nov-20-04 09:39	Analyst: TAG01	Date Prep:Nov-20-04 08:41	Tech: TAG01
Seq Number: 24738			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.3	0.13	mg/kg	U	250
1,1,1-Trichloroethane	71-55-6	BRL	1.3	0.18	mg/kg	U	250
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.3	0.21	mg/kg	U	250
1,1,2-Trichloroethane	79-00-5	BRL	1.3	0.15	mg/kg	U	250
1,1-Dichloroethane	75-34-3	BRL	1.3	0.13	mg/kg	U	250
1,1-Dichloroethene	75-35-4	BRL	1.3	0.72	mg/kg	U	250
1,1-Dichloropropene	563-58-6	BRL	1.3	0.20	mg/kg	U	250
1,2,3-Trichlorobenzene	87-61-6	BRL	1.3	0.42	mg/kg	U	250
1,2,3-Trichloropropane	96-18-4	BRL	1.3	0.11	mg/kg	U	250
1,2,4-Trichlorobenzene	120-82-1	BRL	1.3	0.42	mg/kg	U	250
1,2,4-Trimethylbenzene	95-63-6	BRL	1.3	0.18	mg/kg	U	250
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.3	0.51	mg/kg	U	250
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.3	0.15	mg/kg	U	250
1,2-Dichlorobenzene	95-50-1	BRL	1.3	0.18	mg/kg	U	250
1,2-Dichloroethane	107-06-2	BRL	1.3	0.13	mg/kg	U	250
1,2-Dichloropropane	78-87-5	BRL	1.3	0.13	mg/kg	U	250
1,3,5-Trimethylbenzene	108-67-8	BRL	1.3	0.18	mg/kg	U	250
1,3-Dichlorobenzene	541-73-1	BRL	1.3	0.21	mg/kg	U	250
1,3-Dichloropropane	142-28-9	BRL	1.3	0.13	mg/kg	U	250
1,4-Dichlorobenzene	106-46-7	BRL	1.3	0.23	mg/kg	U	250
2,2-Dichloropropane	594-20-7	BRL	1.3	0.19	mg/kg	U	250
2-Butanone	78-93-3	BRL	2.5	0.73	mg/kg	U	250
2-Chlorotoluene	95-49-8	BRL	1.3	0.19	mg/kg	U	250
2-Hexanone	591-78-6	BRL	2.5	0.42	mg/kg	U	250
4-Chlorotoluene	106-43-4	BRL	1.3	0.21	mg/kg	U	250
4-Methyl-2-Pentanone	108-10-1	BRL	2.5	0.56	mg/kg	U	250
Acetone	67-64-1	BRL	2.5	0.98	mg/kg	U	250
Benzene	71-43-2	BRL	1.3	0.16	mg/kg	U	250
Bromobenzene	108-86-1	BRL	1.3	0.24	mg/kg	U	250
Bromochloromethane	74-97-5	BRL	1.3	0.15	mg/kg	U	250
Bromodichloromethane	75-27-4	BRL	1.3	0.16	mg/kg	U	250
Bromoform	75-25-2	BRL	1.3	0.15	mg/kg	U	250
Bromomethane	74-83-9	BRL	1.3	0.38	mg/kg	U	250
Carbon Disulfide	75-15-0	BRL	1.3	0.78	mg/kg	U	250
Carbon Tetrachloride	56-23-5	BRL	1.3	0.20	mg/kg	U	250
Chlorobenzene	108-90-7	BRL	1.3	1.1	mg/kg	U	250
Chloroethane	75-00-3	BRL	1.3	0.43	mg/kg	U	250
Chloroform	67-66-3	BRL	1.3	0.14	mg/kg	U	250
Chloromethane	74-87-3	BRL	1.3	0.23	mg/kg	U	250
cis-1,2-Dichloroethene	156-59-2	BRL	1.3	0.20	mg/kg	U	250
cis-1,3-Dichloropropene	10061-01-5	BRL	1.3	0.085	mg/kg	U	250
Dibromochloromethane	124-48-1	BRL	1.3	0.11	mg/kg	U	250
Dibromomethane	74-95-3	BRL	1.3	0.10	mg/kg	U	250
Dichlorodifluoromethane	75-71-8	BRL	1.3	0.26	mg/kg	U	250
Ethylbenzene	100-41-4	BRL	1.3	0.18	mg/kg	U	250



Certificate of Analytical Results 7227

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24584 BLK
Lab Sample Id: 24584 BLK
Sample Depth:

Matrix:SOIL
Date Collected:

% Moisture:
Date Received:

Analytical Method: VOCs by SW8260B

Prep Method:SW5030B

Date Analyzed:Nov-20-04 09:39

Analyst: TAG01

Date Prep:Nov-20-04 08:41

Tech: TAG01

Seq Number: 24738

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.3	0.20	mg/kg	U	250
Isopropylbenzene	98-82-8	BRL	1.3	0.20	mg/kg	U	250
m,p-Xylenes	136777-61-2	BRL	2.5	0.40	mg/kg	U	250
Methylene Chloride	75-09-2	BRL	1.3	0.18	mg/kg	U	250
Naphthalene	91-20-3	BRL	1.3	0.21	mg/kg	U	250
n-Butylbenzene	104-51-8	BRL	1.3	0.19	mg/kg	U	250
n-Propylbenzene	103-65-1	BRL	1.3	0.26	mg/kg	U	250
o-Xylene	95-47-6	BRL	1.3	0.16	mg/kg	U	250
p-Isopropyltoluene	99-87-6	BRL	1.3	0.20	mg/kg	U	250
sec-Butylbenzene	135-98-8	BRL	1.3	0.20	mg/kg	U	250
Styrene	100-42-5	BRL	1.3	0.18	mg/kg	U	250
tert-Butylbenzene	98-06-6	BRL	1.3	0.17	mg/kg	U	250
Tetrachloroethylene	127-18-4	BRL	1.3	0.17	mg/kg	U	250
Toluene	108-88-3	BRL	1.3	0.18	mg/kg	U	250
trans-1,2-Dichloroethene	156-60-5	BRL	1.3	0.20	mg/kg	U	250
trans-1,3-Dichloropropene	10061-02-6	BRL	1.3	0.22	mg/kg	U	250
Trichloroethene	79-01-6	BRL	1.3	0.87	mg/kg	U	250
Trichlorofluoromethane	75-69-4	BRL	1.3	0.18	mg/kg	U	250
Vinyl Chloride	75-01-4	BRL	1.3	0.22	mg/kg	U	250

Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 01:25

Work Order #: 7227

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24515

Sample: 24418 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0509	0.0500	102	75-125	
Bromofluorobenzene	0.0499	0.0500	100	75-125	
Toluene-D8	0.0495	0.0500	99	75-125	

Lab Batch #: 24515

Sample: 7227-004 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0426	0.0422	101	70-130	
Bromofluorobenzene	0.0421	0.0422	100	70-130	
Toluene-D8	0.0420	0.0422	100	70-130	

Lab Batch #: 24507

Sample: 24414 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	2.84	2.50	114	75-125	
Bromofluorobenzene	2.28	2.50	91	75-125	
Toluene-D8	2.78	2.50	111	75-125	

Lab Batch #: 24507

Sample: 7227-003 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	8.54	8.87	96	70-130	
Bromofluorobenzene	8.57	8.87	97	70-130	
Toluene-D8	8.51	8.87	96	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 01:25

Work Order #: 7227

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24507

Sample: 7227-005 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	9.37	9.06	103	70-130	
Bromofluorobenzene	9.09	9.06	100	70-130	
Toluene-D8	9.14	9.06	101	70-130	

Lab Batch #: 24508

Sample: 24415 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.8	10.0	118	80-120	
Bromofluorobenzene	9.20	10.0	92	80-120	
Toluene-D8	11.5	10.0	115	80-120	

Lab Batch #: 24508

Sample: 7227-001 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	10.8	10.0	108	70-130	
Bromofluorobenzene	8.89	10.0	89	70-130	
Toluene-D8	11.0	10.0	110	70-130	

Lab Batch #: 24508

Sample: 7227-002 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	10.4	10.0	104	70-130	
Bromofluorobenzene	9.02	10.0	90	70-130	
Toluene-D8	10.2	10.0	102	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 01:25

Project ID: 6301-03-0011-1901-1000

Work Order #: 7227

Lab Batch #: 24738

Sample: 24584 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY

VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	2.98	2.50	119	75-125	
Bromofluorobenzene	2.53	2.50	101	75-125	
Toluene-D8	2.95	2.50	118	75-125	

Lab Batch #: 24738

Sample: 7227-003 DL1 / DIL

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY

VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	238	222	107	70-130	
Bromofluorobenzene	210	222	95	70-130	
Toluene-D8	240	222	108	70-130	

Lab Batch #: 24738

Sample: 7227-003 DL2 / DIL

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY

VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	537	443	121	70-130	
Bromofluorobenzene	421	443	95	70-130	
Toluene-D8	482	443	109	70-130	

Lab Batch #: 24738

Sample: 7227-004 DL1 / DIL

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY

VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	2.51	2.22	113	70-130	
Bromofluorobenzene	1.89	2.22	85	70-130	
Toluene-D8	2.24	2.22	101	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 01:25

Work Order #: 7227

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24738

Sample: 7227-005 DL1 / DIL

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	255	226	113	70-130	
Bromofluorobenzene	216	226	96	70-130	
Toluene-D8	250	226	111	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits

Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Work Order #: 7227
Lab Batch #: 24515

Report Date: 12/10/04 01:25
Project ID: 6301-03-0011-1901-1000
Matrix: S

Reporting Units: mg/kg

Batch #: 1

Sample: 24418 BKS

BLANK /BLANK SPIKE RECOVERY STUDY

VOCs by SW8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.00061	0.050	0.047	94	75-125	
1,1-Dichloroethane	<0.00053	0.050	0.052	104	75-125	
1,1-Dichloroethene	<0.00068	0.050	0.053	106	75-125	
Benzene	<0.00063	0.050	0.052	104	75-125	
Bromodichloromethane	<0.00067	0.050	0.052	104	75-125	
Chlorobenzene	<0.00074	0.050	0.051	102	75-125	
cis-1,2-Dichloroethene	<0.00080	0.050	0.051	102	75-125	
Tetrachloroethylene	<0.00077	0.050	0.052	104	75-125	
Toluene	<0.00073	0.050	0.051	102	75-125	
Trichloroethene	<0.00082	0.050	0.051	102	75-125	
Vinyl Chloride	<0.00053	0.050	0.052	104	75-125	

Lab Batch #: 24507

Sample: 24414 BKS

Matrix: S

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

VOCs by SW8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.18	2.5	2.8	112	75-125	
1,1-Dichloroethane	<0.13	2.5	2.6	104	75-125	
1,1-Dichloroethene	<0.72	2.5	2.6	104	75-125	
Benzene	<0.16	2.5	2.6	104	75-125	
Bromodichloromethane	<0.16	2.5	2.6	104	75-125	
Chlorobenzene	<1.1	2.5	2.5	100	75-125	
cis-1,2-Dichloroethene	<0.20	2.5	2.6	104	75-125	
Tetrachloroethylene	<0.17	2.5	2.8	112	75-125	
Toluene	<0.18	2.5	2.7	108	75-125	
Trichloroethene	<0.87	2.5	2.6	104	75-125	
Vinyl Chloride	<0.22	2.5	2.5	100	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDI and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Work Order #: 7227

Lab Batch #: 24738

Reporting Units: mg/kg

Report Date:

12/10/04 01:25

Project ID:

6301-03-0011-1901-1000

Sample: 24584 BKS

Matrix: S

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

VOCs by SW8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.18	2.5	2.6	104	75-125	
1,1-Dichloroethane	<0.13	2.5	2.5	100	75-125	
1,1-Dichloroethene	<0.72	2.5	2.6	104	75-125	
Benzene	<0.16	2.5	2.4	96	75-125	
Bromodichloromethane	<0.16	2.5	2.5	100	75-125	
Chlorobenzene	<1.1	2.5	2.4	96	75-125	
cis-1,2-Dichloroethene	<0.20	2.5	2.5	100	75-125	
Tetrachloroethylene	<0.17	2.5	2.8	112	75-125	
Toluene	<0.18	2.5	2.6	104	75-125	
Trichloroethene	<0.87	2.5	2.6	104	75-125	
Vinyl Chloride	<0.22	2.5	2.3	92	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date
Project ID: 6301-03-0011-1901-1000
Matrix: W

Work Order #: 7227

Lab Batch ID: 24508

Sample: 24415 BKS

Batch #: 1

Units: ug/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
VOCs by SW8260B (25ml purge)											
1,1,1-Trichloroethane	<0.33	10	9.9	99	10	11	110	11	80-120	30	
1,1-Dichloroethane	<0.31	10	10	100	10	10	100	0	80-120	30	
1,1-Dichloroethene	<0.16	10	11	110	10	11	110	0	80-120	30	
Benzene	<0.16	10	9.6	96	10	10	100	4	80-120	30	
Bromodichloromethane	<0.090	10	8.9	89	10	9.5	95	7	80-120	30	
Chlorobenzene	<0.13	10	9.7	97	10	10	100	3	80-120	30	
cis-1,2-Dichloroethene	<0.19	10	9.8	98	10	10	100	2	80-120	30	
Tetrachloroethylene	<0.35	10	10	100	10	11	110	10	80-120	30	
Toluene	<0.16	10	11	110	10	11	110	0	80-120	30	
Trichloroethene	<0.12	10	10	100	10	11	110	10	80-120	30	
Vinyl Chloride	<0.17	10	9.7	97	10	9.9	99	2	80-120	30	

Relative Percent Difference RPD = $200 * [(D-G)/(D+G)]$

Blank Spike Recovery [D] = $100 * (C/B)$

Blank Spike Duplicate Recovery [G] = $100 * (F/E)$

All results are based on MDL and Validated for QC Purposes

F = RPD exceeded the laboratory control limits



Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Work Order #: 7227

Lab Batch ID: 24515

Reporting Units: mg/kg

Report Date: 12/10/04 01:25

Project ID: 6301-03-0011-1901-1000

QC- Sample ID: 7227-004 MS

Batch #: 1

Matrix: S

VOCs by SW8260B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											Flag
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD		
1,1,1-Trichloroethane	<0.0010	0.043	0.048	112	0.045	0.041	91	21	70-130	30		
1,1-Dichloroethane	<0.0010	0.043	0.039	91	0.045	0.045	100	9	70-130	30		
1,1-Dichloroethene	<0.0010	0.043	0.039	91	0.045	0.046	102	11	70-130	30		
Benzene	<0.0010	0.043	0.039	91	0.045	0.045	100	9	70-130	30		
Bromodichloromethane	<0.0010	0.043	0.039	91	0.045	0.045	100	9	70-130	30		
Chlorobenzene	0.0070	0.043	0.048	95	0.045	0.051	98	3	70-130	30		
cis-1,2-Dichloroethene	0.84	0.043	0.80	-93	0.045	0.91	156	790	70-130	30	ZF	
Tetrachloroethylen	<0.0010	0.043	0.038	88	0.045	0.044	98	11	70-130	30		
Toluene	0.0017	0.043	0.040	89	0.045	0.045	96	8	70-130	30		
Trichloroethene	0.0052	0.043	0.040	81	0.045	0.049	97	18	70-130	30		
Vinyl Chloride	0.72	0.043	0.48	-558	0.045	0.51	-467	-18	70-130	30	Z	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 01:25
Project ID: 6301-03-0011-1901-1000

Work Order #: 7227
Lab Batch ID: 24507
Reporting Units: mg/kg

QC- Sample ID: 7227-005 MS **Batch #:** 1 **Matrix:** S

VOCs by SW8260B		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY									
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1,1-Trichloroethane	<0.89	12	12	100	12	11	92	8	70-130	30	
1,1-Dichloroethane	<0.65	12	11	92	12	11	92	0	70-130	30	
1,1-Dichloroethene	<3.5	12	12	100	12	12	100	0	70-130	30	
Benzene	<0.77	12	12	100	12	12	100	0	70-130	30	
Bromodichloromethane	<0.76	12	11	92	12	11	92	0	70-130	30	
Chlorobenzene	11	12	24	108	12	24	108	0	70-130	30	
cis-1,2-Dichloroethene	30	12	41	92	12	41	92	0	70-130	30	
Tetrachloroethylene	17	12	14	103	12	14	103	0	70-130	30	
Toluene	40	12	16	100	12	16	100	0	70-130	30	
Trichloroethene	410	12	430	167	12	410	0	200	70-130	30	ZF
Vinyl Chloride	<1.1	12	11	92	12	10	83	10	70-130	30	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference RPD = 200*(D-G)/(D+G)

F = RPD exceeded the laboratory control limits





8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABS Contract : 6301-03-0011-1901-1000
 Lab Code : ACCURA Case No. : 7227 SAS No. : _____
 Instrument ID: HP-MSJ SDG No. N/A
 Lab File ID: J111904U14387 Date Analyzed: 11/19/04
 EPA Sample No. -VSTD010J20 Time Analyzed : 13:59
 GC Column: ZB-624 ID: 25 (mm) Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	527319	5.98	620513	11.45	172569	14.67
UPPER LIMIT	1054638	6.48	1241026	11.95	345138	15.17
LOWER LIMIT	263660	5.48	310257	10.95	86285	14.17
EPA SAMPLE						
1 24414 BLK	490931	5.98	550411	11.45	150021	14.67
2 24414 BKS	472826	5.98	635076	11.45	168902	14.67
3 OU4PIT-3SO-DUP1	583922	5.98	749807	11.45	216342	14.66
4 OU4PIT-3SO-18	579524	5.98	794530	11.44	226827	14.67
5 OU4PIT-3SO-18 MS	571232	5.98	782124	11.46	219636	14.68
6 OU4PIT-3SO-18 MSD	633020	5.98	885090	11.45	260264	14.66

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7227

SAS No. : _____

Instrument ID: HP-MSJSDG No. N/ALab File ID: J111904UJ14387Date Analyzed: 11/19/04EPA Sample No. : VSTD010J20Time Analyzed : 13:59GC Column: ZB-624ID: .25 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	527319	5.98	620513	11.45	172569	14.67
UPPER LIMIT	1054638	6.48	1241026	11.95	345138	15.17
LOWER LIMIT	263660	5.48	310257	10.95	86285	14.17
EPA SAMPLE						
1 24415 BLK	522149	5.98	623275	11.45	175920	14.67
2 24415 BKS	472553	5.98	625711	11.45	170845	14.66
3 24415 BSD	478828	5.98	645406	11.45	173796	14.67
4 TB-11-18-04	506419	5.97	618100	11.45	169107	14.66
5 OU4PIT-3-SO-EB2	486275	5.98	601995	11.45	153410	14.66

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABS Contract : 6301-03-0011-1901-1000
 Lab Code : ACCURA Case No. : 7227 SAS No. : _____
 Instrument ID: AG-MSK SDG No. N/A
 Lab File ID: K112004\K012891 Date Analyzed: 11/20/04
 EPA Sample No. : VSTD010K98 Time Analyzed : 11:09
 GC Column: DB-624 ID: .18 (mm) Heated Purge (Y/N) _____

	ISI (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	354471	3.97	525889	8.37	305103	10.89
UPPER LIMIT	708942	4.47	1051778	8.87	610206	11.39
LOWER LIMIT	177236	3.47	262945	7.87	152552	10.39
EPA SAMPLE						
1 VSTD010K98	354471	3.97	525889	8.37	305103	10.89
2 24418 BLK	312349	3.97	473639	8.37	273626	10.88
3 24418 BKS	341535	3.97	510400	8.37	303015	10.89
4 OU4PIT-3SO-17	304117	3.97	458291	8.37	268077	10.89
5 OU4PIT-3SO-17 MS	336006	3.97	496810	8.37	298666	10.89
6 OU4PIT-3SO-17 MSD	338122	3.97	504074	8.37	304829	10.89

ISI (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7227

SAS No. : _____

Instrument ID: AG-MSKSDG No. N/ALab File ID: K112004\K012899Date Analyzed: 11/20/04EPA Sample No. : VSTD050K99Time Analyzed : 15:24GC Column: DB-624ID: .18 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA	#	RT #	IS3 (DCB) AREA	#	RT #
12 HOUR STD	357222	3.97	532075		8.37	316257		10.89
UPPER LIMIT	714444	4.47	1064150		8.87	632514		11.39
LOWER LIMIT	178611	3.47	266038		7.87	158129		10.39
EPA SAMPLE								
1 VSTD010K98	354471	3.97	525889		8.37	305103		10.89
2 24418 BLK	312349	3.97	473639		8.37	273626		10.88
3 24418 BKS	341535	3.97	510400		8.37	303015		10.89
4 OU4PIT-3SO-17	304117	3.97	458291		8.37	268077		10.89
5 OU4PIT-3SO-17 MS	336006	3.97	496810		8.37	298666		10.89
6 OU4PIT-3SO-17 MSD	338122	3.97	504074		8.37	304829		10.89

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABS Contract : 6301-03-0011-1901-1000
 Lab Code : ACCURA Case No. : 7227 SAS No. : _____
 Instrument ID: HP-MSJ SDG No. N/A
 Lab File ID: J112004U14414 Date Analyzed: 11/20/04
 EPA Sample No. : VSTD010J22 Time Analyzed : 09:01
 GC Column: ZB-624 ID: .25 (mm) Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	484335	5.97	651979	11.44	181627	14.67
UPPER LIMIT	968670	6.47	1303958	11.94	363254	15.17
LOWER LIMIT	242168	5.47	325990	10.94	90814	14.17
EPA SAMPLE						
1 24584 BLK	507029	5.97	628586	11.45	159893	14.66
2 24584 BKS	496123	5.97	657604	11.44	184356	14.66
3 OU4PIT-3SO-DUP1 DL1	519985	5.97	643644	11.44	170998	14.66
4 OU4PIT-3SO-17 DL1	468172	5.97	593114	11.44	164398	14.66
5 OU4PIT-3SO-18 DL1	534449	5.98	646893	11.45	165585	14.66
6 OU4PIT-3SO-DUP1 DL2	445449	5.98	585191	11.45	151847	14.66

IS1 (PFB) = Pentafluorobenzene
 IS2 (CBZ) = Chlorobenzene-d5
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of the QC limits



Accura Analytical Laboratory

EPA Defined Qualifiers Codes used by AAL

- BRL:** This abbreviation indicates that the analytical results were Below the Reporting Limit (BRL).
- U:** The compound was analyzed for but not detected.
- J:** This indicates an estimated value. This flag is used in 3 incidences.
- (1) When estimating a concentration for tentatively identified compounds where 1:1 response is assumed.
 - (2) When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the Contract Required Detection Limit (CRDL) – or Reporting Limit - but greater than the MDL.
 - (3) When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL – or Reporting Limit- but greater than MDL.
- N:** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" flag is not used.
- P:** This is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with "P"
- C:** This applies to pesticide result where the identification has been confirmed by GC/MS. Do not apply if this flag if analyte(s) were not confirmed. Used the laboratory-defined flag instead (see the X qualifier).
- B:** This is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The flag shall be used for a tentatively identified compound as well as for a positively identified target compound.
- E:** This identifies compounds whose concentrations exceed the upper level of the linear calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract should be diluted and re-analyzed.
- Note: For Total xylene, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately.*
- X:** Defined by the laboratory
- Z:** Surrogates/Spikes results exceeds quality control limits
- ZZ:** Surrogates/Spikes results exceeds quality control limits in multiple samples
- ***:** Surrogate recoveries were diluted out
- M:** Manual integrations were necessary and an "m" qualifying code is present on the quantitation report next to the analyte.
- D:** This flag indicates that the identified compound is reported from the dilution run.



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
 6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

AAL Work Order # 7239

Client Project: DSCR OU4 Source Removal / 6301-03-0011-1901-1000

Accura Analytical Laboratory Inc. certifies that the results meet all requirements of the NELAC Standards.

The data package includes a total of **92** pages including: case narrative, Chain of Custody, Request for Analysis Forms, Sample Receipt Checklist, analytical results pages, QC surrogate recovery pages, QC Blank Spike / Blank Spike Duplicate recovery pages, QC MS/MSD recovery pages, 2 subcontract laboratory's batch QC report pages, and a list of common EPA qualifier codes used by AAL.

The following items were noted concerning this work order:

Receiving Notations:

1. The samples were received at 2°C.

Michele Ruiz
 Michele Ruiz
 Receiving

November 20, 2004
 Date

Reactive Sulfide Notations:

1. %RPD on the sample duplicate was outside laboratory control limits, all other QC within laboratory control limits.

Lisandra J. Betancourt
 Lisandra J. Betancourt
 Wet Chemistry Analyst

November 23, 2004
 Date

DRO by SW8015B Notations:

1. The following samples required dilution due to high analyte concentration and/or nature of the extract, resulting in elevated detection limits: OU4-IDW-SO-1, OU4-IDW-SO-3, OU4-IDW-SO-4, OU4-IDW-SO-5.

Prashant Bagade
 GC Analyst

November 24, 2004
 Date

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 Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

TCLP Mercury by SW7470A Notations:

1. MS/MSD failed due to high analyte concentration in the sample. (Note the sample used for MS/MSD was from another client's submittal.) All other related QC within laboratory control limits.

Nikita Kuruganty

Nikita Kuruganty
 Mercury Analyst

November 24, 2004

Date

Reactive Cyanide Notations:

1. MS/MSD outside the laboratory control limits, all other QC within laboratory control limits.

Lisandra J. Betancourt

Lisandra J. Betancourt
 Wet Chemistry Analyst

November 29, 2004

Date

VOCs by SW8260B Notations (soil Batch 24516):

1. The following spike recoveries were outside the method specified limits due to possible matrix interference and/or sample heterogeneity:
 Matrix Spike – 1,1,1-Trichloroethane, cis-1,2-Dichloroethene, Trichloroethene and Vinyl Chloride
 Matrix Spike Duplicate - 1,1,1-Trichloroethane, cis-1,2-Dichloroethene and Vinyl Chloride
2. The relative percent difference between the matrix spike and matrix spike duplicate was outside the method specified limit for the following analyte: Trichloroethene.

Thomas A. Gatch

Thomas A. Gatch
 VOC Analyst

December 01, 2004

Date

Project Manager's Notations:

1. The soil sample results are reported on a dry weight basis as appropriate for the "total" analyses methods.

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Page 2 of 3

WO 7239CN



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Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

2. The following analyses were performed by Test America, Inc., 2960 Foster Creighton Dr., Nashville, TN 37204: TOX – EPA 9023.

The lab contact person at Test America, Inc. is: Carlsie Crutchfield at 1-800-765-0980.

These case narrative notations have been reviewed/edited by:

A handwritten signature in black ink, appearing to read 'David C. Fuller', written over a horizontal line.

David C. Fuller
VP – Client Services

December 01, 2004

Date

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Page 1 of 2
 6017 Financial Drive, Norcross, GA 30071
 Phone # (770) 449-8800 Fax # (770) 449-5477

ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

CHAIN OF CUSTODY

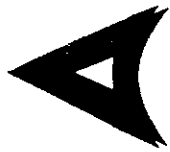
Company Name: MACTEC Billing address: 3200 TOWNMOUNT DRIVE, STE 100
 Address: 9625 JEFFERSON DAVIS HIGHWAY, RICHMOND VA 23237 P.O. # (if required): 6301-03-0011-1901-1000 KENNESAW GA 30144
 Results Sent to: (Client Contact): JUDY HARTNESS For Laboratory Use Only: AAI LIMS System ID: 11976
 Email address: JHARTNESS@MACTEC.COM OC Level: 3 Receiver's Initials/Temp: 600/24
 Contact Phone #: 770-421-3336 Fax #: 1-770-421-3343 Custody Seal(s): 2 ON Type: 7239
 Project (Site) Name: DSCR 004 SOURCE REMOVAL AAL Work Order # 7239
 Project Number: 6301-03-0011

Line #	Sample ID #	Sample Date / Time	Composite	Grid	Matrix (See Below)	Sampler(s): (printed)	Sample Location	No. of Containers	Analysis Requested						Field Comments:	AAL Lab ID:				
									1	8	1	2	1	1			1	1		
1	004-IDW-50-1	11-19-04/1400	X		S	TED A. WATTEMANN	004 STRIKE B (SOUTH)	9	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204	004-IDW-501 004-IDW-502 ARE TULP SAMPLES	7239	
2	004-IDW-50-2	11-19-04/1420	X		S	TED A. WATTEMANN	004 STRIKE B (WEST)	9	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		-021	
3	004-PIT-150-12	11-19-04/1400	X		S	TED A. WATTEMANN	004 PIT 1	5	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		2	
4	004-PIT-365-5	11-19-04/0920	X		S	TED A. WATTEMANN	004 PIT 3	5	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		3	
5	004-PIT-365-9	11-19-04/1020	X		S	TED A. WATTEMANN	004 PIT 3	5	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		4	
6	004-PIT-365-5	MS/MSD	X		S	TED A. WATTEMANN	004 PIT 3	5	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		5	
7	004-PIT-365-DUP1	11-19-04/0800	X		S	TED A. WATTEMANN	004 PIT 3	5	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		4	
8	TB 11-19-04	11-19-04/1730			W	TED A. WATTEMANN	TRIB BLANK	2	VOC	SW8260B	TO MOISTURE	D2216	SW8260B	SW8015M	SW9023	SW9095/4733	ASTM-D2204		6	
9																				7
10																				

1) Relinquished By: [Signature] Date / Time: 11-19-04/1930 Received By: [Signature] Date / Time: 11/20/04
 2) Received By: [Signature] Date / Time: 11/20/04
 3) Relinquished By: [Signature] Date / Time: 11/20/04 Received By: [Signature] Date / Time: 11/20/04
 Delivered by: (Circle One)
 Fed Ex UPS DHL AAL Pickup / Hand / Other
 Turnaround Time Requested: 7 DAYS

Matrix Guide: (W=Water) (DW=Drinking Water) (GW=Groundwater) (SW=Surface Water) (L=Liquid) (O=Oil) (S=Soil) (SD=Solid) (SI=Sludge) (A=Air) (C=Air Cartridge)

Preservation Codes: 1=HCL / 2=HNO₃ / 3=H₂SO₄ / 4=NaOH+NaAsO₂ / 5=NaOH+ZnAc / 6=Na₂S₂O₈ / 7=NaHSO₄ / 8=MeOH



ACCURA ANALYTICAL LABORATORY, INC.
Environmental Analytical Services

40261
Page 2 of 2

6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-5477

CHAIN OF CUSTODY

Company Name: MAC TEC Billing address: 3200 TOWNPOINT DRIVE, STE 100
 Address: 9625 JEFFERSON DAVIS HIGHWAY, RICHMOND VA 23237 (required): 6301-03-0011-1901-1000 KENNESAW, GA 30144
 Results Sent to: (Client Contact): JUDY HARTNESS
 Email address: _____
 Contact Phone #: 770-509-421-3336 Fax #: 1-770-421-3343
 Project (Site) Name: DSCR OUY SOURCE REMOVAL
 Project Number: 6301-03-0011
 Sampler(s): (signature) _____ Preservation Code: (See below)

Line #	Sample ID #	Sample Date / Time	Composite	Grab	Matrix	(See below)	Sampler(s)	(printed)	Sample Location	No. of Containers	Analysis Requested				Field Comments	AAL Lab ID:
											B	6010 B / 4013	6010 B / 4015 M	SW 8015 M		
1	0U4-IDW-50-3	11-19-04/1520	X		S		TED A. WITTEMAN		OUY STOCKPILE A (NORTH)	9	2	1	1	1	1	7239
2	0U4-IDW-50-4	11-19-04/1540	X		S		TED A. WITTEMAN		OUY STOCKPILE A (MIDDLE)	9	2	1	1	1	1	-008
3	0U4-IDW-50-5	11-19-04/1550	X		S		TED A. WITTEMAN		OUY STOCKPILE A (SOUTH)	9	2	1	1	1	1	-19
4	TB-11-19-04(2)	11-19-04/1430			W		TED A. WITTEMAN		TB B BLANK	2	2	1	1	1	2	-010
5																-1
6																
7																
8																
9																
10																

1) Relinquished By: _____ Date / Time: 11-19-04/1930 2) Received By: _____ Date / Time: 11/20/04 1145
 3) Relinquished By: _____ Date / Time: _____ 4) Received By: _____ Date / Time: _____
 Delivered by: (Circle One)
 Fed Ex / UPS / DHL / AAL Pickup / Hand / Other
 Turnaround Time Requested: 7 DAY

Matrix Guide: (W=Water) (DW=Drinking Water) (GW=Groundwater) (SW=Surface Water) (L=Liquid) (O=Oil) (S=Soil) (SD=Solid) (SL=Sludge) (A=Air) (C=Air Cartridge)
 Preservation Codes: 1=HCL / 2=HNO₃ / 3=H₂SO₄ / 4=NaOH+NaAsO₂ / 5=NaOH+ZnAc / 6=Na₂S₂O₃ / 7=NaHSO₄ / 8=MeOH

ACCURA ANALYTICAL LABORATORY, INC.

SAMPLE RECEIPT CHECKLIST VERSION 6 Client Code: 1405-3 AAL Project Mgr: CF

Client Project Name: DSCR 004 Source Remed ACCURA Work Order#: 7239

Are there EnCores, tests with < 48Hr hold times, or RUSH TAT's requested? YES NO
 If YES, you must communicate RUSH analyses to the appropriate analyst(s) immediately!!! / or preserve EnCores (see #16 below)!!!
 Preliminary Examination: Initials: LRM Date received: 11/20/04 Date cooler was opened: 11/20/04

1. Did cooler/package come with a shipping slip (airbill, Etc.)? YES NO
 If YES, enter carrier name and airbill number here: Fed Ex 843458945262/843458945251
 Describe type of packing in cooler: Bubble bags, Ice
 ****If cooler was hand delivered, CIRCLE HERE, skip to item #5****
2. Were custody seals on outside of cooler? YES NO
 If YES, how many: 2 seal dated: 11/20/04 seal name: Illegible
3. Were custody seals unbroken and intact at the date and time of arrival? YES N/A NO
4. Were custody papers sealed in a plastic bag to prevent damage to chain of custody? YES NO
5. If required, was enough ice used? (Internal cooler temperature, 2°C) YES N/A NO
6. Did you sign custody papers in the appropriate place? YES NO
7. Was project identifiable from custody papers? YES NO
 If YES, enter project name at the top.

Complete project file with green sheet, proper file tag, and shipping documentation. Line up samples following chain. Complete Container Receipt Verification form (include extra containers for dissolved metals filtrates). Complete login in XENCO and generate AAL ID Labels.

8. Did all containers arrive unbroken and were labels in good condition? YES NO
9. Were custody papers filled out properly and did all labels agree with custody papers? YES NO
10. Were correct containers and sufficient amount of sample sent for the test indicated? YES NO
11. All samples collected within three days of date received for these analyses (Reactive Cn & S, Solids in H2O, Sulfide, Sulfite, IALLI Extractable Organic Waters)? YES N/A NO
 If NO, coordinate with the project manager to ensure that no samples go out of hold!!!
12. No residual chlorine found in waters for these analyses: (Cyanide, PAH, SVOC, Pesticides, PCB's, Herbicides)? YES N/A NO
 Checked by: _____ (Initials)
13. Were samples properly chemically preserved, if required, upon receipt? YES N/A NO
 (For example: pH checked for waters for all Metals, Wet Chemistry, Pesticides, PCB's, Herbicides, and VOC/BTEX samples submitted with HCL for waters and in either Encore samplers or NaHSO₄ labeled vials for soils)
 Preservation checked by: LRM (Initials)
14. Were air bubbles (>1/4 inch) absent in VOC/BTEX samples? YES N/A NO
 If NO, list ID # on back and label vials with NO Air Bubbles in Sample Management
15. If there are samples for dissolved metals, were they field filtered? YES N/A NO
 If NO, list date and time samples were filtered and preserved in lab: _____
16. Were Encore samplers included? YES NO
 If YES, date and time preserved with NaHSO₄: 11/20/04 12:15 By whom: LRM
17. Does this submittal contain soil NaHSO₄ vials for BTEX/GRO/VOC'S? YES NO
 If YES, vials weighed by and entered into vial database by: LRM
18. Initials of laboratory personnel responsible for labeling laboratory I.D. numbers on containers: LRM

Keep samples and chain out. Before moving samples to their appropriate location, another person must review the entire project ensuring that information on the AAL ID Barcode label matches the container label, and that all information is consistent with the chain.
 Final check and samples logged to locations by: _____ (Initials)

19. Was it necessary to call the assigned project manager in order to proceed with login? YES NO
 20. Who was called? _____ By whom? _____ Date/Time: _____
- Project Mgr. Review: LRM (Initials) 11/21/04 (Date)

ACCURA ANALYTICAL LABORATORY, INC.
SAMPLE RECEIPT VARIANCE FORM

Item # Discrepancies Noted:

8-1 2U4-IDW-50-5 for TCH came broken

Item # Actions Taken:

8-1 AMZ to use remaining containers

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: SOIL

Sample ID: OU4-IDW-SO-1

7239 -001

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW	SW1311
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitabilitsw	Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cy:SW9095/	Ch7.3.3/ASTM-D2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

783 536

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

7239 -002

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: SOIL

Sample ID: OU4-IDW-SO-2

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW1311	
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitabilitsw	Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cy	SW9095/Ch7.3.3/ASTM-D2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

7239-003

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-1-SO-12

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: FID = 25.8

Prepared By: *Paul W...*

Checked By: _____

783 538

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

7239 - 004

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3-CS-5

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: FID = 603.6

Prepared By: TED WITTEMAN

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

7239-004

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3-CS-5 MS/

MSD

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: FID = 603.6

Prepared By: TED WITTEMAN

Checked By: _____

783 540

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

7239 -005

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3-CS-9

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: FID = 161.1

Prepared By: TED WITTEMAN

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form 7239 -006

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-3-CS- DUP1

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

783 542

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form 7239 -007

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: TB-11-19-04

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
-----------	----	--------------	-----------	--------	------

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

7239 -008

Matrix: SOIL

Sample ID: OU4-IDW-SO-3

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW1311	
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitability	sw Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cy	SW9095/Ch7.3.3/ASTM-D2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

783 544

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

7239 -009

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: SOIL

Sample ID: OU4-IDW-SO-4

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW1311	
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitabilitsw	Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cyz	SW9095/Ch7.3.3/ASTM-D2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

7239 - 010

Matrix: SOIL

Sample ID: OU4-IDW-SO-5

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW1311	
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitability	Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cy	SW9095/Ch7.3.3/ASTM-D2216	

Comments: _____

Prepared By: TED A WITTEWANN

Checked By: _____

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MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form 7239-011

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: TB- 11-19-04 (2)

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	

Comments: _____

Prepared By: TED WITEMANN

Checked By: _____



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-1	Matrix: SOIL	% Moisture: 13
Lab Sample Id: 7239-001	Date Collected: Nov-19-04 14:00	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: Total Organic Halogens by SW9023		Prep Method:	
Date Analyzed: Nov-26-04 17:13	Analyst: TA	Date Prep:	Tech: TA
Seq Number: 24589			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halogens	TOX	BRL	57.5	13.8	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-1		Matrix: SOIL		% Moisture: 13			
Lab Sample Id: 7239-001		Date Collected: Nov-19-04 14:00		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: PCBs by 8082			Prep Method: SW3545				
Date Analyzed: Nov-23-04 17:06		Analyst: MJL01	Date Prep: Nov-22-04 10:15		Tech: ENP01		
Seq Number: 24559							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	38	4.7	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	38	9.9	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	38	6.6	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	38	18	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	38	14	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	38	5.2	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	38	8.6	ug/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:				
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Sulfide		46	110	2.3	mg/kg	J	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method: SW7.3				
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01		
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.023	mg/kg	U	1
Analytical Method: TPH DRO by SW8015M			Prep Method: SW3545				
Date Analyzed: Nov-23-04 11:19		Analyst: PB01	Date Prep: Nov-22-04 09:30		Tech: ENP01		
Seq Number: 24553							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		44	110	17	mg/kg	J	10
Analytical Method: TPH GRO by SW8015M			Prep Method: SW5030B				
Date Analyzed: Nov-23-04 10:58		Analyst: AME01	Date Prep: Nov-23-04 08:42		Tech: AME01		
Seq Number: 24564							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		3.4	4.1	0.61	mg/kg	JB	50



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-1		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7239-001		Date Collected: Nov-19-04 14:00		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01		Date Prep:			
		Seq Number: 24575		Tech: CKM01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01		Date Prep:			
		Seq Number: 24568		Tech: LJB01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-23-04 23:56		Analyst: NK01		Date Prep: Nov-23-04 12:00			
		Seq Number: 24555		Tech: NK01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	0.0211	0.0200	0.000860	mg/L		1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-23-04 16:28		Analyst: MCJ01		Date Prep: Nov-23-04 12:00			
		Seq Number: 24560		Tech: MCJ01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.19	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	0.0022	1.0	0.0016	mg/L	J	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.027	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.065	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-1	Matrix: SOIL	% Moisture:
Lab Sample Id: 7239-001	Date Collected: Nov-19-04 14:00	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C	Prep Method: SW3520C
Date Analyzed: Nov-23-04 21:42	Analyst: CTP01
Seq Number: 24566	Date Prep: Nov-23-04 13:30
	Tech: VHB01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	BRL	0.10	0.0081	mg/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Analytical Method: TCLP VOCs by SW1311/8260B	Prep Method: SW5030B
Date Analyzed: Nov-24-04 12:37	Analyst: TAG01
Seq Number: 24597	Date Prep: Nov-24-04 08:31
	Tech: TAG01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	BRL	0.050	0.012	mg/L	U	10
Trichloroethene	79-01-6	0.056	0.050	0.011	mg/L		10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Analytical Method: pH by SW9045C	Prep Method:
Date Analyzed: Nov-23-04 16:00	Analyst: JAT01
Seq Number: 24592	Date Prep:
	Tech: JAT01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		4.39	N/A	0	pH		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-2		Matrix: SOIL		% Moisture: 11			
Lab Sample Id: 7239-002		Date Collected: Nov-19-04 14:20		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: PCBs by 8082			Prep Method: SW3545				
Date Analyzed: Nov-23-04 18:32		Analyst: MJL01	Date Prep: Nov-22-04 10:15		Tech: ENP01		
Seq Number: 24559							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	37	4.6	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	37	9.7	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	37	6.5	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	37	17	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	37	14	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	37	5.1	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	37	8.4	ug/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:				
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Sulfide		110	110	2.2	mg/kg	J	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method: SW7.3				
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01		
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.022	mg/kg	U	1
Analytical Method: TPH DRO by SW8015M			Prep Method: SW3545				
Date Analyzed: Nov-23-04 15:31		Analyst: PB01	Date Prep: Nov-22-04 09:30		Tech: ENP01		
Seq Number: 24553							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		29	11	1.7	mg/kg		1
Analytical Method: TPH GRO by SW8015M			Prep Method: SW5030B				
Date Analyzed: Nov-23-04 11:27		Analyst: AME01	Date Prep: Nov-23-04 08:42		Tech: AME01		
Seq Number: 24564							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		1.1	4.4	0.66	mg/kg	JB	50



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-2	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7239-002	Date Collected: Nov-19-04 14:20	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: Total Organic Halogens by SW9023		Prep Method:	
Date Analyzed: Nov-26-04 17:13	Analyst: TA	Date Prep:	Tech: TA
Seq Number: 24589			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halogens	TOX	BRL	56.2	13.5	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-2		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7239-002		Date Collected: Nov-19-04 14:20		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01		Date Prep:			
		Seq Number: 24575		Tech: CKM01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01		Date Prep:			
		Seq Number: 24568		Tech: LJB01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-24-04 00:00		Analyst: NK01		Date Prep: Nov-23-04 12:00			
		Seq Number: 24555		Tech: NK01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-23-04 17:09		Analyst: MCJ01		Date Prep: Nov-23-04 12:00			
		Seq Number: 24560		Tech: MCJ01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.19	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	0.0024	1.0	0.0016	mg/L	J	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	0.069	1.0	0.031	mg/L	J	1
Nickel	7440-02-0	0.015	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.048	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-2		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7239-002		Date Collected: Nov-19-04 14:20		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: TCLP SVOCs by SW1311/8270C				Prep Method: SW3520C			
Date Analyzed: Nov-23-04 22:14		Analyst: CTP01	Date Prep: Nov-23-04 13:30		Tech: VHB01		
Seq Number: 24566							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	BRL	0.10	0.0081	mg/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1
Analytical Method: TCLP VOCs by SW1311/8260B				Prep Method: SW5030B			
Date Analyzed: Nov-24-04 15:23		Analyst: TAG01	Date Prep: Nov-24-04 08:31		Tech: TAG01		
Seq Number: 24597							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	BRL	0.050	0.012	mg/L	U	10
Trichloroethene	79-01-6	BRL	0.050	0.011	mg/L	U	10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10
Analytical Method: pH by SW9045C				Prep Method:			
Date Analyzed: Nov-23-04 16:00		Analyst: JAT01	Date Prep:		Tech: JAT01		
Seq Number: 24592							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		4.32	N/A	0	pH		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4PIT-ISO-12	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7239-003	Date Collected: Nov-19-04 14:00	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035
Date Analyzed: Nov-21-04 16:48	Analyst: TAG01
	Date Prep: Nov-21-04 13:32
	Tech: TAG01
	Seq Number: 24516

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0048	0.00071	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	0.0026	0.0048	0.00058	mg/kg	J	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0048	0.00081	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0048	0.00070	mg/kg	U	1
1,1-Dichloroethane	75-34-3	0.0018	0.0048	0.00051	mg/kg	J	1
1,1-Dichloroethene	75-35-4	BRL	0.0048	0.00065	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0048	0.00053	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0048	0.00098	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0048	0.00088	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0048	0.00093	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0048	0.00099	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0048	0.00050	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0048	0.00050	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	0.0022	0.0048	0.00064	mg/kg	J	1
1,2-Dichloroethane	107-06-2	BRL	0.0048	0.00062	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0048	0.00053	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0048	0.00093	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0048	0.00048	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0048	0.00062	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0048	0.00097	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0048	0.00084	mg/kg	U	1
2-Butanone	78-93-3	0.0019	0.0095	0.00050	mg/kg	J	1
2-Chlorotoluene	95-49-8	BRL	0.0048	0.00096	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0095	0.00065	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0048	0.00084	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0095	0.00061	mg/kg	U	1
Acetone	67-64-1	0.052	0.0095	0.0012	mg/kg		1
Benzene	71-43-2	BRL	0.0048	0.00060	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0048	0.00091	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0048	0.00091	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0048	0.00064	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0048	0.00057	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0048	0.00048	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0048	0.0013	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0048	0.00077	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0048	0.00071	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0048	0.0015	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0048	0.00075	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0048	0.00057	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.031	0.0048	0.00076	mg/kg		1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0048	0.00065	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0048	0.00067	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0048	0.00059	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	0.00065	0.0048	0.00060	mg/kg	J	1
Ethylbenzene	100-41-4	BRL	0.0048	0.00066	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-ISO-12	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7239-003	Date Collected: Nov-19-04 14:00	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5035
Date Analyzed: Nov-21-04 16:48	Analyst: TAG01	Date Prep: Nov-21-04 13:32
	Seq Number: 24516	Tech: TAG01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0048	0.00062	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0048	0.00079	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.0095	0.0018	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0048	0.0012	mg/kg	U	1
Naphthalene	91-20-3	0.0018	0.0048	0.00091	mg/kg	JB	1
n-Butylbenzene	104-51-8	BRL	0.0048	0.00049	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0048	0.00097	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0048	0.00060	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0048	0.00095	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0048	0.00091	mg/kg	U	1
Styrene	100-42-5	BRL	0.0048	0.00098	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0048	0.00063	mg/kg	U	1
Tetrachloroethylene	127-18-4	0.0084	0.0048	0.00073	mg/kg		1
Toluene	108-88-3	BRL	0.0048	0.00070	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0048	0.00064	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0048	0.00083	mg/kg	U	1
Trichloroethene	79-01-6	0.0058	0.0048	0.00078	mg/kg		1
Trichlorofluoromethane	75-69-4	BRL	0.0048	0.00049	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0048	0.00051	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4PIT-3 CS-5	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7239-004	Date Collected: Nov-19-04 09:20	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035
Date Analyzed: Nov-21-04 18:06	Analyst: TAG01
Seq Number: 24516	Date Prep: Nov-21-04 13:32
	Tech: TAG01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0047	0.00071	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	0.0022	0.0047	0.00057	mg/kg	J	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0047	0.00080	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0047	0.00069	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0047	0.00050	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0047	0.00064	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0047	0.00053	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0047	0.00097	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0047	0.00087	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0047	0.00092	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0047	0.00098	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0047	0.00049	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0047	0.00049	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0047	0.00063	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0047	0.00061	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0047	0.00053	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0047	0.00092	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0047	0.00047	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0047	0.00061	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0047	0.00096	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0047	0.00083	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.0094	0.00049	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0047	0.00095	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0094	0.00064	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0047	0.00083	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0094	0.00060	mg/kg	U	1
Acetone	67-64-1	0.018	0.0094	0.0012	mg/kg		1
Benzene	71-43-2	BRL	0.0047	0.00059	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0047	0.00089	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0047	0.00089	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0047	0.00063	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0047	0.00056	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0047	0.00047	mg/kg	U	1
Carbon Disulfide	75-15-0	0.0044	0.0047	0.0013	mg/kg	J	1
Carbon Tetrachloride	56-23-5	BRL	0.0047	0.00076	mg/kg	U	1
Chlorobenzene	108-90-7	0.0015	0.0047	0.00070	mg/kg	J	1
Chloroethane	75-00-3	BRL	0.0047	0.0015	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0047	0.00074	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0047	0.00056	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	1.7	0.0047	0.00075	mg/kg	E	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0047	0.00064	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0047	0.00066	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0047	0.00058	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	0.00067	0.0047	0.00059	mg/kg	J	1
Ethylbenzene	100-41-4	BRL	0.0047	0.00065	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4PIT-3 CS-5	Matrix: SOIL	% Moisture: 12
Lab Sample Id: 7239-004	Date Collected: Nov-19-04 09:20	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035

Date Analyzed: **Nov-21-04 18:06**

Analyst: **TAG01**

Date Prep: **Nov-21-04 13:32**

Tech: **TAG01**

Seq Number: **24516**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0047	0.00061	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0047	0.00078	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.0094	0.0017	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0047	0.0012	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.0047	0.00089	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0047	0.00048	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0047	0.00096	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0047	0.00059	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0047	0.00094	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0047	0.00089	mg/kg	U	1
Styrene	100-42-5	BRL	0.0047	0.00097	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0047	0.00062	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0047	0.00072	mg/kg	U	1
Toluene	108-88-3	0.0012	0.0047	0.00069	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	0.015	0.0047	0.00063	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0047	0.00082	mg/kg	U	1
Trichloroethene	79-01-6	0.027	0.0047	0.00077	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0047	0.00048	mg/kg	U	1
Vinyl Chloride	75-01-4	0.13	0.0047	0.00050	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4PIT-3 CS-9	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7239-005	Date Collected: Nov-19-04 10:20	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5035	
Date Analyzed: Nov-21-04 17:14	Analyst: TAG01	Date Prep: Nov-21-04 13:32	Tech: TAG01
Seq Number: 24516			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0045	0.00068	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	0.0025	0.0045	0.00055	mg/kg	J	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0045	0.00077	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0045	0.00066	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0045	0.00048	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0045	0.00061	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0045	0.00051	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0045	0.00093	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0045	0.00083	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0045	0.00089	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0045	0.00094	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0045	0.00047	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0045	0.00047	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0045	0.00061	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0045	0.00059	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0045	0.00051	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0045	0.00089	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	0.0018	0.0045	0.00045	mg/kg	J	1
1,3-Dichloropropane	142-28-9	BRL	0.0045	0.00059	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	0.024	0.0045	0.00092	mg/kg		1
2,2-Dichloropropane	594-20-7	BRL	0.0045	0.00079	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.0090	0.00047	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0045	0.00091	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0090	0.00061	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0045	0.00079	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0090	0.00058	mg/kg	U	1
Acetone	67-64-1	0.041	0.0090	0.0012	mg/kg		1
Benzene	71-43-2	BRL	0.0045	0.00057	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0045	0.00086	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0045	0.00086	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0045	0.00061	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0045	0.00054	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0045	0.00045	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0045	0.0013	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0045	0.00073	mg/kg	U	1
Chlorobenzene	108-90-7	0.036	0.0045	0.00067	mg/kg		1
Chloroethane	75-00-3	BRL	0.0045	0.0014	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0045	0.00071	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0045	0.00054	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.011	0.0045	0.00072	mg/kg		1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0045	0.00061	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0045	0.00063	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0045	0.00056	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0045	0.00057	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0045	0.00062	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4PIT-3 CS-9	Matrix: SOIL	% Moisture: 11					
Lab Sample Id: 7239-005	Date Collected: Nov-19-04 10:20	Date Received: Nov-20-04 11:45					
Sample Depth:							
Analytical Method: VOCs by SW8260B		Prep Method: SW5035					
Date Analyzed: Nov-21-04 17:14	Analyst: TAG01	Date Prep: Nov-21-04 13:32					
	Seq Number: 24516	Tech: TAG01					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0045	0.00059	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0045	0.00075	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.0090	0.0017	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0045	0.0012	mg/kg	U	1
Naphthalene	91-20-3	BRL	0.0045	0.00086	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0045	0.00046	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0045	0.00092	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0045	0.00057	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0045	0.00090	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0045	0.00086	mg/kg	U	1
Styrene	100-42-5	BRL	0.0045	0.00093	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0045	0.00060	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0045	0.00070	mg/kg	U	1
Toluene	108-88-3	0.00074	0.0045	0.00066	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0045	0.00061	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0045	0.00079	mg/kg	U	1
Trichloroethene	79-01-6	0.0040	0.0045	0.00074	mg/kg	J	1
Trichlorofluoromethane	75-69-4	BRL	0.0045	0.00046	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0045	0.00048	mg/kg	U	1

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Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4PIT-3-CS-DUPI	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7239-006	Date Collected: Nov-19-04 08:00	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035
Date Analyzed: Nov-21-04 17:40	Analyst: TAG01
Seq Number: 24516	Date Prep: Nov-21-04 13:32
	Tech: TAG01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0047	0.00070	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	0.0025	0.0047	0.00057	mg/kg	J	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0047	0.00079	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0047	0.00068	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0047	0.00050	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0047	0.00064	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0047	0.00052	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0047	0.00096	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0047	0.00086	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0047	0.00092	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0047	0.00097	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0047	0.00049	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0047	0.00049	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0047	0.00063	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0047	0.00061	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0047	0.00052	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0047	0.00092	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	0.0013	0.0047	0.00047	mg/kg	J	1
1,3-Dichloropropane	142-28-9	BRL	0.0047	0.00061	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	0.017	0.0047	0.00095	mg/kg		1
2,2-Dichloropropane	594-20-7	BRL	0.0047	0.00082	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.0093	0.00049	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0047	0.00094	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0093	0.00064	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0047	0.00082	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0093	0.00060	mg/kg	U	1
Acetone	67-64-1	0.052	0.0093	0.0012	mg/kg		1
Benzene	71-43-2	BRL	0.0047	0.00059	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0047	0.00089	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0047	0.00089	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0047	0.00063	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0047	0.00056	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0047	0.00047	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0047	0.0013	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0047	0.00076	mg/kg	U	1
Chlorobenzene	108-90-7	0.044	0.0047	0.00069	mg/kg		1
Chloroethane	75-00-3	BRL	0.0047	0.0015	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0047	0.00074	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0047	0.00056	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.017	0.0047	0.00075	mg/kg		1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0047	0.00064	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0047	0.00065	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0047	0.00058	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	0.00074	0.0047	0.00059	mg/kg	J	1
Ethylbenzene	100-41-4	BRL	0.0047	0.00064	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4PIT-3-CS-DUP1	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7239-006	Date Collected: Nov-19-04 08:00	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B		Prep Method: SW5035	
Date Analyzed: Nov-21-04 17:40	Analyst: TAG01	Date Prep: Nov-21-04 13:32	Tech: TAG01
Seq Number: 24516			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0047	0.00061	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0047	0.00078	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.0093	0.0017	mg/kg	U	1
Methylene Chloride	75-09-2	0.016	0.0047	0.0012	mg/kg		1
Naphthalene	91-20-3	BRL	0.0047	0.00089	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0047	0.00048	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0047	0.00095	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0047	0.00059	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0047	0.00093	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0047	0.00089	mg/kg	U	1
Styrene	100-42-5	BRL	0.0047	0.00096	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0047	0.00062	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0047	0.00072	mg/kg	U	1
Toluene	108-88-3	0.0010	0.0047	0.00068	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0047	0.00063	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0047	0.00081	mg/kg	U	1
Trichloroethene	79-01-6	0.0068	0.0047	0.00077	mg/kg		1
Trichlorofluoromethane	75-69-4	BRL	0.0047	0.00048	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0047	0.00050	mg/kg	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: TB 11-19-04	Matrix: SOIL	% Moisture:
Lab Sample Id: 7239-007	Date Collected: Nov-19-04 17:30	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-20-04 19:11	Analyst: MVRR01
Seq Number: 24532	Date Prep: Nov-20-04 08:41
	Tech: MVRR01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: TB 11-19-04	Matrix: SOIL	% Moisture:
Lab Sample Id: 7239-007	Date Collected: Nov-19-04 17:30	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-20-04 19:11	Analyst: MVRR01	Date Prep: Nov-20-04 08:41	Tech: MVRR01
Seq Number: 24532			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	1.1	1.0	0.16	ug/L		1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1

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Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-3		Matrix: SOIL		% Moisture: 13	
Lab Sample Id: 7239-008		Date Collected: Nov-19-04 15:20		Date Received: Nov-20-04 11:45	
Sample Depth:					
Analytical Method: PCBs by 8082			Prep Method: SW3545		
Date Analyzed: Nov-23-04 19:00		Analyst: MJL01	Date Prep: Nov-22-04 10:15		Tech: ENP01
Seq Number: 24559					
Parameter	Cas Number	Result	Rep Limit	MDL	Units Flag Dil
Aroclor-1016	12674-11-2	BRL	38	4.7	ug/kg U 1
Aroclor-1221	11104-28-2	BRL	38	9.9	ug/kg U 1
Aroclor-1232	11141-16-5	BRL	38	6.6	ug/kg U 1
Aroclor-1242	53469-21-9	BRL	38	18	ug/kg U 1
Aroclor-1248	12672-29-6	BRL	38	14	ug/kg U 1
Aroclor-1254	11097-69-1	BRL	38	5.2	ug/kg U 1
Aroclor-1260	11096-82-5	BRL	38	8.6	ug/kg U 1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:		
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01
Seq Number: 24569					
Parameter	Cas Number	Result	Rep Limit	MDL	Units Flag Dil
Reactive Sulfide		BRL	110	2.3	mg/kg U 1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method: SW7.3		
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01
Seq Number: 24571					
Parameter	Cas Number	Result	Rep Limit	MDL	Units Flag Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.023	mg/kg U 1
Analytical Method: TPH DRO by SW8015M			Prep Method: SW3545		
Date Analyzed: Nov-23-04 14:11		Analyst: PB01	Date Prep: Nov-22-04 09:30		Tech: ENP01
Seq Number: 24553					
Parameter	Cas Number	Result	Rep Limit	MDL	Units Flag Dil
TPH-DRO (C10-C28)		230	110	17	mg/kg 10
Analytical Method: TPH GRO by SW8015M			Prep Method: SW5030B		
Date Analyzed: Nov-23-04 18:49		Analyst: AME01	Date Prep: Nov-23-04 08:42		Tech: AME01
Seq Number: 24564					
Parameter	Cas Number	Result	Rep Limit	MDL	Units Flag Dil
TPH-GRO (C6-C10)		16	4.6	0.68	mg/kg 50


Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-3	Matrix: SOIL	% Moisture: 13					
Lab Sample Id: 7239-008	Date Collected: Nov-19-04 15:20	Date Received: Nov-20-04 11:45					
Sample Depth:							
Analytical Method: Total Organic Halogens by SW9023		Prep Method:					
Date Analyzed: Nov-26-04 17:13	Analyst: TA	Date Prep:					
	Seq Number: 24589	Tech: TA					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halogens	TOX	70.3	57.5	13.8	mg/kg		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-3		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7239-008		Date Collected: Nov-19-04 15:20		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01		Date Prep:			
		Seq Number: 24575		Tech: CKM01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01		Date Prep:			
		Seq Number: 24568		Tech: LJB01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-24-04 00:04		Analyst: NK01		Date Prep: Nov-23-04 12:00			
		Seq Number: 24555		Tech: NK01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-23-04 17:13		Analyst: MCJ01		Date Prep: Nov-23-04 12:00			
		Seq Number: 24560		Tech: MCJ01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.12	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	BRL	1.0	0.0016	mg/L	U	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.019	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.046	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-3	Matrix: SOIL	% Moisture:
Lab Sample Id: 7239-008	Date Collected: Nov-19-04 15:20	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C				Prep Method: SW3520C			
Date Analyzed: Nov-23-04 22:45		Analyst: CTP01		Date Prep: Nov-23-04 13:30		Tech: VHB01	
Seq Number: 24566							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	0.013	0.10	0.0081	mg/L	J	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Analytical Method: TCLP VOCs by SW1311/8260B				Prep Method: SW5030B			
Date Analyzed: Nov-24-04 15:49		Analyst: TAG01		Date Prep: Nov-24-04 08:31		Tech: TAG01	
Seq Number: 24597							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	0.20	0.050	0.012	mg/L		10
Trichloroethene	79-01-6	0.11	0.050	0.011	mg/L		10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Analytical Method: pH by SW9045C				Prep Method:			
Date Analyzed: Nov-23-04 16:00		Analyst: JAT01		Date Prep:		Tech: JAT01	
Seq Number: 24592							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		4.09	N/A	0	pH		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-4		Matrix: SOIL		% Moisture: 13			
Lab Sample Id: 7239-009		Date Collected: Nov-19-04 15:40		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: PCBs by 8082			Prep Method: SW3545				
Date Analyzed: Nov-23-04 19:29		Analyst: MJL01	Date Prep: Nov-22-04 10:15		Tech: ENP01		
Seq Number: 24559							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	38	4.7	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	38	9.9	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	38	6.6	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	38	18	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	38	14	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	38	5.2	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	38	8.6	ug/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:				
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Sulfide		BRL	110	2.3	mg/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method: SW7.3				
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01		
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.023	mg/kg	U	1
Analytical Method: TPH DRO by SW8015M			Prep Method: SW3545				
Date Analyzed: Nov-23-04 14:31		Analyst: PB01	Date Prep: Nov-22-04 09:30		Tech: ENP01		
Seq Number: 24553							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		890	110	17	mg/kg		10
Analytical Method: TPH GRO by SW8015M			Prep Method: SW5030B				
Date Analyzed: Nov-23-04 12:26		Analyst: AME01	Date Prep: Nov-23-04 08:42		Tech: AME01		
Seq Number: 24564							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		16	4.3	0.65	mg/kg		50

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Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-4	Matrix: SOIL	% Moisture: 13
Lab Sample Id: 7239-009	Date Collected: Nov-19-04 15:40	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: Total Organic Halogens by SW9023	Prep Method:
Date Analyzed: Nov-26-04 17:13	Analyst: TA
	Date Prep:
	Tech: TA
	Seq Number: 24589

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halogens	TOX	111	57.5	13.8	mg/kg		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-4		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7239-009		Date Collected: Nov-19-04 15:40		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01	Date Prep:		Tech: CKM01		
Seq Number: 24575							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24568							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-24-04 00:07		Analyst: NK01	Date Prep: Nov-23-04 12:00		Tech: NK01		
Seq Number: 24555							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-23-04 17:35		Analyst: MCJ01	Date Prep: Nov-23-04 12:00		Tech: MCJ01		
Seq Number: 24560							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.13	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	BRL	1.0	0.0016	mg/L	U	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.032	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.075	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-4	Matrix: SOIL	% Moisture:
Lab Sample Id: 7239-009	Date Collected: Nov-19-04 15:40	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C		Prep Method: SW3520C	
Date Analyzed: Nov-23-04 23:17	Analyst: CTP01	Date Prep: Nov-23-04 13:30	Tech: VHB01
Seq Number: 24566			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	0.087	0.10	0.0081	mg/L	J	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 16:15	Analyst: TAG01	Date Prep: Nov-24-04 08:31	Tech: TAG01
Seq Number: 24597			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	0.14	0.050	0.012	mg/L		10
Trichloroethene	79-01-6	1.5	0.050	0.011	mg/L		10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Analytical Method: pH by SW9045C		Prep Method:	
Date Analyzed: Nov-23-04 16:00	Analyst: JAT01	Date Prep:	Tech: JAT01
Seq Number: 24592			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		4.27	N/A	0	pH		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-5		Matrix: SOIL		% Moisture: 16			
Lab Sample Id: 7239-010		Date Collected: Nov-19-04 15:50		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: PCBs by 8082			Prep Method: SW3545				
Date Analyzed: Nov-23-04 19:57		Analyst: MJL01	Date Prep: Nov-22-04 10:15		Tech: ENP01		
Seq Number: 24559							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	40	4.9	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	40	10	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	40	6.9	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	40	18	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	40	15	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	40	5.4	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	40	8.9	ug/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:				
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Sulfide		48	120	2.4	mg/kg	J	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method: SW7.3				
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01		
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.2	0.024	mg/kg	U	1
Analytical Method: TPH DRO by SW8015M			Prep Method: SW3545				
Date Analyzed: Nov-23-04 14:51		Analyst: PB01	Date Prep: Nov-22-04 09:30		Tech: ENP01		
Seq Number: 24553							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		430	120	17	mg/kg		10
Analytical Method: TPH GRO by SW8015M			Prep Method: SW5030B				
Date Analyzed: Nov-23-04 12:55		Analyst: AME01	Date Prep: Nov-23-04 08:42		Tech: AME01		
Seq Number: 24564							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		71	4.9	0.74	mg/kg		50



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-5	Matrix: SOIL	% Moisture: 16					
Lab Sample Id: 7239-010	Date Collected: Nov-19-04 15:50	Date Received: Nov-20-04 11:45					
Sample Depth:							
Analytical Method: Total Organic Halogens by SW9023		Prep Method:					
Date Analyzed: Nov-26-04 17:13	Analyst: TA	Date Prep:					
	Seq Number: 24589	Tech: TA					
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halogens	TOX	88.2	59.5	14.3	mg/kg		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-5		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7239-010		Date Collected: Nov-19-04 15:50		Date Received: Nov-20-04 11:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01	Date Prep:	Tech: CKM01			
Seq Number: 24575							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01	Date Prep:	Tech: LJB01			
Seq Number: 24568							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-24-04 00:19		Analyst: NK01	Date Prep: Nov-23-04 12:00	Tech: NK01			
Seq Number: 24555							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-23-04 17:40		Analyst: MCJ01	Date Prep: Nov-23-04 12:00	Tech: MCJ01			
Seq Number: 24560							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.17	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	BRL	1.0	0.0016	mg/L	U	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.021	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.13	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: OU4-IDW-SO-5	Matrix: SOIL	% Moisture:
Lab Sample Id: 7239-010	Date Collected: Nov-19-04 15:50	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C		Prep Method: SW3520C	
Date Analyzed: Nov-23-04 20:08	Analyst: CTP01	Date Prep: Nov-23-04 13:30	Tech: VHB01
Seq Number: 24566			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	0.098	0.10	0.0081	mg/L	J	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 16:41	Analyst: TAG01	Date Prep: Nov-24-04 08:31	Tech: TAG01
Seq Number: 24597			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	0.033	0.050	0.017	mg/L	J	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	0.12	0.050	0.012	mg/L		10
Trichloroethene	79-01-6	3.1	0.50	0.11	mg/L	D	100
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Analytical Method: pH by SW9045C		Prep Method:	
Date Analyzed: Nov-23-04 16:00	Analyst: JAT01	Date Prep:	Tech: JAT01
Seq Number: 24592			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		4.22	N/A	0	pH		1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR 0U4 Source Removal

Sample Id: TB-11-19-04 (2)	Matrix: WATER	% Moisture:
Lab Sample Id: 7239-011	Date Collected: Nov-19-04 17:30	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-20-04 19:36	Analyst: MVRR01
Seq Number: 24532	Date Prep: Nov-20-04 08:41
	Tech: MVRR01

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id: TB-11-19-04 (2)	Matrix: WATER	% Moisture:
Lab Sample Id: 7239-011	Date Collected: Nov-19-04 17:30	Date Received: Nov-20-04 11:45
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)	Prep Method: SW5030B
Date Analyzed: Nov-20-04 19:36	Analyst: MVRR01
	Date Prep: Nov-20-04 08:41
	Tech: MVRR01
	Seq Number: 24532

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	0.40	1.0	0.16	ug/L	J	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7239

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR 0U4 Source Removal

Sample Id: 24421 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24421 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035

Date Analyzed: Nov-21-04 14:29

Analyst: TAG01

Date Prep: Nov-21-04 13:32

Tech: TAG01

Seq Number: 24516

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0050	0.00075	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0050	0.00061	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0050	0.00085	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0050	0.00073	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0050	0.00053	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0050	0.00068	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0050	0.00056	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0050	0.00092	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0050	0.00098	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0050	0.00067	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0050	0.00065	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0050	0.00056	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0050	0.00098	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0050	0.00050	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0050	0.00065	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0050	0.0010	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0050	0.00088	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.010	0.00052	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0050	0.0010	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.010	0.00068	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0050	0.00088	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.010	0.00064	mg/kg	U	1
Acetone	67-64-1	BRL	0.010	0.0013	mg/kg	U	1
Benzene	71-43-2	BRL	0.0050	0.00063	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0050	0.00095	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0050	0.00095	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0050	0.00067	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0050	0.00060	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0050	0.00050	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0050	0.0014	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0050	0.00081	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0050	0.00074	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0050	0.0016	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0050	0.00079	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0050	0.00060	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	0.0050	0.00080	mg/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0050	0.00068	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0050	0.00070	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0050	0.00062	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0050	0.00063	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0050	0.00069	mg/kg	U	1



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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
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Sample Id: 24421 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24421 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B				Prep Method: SW5035			
Date Analyzed: Nov-21-04 14:29		Analyst: TAG01		Date Prep: Nov-21-04 13:32		Tech: TAG01	
Seq Number: 24516							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0050	0.00065	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0050	0.00083	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.010	0.0018	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0050	0.0013	mg/kg	U	1
Naphthalene	91-20-3	0.0019	0.0050	0.00095	mg/kg	J	1
n-Butylbenzene	104-51-8	BRL	0.0050	0.00051	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0050	0.0010	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0050	0.00063	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0050	0.0010	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0050	0.00095	mg/kg	U	1
Styrene	100-42-5	BRL	0.0050	0.0010	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0050	0.00066	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0050	0.00077	mg/kg	U	1
Toluene	108-88-3	BRL	0.0050	0.00073	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0050	0.00067	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0050	0.00087	mg/kg	U	1
Trichloroethene	79-01-6	BRL	0.0050	0.00082	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0050	0.00051	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0050	0.00053	mg/kg	U	1

Sample Id: 24427 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24427 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TPH DRO by SW8015M				Prep Method: SW3545			
Date Analyzed: Nov-23-04 07:58		Analyst: PB01		Date Prep: Nov-22-04 09:30		Tech: ENP01	
Seq Number: 24553							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		BRL	10	1.5	mg/kg	U	1



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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
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Sample Id: 24432 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24432 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-20-04 10:15	Analyst: MVRRO1	Date Prep: Nov-20-04 08:41	Tech: MVRRO1
Seq Number: 24532			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
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Sample Id: 24432 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24432 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)				Prep Method: SW5030B			
Date Analyzed: Nov-20-04 10:15		Analyst: MVRRO1		Date Prep: Nov-20-04 08:41		Tech: MVRRO1	
Seq Number: 24532							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1

Sample Id: 24440 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24440 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-23-04 23:14		Analyst: NK01		Date Prep: Nov-23-04 12:00		Tech: NK01	
Seq Number: 24555							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1



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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
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Sample Id: 24441 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24441 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP Metals by SW1311/6010B		Prep Method: SW3010A	
Date Analyzed: Nov-23-04 15:25	Analyst: MCJ01	Date Prep: Nov-23-04 12:00	Tech: MCJ01
Seq Number: 24560			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	BRL	1.0	0.034	mg/L	U	1
Cadmium	7440-43-9	BRL	1.0	0.0016	mg/L	U	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.013	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.028	1.0	0.012	mg/L	J	1

Sample Id: 24446 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24446 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: PCBs by 8082		Prep Method: SW3545	
Date Analyzed: Nov-23-04 16:09	Analyst: MJL01	Date Prep: Nov-22-04 10:15	Tech: ENP01
Seq Number: 24559			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	33	4.1	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	33	8.7	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	33	5.8	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	33	15	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	33	12	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	33	4.5	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	33	7.5	ug/kg	U	1



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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
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Sample Id: 24451 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24451 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C				Prep Method: SW3520C			
Date Analyzed: Nov-23-04 19:06		Analyst: CTP01		Date Prep: Nov-23-04 13:30		Tech: VHB01	
Seq Number: 24566							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	BRL	0.10	0.0081	mg/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Sample Id: 24457 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24457 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TPH GRO by SW8015M				Prep Method: SW5030B			
Date Analyzed: Nov-23-04 09:26		Analyst: AME01		Date Prep: Nov-23-04 08:42		Tech: AME01	
Seq Number: 24564							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		2.0	10	1.5	mg/kg	J	50

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 24468 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3				Prep Method: SW7.3			
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01		Date Prep: Nov-27-04 15:00		Tech: LJB01	
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.0	0.020	mg/kg	U	1



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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
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Sample Id: 24486 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24486 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 09:56	Analyst: 9999	Date Prep: Nov-24-04 08:31	Tech: TAG01
Seq Number: 24597			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethene	127-18-4	BRL	0.050	0.012	mg/L	U	10
Trichloroethene	79-01-6	BRL	0.050	0.011	mg/L	U	10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Sample Id: 24489 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24489 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-29-04 12:38	Analyst: TAG01	Date Prep: Nov-29-04 11:18	Tech: TAG01
Seq Number: 24604			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	BRL	0.050	0.012	mg/L	U	10
Trichloroethene	79-01-6	BRL	0.050	0.011	mg/L	U	10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

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MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR 0U4 Source Removal

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 24569 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:				
Date Analyzed: Nov-24-04 10:00	Analyst: LJB01	Date Prep:	Tech: LJB01				
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.023	mg/kg	U	1
Reactive Sulfide		BRL	110	2.3	mg/kg	U	1

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 24575 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Flash Point (Closed Cup) by SW1010			Prep Method:				
Date Analyzed: Nov-24-04 12:00	Analyst: CKM01	Date Prep:	Tech: CKM01				
Seq Number: 24575							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 8614 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Total Organic Halogens by SW9023			Prep Method:				
Date Analyzed: Nov-26-04 17:13	Analyst: TA	Date Prep:	Tech: TA				
Seq Number: 24589							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halogens	TOX	BRL	50.0	12.0	mg/kg	U	1



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Work Order #: 7239

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24559

Sample: 24446 BLK / BLK

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	16.5	16.7	99	50-130	
Tetrachloro-m-xylene	12.1	16.7	72	50-130	

Lab Batch #: 24559

Sample: 24446 BLK / BLK

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	16.0	16.7	96	50-130	
Tetrachloro-m-xylene	12.0	16.7	72	50-130	

Lab Batch #: 24559

Sample: 7239-001 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	14.1	16.6	85	40-140	
Tetrachloro-m-xylene	11.3	16.6	68	40-140	

Lab Batch #: 24559

Sample: 7239-001 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	14.8	16.6	89	40-140	
Tetrachloro-m-xylene	10.5	16.6	63	40-140	

Lab Batch #: 24559

Sample: 7239-002 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	12.8	16.6	77	40-140	
Tetrachloro-m-xylene	7.73	16.6	47	40-140	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24559

Sample: 7239-002 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	12.6	16.6	76	40-140	
Tetrachloro-m-xylene	8.80	16.6	53	40-140	

Lab Batch #: 24559

Sample: 7239-008 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	9.68	16.7	58	40-140	
Tetrachloro-m-xylene	11.3	16.7	68	40-140	

Lab Batch #: 24559

Sample: 7239-008 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	12.4	16.7	74	40-140	
Tetrachloro-m-xylene	18.1	16.7	108	40-140	

Lab Batch #: 24559

Sample: 7239-009 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	8.64	16.6	52	40-140	
Tetrachloro-m-xylene	9.20	16.6	55	40-140	

Lab Batch #: 24559

Sample: 7239-009 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	14.0	16.6	84	40-140	
Tetrachloro-m-xylene	16.4	16.6	99	40-140	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Work Order #: 7239

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24559

Sample: 7239-010 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	8.51	16.7	51	40-140	
Tetrachloro-m-xylene	9.86	16.7	59	40-140	

Lab Batch #: 24559

Sample: 7239-010 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	13.3	16.7	80	40-140	
Tetrachloro-m-xylene	14.3	16.7	86	40-140	

Lab Batch #: 24566

Sample: 24451 BLK / BLK

Batch: 1 Matrix: S

Units: mg/L

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.6338	1.000	63	30-130	
2-Fluorobiphenyl	0.2815	0.5000	56	30-130	
2-Fluorophenol	0.5142	1.000	51	30-130	
Nitrobenzene-d5	0.2295	0.5000	46	30-130	
Phenol-d5	0.4700	1.000	47	30-130	
p-Terphenyl-d14	0.4196	0.5000	84	30-130	

Lab Batch #: 24566

Sample: 7239-001 / SMP

Batch: 1 Matrix: S

Units: mg/L

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.5871	1.000	59	30-130	
2-Fluorobiphenyl	0.2434	0.5000	49	30-130	
2-Fluorophenol	0.4329	1.000	43	30-130	
Nitrobenzene-d5	0.2213	0.5000	44	30-130	
Phenol-d5	0.4209	1.000	42	30-130	
p-Terphenyl-d14	0.3467	0.5000	69	30-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits, data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24566

Sample: 7239-002 / SMP

Batch: 1 Matrix: S

Units: mg/L.

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.5884	1.000	59	30-130	
2-Fluorobiphenyl	0.2829	0.5000	57	30-130	
2-Fluorophenol	0.4849	1.000	48	30-130	
Nitrobenzene-d5	0.2280	0.5000	46	30-130	
Phenol-d5	0.4970	1.000	50	30-130	
p-Terphenyl-d14	0.4012	0.5000	80	30-130	

Lab Batch #: 24566

Sample: 7239-008 / SMP

Batch: 1 Matrix: S

Units: mg/L.

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.6722	1.000	67	30-130	
2-Fluorobiphenyl	0.2949	0.5000	59	30-130	
2-Fluorophenol	0.4967	1.000	50	30-130	
Nitrobenzene-d5	0.2564	0.5000	51	30-130	
Phenol-d5	0.4593	1.000	46	30-130	
p-Terphenyl-d14	0.4435	0.5000	89	30-130	

Lab Batch #: 24566

Sample: 7239-009 / SMP

Batch: 1 Matrix: S

Units: mg/L.

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.6922	1.000	69	30-130	
2-Fluorobiphenyl	0.3361	0.5000	67	30-130	
2-Fluorophenol	0.4970	1.000	50	30-130	
Nitrobenzene-d5	0.2678	0.5000	54	30-130	
Phenol-d5	0.4919	1.000	49	30-130	
p-Terphenyl-d14	0.4563	0.5000	91	30-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Work Order #: 7239

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24566

Sample: 7239-010 / SMP

Batch: 1 Matrix: S

Units: mg/L

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.7374	1.000	74	30-130	
2-Fluorobiphenyl	0.3475	0.5000	70	30-130	
2-Fluorophenol	0.6086	1.000	61	30-130	
Nitrobenzene-d5	0.2894	0.5000	58	30-130	
Phcnol-d5	0.5829	1.000	58	30-130	
p-Terphenyl-d14	0.4239	0.5000	85	30-130	

Lab Batch #: 24597

Sample: 24486 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	52.34	50.00	105	62-139	
Bromofluorobenzene	49.64	50.00	99	77-127	
Toluene-D8	49.25	50.00	99	81-117	

Lab Batch #: 24597

Sample: 7239-001 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	52.0	50.0	104	72-129	
4-Bromofluorobenzene	50.8	50.0	102	72-126	
Toluene-D8	49.3	50.0	99	81-116	

Lab Batch #: 24597

Sample: 7239-002 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	50.6	50.0	101	72-129	
4-Bromofluorobenzene	52.3	50.0	105	72-126	
Toluene-D8	49.0	50.0	98	81-116	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24597

Sample: 7239-008 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	50.1	50.0	100	72-129	
4-Bromofluorobenzene	51.6	50.0	103	72-126	
Toluene-D8	49.6	50.0	99	81-116	

Lab Batch #: 24597

Sample: 7239-009 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	53.0	50.0	106	72-129	
4-Bromofluorobenzene	49.9	50.0	100	72-126	
Toluene-D8	50.9	50.0	102	81-116	

Lab Batch #: 24597

Sample: 7239-010 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	52.5	50.0	105	72-129	
4-Bromofluorobenzene	51.3	50.0	103	72-126	
Toluene-D8	50.1	50.0	100	81-116	

Lab Batch #: 24604

Sample: 24489 BLK / BLK

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	52.3	50.0	105	72-129	
4-Bromofluorobenzene	48.3	50.0	97	77-127	
Toluene-D8	56.6	50.0	113	84-114	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24604

Sample: 7239-010 DL / DIL

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	49.6	50.0	99	72-129	
4-Bromofluorobenzene	50.0	50.0	100	72-126	
Toluene-D8	49.5	50.0	99	81-116	

Lab Batch #: 24553

Sample: 24427 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	34.71	50.00	69	33-124	

Lab Batch #: 24553

Sample: 7239-001 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	3.667	5.000	73	33-124	

Lab Batch #: 24553

Sample: 7239-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	50.27	50.00	101	33-124	

Lab Batch #: 24553

Sample: 7239-008 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	3.595	5.000	72	33-124	

- * Surrogate outside of Laboratory QC limits
- ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
- All results are based on MDL and validated for QC purposes.
- Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24553

Sample: 7239-009 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	4.564	5.000	91	33-124	

Lab Batch #: 24553

Sample: 7239-010 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	4.929	5.000	99	33-124	

Lab Batch #: 24564

Sample: 24457 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Isopropyltoluene	0.118	0.100	118	70-130	

Lab Batch #: 24564

Sample: 7239-001 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Isopropyltoluene	0.119	0.100	119	70-130	

Lab Batch #: 24564

Sample: 7239-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Isopropyltoluene	0.118	0.100	118	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = $100 * A / B$
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24564

Sample: 7239-008 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Isopropyltoluene	0.114	0.100	114	70-130	

Lab Batch #: 24564

Sample: 7239-009 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Isopropyltoluene	0.127	0.100	127	70-130	

Lab Batch #: 24564

Sample: 7239-010 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Isopropyltoluene	0.126	0.100	126	70-130	

Lab Batch #: 24516

Sample: 24421 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-d4	0.0469	0.0500	94	75-125	
Bromofluorobenzene	0.0484	0.0500	97	75-125	
Toluene-D8	0.0490	0.0500	98	75-125	

Lab Batch #: 24516

Sample: 7239-003 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,2-Dichloroethane-d4	0.0400	0.0419	95	70-130	
Bromofluorobenzene	0.0401	0.0419	96	70-130	
Toluene-D8	0.0410	0.0419	98	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Work Order #: 7239

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24516

Sample: 7239-004 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0389	0.0414	94	70-130	
Bromofluorobenzene	0.0391	0.0414	94	70-130	
Toluene-D8	0.0404	0.0414	98	70-130	

Lab Batch #: 24516

Sample: 7239-005 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0368	0.0402	92	70-130	
Bromofluorobenzene	0.0377	0.0402	94	70-130	
Toluene-D8	0.0385	0.0402	96	70-130	

Lab Batch #: 24516

Sample: 7239-006 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0387	0.0416	93	70-130	
Bromofluorobenzene	0.0392	0.0416	94	70-130	
Toluene-D8	0.0403	0.0416	97	70-130	

Lab Batch #: 24532

Sample: 24432 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.0	10.0	110	80-120	
Bromofluorobenzene	8.71	10.0	87	80-120	
Toluene-D8	10.9	10.0	109	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits, data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date: 12/01/04 16:07

Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch #: 24532

Sample: 7239-007 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.0	10.0	110	70-130	
Bromofluorobenzene	8.73	10.0	87	70-130	
Toluene-D8	10.5	10.0	105	70-130	

Lab Batch #: 24532

Sample: 7239-011 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.2	10.0	112	70-130	
Bromofluorobenzene	9.07	10.0	91	70-130	
Toluene-D8	10.5	10.0	105	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = $100 * A / B$
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Blank Spike Recovery

Project Name: DSCR 0U4 Source Removal

Work Order #: 7239
 Lab Batch #: 24516
 Reporting Units: mg/kg

Sample: 24421 BKS
 Batch #: 1

Report Date:
 Project ID: 6301-03-0011-1901-1000
 Matrix: S

VOCs by SW8260B		BLANK /BLANK SPIKE RECOVERY STUDY				
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.00061	0.050	0.043	86	75-125	
1,1-Dichloroethane	<0.00053	0.050	0.050	100	75-125	
1,1-Dichloroethene	<0.00068	0.050	0.052	104	75-125	
Benzene	<0.00063	0.050	0.050	100	75-125	
Bromodichloromethane	<0.00067	0.050	0.051	102	75-125	
Chlorobenzene	<0.00074	0.050	0.051	102	75-125	
cis-1,2-Dichloroethene	<0.00080	0.050	0.052	104	75-125	
Tetrachloroethylene	<0.00077	0.050	0.053	106	75-125	
Toluene	<0.00073	0.050	0.050	100	75-125	
Trichloroethene	<0.00082	0.050	0.050	100	75-125	
Vinyl Chloride	<0.00053	0.050	0.045	90	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



Blank Spike Recovery

Project Name: DSCR 0U4 Source Removal

Work Order #: 7239

Lab Batch #: 24564

Reporting Units: mg/kg

Sample: 24457 BKS

Batch #: 1

Report Date:

Project ID: 6301-03-0011-1901-1000

Matrix: S

BLANK /BLANK SPIKE RECOVERY STUDY						
TPH (Gasoline Range Organics) by SW8015B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
TPH-GRO (C6-C10)	2.0	50	51	102	70-130	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

783 600



3D
SOIL SEMIVOLATILE BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY

Lab Name: ACCURA ANALYTICAL LAB

Contract : 6301-03-0011-1901-1000

Lab Code : ACCURA

Case No. : 7239

SAS No. : _____ SDG No. : N/A

Blank Spike - EPA Sample No. : 24427 BKS

Level : (low / med) LOW

COMPOUND	SPIKE ADDED	BLANK CONCENTRATION	BKS CONCENTRATION	BKS % REC #	QC LIMITS REC.
	(mg/kg)	(mg/kg)	(mg/kg)		
TPH-DRO (C10-C28)	33	0	18	55	39-114

Column to be used to flag recovery and RPD values with and astensk

* Values outside of QC limits

RPD 0 out of 1 outside limit

Spike Recovery 0 out of 2 outside limit

Comments :



3F
SOIL PESTICIDE BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY

Lab Name: ACCURA ANALYTICAL LABORATORYContract : 6301-03-0011-1901-1000Lab Code : ACCURA

Case No. : _____

SAS No. : _____

SDG No. : N/ABlank Spike - EPA Sample No. : 24446 BKSLevel : (low / med) LOW

COMPOUND	SPIKE ADDED	BLANK CONCENTRATION	BKS CONCENTRATION	BKS % REC #	QC LIMITS REC.
	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	170	0	120	71	50-130
Aroclor-1260	170	0	150	88	50-130

Column to be used to flag recovery and RPD values with and asterisk

* Values outside of QC limits

RPD 0 out of 2 outside limitSpike Recovery 0 out of 4 outside limitComments : _____



Blank Spike Recovery

Project Name: DSCR 0U4 Source Removal

Work Order #: 7239
Lab Batch #: 24597
Reporting Units: mg/L

Sample: 24486 BKS
Batch #: 1

Report Date:
Project ID: 6301-03-0011-1901-1000
Matrix: W

TCLP VOCs by SW1311/8260B		BLANK /BLANK SPIKE RECOVERY STUDY				
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1-Dichloroethene	<0.015	0.050	0.052	104	70-130	
1,2-Dichloroethane	<0.013	0.050	0.056	112	70-130	
2-Butanone	<0.022	0.050	0.052	104	70-130	
Benzene	<0.010	0.050	0.056	112	70-130	
Carbon Tetrachloride	<0.012	0.050	0.055	110	70-130	
Chlorobenzene	<0.017	0.050	0.055	110	70-130	
Chloroform	<0.011	0.050	0.057	114	70-130	
Tetrachloroethene	<0.012	0.050	0.053	106	70-130	
Trichloroethene	<0.011	0.050	0.057	114	70-130	
Vinyl Chloride	<0.014	0.050	0.054	108	70-130	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit

Blank Spike Recovery

Project Name: DSCR 0U4 Source Removal

Work Order #: 7239 Report Date: 6301-03-0011-1901-1000
 Lab Batch #: 24566 Project ID: 6301-03-0011-1901-1000
 Reporting Units: mg/L Sample: 24451 BKS Matrix: S

Analytes	BLANK /BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,4-Dichlorobenzene	<0.0081	0.50	0.22	44	30-130	
2,4,5-Trichlorophenol	<0.024	0.50	0.24	48	30-130	
2,4,6-Trichlorophenol	<0.018	0.50	0.25	50	30-130	
2,4-Dinitrotoluene	<0.012	0.50	0.23	46	30-130	
2-Methylphenol	<0.020	0.50	0.26	52	30-130	
3, 4-Methylphenol	<0.022	1.0	0.52	52	30-130	
Hexachlorobenzene	<0.018	0.50	0.40	80	30-130	
Hexachlorobutadiene	<0.012	0.50	0.26	52	30-130	
Hexachloroethane	<0.013	0.50	0.23	46	30-130	
Nitrobenzene	<0.0085	0.50	0.28	56	30-130	
Pentachlorophenol	<0.048	0.50	0.19	38	30-130	
Pyridine	<0.025	0.50	0.15	30	30-130	



BS / BSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date 12/01/04 15:51
 Project ID: 6301-03-0011-1901-1000
 Matrix: S

Work Order #: 7239

Lab Batch ID: 24575 Sample: 24575 BKS

Units: Deg.F

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Flash Point	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	1.40	82.0	80.6	98	82.0	79.0	96	2	-		

Lab Batch ID: 24571 Sample: 24468 BKS

Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Reactive Cyanide	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Reactive Cyanide/Sulfide by SW846 Sec. 7.3	<0.020	5.0	2.6	52	5.0	2.6	52	0	50-150	20	

Lab Batch ID: 24569 Sample: 24569 BKS

Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Reactive Sulfide	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Reactive Cyanide/Sulfide by SW846 Sec. 7.3	<2.3	3000	2900	97	3000	2900	97	0	50-150	20	

Relative Percent Difference RPD = $200 * (D-G) / (D+G)$
 Blank Spike Recovery [D] = $100 * (C) / (B)$
 Blank Spike Duplicate Recovery [G] = $100 * (F) / (E)$
 All results are based on MDL and Validated for QC Purposes
 F = RPD exceeded the laboratory control limits

BS / BSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date 12/01/04 15:51
Project ID: 6301-03-0011-1901-1000

Work Order #: 7239

Lab Batch ID: 24555 Sample: 24440 BKS

Batch #: 1

Matrix: S

Units: mg/L

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blank Spike Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Mercury	<0.000860	0.0250	0.0269	108	0.0250	0.0264	106	2	77-133	20	

Lab Batch ID: 24560 Sample: 24441 BKS

Batch #: 1

Matrix: S

Units: mg/L

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blank Spike Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<0.021	4.0	4.4	110	4.0	4.4	110	0	75-125	20	
Barium	<0.034	4.0	3.9	98	4.0	3.9	98	0	75-125	20	
Cadmium	<0.0016	4.0	4.3	108	4.0	4.3	108	0	75-125	20	
Chromium	<0.084	4.0	4.0	100	4.0	4.0	100	0	75-125	20	
Copper	<0.024	4.0	4.1	103	4.0	4.1	103	0	75-125	20	
Lead	<0.031	4.0	4.1	103	4.0	4.1	103	0	75-125	20	
Nickel	0.013	4.0	4.1	103	4.0	4.1	103	0	75-125	20	
Selenium	<0.073	4.0	4.5	113	4.0	4.5	113	0	75-125	20	
Silver	<0.0038	4.0	4.1	103	4.0	4.0	100	3	75-125	20	
Zinc	0.028	4.0	4.4	110	4.0	4.4	110	0	75-125	20	

Relative Percent Difference RPD = $200 \cdot \frac{|(D-G)-(D+G)|}{(D+G)}$
Blank Spike Recovery [D] = $100 \cdot \frac{C}{B}$
Blank Spike Duplicate Recovery [G] = $100 \cdot \frac{F}{E}$
All results are based on MDL and Validated for QC Purposes

F = RPD exceeded the laboratory control limits



BS / BSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date 12/01/04 15:51
 Project ID: 6301-03-0011-1901-1000
 Matrix: W

Work Order #: 7239
 Lab Batch ID: 24532
 Sample: 24432 BKS
 Units: ug/L

Batch #: 1

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
VOCs by SW8260B (25ml purge)											
1,1,1-Trichloroethane	<0.33	10	9.3	93	10	10	100	7	80-120	30	
1,1-Dichloroethane	<0.31	10	9.6	96	10	9.7	97	1	80-120	30	
1,1-Dichloroethene	<0.16	10	9.7	97	10	10	100	3	80-120	30	
Benzene	<0.16	10	9.1	91	10	9.3	93	2	80-120	30	
Bromodichloromethane	<0.090	10	8.4	84	10	9.1	91	8	80-120	30	
Chlorobenzene	<0.13	10	9.7	97	10	9.9	99	2	80-120	30	
cis-1,2-Dichloroethene	<0.19	10	9.6	96	10	9.5	95	1	80-120	30	
Tetrachloroethylene	<0.35	10	11	110	10	11	110	0	80-120	30	
Toluene	<0.16	10	10	100	10	10	100	0	80-120	30	
Trichloroethene	<0.12	10	9.5	95	10	10	100	5	80-120	30	
Vinyl Chloride	<0.17	10	8.8	88	10	8.7	87	1	80-120	30	

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
 Blank Spike Recovery [D] = 100*(C)/[B]
 Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
 All results are based on MDL and Validated for QC Purposes
 F = RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date:
Project ID: 6301-03-0011-1901-1000

Work Order #: 7239
Lab Batch ID: 24516
Reporting Units: mg/kg

QC- Sample ID: 7239-004 MS Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
VOCs by SW8260B											
1,1,1-Trichloroethane	0.0022	0.041	0.025	56	0.039	0.029	69	21	70-130	30	Z
1,1-Dichloroethane	<0.0010	0.041	0.037	90	0.039	0.038	97	7	70-130	30	
1,1-Dichloroethene	<0.0010	0.041	0.039	95	0.039	0.040	103	8	70-130	30	
Benzene	<0.0010	0.041	0.037	90	0.039	0.037	95	5	70-130	30	
Bromodichloromethane	<0.0010	0.041	0.036	88	0.039	0.037	95	8	70-130	30	
Chlorobenzene	0.0015	0.041	0.036	84	0.039	0.038	94	11	70-130	30	
cis-1,2-Dichloroethene	1.7	0.041	0.46	-3024	0.039	0.40	-3333	-10	70-130	30	Z
Tetrachloroethylene	<0.0010	0.041	0.036	88	0.039	0.038	97	10	70-130	30	
Toluene	0.0012	0.041	0.036	85	0.039	0.038	94	10	70-130	30	
Trichloroethene	0.027	0.041	0.12	227	0.039	0.067	103	75	70-130	30	ZF
Vinyl Chloride	0.13	0.041	0.048	-200	0.039	0.043	-223	-11	70-130	30	Z

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)
F = RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Work Order # 7239
 Lab Batch ID: 24364
 Reporting Units: mg/kg

Report Date:
 Project ID: 6301-03-0011-1901-1000
 QC-Sample ID: 7239-001 MS Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH (Gasoline Range Organics) by SW8015B Analytes TPH-GRO (C6-C10)	Parent Sample Result A	Spike Added B	Spiked Sample Result C	Spiked Sample %R D	Spike Added E	Duplicate Spiked Sample Result F	Spiked Dup. %R G	RPD %	Control Limits %R	Control Limits %RPD	Flag
		3.4	20	25	108	20	22	93	15	70-130	25

Matrix Spike Percent Recovery $[D] = 100 \cdot (C-A)/B$
 Relative Percent Difference $RPD = 200 \cdot (D-G)/(D+G)$
 * - RPD exceeded the laboratory control limits

Matrix Spike Duplicate Percent Recovery $[G] = 100 \cdot (F-A)/E$



3D
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ACCURA ANALYTICAL LABContract: 6301-03-0011-1901-1000Lab Code: ACCURACase No.: 7239SAS No.: _____ SDG No.: N/AMatrix Spike - EPA Sample No.: HP-MW4-SS-2-4 MSLevel Type: LOW

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS CONCENTRATION mg/kg	MS % REC #	QC LIMITS REC.
TPH-DRO (C10-C28)	36	4.4	27	63	28-116

COMPOUND	SPIKE ADDED mg/kg	MSD CONCENTRATION mg/kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC
TPH-DRO (C10-C28)	36	29	68	8	20	28-116

Column to be used to flag recovery and RPD Values with and asterisk.

* Values outside of QC limits

RPD 0 Out of 1 outside limitsSpike Recovery: 0 Out of 2 outside limitCOMMENTS: _____



3F
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ACCURA ANALYTICAL LABORATContract : 6301-03-0011-1901-1000Lab Code : ACCURA

CASE No. _____

SAS No. : _____

SDG No. N/AMatrix Spike - EPA Sample No. OU4-IDW-SO-1 MS

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS CONCENTRATION ug/kg	MS % REC #	QC LIMITS REC.
Aroclor-1016	190	0	170	89	40-140
Aroclor-1260	190	0	160	84	40-140

COMPOUND	SPIKE ADDED ug/kg	MSD CONCENTRATION ug/kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC
Aroclor-1016	190	180	95	7	50	40-140
Aroclor-1260	190	150	79	6	50	40-140

Column to be used to flag recovery and RPD Values with and asterisk.

* Values outside of QC limits

RPD 0 Out of 2 outside LimitSpike Recovery : 0 Out of 4 outside limit

Comments : _____

Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date:
Project ID: 6301-03-0011-1901-1000

Work Order #: 7239
Lab Batch ID: 24560
Reporting Units: mg/L

OC - Sample ID: 7223-002 MS Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
As,mg	0.021	4.0	4.2	105	4.0	4.2	105	0	75-125	20	
Barium	0.75	4.0	4.4	92	4.0	4.3	90	2	75-125	20	
Cadmium	0.046	4.0	4.1	101	4.0	4.1	101	0	75-125	20	
Chromium	0.084	4.0	3.9	98	4.0	3.8	95	3	75-125	20	
Copper	0.50	4.0	4.4	98	4.0	4.1	95	3	75-125	20	
Lead	0.097	4.0	4.0	98	4.0	4.0	98	0	75-125	20	
Nickel	0.032	4.0	3.9	97	4.0	3.9	97	0	75-125	20	
Selenium	0.073	4.0	4.3	108	4.0	4.3	108	0	75-125	20	
Silver	0.0038	4.0	3.9	98	4.0	3.9	98	0	75-125	20	
/inc	2.5	4.0	6.4	98	4.0	6.2	93	5	75-125	20	

MATRIX SPIKE Duplicate Percent Recovery [G] 100% (A-G)
Relative Percent Difference [RPD] 300% (D-G)/(D-G)
RPD exceeded the laboratory control limits



Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Work Order #: 7239

Lab Batch ID: 24555

Reporting Units: mg/L

Report Date:

Project ID: 6301-03-0011-1901-1000

QC- Sample ID: 7223-002 MS

Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TCLP Mercury by SW1311/7470A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Mercury	7.67	0.0250	8.19	2080	0.0250	8.02	1400	39	89-123	20

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference RPD = 200*(D-A)/(C+A)
 RPD exceeded the laboratory control limits

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date:
Project ID: 6301-03-0011-1901-1000

Work Order #: 7239
Lab Batch ID: 24597
Reporting Units: mg/L

QC- Sample ID: 7239-001 MS Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TCLP VOCs by SW1311/8260B											
1,1-Dichloroethene	<0.015	0.50	0.46	92	0.50	0.51	102	10	70-130	20	
1,2-Dichloroethane	<0.013	0.50	0.49	98	0.50	0.54	108	10	70-130	20	
2-Butanone	<0.022	0.50	0.45	90	0.50	0.48	96	6	70-130	20	
Benzene	<0.010	0.50	0.47	94	0.50	0.53	106	12	70-130	20	
Carbon Tetrachloride	<0.012	0.50	0.49	98	0.50	0.54	108	10	70-130	20	
Chlorobenzene	<0.017	0.50	0.47	94	0.50	0.51	102	8	70-130	20	
Chloroform	<0.011	0.50	0.48	96	0.50	0.53	106	10	70-130	20	
Tetrachloroethylene	<0.012	0.50	0.47	94	0.50	0.50	100	6	70-130	20	
Trichloroethene	0.056	0.50	0.52	93	0.50	0.59	107	14	70-130	20	
Vinyl Chloride	<0.014	0.50	0.49	98	0.50	0.53	106	8	70-130	20	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 300*(D-C)/(D+C)
F = RPD exceeded the laboratory control limits



Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Work Order # 7239
 Lab Batch ID: 24566
 Reporting Units: mg/L

Report Date: _____
 Project ID: 6301-03-0011-1901-1000
 QC-Sample ID: 7239-010 MS Batch #: 1 Matrix: S

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
TCLP SVOCs by SW1311/8270C												
1,4-Dichlorobenzene	0.12	0.60	0.38	43	0.60	0.41	48	11	30-130	30		
2,4,5-Trichlorophenol	<0.029	0.60	0.31	52	0.60	0.36	60	14	30-130	30		
2,4,6-Trichlorophenol	<0.021	0.60	0.34	57	0.60	0.36	60	5	30-130	30		
2,4-Dinitrotoluene	<0.014	0.60	0.26	43	0.60	0.31	52	19	30-130	30		
2-Methylphenol	<0.024	0.60	0.28	47	0.60	0.33	55	16	30-130	30		
3 & 4-Methylphenol	<0.026	1.2	0.62	52	1.2	0.64	53	2	30-130	30		
Hexachlorobenzene	<0.021	0.60	0.43	72	0.60	0.44	73	1	30-130	30		
Hexachlorobutadiene	<0.014	0.60	0.34	57	0.60	0.33	55	4	30-130	30		
Hexachloroethane	<0.015	0.60	0.28	47	0.60	0.31	52	10	30-130	30		
Nitrobenzene	<0.010	0.60	0.32	53	0.60	0.35	58	9	30-130	30		
Pentachlorophenol	<0.057	0.60	0.29	48	0.60	0.36	60	22	30-130	30		
Pyridine	<0.030	0.60	0.28	47	0.60	0.23	38	21	30-130	30		

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference RPD = 200*(D-G)/(D+G)
 * RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Report Date:
Project ID: 6301-03-0011-1901-1000

Work Order # : 7239
Lab Batch ID: 24571
Reporting Units: mg/kg

QC-Sample ID: 7255-002 MS **Batch #:** 1 **Matrix:** S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Reactive Cyanide	<0.020	5.0	0.14	3	5.0	0.15	3	0	50-150	20	✓

Reactive Cyanide/Sulfide by SW846 Sec. 7.3

Analytes

Reactive Cyanide

Matrix Spike Duplicate Recovery Study

Matrix Spike Duplicate Recovery Study
 Reference: EPA 8160-G-01-001
 RPD = (C - F) / ((C + F) / 2) * 100

Form 3 - MS / MSD Recoveries

Project Name: DSCR 0U4 Source Removal

Work Order #: 7239
 Lab Batch ID: 24569
 Reporting Units: mg/kg

Report Date: _____
 Project ID: 6301-03-0011-1901-1000
 QC-Sample ID: 7239-001 MS Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Reactive Cyanide/Sulfide by SW846 Sec. 7.3	Parent Sample Result [A]		Spiked Sample Result [C]		Spiked Sample %R [D]		Duplicate Spiked Sample Result [F]		Spiked Dup. %R [G]	
	46	3000	2800	92	3000	2700	88	4	50-150	20
Reactive Sulfide	Analytes		RPD %		Control Limits %RPD		Control Limits %R		Flag	

MATRIX SPIKE DUPLICATE Percent Recovery [C] / (Parent-A)

MATRIX SPIKE DUPLICATE Percent Recovery [G] / (Parent-A)
 Relative Percent Difference RPD = 2000(D-G)/(D+G)
 RPD exceeded the laboratory control limits

TestAmerica

ANALYTICAL TESTING CORPORATION

2960 FOSTER CREIGHTON DRIVE • NASHVILLE, TENNESSEE 37204
800-783-0980 • 615-726-3404 FAX

PROJECT QUALITY CONTROL DATA

Project Number: 7239-DCF1

Project Name:

Page: 1

Laboratory Receipt Date: 11/23/04

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on a true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
MISC PARAMETERS								
Extracted TOX	mg/kg	< 50.0	1100	1000	110	80 - 120	8614	04-A184221

Matrix Spike Duplicate

Analyte	units	Orig. Val	Duplicate	RPD	Limit	Q.C. Batch
Extracted TOX	mg/kg	1100	1140	3.57	20	8614

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
MISC PARAMETERS						
Extracted TOX	mg/kg	1000	1060	106	90 - 113	8614

Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
Extracted TOX	mg/kg	74.1	79.7	7.28	15.	8614	04-A184225

783 618

TestAmerica

ANALYTICAL TESTING CORPORATION

2960 FOSTER CREIGHTON DRIVE • NASHVILLE, TENNESSEE 37204
800-785-0980 • 615-726-3404 FAX

PROJECT QUALITY CONTROL DATA
Project Number: 7239-DCF1
Project Name:
Page: 2
Laboratory Receipt Date: 11/23/04

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
---------	-------------	-------	------------	---------------	---------------

MISC PARAMETERS

Extracted TOX	< 50.0	mg/kg	8614	11/26/04	17:13
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= Value outside Laboratory historical or method prescribed QC limits.



Accura Analytical Laboratory

EPA Defined Qualifiers Codes used by AAL

- BRL:** This abbreviation indicates that the analytical results were Below the Reporting Limit (BRL).
- U:** The compound was analyzed for but not detected.
- J:** This indicates an estimated value. This flag is used in 3 incidences.
- (1) When estimating a concentration for tentatively identified compounds where 1:1 response is assumed.
 - (2) When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the Contract Required Detection Limit (CRDL) – or Reporting Limit - but greater than the MDL.
 - (3) When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL – or Reporting Limit- but greater than MDL.
- N:** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" flag is not used.
- P:** This is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with "P"
- C:** This applies to pesticide result where the identification has been confirmed by GC/MS. Do not apply if this flag if analyte(s) were not confirmed. Used the laboratory-defined flag instead (see the X qualifier).
- B:** This is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The flag shall be used for a tentatively identified compound as well as for a positively identified target compound.
- E:** This identifies compounds whose concentrations exceed the upper level of the linear calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract should be diluted and re-analyzed.
- Note: For Total xylene, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately.*
- X:** Defined by the laboratory
- Z:** Surrogates/Spikes results exceeds quality control limits
- ZZ:** Surrogates/Spikes results exceeds quality control limits in multiple samples
- ***:** Surrogate recoveries were diluted out
- M:** Manual integrations were necessary and an "m" qualifying code is present on the quantitation report next to the analyte.
- D:** This flag indicates that the identified compound is reported from the dilution run.



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
 6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

AAL Work Order # 7240

Client Project: DSCR OU4 Source Removal / 6301-03-0011-1901-1000

Accura Analytical Laboratory Inc. certifies that the results meet all requirements of the NELAC Standards.

The data package includes a total of **29** pages including: case narrative, Chain of Custody, Request for Analysis Forms, Sample Receipt Checklist, analytical results pages, QC surrogate recovery pages, QC Blank Spike / Blank Spike Duplicate recovery pages, QC MS/MSD recovery pages, Internal Standard Results Forms, and a list of common EPA qualifier codes used by AAL.

The following items were noted concerning this work order:

Receiving Notations:

1. The samples were received at 5°C.

Michele Ruiz

Michele Ruiz
 Receiving

November 21, 2004

Date

VOCs by SW8260B Notations:

1. The following analyte concentration was above the calibration range, as indicated by the "E" qualifier:
 - 4-Methyl-2-Pentanone – OU4-PIT1-SO-19
 - Acetone – OU4-PIT1-SO-19
 - cis-1,2-Dichloroethene – OU4-PIT1-SO-19
 - Acetone – OU4-PIT1-CS-15
 - Trichloroethene – OU4-PIT1-CS-15

When the samples were diluted, the results were below the detection limit. The result for these analytes should be considered estimated.

Thomas A. Gatch

Thomas A. Gatch
 VOC Analyst

December 10, 2004

Date

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FL Certification #E87429 NC Certification #483 SC Certification #98015
Utah Certification #AAL11 USACE Approved Navy Certification code NFESC 413
Case Narrative

Project Manager's Notations:

1. The soil sample results are reported on a dry weight basis.

These case narrative notations have been reviewed/edited by:

A handwritten signature in black ink, appearing to read "David C. Fuller", is written over a horizontal line.

David C. Fuller
VP - Client Services

December 10, 2004

Date



ACCURA ANALYTICAL LABORATORY, INC.
Environmental Analytical Services

40260

Page 1 of 1
6017 Financial Drive, Norcross, GA 30071
Phone # (770) 449-8800 Fax # (770) 449-3477

CHAIN OF CUSTODY

Company Name: MAC TEC Billing address: 3200 TOWNBUNT DRIVE, SUITE 100
Address: 9625 JEFFERSON DAVIS HIGHWAY, RICHMOND VA 23237 P.O.# (if required): KENNESAW GA 30144
Results Sent to: (Client Contact): JUDY HARTNESS AAL LIMS System ID: 11976
Email address: JHARTNESS@MACTEC.COM Receiver's Initials/Temp: JK/SK
Contact Phone #: 1-770-421-3336 Fax #: 770-421-3343 Custody Seal(s): 2 AAL Work Order #: 7240
Project (Site) Name: DISCR OUY SOURCE REMOVAL
Project Number: 6301-03-0011

Line No.	Sample ID #	Sample Date / Time	Composite	Grab	Matrix (See below)	Sample Location	No. of Containers	Analysis Requested				Field Comments:	AAL Lab ID:
								1) Requisitioned By:	2) Received By:	Date / Time	Date / Time		
1	TB-11-20-04	11-20-04 / 1500			W		2						7240
2	OUY-PIT1-SO19	11-20-04 / 925	X		S	O04 PIT-1E3'	5						-001
3	OUY-PIT1-CSB	11-20-04 / 1145	X		S	O04 PIT-1E4'	5						-002
4	OUY-PIT1-CS15	11-20-04 / 1420	X		S	O04 PIT-1E8'	5						-003
5													-004
6													
7													
8													
9													
10													
3) Relinquished By: <u>David C. Falk</u> Date / Time: <u>11-20-04 / 15:00</u>								Delivered by: (Circle One) <u>DELTA TRAK</u>				Fed Ex / UPS / DHL / <u>Hand / Other</u>	
1) Relinquished By: <u>David C. Falk</u> Date / Time: <u>11-21-04 / 16:00</u>								Turnaround Time Requested:					

Matrix Guide: (W=Water) (DW=Drinking Water) (GW=Groundwater) (SW=Surface Water) (L=Liquid) (S=Soil) (SD=Solid) (SL=Sludge) (A=Air) (C=Air Cartridge)
Preservation Codes: 1=HCL / 2=HNO₃ / 3=H₂SO₄ / 4=NaOH+NaAsO₂ / 5=NaOH+ZnAc / 6=Na₂S₂O₃ / 7=NaHSO₄ / 8=MeOH

783 622

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: TB- 11-20-04

7240-001

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	

Comments: _____

Prepared By: Na Kim

Checked By: _____

783 624

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-1-SO-19

7240-002

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: *[Signature]*

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-1-CS-8

7240-003

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: *Dan V...*

Checked By: _____

783 626

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: OU4PIT-1-CS-15

7240-004

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
ENCORE	4	24 HOUR TAT Cool to 4C	Volatile Organics	SW8260B	
2 oz. Glass Jar	1	24 HOUR TAT Cool to 4C	% Moisture	D-2216	

Comments: _____

Prepared By: Don Van

Checked By: _____

ACCURA ANALYTICAL LABORATORY, INC.

SAMPLE RECEIPT CHECKLIST VERSION 6 Client Code: 105-3 AAL Project Mgr: DTF

Client Project Name: DSCR 004 Source Removal ACCURA Work Order#: 7240

Are there EnCores, tests with < 48Hr hold times, or RUSH TAT's requested? YES NO
 If YES, you must communicate RUSH analyses to the appropriate analyst(s) immediately!!! / or preserve EnCores (see #16 below)!!!
 Preliminary Examination: Initials: DTF Date received: 11/21/04 Date cooler was opened: 11/21/04

1. Did cooler/package come with a shipping slip (airbill, Etc.)? YES NO
 If YES, enter carrier name and airbill number here: DELTA DASH # 006-2884 7394
 Describe type of packing in cooler: bubble bags, ice bags
****If cooler was hand delivered, CIRCLE HERE, skip to item #5****
2. Were custody seals on outside of cooler? YES NO
 If YES, how many: 2 seal dated: 11/20 seal name: D VCS
3. Were custody seals unbroken and intact at the date and time of arrival? YES N/A NO
4. Were custody papers sealed in a plastic bag to prevent damage to chain of custody? YES NO
5. If required, was enough ice used? (Internal cooler temperature, 5°C) YES N/A NO
6. Did you sign custody papers in the appropriate place? YES NO
7. Was project identifiable from custody papers? YES NO
 If YES, enter project name at the top.

Complete project file with green sheet, proper file tag, and shipping documentation. Line up samples following chain. Complete Container Receipt Verification form (include extra containers for dissolved metals filtrates). Complete login in XENCO and generate AAL ID Labels.

8. Did all containers arrive unbroken and were labels in good condition? YES NO
9. Were custody papers filled out properly and did all labels agree with custody papers? YES NO
10. Were correct containers and sufficient amount of sample sent for the test indicated? YES NO
11. All samples collected within three days of date received for these analyses (Reactive Cn & S, Solids in H2O, Sulfide, Sulfite, IALLI Extractable Organic Waters)? YES N/A NO
 If NO, coordinate with the project manager to ensure that no samples go out of hold!!!
12. No residual chlorine found in waters for these analyses: (Cyanide, PAH, SVOC, Pesticides, PCB's, Herbicides)? YES N/A NO
 Checked by: _____ (Initials)
13. Were samples properly chemically preserved, if required, upon receipt? YES N/A NO
 (For example: pH checked for waters for all Metals, Wet Chemistry, Pesticides, PCB's, Herbicides, and VOC/BTEX samples submitted with HCL for waters and in either Encore samplers or NaHSO₄ labeled vials for soils)
 Preservation checked by: DTF (Initials)
14. Were air bubbles (>1/4 inch) absent in VOC/BTEX samples? YES N/A NO
 If NO, list ID # on back and label vials with ~~Do Not Open After Sample Receipt~~
15. If there are samples for dissolved metals, were they field filtered? YES N/A NO
 If NO, list date and time samples were filtered and preserved in lab: _____
16. Were Encore samplers included? YES NO
 If YES, date and time preserved with NaHSO₄: 11/21/04 By whom: DTF
17. Does this submittal contain soil NaHSO₄ vials for BTEX/GRO/VOC'S? YES NO
 If YES, vials weighed by and entered into vial database by: DTF
18. Initials of laboratory personnel responsible for labeling laboratory I.D. numbers on containers: DTF

Keep samples and chain out. Before moving samples to their appropriate location, another person must review the entire project ensuring that information on the AAL ID Barcode label matches the container label, and that all information is consistent with the chain.
 Final check and samples logged to locations by: _____ (Initials)

19. Was it necessary to call the assigned project manager in order to proceed with login? YES NO
 If YES, give details on the back of this form.
 20. Who was called? DTF By whom? _____ Date/Time: _____
- Project Mgr. Review: DTF (Initials) 11/21/04 (Date)



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: TB-11-20-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7240-001	Date Collected: Nov-20-04 15:00	Date Received: Nov-21-04 16:00
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-21-04 21:48	Analyst: MVRR01	Date Prep: Nov-21-04 16:04	Tech: MVRR01
Seq Number: 24534			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	0.44	1.0	0.17	ug/L	J	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: TB-11-20-04	Matrix: WATER	% Moisture:
Lab Sample Id: 7240-001	Date Collected: Nov-20-04 15:00	Date Received: Nov-21-04 16:00
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)

Prep Method: SW5030B

Date Analyzed: **Nov-21-04 21:48**

Analyst: **MVRR01**

Date Prep: **Nov-21-04 16:04**

Tech: **MVRR01**

Seq Number: **24534**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	0.53	1.0	0.16	ug/L	J	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1

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Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4-PIT1-SO19	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7240-002	Date Collected: Nov-20-04 09:25	Date Received: Nov-21-04 16:00
Sample Depth: 3 ft		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035
Date Analyzed: Nov-22-04 16:53	Analyst: MVRR01
	Date Prep: Nov-22-04 12:02
	Tech: MVRR01
	Seq Number: 24538

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0047	0.00071	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0047	0.00058	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0047	0.00080	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0047	0.00069	mg/kg	U	1
1,1-Dichloroethane	75-34-3	0.083	0.0047	0.00050	mg/kg		1
1,1-Dichloroethene	75-35-4	0.011	0.0047	0.00064	mg/kg		1
1,1-Dichloropropene	563-58-6	BRL	0.0047	0.00053	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0047	0.00097	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0047	0.00087	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0047	0.00093	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0047	0.00098	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0047	0.00049	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0047	0.00049	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0047	0.00063	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0047	0.00061	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0047	0.00053	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0047	0.00093	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0047	0.00047	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0047	0.00061	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0047	0.00096	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0047	0.00083	mg/kg	U	1
2-Butanone	78-93-3	0.072	0.0094	0.00049	mg/kg		1
2-Chlorotoluene	95-49-8	BRL	0.0047	0.00095	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0094	0.00064	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0047	0.00083	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	0.25	0.0094	0.00060	mg/kg	E	1
Acetone	67-64-1	0.61	0.0094	0.0012	mg/kg	E	1
Benzene	71-43-2	BRL	0.0047	0.00059	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0047	0.00090	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0047	0.00090	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0047	0.00063	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0047	0.00057	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0047	0.00047	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0047	0.0013	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0047	0.00076	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0047	0.00070	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0047	0.0015	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0047	0.00075	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0047	0.00057	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.24	0.0047	0.00076	mg/kg	E	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0047	0.00064	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0047	0.00066	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0047	0.00059	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0047	0.00059	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0047	0.00065	mg/kg	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-PIT1-SO19	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7240-002	Date Collected: Nov-20-04 09:25	Date Received: Nov-21-04 16:00
Sample Depth: 3 ft		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5035**

Date Analyzed: **Nov-22-04 16:53**

Analyst: **MVRR01**

Date Prep: **Nov-22-04 12:02**

Tech: **MVRR01**

Seq Number: **24538**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0047	0.00061	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0047	0.00078	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.0094	0.0017	mg/kg	U	1
Methylene Chloride	75-09-2	0.021	0.0047	0.0012	mg/kg		1
Naphthalene	91-20-3	0.0012	0.0047	0.00090	mg/kg	J	1
n-Butylbenzene	104-51-8	BRL	0.0047	0.00048	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0047	0.00096	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0047	0.00059	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0047	0.00094	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0047	0.00090	mg/kg	U	1
Styrene	100-42-5	BRL	0.0047	0.00097	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0047	0.00062	mg/kg	U	1
Tetrachloroethylene	127-18-4	0.0086	0.0047	0.00073	mg/kg		1
Toluene	108-88-3	0.00079	0.0047	0.00069	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	0.0011	0.0047	0.00063	mg/kg	J	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0047	0.00082	mg/kg	U	1
Trichloroethene	79-01-6	0.026	0.0047	0.00077	mg/kg		1
Trichlorofluoromethane	75-69-4	BRL	0.0047	0.00048	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0047	0.00050	mg/kg	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-PIT1-CS8	Matrix: SOIL	% Moisture: 8
Lab Sample Id: 7240-003	Date Collected: Nov-20-04 11:45	Date Received: Nov-21-04 16:00
Sample Depth: 4 ft		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5035**

Date Analyzed: **Nov-22-04 16:01**

Analyst: **MVRR01**

Date Prep: **Nov-22-04 12:02**

Tech: **MVRR01**

Seq Number: **24538**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0045	0.00068	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0045	0.00055	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0045	0.00077	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0045	0.00066	mg/kg	U	1
1,1-Dichloroethane	75-34-3	0.0025	0.0045	0.00048	mg/kg	J	1
1,1-Dichloroethene	75-35-4	BRL	0.0045	0.00061	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0045	0.00050	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0045	0.00093	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0045	0.00083	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0045	0.00088	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0045	0.00094	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0045	0.00047	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0045	0.00047	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	0.0052	0.0045	0.00060	mg/kg		1
1,2-Dichloroethane	107-06-2	BRL	0.0045	0.00059	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0045	0.00050	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0045	0.00088	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0045	0.00045	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0045	0.00059	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	0.00097	0.0045	0.00092	mg/kg	J	1
2,2-Dichloropropane	594-20-7	BRL	0.0045	0.00079	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.0090	0.00047	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0045	0.00091	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0090	0.00061	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0045	0.00079	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0090	0.00058	mg/kg	U	1
Acetone	67-64-1	0.029	0.0090	0.0012	mg/kg		1
Benzene	71-43-2	BRL	0.0045	0.00057	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0045	0.00086	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0045	0.00086	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0045	0.00060	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0045	0.00054	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0045	0.00045	mg/kg	U	1
Carbon Disulfide	75-15-0	0.0013	0.0045	0.0013	mg/kg	J	1
Carbon Tetrachloride	56-23-5	BRL	0.0045	0.00073	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0045	0.00067	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0045	0.0014	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0045	0.00071	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0045	0.00054	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.052	0.0045	0.00072	mg/kg		1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0045	0.00061	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0045	0.00063	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0045	0.00056	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0045	0.00057	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0045	0.00062	mg/kg	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-PIT1-CS8	Matrix: SOIL	% Moisture: 8
Lab Sample Id: 7240-003	Date Collected: Nov-20-04 11:45	Date Received: Nov-21-04 16:00
Sample Depth: 4 ft		

Analytical Method: **VOCs by SW8260B**

Prep Method: **SW5035**

Date Analyzed: **Nov-22-04 16:01**

Analyst: **MVRR01**

Date Prep: **Nov-22-04 12:02**

Tech: **MVRR01**

Seq Number: **24538**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0045	0.00059	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0045	0.00075	mg/kg	U	1
m,p-Xylene	136777-61-2	0.0023	0.0090	0.0017	mg/kg	J	1
Methylene Chloride	75-09-2	0.011	0.0045	0.0012	mg/kg	J	1
Naphthalene	91-20-3	0.0016	0.0045	0.00086	mg/kg	J	1
n-Butylbenzene	104-51-8	BRL	0.0045	0.00046	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0045	0.00092	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0045	0.00057	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0045	0.00090	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0045	0.00086	mg/kg	U	1
Styrene	100-42-5	BRL	0.0045	0.00093	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0045	0.00059	mg/kg	U	1
Tetrachloroethylene	127-18-4	0.013	0.0045	0.00069	mg/kg	J	1
Toluene	108-88-3	0.00067	0.0045	0.00066	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0045	0.00060	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0045	0.00078	mg/kg	U	1
Trichloroethene	79-01-6	0.0044	0.0045	0.00074	mg/kg	J	1
Trichlorofluoromethane	75-69-4	BRL	0.0045	0.00046	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0045	0.00048	mg/kg	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4-PIT1-CS15	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7240-004	Date Collected: Nov-20-04 14:20	Date Received: Nov-21-04 16:00
Sample Depth: 8 ft		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035

Date Analyzed: **Nov-22-04 16:27**

Analyst: **MVRR01**

Date Prep: **Nov-22-04 12:02**

Tech: **MVRR01**

Seq Number: **24538**

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0045	0.00068	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	0.024	0.0045	0.00055	mg/kg		1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0045	0.00077	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0045	0.00066	mg/kg	U	1
1,1-Dichloroethane	75-34-3	0.018	0.0045	0.00048	mg/kg		1
1,1-Dichloroethene	75-35-4	0.0018	0.0045	0.00062	mg/kg	J	1
1,1-Dichloropropene	563-58-6	BRL	0.0045	0.00051	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0045	0.00093	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0045	0.00083	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0045	0.00089	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	0.0024	0.0045	0.00094	mg/kg	J	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0045	0.00047	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0045	0.00047	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	0.14	0.0045	0.00061	mg/kg		1
1,2-Dichloroethane	107-06-2	BRL	0.0045	0.00059	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0045	0.00051	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0045	0.00089	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	0.0013	0.0045	0.00045	mg/kg	J	1
1,3-Dichloropropane	142-28-9	BRL	0.0045	0.00059	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	0.016	0.0045	0.00092	mg/kg		1
2,2-Dichloropropane	594-20-7	BRL	0.0045	0.00080	mg/kg	U	1
2-Butanone	78-93-3	0.072	0.0090	0.00047	mg/kg		1
2-Chlorotoluene	95-49-8	BRL	0.0045	0.00091	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.0090	0.00062	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0045	0.00080	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.0090	0.00058	mg/kg	U	1
Acetone	67-64-1	0.39	0.0090	0.0012	mg/kg	E	1
Benzene	71-43-2	BRL	0.0045	0.00057	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0045	0.00086	mg/kg	U	1
Bromochloromethane	74-97-5	0.0011	0.0045	0.00086	mg/kg	J	1
Bromodichloromethane	75-27-4	BRL	0.0045	0.00061	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0045	0.00054	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0045	0.00045	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0045	0.0013	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0045	0.00073	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0045	0.00067	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0045	0.0014	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0045	0.00071	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0045	0.00054	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	0.015	0.0045	0.00072	mg/kg		1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0045	0.00062	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0045	0.00063	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0045	0.00056	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0045	0.00057	mg/kg	U	1
Ethylbenzene	100-41-4	0.0035	0.0045	0.00062	mg/kg	J	1

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Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-PIT1-CS15	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7240-004	Date Collected: Nov-20-04 14:20	Date Received: Nov-21-04 16:00
Sample Depth: 8 ft		

Analytical Method: VOCs by SW8260B	Prep Method: SW5035
Date Analyzed: Nov-22-04 16:27	Analyst: MVRR01
	Date Prep: Nov-22-04 12:02
	Tech: MVRR01
	Seq Number: 24538

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0045	0.00059	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0045	0.00075	mg/kg	U	1
m,p-Xylene	136777-61-2	0.038	0.0090	0.0017	mg/kg		1
Methylene Chloride	75-09-2	0.048	0.0045	0.0012	mg/kg		1
Naphthalene	91-20-3	0.032	0.0045	0.00086	mg/kg		1
n-Butylbenzene	104-51-8	BRL	0.0045	0.00046	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0045	0.00092	mg/kg	U	1
o-Xylene	95-47-6	0.0023	0.0045	0.00057	mg/kg	J	1
p-Isopropyltoluene	99-87-6	BRL	0.0045	0.00090	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0045	0.00086	mg/kg	U	1
Styrene	100-42-5	BRL	0.0045	0.00093	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0045	0.00060	mg/kg	U	1
Tetrachloroethylene	127-18-4	0.14	0.0045	0.00070	mg/kg		1
Toluene	108-88-3	0.0028	0.0045	0.00066	mg/kg	J	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0045	0.00061	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0045	0.00079	mg/kg	U	1
Trichloroethene	79-01-6	0.31	0.0045	0.00074	mg/kg	E	1
Trichlorofluoromethane	75-69-4	BRL	0.0045	0.00046	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0045	0.00048	mg/kg	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24433 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24433 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)

Prep Method: SW5030B

Date Analyzed: Nov-21-04 18:49

Analyst: MVRRO1

Date Prep: Nov-21-04 16:04

Tech: MVRRO1

Seq Number: 24534

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24433 BLK
Lab Sample Id: 24433 BLK
Sample Depth:

Matrix: WATER
Date Collected:

% Moisture:
Date Received:

Analytical Method: VOCs by SW8260B (25ml purge)

Prep Method: SW5030B

Date Analyzed: Nov-21-04 18:49

Analyst: MVRR01

Date Prep: Nov-21-04 16:04

Tech: MVRR01

Seq Number: 24534

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24437 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24437 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035

Date Analyzed: Nov-22-04 13:37

Analyst: MVRR01

Date Prep: Nov-22-04 12:02

Tech: MVRR01

Seq Number: 24538

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	0.0050	0.00075	mg/kg	U	1
1,1,1-Trichloroethane	71-55-6	BRL	0.0050	0.00061	mg/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	0.0050	0.00085	mg/kg	U	1
1,1,2-Trichloroethane	79-00-5	BRL	0.0050	0.00073	mg/kg	U	1
1,1-Dichloroethane	75-34-3	BRL	0.0050	0.00053	mg/kg	U	1
1,1-Dichloroethene	75-35-4	BRL	0.0050	0.00068	mg/kg	U	1
1,1-Dichloropropene	563-58-6	BRL	0.0050	0.00056	mg/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2,3-Trichloropropane	96-18-4	BRL	0.0050	0.00092	mg/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	0.0050	0.00098	mg/kg	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	0.0050	0.0010	mg/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	BRL	0.0050	0.00052	mg/kg	U	1
1,2-Dichlorobenzene	95-50-1	BRL	0.0050	0.00067	mg/kg	U	1
1,2-Dichloroethane	107-06-2	BRL	0.0050	0.00065	mg/kg	U	1
1,2-Dichloropropane	78-87-5	BRL	0.0050	0.00056	mg/kg	U	1
1,3,5-trimethylbenzene	108-67-8	BRL	0.0050	0.00098	mg/kg	U	1
1,3-Dichlorobenzene	541-73-1	BRL	0.0050	0.00050	mg/kg	U	1
1,3-Dichloropropane	142-28-9	BRL	0.0050	0.00065	mg/kg	U	1
1,4-Dichlorobenzene	106-46-7	BRL	0.0050	0.0010	mg/kg	U	1
2,2-Dichloropropane	594-20-7	BRL	0.0050	0.00088	mg/kg	U	1
2-Butanone	78-93-3	BRL	0.010	0.00052	mg/kg	U	1
2-Chlorotoluene	95-49-8	BRL	0.0050	0.0010	mg/kg	U	1
2-Hexanone	591-78-6	BRL	0.010	0.00068	mg/kg	U	1
4-Chlorotoluene	106-43-4	BRL	0.0050	0.00088	mg/kg	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	0.010	0.00064	mg/kg	U	1
Acetone	67-64-1	BRL	0.010	0.0013	mg/kg	U	1
Benzene	71-43-2	BRL	0.0050	0.00063	mg/kg	U	1
Bromobenzene	108-86-1	BRL	0.0050	0.00095	mg/kg	U	1
Bromochloromethane	74-97-5	BRL	0.0050	0.00095	mg/kg	U	1
Bromodichloromethane	75-27-4	BRL	0.0050	0.00067	mg/kg	U	1
Bromoform	75-25-2	BRL	0.0050	0.00060	mg/kg	U	1
Bromomethane	74-83-9	BRL	0.0050	0.00050	mg/kg	U	1
Carbon Disulfide	75-15-0	BRL	0.0050	0.0014	mg/kg	U	1
Carbon Tetrachloride	56-23-5	BRL	0.0050	0.00081	mg/kg	U	1
Chlorobenzene	108-90-7	BRL	0.0050	0.00074	mg/kg	U	1
Chloroethane	75-00-3	BRL	0.0050	0.0016	mg/kg	U	1
Chloroform	67-66-3	BRL	0.0050	0.00079	mg/kg	U	1
Chloromethane	74-87-3	BRL	0.0050	0.00060	mg/kg	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	0.0050	0.00080	mg/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	0.0050	0.00068	mg/kg	U	1
Dibromochloromethane	124-48-1	BRL	0.0050	0.00070	mg/kg	U	1
Dibromomethane	74-95-3	BRL	0.0050	0.00062	mg/kg	U	1
Dichlorodifluoromethane	75-71-8	BRL	0.0050	0.00063	mg/kg	U	1
Ethylbenzene	100-41-4	BRL	0.0050	0.00069	mg/kg	U	1



Certificate of Analytical Results 7240

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24437 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24437 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B

Prep Method: SW5035

Date Analyzed: Nov-22-04 13:37

Analyst: MVRR01

Date Prep: Nov-22-04 12:02

Tech: MVRR01

Seq Number: 24538

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	0.0050	0.00065	mg/kg	U	1
Isopropylbenzene	98-82-8	BRL	0.0050	0.00083	mg/kg	U	1
m,p-Xylene	136777-61-2	BRL	0.010	0.0018	mg/kg	U	1
Methylene Chloride	75-09-2	BRL	0.0050	0.0013	mg/kg	JU	1
Naphthalene	91-20-3	BRL	0.0050	0.00095	mg/kg	U	1
n-Butylbenzene	104-51-8	BRL	0.0050	0.00051	mg/kg	U	1
n-Propylbenzene	103-65-1	BRL	0.0050	0.0010	mg/kg	U	1
o-Xylene	95-47-6	BRL	0.0050	0.00063	mg/kg	U	1
p-Isopropyltoluene	99-87-6	BRL	0.0050	0.0010	mg/kg	U	1
Sec-Butylbenzene	135-98-8	BRL	0.0050	0.00095	mg/kg	U	1
Styrene	100-42-5	BRL	0.0050	0.0010	mg/kg	U	1
tert-Butylbenzene	98-06-6	BRL	0.0050	0.00066	mg/kg	U	1
Tetrachloroethylene	127-18-4	BRL	0.0050	0.00077	mg/kg	U	1
Toluene	108-88-3	BRL	0.0050	0.00073	mg/kg	U	1
trans-1,2-dichloroethene	156-60-5	BRL	0.0050	0.00067	mg/kg	U	1
trans-1,3-dichloropropene	10061-02-6	BRL	0.0050	0.00087	mg/kg	U	1
Trichloroethene	79-01-6	BRL	0.0050	0.00082	mg/kg	U	1
Trichlorofluoromethane	75-69-4	BRL	0.0050	0.00051	mg/kg	U	1
Vinyl Chloride	75-01-4	BRL	0.0050	0.00053	mg/kg	U	1

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Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 20:52

Project ID: 6301-03-0011-1901-1000

Work Order #: 7240

Lab Batch #: 24538

Sample: 24437 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0487	0.0500	97	75-125	
Bromofluorobenzene	0.0489	0.0500	98	75-125	
Toluene-D8	0.0485	0.0500	97	75-125	

Lab Batch #: 24538

Sample: 7240-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0408	0.0420	97	70-130	
Bromofluorobenzene	0.0415	0.0420	99	70-130	
Toluene-D8	0.0433	0.0420	103	70-130	

Lab Batch #: 24538

Sample: 7240-003 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0404	0.0415	97	70-130	
Bromofluorobenzene	0.0413	0.0415	100	70-130	
Toluene-D8	0.0407	0.0415	98	70-130	

Lab Batch #: 24538

Sample: 7240-004 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
VOCs by SW8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	0.0391	0.0403	97	70-130	
Bromofluorobenzene	0.0384	0.0403	95	70-130	
Toluene-D8	0.0399	0.0403	99	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = $100 * A / B$
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 20:52

Work Order #: 7240

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24534

Sample: 24433 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	10.3	10.0	103	80-120	
Bromofluorobenzene	9.11	10.0	91	80-120	
Toluene-D8	11.1	10.0	111	80-120	

Lab Batch #: 24534

Sample: 7240-001 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.6	10.0	116	70-130	
Bromofluorobenzene	9.10	10.0	91	70-130	
Toluene-D8	11.1	10.0	111	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Work Order #: 7240

Lab Batch #: 24538

Reporting Units: mg/kg

Sample: 24437 BKS

Batch #: 1

Report Date:

12/10/04 20:52

Project ID:

6301-03-0011-1901-1000

Matrix: S

VOCs by SW8260B		BLANK /BLANK SPIKE RECOVERY STUDY				
Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1,1-Trichloroethane	<0.00061	0.050	0.042	84	75-125	
1,1-Dichloroethane	<0.00053	0.050	0.057	114	75-125	
1,1-Dichloroethene	<0.00068	0.050	0.056	112	75-125	
Benzene	<0.00063	0.050	0.056	112	75-125	
Bromodichloromethane	<0.00067	0.050	0.055	110	75-125	
Chlorobenzene	<0.00074	0.050	0.054	108	75-125	
cis-1,2-Dichloroethene	<0.00080	0.050	0.057	114	75-125	
Tetrachloroethylene	<0.00077	0.050	0.052	104	75-125	
Toluene	<0.00073	0.050	0.054	108	75-125	
Trichloroethene	<0.00082	0.050	0.055	110	75-125	
Vinyl Chloride	<0.00053	0.050	0.049	98	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit

BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date 12/10/04 20:52
 Project ID: 6301-03-0011-1901-1000
 Matrix: W

Work Order #: 7240
 Lab Batch ID: 24534
 Units: ug/L

Sample: 24433 BKS

Batch #: 1

Analytes	BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1,1-trichloroethane	<0.33	10	11	110	10	10	100	10	80-120	30	
1,1-Dichloroethane	<0.31	10	10	100	10	10	100	0	80-120	30	
1,1-Dichloroethene	<0.16	10	11	110	10	10	100	10	80-120	30	
Benzene	<0.16	10	11	110	10	9.4	94	16	80-120	30	
Bromochloromethane	<0.090	10	10	100	10	10	100	0	80-120	30	
Chlorobenzene	<0.13	10	10	100	10	9.9	99	1	80-120	30	
cis-1,2-dichloroethene	<0.19	10	10	100	10	9.9	99	1	80-120	30	
Tetrachloroethylene	<0.35	10	11	110	10	11	110	0	80-120	30	
Toluene	<0.16	10	11	110	10	10	100	10	80-120	30	
Trichloroethene	<0.12	10	10	100	10	10	100	0	80-120	30	
Vinyl Chloride	<0.17	10	9.4	94	10	9.1	91	3	80-120	30	

Relative Percent Difference RPD = 200 * [(D-G)/(D+G)]
 Blank Spike Recovery [D] = 100 * (C)/[B]
 Blank Spike Duplicate Recovery [G] = 100 * (F)/[E]
 All results are based on MDL and Validated for QC Purposes
 F = RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/10/04 20:52
Project ID: 6301-03-0011-1901-1000

Work Order #: 7240
Lab Batch ID: 24538
Reporting Units: mg/kg

QC- Sample ID: 7240-003 MS Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
VOCs by SW8260B											
1,1,1-Trichloroethane	<0.0010	0.045	0.032	71	0.046	0.036	78	9	70-130	30	
1,1-Dichloroethane	0.0025	0.045	0.047	99	0.046	0.052	108	9	70-130	30	
1,1-Dichloroethene	<0.0010	0.045	0.047	104	0.046	0.052	113	8	70-130	30	
Benzene	<0.0010	0.045	0.045	100	0.046	0.049	107	7	70-130	30	
Bromodichloromethane	<0.0010	0.045	0.044	98	0.046	0.047	102	4	70-130	30	
Chlorobenzene	<0.0010	0.045	0.041	91	0.046	0.042	91	0	70-130	30	
cis-1,2-Dichloroethene	0.052	0.045	0.090	84	0.046	0.093	89	6	70-130	30	
Tetrachloroethylene	0.013	0.045	0.057	98	0.046	0.060	102	4	70-130	30	
Toluene	<0.0010	0.045	0.043	96	0.046	0.046	100	4	70-130	30	
Trichloroethene	0.0044	0.045	0.050	101	0.046	0.053	106	5	70-130	30	
Vinyl Chloride	<0.0010	0.045	0.040	89	0.046	0.044	96	8	70-130	30	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)

* RPD exceeded the laboratory control limits



8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7240

SAS No. : _____

Instrument ID: HP-MSJSDG No. N/ALab File ID: J112104U14440Date Analyzed: 11/21/04EPA Sample No. : VSTD010J23Time Analyzed : 17:09GC Column: ZB-624ID: .25 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	530470	5.96	667274	11.44	183329	14.66
UPPER LIMIT	1060940	6.46	1334548	11.94	366658	15.16
LOWER LIMIT	265235	5.46	333637	10.94	91665	14.16
EPA SAMPLE						
1 24433 BLK	449728	5.97	500650	11.44	143318	14.66
2 24433 BKS	477594	5.96	624362	11.44	176762	14.65
3 24433 BSD	502595	5.97	653843	11.44	169350	14.66
4 TB-11-20-04	468163	5.97	573055	11.44	159619	14.65

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : ACCURA ANALYTICAL LABSContract : 6301-03-0011-1901-1000Lab Code : ACCURACase No. : 7240

SAS No. : _____

Instrument ID: AG-MSKSDG No. N/ALab File ID: K112204\K012941Date Analyzed: 11/22/04EPA Sample No. : VSTD050K01Time Analyzed : 12:39GC Column: DB-624ID: .18 (mm)

Heated Purge (Y/N) _____

	IS1 (PFB) AREA	RT #	IS2 (CBZ) AREA	#	RT #	IS3 (DCB) AREA	#	RT #
	12 HOUR STD	416707	3.97	644172	8.37	386324		10.89
	UPPER LIMIT	833414	4.47	1288344	8.87	772648		11.39
	LOWER LIMIT	208354	3.47	322086	7.87	193162		10.39
	EPA SAMPLE							
1	24437 BLK	343396	3.97	548447	8.37	317735		10.89
2	24437 BKS	377737	3.97	583901	8.37	361152		10.89
3	OU4-PIT1-CS8	329819	3.97	531545	8.37	294633		10.89
4	OU4-PIT1-CS15	323653	3.98	519409	8.37	310599		10.89
5	OU4-PIT1-SO19	317764	3.98	527026	8.36	301232		10.89
6	OU4-PIT1-CS8 MS	358476	3.96	556649	8.37	317563		10.89
7	OU4-PIT1-CS8 MSD	363365	3.97	560370	8.37	302682		10.89

IS1 (PFB) = Pentafluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of the QC limits



EPA Defined Qualifiers Codes used by AAL

- BRL:** This abbreviation indicates that the analytical results were Below the Reporting Limit (BRL).
- U:** The compound was analyzed for but not detected.
- J:** This indicates an estimated value. This flag is used in 3 incidences.
- (1) When estimating a concentration for tentatively identified compounds where 1:1 response is assumed.
 - (2) When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the Contract Required Detection Limit (CRDL) – or Reporting Limit - but greater than the MDL.
 - (3) When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL – or Reporting Limit- but greater than MDL.
- N:** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" flag is not used.
- P:** This is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with "P"
- C:** This applies to pesticide result where the identification has been confirmed by GC/MS. Do not apply if this flag if analyte(s) were not confirmed. Used the laboratory-defined flag instead (see the X qualifier).
- B:** This is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The flag shall be used for a tentatively identified compound as well as for a positively identified target compound.
- E:** This identifies compounds whose concentrations exceed the upper level of the linear calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract should be diluted and re-analyzed.
- Note: For Total xylene, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately.*
- X:** Defined by the laboratory
- Z:** Surrogates/Spikes results exceeds quality control limits
- ZZ:** Surrogates/Spikes results exceeds quality control limits in multiple samples
- ***:** Surrogate recoveries were diluted out
- M:** Manual integrations were necessary and an "m" qualifying code is present on the quantitation report next to the analyte.
- D:** This flag indicates that the identified compound is reported from the dilution run.



ACCURA ANALYTICAL LABORATORY, INC. (AAL)
 6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
 FL Certification #E87429 NC Certification #483 SC Certification #98015
 Utah Certification #AALI1 USACE Approved Navy Certification code NFESC 413
Case Narrative

AAL Work Order # 7255

Client Project: DSCR OU4 Source Removal / 6301-03-0011-1901-1000

Accura Analytical Laboratory Inc. certifies that the results meet all requirements of the NELAC Standards.

The data package includes a total of **42** pages including: case narrative, Chain of Custody, Request for Analysis Forms, Sample Receipt Checklist, analytical results pages, QC surrogate recovery pages, QC Blank Spike / Blank Spike Duplicate recovery pages, QC MS/MSD recovery pages, 1 subcontract laboratory's batch QC report page, and a list of common EPA qualifier codes used by AAL.

The following items were noted concerning this work order:

Receiving Notations:

1. The samples were received at 2°C.

Michael F Broome

Michael Broome

Receiving

November 23, 2004

Date

Reactive Sulfide Notations:

1. %RPD on the sample duplicate was outside laboratory control limits, all other QC within laboratory control limits.

Lisandra J. Betancourt

Lisandra J. Betancourt

Wet Chemistry Analyst

November 23, 2004

Date

Reactive Cyanide Notations:

1. MS/MSD outside the laboratory control limits, all other QC within laboratory control limits.

Lisandra J. Betancourt

Lisandra J. Betancourt

November 29, 2004

Date

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 Utah Certification #AAL11 USACE Approved Navy Certification code NFESC 413
Case Narrative

DRO by SW8015B Notations:

1. The following sample required dilution due to high analyte concentration, resulting in elevated detection limits: OU4-IDW-SO-6.
2. The relative percent difference between the matrix spike and matrix spike duplicate was outside the method specified limit.

Prashant Bagade
 GC Analyst

November 30, 2004
 Date

TCLP Metals by SW1311/6010B Notations:

1. The Method duplicate RPD was outside acceptance criteria for Ni. Sample concentrations were below the RL.

Michael C Jordan
 Michael C Jordan
 Metals Analyst

November 30, 2004
 Date

Project Manager's Notations:

1. The soil sample results are reported on a dry weight basis as appropriate for the "total" analyses methods.
2. The following analyses were performed by Xenco Laboratories, 11381 Meadowglen, Ste. L, Houston, TX 77082: TOX by EPA 9020B.

The lab contact person at Xenco Laboratories is Brent Barron at 281-589-0692.

These case narrative notations have been reviewed/edited by:

David C Fuller
 David C. Fuller
 VP - Client Services

December 01, 2004
 Date

44515

Page 1 of 1
 6017 Financial Drive, Norcross, GA 30071
 Phone # (770) 449-8800 Fax # (770) 449-5477

ACCURA ANALYTICAL LABORATORY, INC.
 Environmental Analytical Services

CHAIN OF CUSTODY

Company Name: MATEC
 Address: 9625 JEFFERSON DAVIS HWY, RICHMOND VAPO.# 23237
 Results Sent to: (Client Contact): JUDY HARTNESS
 Email address: JHARTNESS@MATEC.COM
 Contact Phone #: 770-421-3336 Fax #: 770-421-3343
 Project (Site) Name: DISCR OV4 SOURCE REMOVAL
 Project Number: 6301-03-0011-1901-1000
 Billing address: 3200 TRINPOINT DRIVE SUITE 1000 KENNESAW, GA 30144
 For Laboratory Use Only:
 QC Level: 1 2 3 4 CLP Like
 Custody Seal(s): Y N Tape
 AAL LIMS System ID: 3m 23
 Receiver's Initials/Temp: 3m 23
 AAL Work Order #: 7255

Sampler(s): (signature) [Signature] Preservation Code: (See below)

Sampler(s): (printed) TED A. WITTEMAN

Line No	Sample ID #	Sample Date / Time	Composite	Grab	Matrix (See below)	Sample Location	No. of Containers	Analysis Requested	Field Comments	AAL Lab ID:
1	004-1D0-50-6	11-22-04/0900	X		S	OV4 STOCKPILE C COMPOSITE (SOUTH)	9	SW8260B SW8015M SW602/095M CH 734/095 1010 SW 995/CH 733 Asm-DB 2216	TUP SAMPLES	7255
2	004-1D0-50-7	11-22-04/0930	X		S	OV4 STOCKPILE C COMPOSITE (NORTH)	9			-1001
3	TB-11-22-04	11-22-04/1200			W	TRAP BLANK	2			-002
4										-V003
5										
6										
7										
8										
9										
10										

1) Relinquished By: [Signature] Date / Time: 11-22-04/17:00 2) Received By: FED KX

3) Relinquished By: FED KX Date / Time: 11/23/04 1245 4) Received By: [Signature]

Delivered by: (Circle One)
 Fed Ex / UPS / DHL / AAL Pickup / Hand / Other
 Turnaround Time Requested:

Matrix Guide: (W=Water) (DW=Drinking Water) (CW=Groundwater) (SW=Surface Water) (E=Liquid) (O=Oil) (S=Soil) (SD=Solid) (SL=Sludge) (A=Air) (C=Air Cartridge)
 Preservation Codes: 1=HCL / 2=HNO₃ / 3=H₂SO₄ / 4=NaOH+NaAsO₂ / 5=NaOH+ZnAc / 6=Na₂S₂O₃ / 7=NaHSO₄ / 8=MeOH

783 652

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

WO # 7255-001

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: SOIL

Sample ID: OU4-IDW-SO-6

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW1311	
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitabilitsw	Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cy:SW9095/Ch7.3.3/ASTM-D2216		

Comments: _____

Prepared By: TED WITTEMAN N

Checked By: _____

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

7255-002

Request For Analysis Form

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: SOIL

Sample ID: OU4-IDW-SO-7

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
4 oz. jar	2	No Preserve Cool to 4C	TCLP VOCs	SW8260B	SW1311
8 oz. jar	1	No Preserve Cool to 4C	TCLP SVOCs/Metals/Hg	SW8270C/6010B/74SW1311	
40 mL Vials	2	Methanol Cool to 4C	TPH-GRO	SW8015M	
8 oz. jar	1	No Preserve Cool to 4C	PCBs/TPH-DRO	SW8082/8015M	
8 oz. jar	1	No Preserve Cool to 4C	Total Organic Halides (TOX)	SW9023	
8 oz. jar	1	Cool to 4C	React-Sulfide/Corrosivity/Ignitability	sw Ch 7.3.4/9045/1010	
8 oz. jar	1	Cool to 4C	Pt Fltr Liq/% Moist/React-Cy	SW9095/Ch7.3.3/ASTM-D2216	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

783 654

MACTEC Engineering & Consulting, Inc.
3200 Town Point Drive, #100
Kennesaw, Georgia 30144

Request For Analysis Form 7255-003

Project Manager: J. Jenkins

Project Chemist: J. Hartness

Project: DSCR

Matrix: GROUNDWATER

Sample ID: TB- 11 22-04

CONTAINER	NO	PRESERVATION	PARAMETER	METHOD	PREP
40 mL VOA vial	2	24 HOUR TAT HCl to pH <2/Cool to 4C	Volatile Organics	SW8260B	

Comments: _____

Prepared By: TED WITTEMAN

Checked By: _____

ACCURA ANALYTICAL LABORATORY, INC.

SAMPLE RECEIPT CHECKLIST VERSION 6 Client Code: 1405-3 AAL Project Mgr: DCF

Client Project Name: DSCR 004 SOURCE REMOVAL ACCURA Work Order#: 7255

Are there EnCores, tests with < 48 Hr hold times, or RUSH TAT's requested? YES NO
If YES, you must communicate RUSH analyses to the appropriate analyst(s) immediately!!! / or preserve EnCores (see #76 below)!!!
Preliminary Examination: Initials: SM Date received: 11/23/04 Date cooler was opened: 11/23/04

- 1. Did cooler/package come with a shipping slip (airbill, Etc.)? YES NO
If YES, enter carrier name and airbill number here: fed ex - 8434 5894 5230
Describe type of packing in cooler: _____
If cooler was hand delivered, CIRCLE HERE, skip to item #5
- 2. Were custody seals on outside of cooler? YES NO
If YES, how many: 2 seal dated: 11/22/04 seal name: Unknown
- 3. Were custody seals unbroken and intact at the date and time of arrival? YES N/A NO
- 4. Were custody papers sealed in a plastic bag to prevent damage to chain of custody? YES NO
- 5. If required, was enough ice used? (Internal cooler temperature, 2c) YES N/A NO
- 6. Did you sign custody papers in the appropriate place? YES NO
- 7. Was project identifiable from custody papers? YES NO
If YES, enter project name at the top.

Complete project file with green sheet, proper file tag, and shipping documentation. Line up samples following chain. Complete Container Receipt Verification form (include extra containers for dissolved metals filtrates). Complete login in XENCO and generate AAL ID Labels.

- 8. Did all containers arrive unbroken and were labels in good condition? YES NO
- 9. Were custody papers filled out properly and did all labels agree with custody papers? YES NO
- 10. Were correct containers and sufficient amount of sample sent for the test indicated? YES NO
- 11. All samples collected within three days of date received for these analyses (Reactive Cn & S, Solids in H2O, Sulfide, Sulfite, IALL! Extractable Organic Waters)? YES N/A NO
If NO, coordinate with the project manager to ensure that no samples go out of hold!!!
- 12. No residual chlorine found in waters for these analyses: (Cyanide, PAH, SVOC, Pesticides, PCB's, Herbicides)? YES N/A NO
Checked by: _____ (Initials)
- 13. Were samples properly chemically preserved, if required, upon receipt? YES N/A NO
(For example: pH checked for waters for all Metals, Wet Chemistry, Pesticides, PCB's, Herbicides, and VOC/BTEX samples submitted with HCL for waters and in either Encore samplers or NaHSO4 labeled vials for soils)
Preservation checked by: SM (Initials)
- 14. Were air bubbles (>1/4 inch) absent in VOC/BTEX samples? YES N/A NO
If NO, list ID # on back and label vials with Do Not Use - Soil Nomenclature Management
- 15. If there are samples for dissolved metals, were they field filtered? YES N/A NO
If NO, list date and time samples were filtered and preserved in lab:

- 16. Were Encore samplers included? YES NO
If YES, date and time preserved with NaHSO4: _____ By whom: _____
- 17. Does this submittal contain soil NaHSO4 vials for BTEX/PRO/VOC'S? YES NO
If YES, vials weighed by and entered into vial database by: SM
- 18. Initials of laboratory personnel responsible for labeling laboratory I.D. numbers on containers: SM

Keep samples and chain out. Before moving samples to their appropriate location, another person must review the entire project ensuring that information on the AAL ID Barcode label matches the container label, and that all information is consistent with the chain.
Final check and samples logged to locations by: _____ (Initials) DCF 11/29/04

- 19. Was it necessary to call the assigned project manager in order to proceed with login? YES N/A NO
If YES, give details on the back of this form.
- 20. Who was called? SM DAVID By whom? SM Date/Time: see attached emails

Project Mgr. Review: SM (Initials) 11/24/04 (Date)

N/A DCF 11/29/04



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-6		Matrix: SOIL		% Moisture: 11			
Lab Sample Id: 7255-001		Date Collected: Nov-22-04 09:00		Date Received: Nov-23-04 12:45			
Sample Depth:							
Analytical Method: PCBs by 8082			Prep Method: SW3545				
Date Analyzed: Nov-29-04 16:49		Analyst: MJL01	Date Prep: Nov-24-04 13:20		Tech: ENP01		
Seq Number: 24593							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	37	4.6	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	37	9.7	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	37	6.5	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	37	17	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	37	14	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	37	5.1	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	37	8.4	ug/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method:				
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Sulfide		160	110	2.2	mg/kg		1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3			Prep Method: SW7.3				
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01		
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.022	mg/kg	U	1
Analytical Method: TOX by EPA 9020B			Prep Method:				
Date Analyzed: Nov-29-04 19:47		Analyst: ANDRES	Date Prep:		Tech: ANDRES		
Seq Number: 24614							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halides	TOX	28.0	11.2	3.67	mg/kg		1
Analytical Method: TPH DRO by SW8015M			Prep Method: SW3545				
Date Analyzed: Nov-29-04 13:42		Analyst: PB01	Date Prep: Nov-23-04 10:00		Tech: ENP01		
Seq Number: 24587							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		780	110	17	mg/kg		10



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-6	Matrix: SOIL	% Moisture: 11
Lab Sample Id: 7255-001	Date Collected: Nov-22-04 09:00	Date Received: Nov-23-04 12:45
Sample Depth:		

Analytical Method: TPH GRO by SW8015M		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 12:09	Analyst: AME01	Date Prep: Nov-24-04 10:06	Tech: AME01
Seq Number: 24570			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		34	4.8	0.71	mg/kg		50

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Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-6		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7255-001		Date Collected: Nov-22-04 09:00		Date Received: Nov-23-04 12:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01		Date Prep:			
		Seq Number: 24575		Tech: CKM01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01		Date Prep:			
		Seq Number: 24568		Tech: LJB01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-30-04 15:09		Analyst: NK01		Date Prep: Nov-29-04 11:35			
		Seq Number: 24623		Tech: OK001			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-30-04 13:40		Analyst: MCJ01		Date Prep: Nov-29-04 11:00			
		Seq Number: 24627		Tech: OK001			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.087	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	0.0026	1.0	0.0016	mg/L	J	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.021	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.13	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-6	Matrix: SOIL	% Moisture:
Lab Sample Id: 7255-001	Date Collected: Nov-22-04 09:00	Date Received: Nov-23-04 12:45
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C		Prep Method: SW3520C	
Date Analyzed: Nov-29-04 20:09	Analyst: CTP01	Date Prep: Nov-29-04 14:40	Tech: VHB01
Seq Number: 24606			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	BRL	0.10	0.0081	mg/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-29-04 14:10	Analyst: TAG01	Date Prep: Nov-29-04 11:18	Tech: TAG01
Seq Number: 24604			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	0.26	0.050	0.012	mg/L		10
Trichloroethene	79-01-6	0.16	0.050	0.011	mg/L		10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Analytical Method: pH by SW9045C		Prep Method:	
Date Analyzed: Nov-30-04 15:30	Analyst: CKM01	Date Prep:	Tech: CKM01
Seq Number: 24618			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		5.01	N/A	0	pH		1

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Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-7		Matrix: SOIL		% Moisture: 13			
Lab Sample Id: 7255-002		Date Collected: Nov-22-04 09:30		Date Received: Nov-23-04 12:45			
Sample Depth:							
Analytical Method: PCBs by 8082				Prep Method: SW3545			
Date Analyzed: Nov-29-04 17:19		Analyst: MJL01	Date Prep: Nov-24-04 13:20		Tech: ENP01		
Seq Number: 24593							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	38	4.7	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	38	10	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	38	6.6	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	38	18	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	38	14	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	38	5.2	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	38	8.6	ug/kg	U	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3				Prep Method:			
Date Analyzed: Nov-24-04 10:00		Analyst: LJB01	Date Prep:		Tech: LJB01		
Seq Number: 24569							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Sulfide		92	110	2.3	mg/kg	J	1
Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3				Prep Method: SW7.3			
Date Analyzed: Nov-29-04 08:45		Analyst: LJB01	Date Prep: Nov-27-04 15:00		Tech: LJB01		
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.023	mg/kg	U	1
Analytical Method: TOX by EPA 9020B				Prep Method:			
Date Analyzed: Nov-29-04 19:47		Analyst: ANDRES	Date Prep:		Tech: ANDRES		
Seq Number: 24614							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halides	TOX	48.2	11.5	3.68	mg/kg		1
Analytical Method: TPH DRO by SW8015M				Prep Method: SW3545			
Date Analyzed: Nov-29-04 14:52		Analyst: PB01	Date Prep: Nov-23-04 10:00		Tech: ENP01		
Seq Number: 24587							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		69	11	1.7	mg/kg		1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-7	Matrix: SOIL	% Moisture: 13
Lab Sample Id: 7255-002	Date Collected: Nov-22-04 09:30	Date Received: Nov-23-04 12:45
Sample Depth:		

Analytical Method: TPH GRO by SW8015M		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 12:39	Analyst: AME01	Date Prep: Nov-24-04 10:06	Tech: AME01
Seq Number: 24570			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		170	4.1	0.62	mg/kg		50



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-7		Matrix: SOIL		% Moisture:			
Lab Sample Id: 7255-002		Date Collected: Nov-22-04 09:30		Date Received: Nov-23-04 12:45			
Sample Depth:							
Analytical Method: Flash Point (Closed Cup) by SW1010				Prep Method:			
Date Analyzed: Nov-24-04 12:00		Analyst: CKM01		Date Prep:			
		Seq Number: 24575		Tech: CKM01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0	Deg F		1
Analytical Method: Paint Filter/Free Liquids by SW9095A				Prep Method:			
Date Analyzed: Nov-23-04 16:30		Analyst: LJB01		Date Prep:			
		Seq Number: 24568		Tech: LJB01			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Percent Free Liquid	PF_LIQUID	BRL	1.00	0	%		1
Analytical Method: TCLP Mercury by SW1311/7470A				Prep Method: SW7470A_DIG			
Date Analyzed: Nov-30-04 15:32		Analyst: NK01		Date Prep: Nov-29-04 11:35			
		Seq Number: 24623		Tech: OK001			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1
Analytical Method: TCLP Metals by SW1311/6010B				Prep Method: SW3010A			
Date Analyzed: Nov-30-04 14:18		Analyst: MCJ01		Date Prep: Nov-29-04 11:00			
		Seq Number: 24627		Tech: OK001			
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	0.15	1.0	0.034	mg/L	J	1
Cadmium	7440-43-9	BRL	1.0	0.0016	mg/L	U	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.026	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.078	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: OU4-IDW-SO-7	Matrix: SOIL	% Moisture:
Lab Sample Id: 7255-002	Date Collected: Nov-22-04 09:30	Date Received: Nov-23-04 12:45
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C		Prep Method: SW3520C	
Date Analyzed: Nov-29-04 20:40	Analyst: CTP01	Date Prep: Nov-29-04 14:40	Tech: VHB01
Seq Number: 24606			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	0.16	0.10	0.0081	mg/L		1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-29-04 17:37	Analyst: TAG01	Date Prep: Nov-29-04 11:18	Tech: TAG01
Seq Number: 24604			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	0.035	0.050	0.017	mg/L	J	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	0.049	0.050	0.012	mg/L	J	10
Trichloroethene	79-01-6	5.5	0.50	0.11	mg/L	D	100
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10

Analytical Method: pH by SW9045C		Prep Method:	
Date Analyzed: Nov-30-04 15:30	Analyst: CKM01	Date Prep:	Tech: CKM01
Seq Number: 24618			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
pH		4.20	N/A	0	pH		1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: TB-11-22-04	Matrix: SOIL	% Moisture:
Lab Sample Id: 7255-003	Date Collected: Nov-22-04 12:00	Date Received: Nov-23-04 12:45
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 11:36	Analyst: MVRR01	Date Prep: Nov-24-04 08:38	Tech: MVRR01
Seq Number: 24603			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: TB-11-22-04	Matrix: SOIL	% Moisture:
Lab Sample Id: 7255-003	Date Collected: Nov-22-04 12:00	Date Received: Nov-23-04 12:45
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 11:36	Analyst: MVRR01	Date Prep: Nov-24-04 08:38	Tech: MVRR01
Seq Number: 24603			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1

Sample Id: 24448 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24448 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TPH DRO by SW8015M		Prep Method: SW3545	
Date Analyzed: Nov-29-04 11:22	Analyst: PB01	Date Prep: Nov-23-04 10:00	Tech: ENP01
Seq Number: 24587			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-DRO (C10-C28)		2.2	10	1.5	mg/kg	J	1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24466 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24466 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: PCBs by 8082		Prep Method: SW3545					
Date Analyzed: Nov-29-04 15:50	Analyst: MJL01	Date Prep: Nov-24-04 13:20	Tech: ENP01				
Seq Number: 24593							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Aroclor-1016	12674-11-2	BRL	33	4.1	ug/kg	U	1
Aroclor-1221	11104-28-2	BRL	33	8.7	ug/kg	U	1
Aroclor-1232	11141-16-5	BRL	33	5.8	ug/kg	U	1
Aroclor-1242	53469-21-9	BRL	33	15	ug/kg	U	1
Aroclor-1248	12672-29-6	BRL	33	12	ug/kg	U	1
Aroclor-1254	11097-69-1	BRL	33	4.5	ug/kg	U	1
Aroclor-1260	11096-82-5	BRL	33	7.5	ug/kg	U	1

Sample Id: 24467 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24467 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TPH GRO by SW8015M		Prep Method: SW5030B					
Date Analyzed: Nov-24-04 11:11	Analyst: AME01	Date Prep: Nov-24-04 10:06	Tech: AME01				
Seq Number: 24570							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TPH-GRO (C6-C10)		1.8	10	1.5	mg/kg	J	50

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 24468 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3		Prep Method: SW7.3					
Date Analyzed: Nov-29-04 08:45	Analyst: LJB01	Date Prep: Nov-27-04 15:00	Tech: LJB01				
Seq Number: 24571							
Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.0	0.020	mg/kg	U	1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24470 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24470 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP Mercury by SW1311/7470A		Prep Method: SW7470A_DIG	
Date Analyzed: Nov-30-04 14:57	Analyst: NK01	Date Prep: Nov-29-04 11:35	Tech: OK001
Seq Number: 24623			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Mercury	7439-97-6	BRL	0.0200	0.000860	mg/L	U	1

Sample Id: 24472 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24472 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP Metals by SW1311/6010B		Prep Method: SW3010A	
Date Analyzed: Nov-30-04 13:22	Analyst: MCJ01	Date Prep: Nov-29-04 11:00	Tech: OK001
Seq Number: 24627			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Arsenic	7440-38-2	BRL	1.0	0.021	mg/L	U	1
Barium	7440-39-3	BRL	1.0	0.034	mg/L	U	1
Cadmium	7440-43-9	BRL	1.0	0.0016	mg/L	U	1
Chromium	7440-47-3	BRL	1.0	0.084	mg/L	U	1
Copper	7440-50-8	BRL	1.0	0.024	mg/L	U	1
Lead	7439-92-1	BRL	1.0	0.031	mg/L	U	1
Nickel	7440-02-0	0.014	1.0	0.0016	mg/L	J	1
Selenium	7782-49-2	BRL	1.0	0.073	mg/L	U	1
Silver	7440-22-4	BRL	1.0	0.0038	mg/L	U	1
Zinc	7440-66-6	0.080	1.0	0.012	mg/L	J	1



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24481 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24481 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP SVOCs by SW1311/8270C		Prep Method: SW3520C	
Date Analyzed: Nov-29-04 19:07	Analyst: CTP01	Date Prep: Nov-29-04 14:40	Tech: VHB01
Seq Number: 24606			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,4-Dichlorobenzene	106-46-7	BRL	0.10	0.0081	mg/L	U	1
2,4,5-Trichlorophenol	95-95-4	BRL	0.10	0.024	mg/L	U	1
2,4,6-Trichlorophenol	88-06-2	BRL	0.10	0.018	mg/L	U	1
2,4-Dinitrotoluene	121-14-2	BRL	0.10	0.012	mg/L	U	1
2-Methylphenol	95-48-7	BRL	0.10	0.020	mg/L	U	1
3 & 4-Methylphenol		BRL	0.20	0.022	mg/L	U	1
Hexachlorobenzene	118-74-1	BRL	0.10	0.018	mg/L	U	1
Hexachlorobutadiene	87-68-3	BRL	0.10	0.012	mg/L	U	1
Hexachloroethane	67-72-1	BRL	0.10	0.013	mg/L	U	1
Nitrobenzene	98-95-3	BRL	0.10	0.0085	mg/L	U	1
Pentachlorophenol	87-86-5	BRL	0.20	0.048	mg/L	U	1
Pyridine	110-86-1	BRL	0.10	0.025	mg/L	U	1

Sample Id: 24489 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24489 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-29-04 12:38	Analyst: TAG01	Date Prep: Nov-29-04 11:18	Tech: TAG01
Seq Number: 24604			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	BRL	0.050	0.012	mg/L	U	10
Trichloroethene	79-01-6	BRL	0.050	0.011	mg/L	U	10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA

DSCR OU4 Source Removal

Sample Id: 24490 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24490 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 09:37	Analyst: MVRR01	Date Prep: Nov-24-04 08:38	Tech: MVRR01
Seq Number: 24603			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	BRL	1.0	0.12	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	BRL	1.0	0.33	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	BRL	1.0	0.39	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	BRL	1.0	0.17	ug/L	U	1
1,1-Dichloroethane	75-34-3	BRL	1.0	0.31	ug/L	U	1
1,1-Dichloroethene	75-35-4	BRL	1.0	0.16	ug/L	U	1
1,1-Dichloropropene	563-58-6	BRL	1.0	0.31	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	BRL	1.0	0.43	ug/L	U	1
1,2,3-Trichloropropane	96-18-4	BRL	1.0	0.38	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	BRL	1.0	0.12	ug/L	U	1
1,2,4-Trimethylbenzene	95-63-6	BRL	1.0	0.18	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	BRL	1.0	0.35	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	BRL	1.0	0.18	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	BRL	1.0	0.19	ug/L	U	1
1,2-Dichloroethane	107-06-2	BRL	1.0	0.15	ug/L	U	1
1,2-Dichloropropane	78-87-5	BRL	1.0	0.16	ug/L	U	1
1,3,5-Trimethylbenzene	108-67-8	BRL	1.0	0.17	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	BRL	1.0	0.16	ug/L	U	1
1,3-Dichloropropane	142-28-9	BRL	1.0	0.16	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	BRL	1.0	0.17	ug/L	U	1
2,2-Dichloropropane	594-20-7	BRL	1.0	0.47	ug/L	U	1
2-Butanone	78-93-3	BRL	10	0.86	ug/L	U	1
2-Chlorotoluene	95-49-8	BRL	1.0	0.15	ug/L	U	1
2-Hexanone	591-78-6	BRL	10	0.24	ug/L	U	1
4-Chlorotoluene	106-43-4	BRL	1.0	0.16	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	BRL	10	0.10	ug/L	U	1
Acetone	67-64-1	BRL	10	0.34	ug/L	U	1
Benzene	71-43-2	BRL	1.0	0.16	ug/L	U	1
Bromobenzene	108-86-1	BRL	1.0	0.12	ug/L	U	1
Bromochloromethane	74-97-5	BRL	1.0	0.47	ug/L	U	1
Bromodichloromethane	75-27-4	BRL	1.0	0.090	ug/L	U	1
Bromoform	75-25-2	BRL	1.0	0.090	ug/L	U	1
Bromomethane	74-83-9	BRL	1.0	0.77	ug/L	U	1
Carbon Disulfide	75-15-0	BRL	1.0	0.090	ug/L	U	1
Carbon Tetrachloride	56-23-5	BRL	1.0	0.16	ug/L	U	1
Chlorobenzene	108-90-7	BRL	1.0	0.13	ug/L	U	1
Chloroethane	75-00-3	BRL	1.0	0.17	ug/L	U	1
Chloroform	67-66-3	BRL	1.0	0.14	ug/L	U	1
Chloromethane	74-87-3	BRL	1.0	0.30	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	BRL	1.0	0.19	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	BRL	1.0	0.090	ug/L	U	1
Dibromochloromethane	124-48-1	BRL	1.0	0.070	ug/L	U	1
Dibromomethane	74-95-3	BRL	1.0	0.17	ug/L	U	1
Dichlorodifluoromethane	75-71-8	BRL	1.0	0.15	ug/L	U	1
Ethylbenzene	100-41-4	BRL	1.0	0.15	ug/L	U	1

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Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id: 24490 BLK	Matrix: WATER	% Moisture:
Lab Sample Id: 24490 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: VOCs by SW8260B (25ml purge)		Prep Method: SW5030B	
Date Analyzed: Nov-24-04 09:37	Analyst: MVRR01	Date Prep: Nov-24-04 08:38	Tech: MVRR01
Seq Number: 24603			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Hexachlorobutadiene	87-68-3	BRL	1.0	0.16	ug/L	U	1
Isopropylbenzene	98-82-8	BRL	1.0	0.17	ug/L	U	1
m,p-Xylenes	136777-61-2	BRL	2.0	0.21	ug/L	U	1
Methylene Chloride	75-09-2	BRL	1.0	0.30	ug/L	U	1
Naphthalene	91-20-3	BRL	1.0	0.39	ug/L	U	1
n-Butylbenzene	104-51-8	BRL	1.0	0.15	ug/L	U	1
n-Propylbenzene	103-65-1	BRL	1.0	0.17	ug/L	U	1
o-Xylene	95-47-6	BRL	1.0	0.16	ug/L	U	1
p-Isopropyltoluene	99-87-6	BRL	1.0	0.16	ug/L	U	1
sec-Butylbenzene	135-98-8	BRL	1.0	0.18	ug/L	U	1
Styrene	100-42-5	BRL	1.0	0.33	ug/L	U	1
tert-Butylbenzene	98-06-6	BRL	1.0	0.15	ug/L	U	1
Tetrachloroethylene	127-18-4	BRL	1.0	0.35	ug/L	U	1
Toluene	108-88-3	BRL	1.0	0.16	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	BRL	1.0	0.14	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	BRL	1.0	0.12	ug/L	U	1
Trichloroethene	79-01-6	BRL	1.0	0.12	ug/L	U	1
Trichlorofluoromethane	75-69-4	BRL	1.0	0.10	ug/L	U	1
Vinyl Chloride	75-01-4	BRL	1.0	0.17	ug/L	U	1

Sample Id: 24495 BLK	Matrix: SOIL	% Moisture:
Lab Sample Id: 24495 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TCLP VOCs by SW1311/8260B		Prep Method: SW5030B	
Date Analyzed: Nov-30-04 12:04	Analyst: AME01	Date Prep: Nov-30-04 10:18	Tech: TAG01
Seq Number: 24617			

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
1,1-Dichloroethene	75-35-4	BRL	0.050	0.015	mg/L	U	10
1,2-Dichloroethane	107-06-2	BRL	0.050	0.013	mg/L	U	10
2-Butanone	78-93-3	BRL	0.50	0.022	mg/L	U	10
Benzene	71-43-2	BRL	0.050	0.010	mg/L	U	10
Carbon Tetrachloride	56-23-5	BRL	0.050	0.012	mg/L	U	10
Chlorobenzene	108-90-7	BRL	0.050	0.017	mg/L	U	10
Chloroform	67-66-3	BRL	0.050	0.011	mg/L	U	10
Tetrachloroethylene	127-18-4	BRL	0.050	0.012	mg/L	U	10
Trichloroethene	79-01-6	BRL	0.050	0.011	mg/L	U	10
Vinyl Chloride	75-01-4	BRL	0.020	0.014	mg/L	U	10



Certificate of Analytical Results 7255

MACTEC Engineering and Consulting, Inc., Kennesaw, GA
DSCR OU4 Source Removal

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 24569 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Reactive Cyanide/Sulfide by SW846 Sec. 7.3	Prep Method:
Date Analyzed: Nov-24-04 10:00 Analyst: LJB01 Date Prep:	Tech: LJB01
Seq Number: 24569	

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Reactive Cyanide	57-12-5	BRL	1.1	0.023	mg/kg	U	1
Reactive Sulfide		BRL	110	2.3	mg/kg	U	1

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 24575 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: Flash Point (Closed Cup) by SW1010	Prep Method:
Date Analyzed: Nov-24-04 12:00 Analyst: CKM01 Date Prep:	Tech: CKM01
Seq Number: 24575	

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
Flash Point		>140	65.0	0.001	Deg F		1

Sample Id:	Matrix: SOIL	% Moisture:
Lab Sample Id: 657951 BLK	Date Collected:	Date Received:
Sample Depth:		

Analytical Method: TOX by EPA 9020B	Prep Method:
Date Analyzed: Nov-29-04 19:47 Analyst: ANDRES Date Prep:	Tech: ANDRES
Seq Number: 24614	

Parameter	Cas Number	Result	Rep Limit	MDL	Units	Flag	Dil
TOX, Total Organic Halides	TOX	BRL	10.0	3.26	mg/kg	U	1

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Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59

Work Order #: 7255

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24593

Sample: 24466 BLK / BLK

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	18.1	16.7	108	50-130	
Tetrachloro-m-xylene	15.2	16.7	91	50-130	

Lab Batch #: 24593

Sample: 24466 BLK / BLK

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	17.9	16.7	107	50-130	
Tetrachloro-m-xylene	13.6	16.7	81	50-130	

Lab Batch #: 24593

Sample: 7255-001 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	8.01	16.7	48	40-140	
Tetrachloro-m-xylene	17.8	16.7	107	40-140	

Lab Batch #: 24593

Sample: 7255-001 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	12.1	16.7	72	40-140	
Tetrachloro-m-xylene	10.7	16.7	64	40-140	

Lab Batch #: 24593

Sample: 7255-002 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Decachlorobiphenyl	9.26	16.7	55	40-140	
Tetrachloro-m-xylene	13.0	16.7	78	40-140	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDI, and validated for QC purposes

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59

Project ID: 6301-03-0011-1901-1000

Work Order #: 7255

Lab Batch #: 24593

Sample: 7255-002 / SMP

Batch: 1 Matrix: S

Units: ug/kg

SURROGATE RECOVERY STUDY					
PCBs by 8082	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Decachlorobiphenyl	11.9	16.7	71	40-140	
Tetrachloro-m-xylene	17.8	16.7	107	40-140	

Lab Batch #: 24606

Sample: 24481 BLK / BLK

Batch: 1 Matrix: S

Units: mg/L

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.7204	1.000	72	30-130	
2-Fluorobiphenyl	0.3104	0.5000	62	30-130	
2-Fluorophenol	0.5376	1.000	54	30-130	
Nitrobenzene-d5	0.2671	0.5000	53	30-130	
Phenol-d5	0.4634	1.000	46	30-130	
p-Terphenyl-d14	0.4658	0.5000	93	30-130	

Lab Batch #: 24606

Sample: 7255-001 / SMP

Batch: 1 Matrix: S

Units: mg/L

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.7501	1.000	75	30-130	
2-Fluorobiphenyl	0.3401	0.5000	68	30-130	
2-Fluorophenol	0.5925	1.000	59	30-130	
Nitrobenzene-d5	0.2783	0.5000	56	30-130	
Phenol-d5	0.5491	1.000	55	30-130	
p-Terphenyl-d14	0.4842	0.5000	97	30-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits, data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59

Work Order #: 7255

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24606

Sample: 7255-002 / SMP

Batch: 1 Matrix: S

Units: mg/L

SURROGATE RECOVERY STUDY					
TCLP SVOCs by SW1311/8270C	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
2,4,6-Tribromophenol	0.7038	1.000	70	30-130	
2-Fluorobiphenyl	0.2992	0.5000	60	30-130	
2-Fluorophenol	0.5282	1.000	53	30-130	
Nitrobenzene-d5	0.2587	0.5000	52	30-130	
Phenol-d5	0.4736	1.000	47	30-130	
p-Terphenyl-d14	0.4613	0.5000	92	30-130	

Lab Batch #: 24604

Sample: 24489 BLK / BLK

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	52.3	50.0	105	72-129	
4-Bromofluorobenzene	48.3	50.0	97	77-127	
Toluene-D8	56.6	50.0	113	84-114	

Lab Batch #: 24604

Sample: 7255-001 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	53.5	50.0	107	72-129	
4-Bromofluorobenzene	50.9	50.0	102	72-126	
Toluene-D8	49.9	50.0	100	81-116	

Lab Batch #: 24604

Sample: 7255-002 / SMP

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	52.1	50.0	104	72-129	
4-Bromofluorobenzene	49.6	50.0	99	72-126	
Toluene-D8	50.0	50.0	100	81-116	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59

Work Order #: 7255

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24617

Sample: 24495 BLK / BLK

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	57.1	50.0	114	72-129	
4-Bromofluorobenzene	54.3	50.0	109	77-127	
Toluene-D8	50.1	50.0	100	84-114	

Lab Batch #: 24617

Sample: 7255-002 DL / DIL

Batch: 1 Matrix: S

Units: ug/L

SURROGATE RECOVERY STUDY					
TCLP VOCs by SW1311/8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-D4	60.2	50.0	120	72-129	
4-Bromofluorobenzene	63.2	50.0	126	72-126	
Toluene-D8	52.9	50.0	106	81-116	

Lab Batch #: 24587

Sample: 24448 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	41.94	50.00	84	33-124	

Lab Batch #: 24587

Sample: 7255-001 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	5.772	5.000	115	33-124	

Lab Batch #: 24587

Sample: 7255-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Diesel Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
o-Terphenyl	51.90	50.00	104	33-124	

* Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 *** Poor recoveries due to dilution
 Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes.
 Z = Surrogate Recovery exceeded the Laboratory QC limits



Form 2 - Surrogate Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59

Work Order #: 7255

Project ID: 6301-03-0011-1901-1000

Lab Batch #: 24570

Sample: 24467 BLK / BLK

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Isopropyltoluene	0.122	0.100	122	70-130	

Lab Batch #: 24570

Sample: 7255-001 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Isopropyltoluene	0.124	0.100	124	70-130	

Lab Batch #: 24570

Sample: 7255-002 / SMP

Batch: 1 Matrix: S

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH (Gasoline Range Organics) by SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Isopropyltoluene	0.123	0.100	123	70-130	

Lab Batch #: 24603

Sample: 24490 BLK / BLK

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.0	10.0	110	80-120	
Bromofluorobenzene	9.15	10.0	92	80-120	
Toluene-D8	11.5	10.0	115	80-120	

Lab Batch #: 24603

Sample: 7255-003 / SMP

Batch: 1 Matrix: W

Units: ug/L

SURROGATE RECOVERY STUDY					
VOCs by SW8260B (25ml purge)	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,2-Dichloroethane-d4	11.7	10.0	117	70-130	
Bromofluorobenzene	8.61	10.0	86	70-130	
Toluene-D8	11.0	10.0	110	70-130	

- * Surrogate outside of Laboratory QC limits
 - ** Surrogates outside limits; data and surrogates confirmed by reanalysis
 - *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B
 All results are based on MDL and validated for QC purposes
 Z = Surrogate Recovery exceeded the Laboratory QC limits



3F
SOIL PESTICIDE BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY

Lab Name: ACCURA ANALYTICAL LAB.Contract : 6301-03-0011-1901-1000Lab Code : ACCURACase No : 7255SAS No. : _____ SDG No. : N/ABlank Spike - EPA Sample No : 24466 BKSLevel : (low / med) LOW

COMPOUND	SPIKE ADDED	BLANK CONCENTRATION	BKS CONCENTRATION	BKS % REC #	QC LIMITS REC.
	(ug/kg)	(ug/kg)	(ug/kg)		
Aroclor-1016	170	0	170	100	50-130
Aroclor-1260	170	0	170	100	50-130

Column to be used to flag recovery and RPD values with and asterisk

* Values outside of QC limits

RPD 0 out of 2 outside limitSpike Recovery 0 out of 4 outside limitComments : _____



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Work Order #: 7255
 Lab Batch #: 24606
 Reporting Units: mg/L

Sample: 24481 BKS

Report Date: 12/01/04 17:47
 Project ID: 6301-03-0011-1901-1000
 Matrix: S

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY						
TCLP SVOCs by SW1311/8270C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
1,4-Dichlorobenzene	<0.0081	0.50	0.29	58	30-130	
2,4,5-Trichlorophenol	<0.024	0.50	0.28	56	30-130	
2,4,6-Trichlorophenol	<0.018	0.50	0.30	60	30-130	
2,4-Dinitrotoluene	<0.012	0.50	0.24	48	30-130	
2-Methylphenol	<0.020	0.50	0.31	62	30-130	
3 & 4-Methylphenol	<0.022	1.0	0.62	62	30-130	
Hexachlorobenzene	<0.018	0.50	0.42	84	30-130	
Hexachlorobutadiene	<0.012	0.50	0.32	64	30-130	
Hexachloroethane	<0.013	0.50	0.30	60	30-130	
Nitrobenzene	<0.0085	0.50	0.34	68	30-130	
Pentachlorophenol	<0.048	0.50	0.28	56	30-130	
Pyridine	<0.025	0.50	0.22	44	30-130	

Lab Batch #: 24604

Sample: 24489 BKS

Matrix: S

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY						
TCLP VOCs by SW1311/8260B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
1,1-Dichloroethene	<0.015	0.050	0.048	96	70-130	
1,2-Dichloroethane	<0.013	0.050	0.046	92	70-130	
2-Butanone	<0.022	0.050	0.043	86	70-130	
Benzene	<0.010	0.050	0.048	96	70-130	
Carbon Tetrachloride	<0.012	0.050	0.050	100	70-130	
Chlorobenzene	<0.017	0.050	0.048	96	70-130	
Chloroform	<0.011	0.050	0.050	100	70-130	
Tetrachloroethylene	<0.012	0.050	0.048	96	70-130	
Trichloroethene	<0.011	0.050	0.049	98	70-130	
Vinyl Chloride	<0.014	0.050	0.050	100	70-130	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:47

Work Order #: 7255

Lab Batch #: 24617

Sample: 24495 BKS

Project ID: 6301-03-0011-1901-1000

Matrix: S

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY						
TCLP VOCs by SW1311/8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,1-Dichloroethene	<0.015	0.050	0.053	106	70-130	
1,2-Dichloroethane	<0.013	0.050	0.057	114	70-130	
2-Butanone	<0.022	0.050	0.059	118	70-130	
Benzene	<0.010	0.050	0.052	104	70-130	
Carbon Tetrachloride	<0.012	0.050	0.053	106	70-130	
Chlorobenzene	<0.017	0.050	0.050	100	70-130	
Chloroform	<0.011	0.050	0.054	108	70-130	
Tetrachloroethylene	<0.012	0.050	0.049	98	70-130	
Trichloroethene	<0.011	0.050	0.052	104	70-130	
Vinyl Chloride	<0.014	0.050	0.054	108	70-130	

Lab Batch #: 24587

Sample: 24448 BKS

Matrix: S

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY						
TPH (Diesel Range Organics) by SW8015B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
TPH-DRO (C10-C28)	2.2	33	22	67	39-114	

Lab Batch #: 24570

Sample: 24467 BKS

Matrix: S

Reporting Units: mg/kg

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY						
TPH (Gasoline Range Organics) by SW8015B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
TPH-GRO (C6-C10)	1.8	50	52	104	70-130	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



Blank Spike Recovery

Project Name: DSCR OU4 Source Removal

Work Order #: 7255

Lab Batch #: 24603

Reporting Units: ug/L

Sample: 24490 BKS

Batch #: 1

Report Date:

12/01/04 17:47

Project ID:

6301-03-0011-1901-1000

Matrix: W

BLANK /BLANK SPIKE RECOVERY STUDY						
VOCs by SW8260B (25ml purge)	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
1,1-Dichloroethene	<0.16	10	11	110	80-120	
Benzene	<0.16	10	10	100	80-120	
Chlorobenzene	<0.13	10	10	100	80-120	
Toluene	<0.16	10	11	110	80-120	
Trichloroethene	<0.12	10	11	110	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQI = Estimated Quantitation Limit



BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date 12/01/04 17:59
Project ID: 6301-03-0011-1901-1000
Matrix: S

Work Order #: 7255

Lab Batch ID: 24571 Sample: 24468 BKS

Batch #: 1

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Reactive Cyanide	<0.020	5.0	2.6	52	5.0	2.6	52	0	50-150	20	

Lab Batch ID: 24569 Sample: 24569 BKS

Batch #: 1

Units: mg/kg

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Reactive Cyanide/Sulfide by SW846 Sec. 7.3	<2.3	3000	2900	97	3000	2900	97	0	50-150	20	

Lab Batch ID: 24623 Sample: 24470 BKS

Batch #: 1

Units: mg/L

BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TCLP Mercury by SW1311/7470A	<0.000860	0.0250	0.0242	97	0.0250	0.0239	96	1	77-133	20	

Relative Percent Difference RPD = 200*((D-G)/(D+G))
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes
F = RPD exceeded the laboratory control limits



BS / BSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date 12/01/04 17:59
 Project ID: 6301-03-0011-1901-1000
 Matrix: S

Work Order #: 7255
 Lab Batch ID: 24627
 Sample: 24472 BKS
 Units: mg/L

Batch #: 1

Analytes	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
TCCLP Metals by SW1311/6010B												
Arsenic	<0.021	4.0	4.3	108	4.0	4.2	105	3	75-125	20		
Barium	<0.034	4.0	3.8	95	4.0	3.7	93	2	75-125	20		
Cadmium	<0.0016	4.0	4.2	105	4.0	4.1	103	2	75-125	20		
Chromium	<0.084	4.0	4.0	100	4.0	4.0	100	0	75-125	20		
Copper	<0.024	4.0	4.1	103	4.0	4.0	100	3	75-125	20		
Lead	<0.031	4.0	4.0	100	4.0	4.0	100	0	75-125	20		
Nickel	0.014	4.0	4.0	100	4.0	3.9	98	2	75-125	20		
Selenium	<0.073	4.0	4.4	110	4.0	4.3	108	2	75-125	20		
Silver	<0.0038	4.0	3.8	95	4.0	3.7	93	2	75-125	20		
Zinc	0.080	4.0	4.4	110	4.0	4.3	108	2	75-125	20		

Relative Percent Difference RPD = 200*(D-G)/(D+G)
 Blank Spike Recovery [D] = 100*(C)/B
 Blank Spike Duplicate Recovery [G] = 100*(F)/E
 All results are based on MDL and Validated for QC Purposes
 F = RPD exceeded the laboratory control limits



BS / BSD Recoveries

Project Name: Standard List of Methods

Work Order #: 248192

Analyst: MAB

Lab Batch ID: 657951

Sample: 647951-1-BKS

Date Prepared: 11/29/2004

Batch #: 1

Project ID: 7255-DCF1

Date Analyzed: 11/29/2004

Matrix: Solid

Units: mg/kg

BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TOX by EPA 9020B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Total Organic Halides	<10.0	100	118	118	100	97.0	97	20	75-125	30

Relative Percent Difference RPD = $200 \cdot (D-G) / (D+G)$
 Blank Spike Recovery [D] = $100 \cdot (C) / (B)$
 Blank Spike Duplicate Recovery [G] = $100 \cdot (F) / (E)$
 All results are based on MDL and Validated for QC Purposes



3F
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ACCURA ANALYTICAL LAB.Contract : 6301-03-0011-1901-1000Lab Code : ACCURA CASE No. 7255SAS No. : _____ SDG No. N/AMatrix Spike - EPA Sample No OU4-IDW-SQ-6

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS CONCENTRATION ug/kg	MS % REC #	QC LIMITS REC.
Aroclor-1016	190	0	180	95	40-140
Aroclor-1260	190	0	170	89	40-140

COMPOUND	SPIKE ADDED ug/kg	MSD CONCENTRATION ug/kg	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC
Aroclor-1016	190	180	95	0	50	40-140
Aroclor-1260	190	150	79	12	50	40-140

Column to be used to flag recovery and RPD Values with and asterisk.

* Values outside of QC limits

RPD 0 Out of 2 outside LimitSpike Recovery : 0 Out of 4 outside limitComments : _____



Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59
Project ID: 6301-03-0011-1901-1000

Work Order #: 7255
Lab Batch ID: 24604
Reporting Units: mg/L

QC-Sample ID: 7255-001 MS

Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TCLP VOCs by SW1311/8260B											
1,1-Dichloroethene	<0.015	0.50	0.59	118	0.50	0.51	102	15	70-130	20	
1,2-Dichloroethane	<0.013	0.50	0.55	110	0.50	0.49	98	12	70-130	20	
2-Butanone	<0.022	0.50	0.45	90	0.50	0.42	84	7	70-130	20	
Benzene	<0.010	0.50	0.60	120	0.50	0.55	110	9	70-130	20	
Carbon Tetrachloride	<0.012	0.50	0.62	124	0.50	0.54	108	14	70-130	20	
Chlorobenzene	<0.017	0.50	0.59	118	0.50	0.55	110	7	70-130	20	
Chloroform	<0.011	0.50	0.59	118	0.50	0.53	106	11	70-130	20	
Tetrachloroethylene	0.26	0.50	0.84	116	0.50	0.75	98	17	70-130	20	
Trichloroethene	0.16	0.50	0.75	118	0.50	0.68	104	13	70-130	20	
Vinyl Chloride	<0.014	0.50	0.62	124	0.50	0.53	106	16	70-130	20	

QC-Sample ID: 7225-014 MS

Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH (Diesel Range Organics) by SW8015B											
TPH-DRO (C10-C28)	2.7	39	37	88	39	27	62	35	28-116	20	F

QC-Sample ID: 7257-002 MS

Batch #: 1 Matrix: S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH (Gasoline Range Organics) by SW8015B											
TPH-GRO (C6-C10)	2.3	60	59	95	60	60	96	1	70-130	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)
F: RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59
Project ID: 6301-03-0011-1901-1000

Work Order #: 7255
Lab Batch ID: 24606
Reporting Units: mg/L

QC- Sample ID: 7255-002 MS

Batch #: 1 Matrix: S

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,4-Dichlorobenzene	0.16	0.50	0.47	62	0.50	0.43	54	14	30-130	30	
2,4,5-Trichlorophenol	<0.024	0.50	0.32	64	0.50	0.29	58	10	30-130	30	
2,4,6-Trichlorophenol	<0.018	0.50	0.35	70	0.50	0.31	62	12	30-130	30	
2,4-Dinitrotoluene	<0.012	0.50	0.29	58	0.50	0.26	52	11	30-130	30	
2-Methylphenol	<0.020	0.50	0.35	70	0.50	0.29	58	19	30-130	30	
3 & 4-Methylphenol	<0.022	1.0	0.67	67	1.0	0.57	57	16	30-130	30	
Hexachlorobenzene	<0.018	0.50	0.42	84	0.50	0.41	82	2	30-130	30	
Hexachlorobutadiene	<0.012	0.50	0.35	70	0.50	0.31	62	12	30-130	30	
Hexachloroethane	<0.013	0.50	0.29	58	0.50	0.28	56	4	30-130	30	
Nitrobenzene	<0.0085	0.50	0.36	72	0.50	0.33	66	9	30-130	30	
Pentachlorophenol	<0.048	0.50	0.30	60	0.50	0.31	62	3	30-130	30	
Pyridine	<0.025	0.50	0.22	44	0.50	0.20	40	10	30-130	30	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)
RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59
Project ID: 6301-03-0011-1901-1000

Work Order #: 7255
Lab Batch ID: 24627
Reporting Units: mg/L

QC-Sample ID: 7255-001 MS Batch #: 1 Matrix: S

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<0.021	4.0	4.2	105	4.0	4.2	105	0	75-125	20	
Barium	0.087	4.0	3.7	90	4.0	3.8	93	3	75-125	20	
Cadmium	0.0026	4.0	4.0	100	4.0	4.1	102	2	75-125	20	
Chromium	<0.084	4.0	3.9	98	4.0	3.9	98	0	75-125	20	
Copper	<0.024	4.0	3.9	98	4.0	3.9	98	0	75-125	20	
Lead	<0.031	4.0	3.9	98	4.0	3.9	98	0	75-125	20	
Nickel	0.021	4.0	3.9	97	4.0	3.9	97	0	75-125	20	
Selenium	<0.073	4.0	4.3	108	4.0	4.3	108	0	75-125	20	
Silver	<0.0038	4.0	3.7	93	4.0	3.8	95	2	75-125	20	
Zinc	0.13	4.0	4.3	104	4.0	4.3	104	0	75-125	20	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+G)

F = RPD exceeded the laboratory control limits

Form 3 - MS / MSD Recoveries

Project Name: DSCR OU4 Source Removal

Report Date: 12/01/04 17:59
Project ID: 6301-03-0011-1901-1000

Work Order #: 7255
Lab Batch ID: 24569
Reporting Units: mg/kg

QC- Sample ID: 7239-001 MS

Batch #: 1 Matrix: S

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Reactive Cyanide/Sulfide by SW846 Sec. 7.3	46	3000	2800	92	3000	2700	88	4	50-150	20	

Lab Batch ID: 24571

QC- Sample ID: 7255-002 MS

Batch #: 1 Matrix: S

Reporting Units: mg/kg

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Reactive Cyanide	<0.023	5.7	0.16	3	5.7	0.17	3	0	50-150	20	Z

Lab Batch ID: 24623

QC- Sample ID: 7255-001 MS

Batch #: 1 Matrix: S

Reporting Units: mg/L

Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TCLP Mercury by SW1311/7470A	<0.00100	0.0250	0.0237	95	0.0250	0.0217	87	9	85-115	20	

Mercury

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(D-G)/(D+C)
F = RPD exceeded the laboratory control limits

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



EPA Defined Qualifiers Codes used by AAL

- BRL:** This abbreviation indicates that the analytical results were Below the Reporting Limit (BRL).
- U:** The compound was analyzed for but not detected.
- J:** This indicates an estimated value. This flag is used in 3 incidences.
- (1) When estimating a concentration for tentatively identified compounds where 1:1 response is assumed.
 - (2) When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the Contract Required Detection Limit (CRDL) – or Reporting Limit - but greater than the MDL.
 - (3) When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor identification criteria, and the result is less than the CRQL – or Reporting Limit- but greater than MDL.
- N:** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" flag is not used.
- P:** This is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with "P"
-
- C:** This applies to pesticide result where the identification has been confirmed by GC/MS. Do not apply if this flag if analyte(s) were not confirmed. Used the laboratory-defined flag instead (see the X qualifier).
- B:** This is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The flag shall be used for a tentatively identified compound as well as for a positively identified target compound.
- E:** This identifies compounds whose concentrations exceed the upper level of the linear calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range, the sample or extract should be diluted and re-analyzed.
- Note: For Total xylene, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately.*
- X:** Defined by the laboratory
- Z:** Surrogates/Spikes results exceeds quality control limits
- ZZ:** Surrogates/Spikes results exceeds quality control limits in multiple samples
- ***:** Surrogate recoveries were diluted out
- M:** Manual integrations were necessary and an "m" qualifying code is present on the quantitation report next to the analyte.
- D:** This flag indicates that the identified compound is reported from the dilution run.

*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

**APPENDIX F
COMPACTION CERTIFICATION MEMORANDUM**

**MEMORANDUM**

To: Steven R. Edlavitch
Jeff R. Zoeckler

From: J. Randy Wirt, P.E.
Lindsey M. Maddox

Cc: Josh Jenkins
Jim Wallace

Date: January 13, 2005

Subject: **Construction Observations – OU4 Pits 1, 2, and 3
Defense Supply Center Richmond
Richmond, Virginia
MACTEC Project No. 6301-03-0011 1901.1000**

MACTEC Engineering and Consulting, Inc. (MACTEC), is pleased to provide the following memorandum to document our construction observation services associated with the subject project. MACTEC observed and documented earthwork activities for Pits 1, 2, and 3 of OU4 on December 1 and 2, 2004.

Our construction observation services included the following:

- Monitoring backfill of OU4 Pits 1, 2, and 3 with off-site select aggregate fill (VDOT No.57 stone) up to an elevation approximately 3 feet below finished grade. The fill was placed and compacted in general compliance with the plans and specifications under observation by MACTEC personnel. Fill placement and compaction was completed using standard construction practices and procedures.
- Monitoring placement of a separation filter fabric atop the VDOT No. 57 backfill and subsequent placement and compaction of select aggregate fill (VDOT No. 21A stone) up to finished grade elevation. The fill was placed in loose lifts approximately 8 to 12-inches in thickness and compacted to a minimum of 95 percent of the maximum dry density according to the standard Proctor test results provided by the off-site borrow supplier.
- Observing compaction density tests completed by MACTEC personnel on the completed lifts of VDOT No. 21A stone for Pits 1 and 3. Due to limited volume of material placed in Pit 2, compaction for this pit was verified by proofrolling with a loaded water truck.
- Evaluating performance of completed backfill for Pits 1, 2, and 3 by means of proofrolling with a loaded water truck. During proofrolling no signs of significant pumping and/or rutting were observed. As such, the subgrade was approved under observation by a registered Professional Engineer.

Based on the observations described above and as presented in MACTEC's daily field reports (attached) for the subject dates, backfilling and compaction of Pits 1, 2, and 3 of OU4 were found to be in general compliance with the plans and specifications (or completed in general accordance with applicable standards and practices).



MACTEC Engineering and Consulting, Inc.
1606 Ownby Lane
Richmond, VA 23220

REPORT OF FIELD DENSITY TESTS

JOB NO. 10301.03.001 SHEET _____ OF _____
PHASE 1901 TASK 1000
JOB NAME DISC. OUT SOURCE REMOVAL
BY TED W DATE 12.1.04
CHECKED BY _____ DATE _____

MATERIAL TYPE : VULCAN Z.I.A. STONE
DRY DENSITY = 138.1 LBS/FT³
OPT MOISTURE = 6.8%

SWAGE TYPE : ITROYLER 3440
SERIAL # : 7507154
LAW/MACTEC # : 387

STANDARD RUN : PASS

DS = 2607
MG = 680

PIT # 3

DEPTH	MODE	WD	DD	M	%m	PROCTOR	OPT M%	PASS/FAIL
-3.0'	BS	139.1	132.4	6.8	4.9	138.1	6.8	PASS 95.8%
-3.0'	BS	140.7	134.1	6.6	4.6	138.1	6.8	PASS 97.1%
-2.0'	BS	141.1	133.7	7.4	5.2	138.1	6.8	PASS 96.3%
-2.0'	BS	140.0	132.6	7.4	5.3	138.1	6.8	PASS 96.0%

PIT # 1

DEPTH	MODE	WD	DD	M	%m	PROCTOR	OPT M%	PASS/FAIL
-4.0'	BS	142.2	136.1	6.0	4.2	138.1	6.8	PASS 98.6%
-3.0'	BS	142.6	137.0	5.6	3.9	138.1	6.8	PASS 99.7%
-2.0	BS	140.7	134.0	6.7	4.6	138.1	6.8	PASS 97.0%
-1.0	BS	141.2	137.4	5.8	4.1	138.1	6.8	PASS 95.9%
0.0	BS	142.0	136.2	5.8	4.1	138.1	6.8	PASS 95.9%

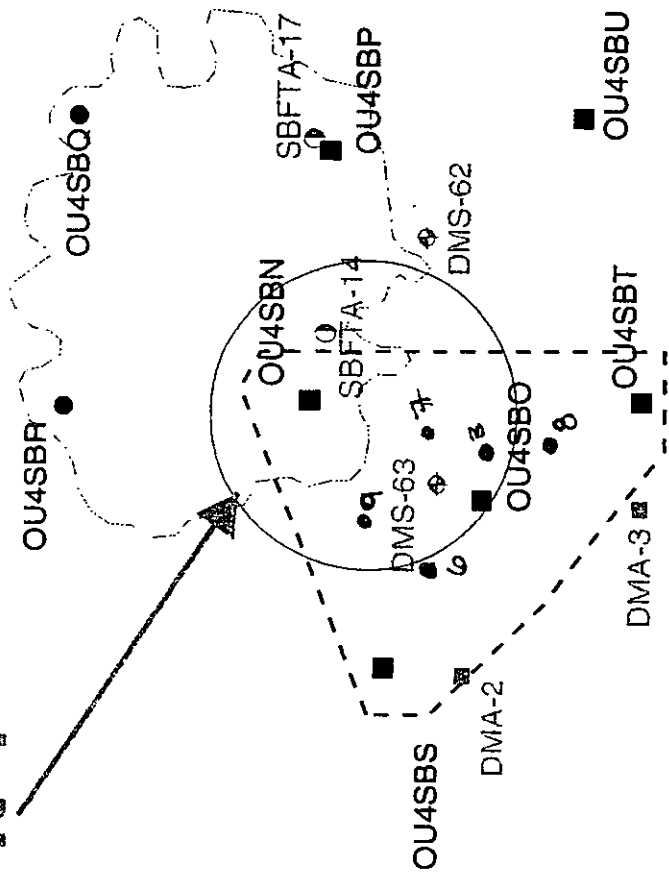
12-1-04
PIT #1
DENSITY TEST
LOCATIONS

Pit 1



- LEGEND:**
- ☉ MONITORING WELL LOCATION AND ID
 - SOIL SAMPLING LOCATION AND ID - EXCEED SRC
 - SOIL SAMPLING LOCATION AND ID
 - ⊕ SOIL SAMPLING LOCATION AND ID (LAW, 1992)
 - ⊖ SOIL SAMPLING LOCATION AND ID (ES, 1992)
 - ⊕ SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊖ SHALLOW SOIL SAMPLING LOCATION AND ID (DAMES AND MOORE, 1989)
 - ⊕ ELECTROMAGNETIC SURVEY ANOMALY (MACTEC, 2003)
 - 24 BUILDING IDENTIFICATION
 - ⊕ PROPOSED EXTENT OF SOIL REMOVAL

- NOTES:**
1. LOCATIONS FOR SUFOS-4, DMA-# AND DMS-# SAMPLES ARE APPROXIMATE.
 2. LOCATION OF HISTORICAL PITS ARE BASED ON AIR PHOTO ANALYSIS.
 3. SOIL SAMPLING LOCATIONS BASED ON SURVEY PERFORMED BY RESOURCE INTERNATIONAL, INC., 2004. (STATEPLANE VA SOUTH, NAD83, FEET)
 4. SRC = SOIL REMOVAL CRITERIA



AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE PERDUE HALL SUPPLY CENTER NEIGHBORHOOD KRYVALA SOURCE CONTROL INVESTIGATION REPORT - PITS 1-4	
PROJECT NO.	711504
FIGURE NUMBER	3-2
DATE	8/15/04
REVISED DATE	8/15/04
FILE NAME	044-PR1_PIT1_V2.DWG

SBFTA-13 SBFTA-15 DMS-74

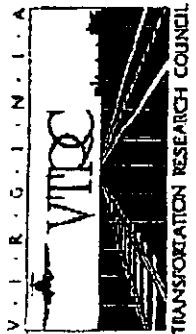
Dale Plant
 11320 Iron bridge Rd.
 Chester, VA 23831
 Phone: 804 - 706 - 1212
 Fax: 804 - 706 - 1219



Vulcan Materials

Fax

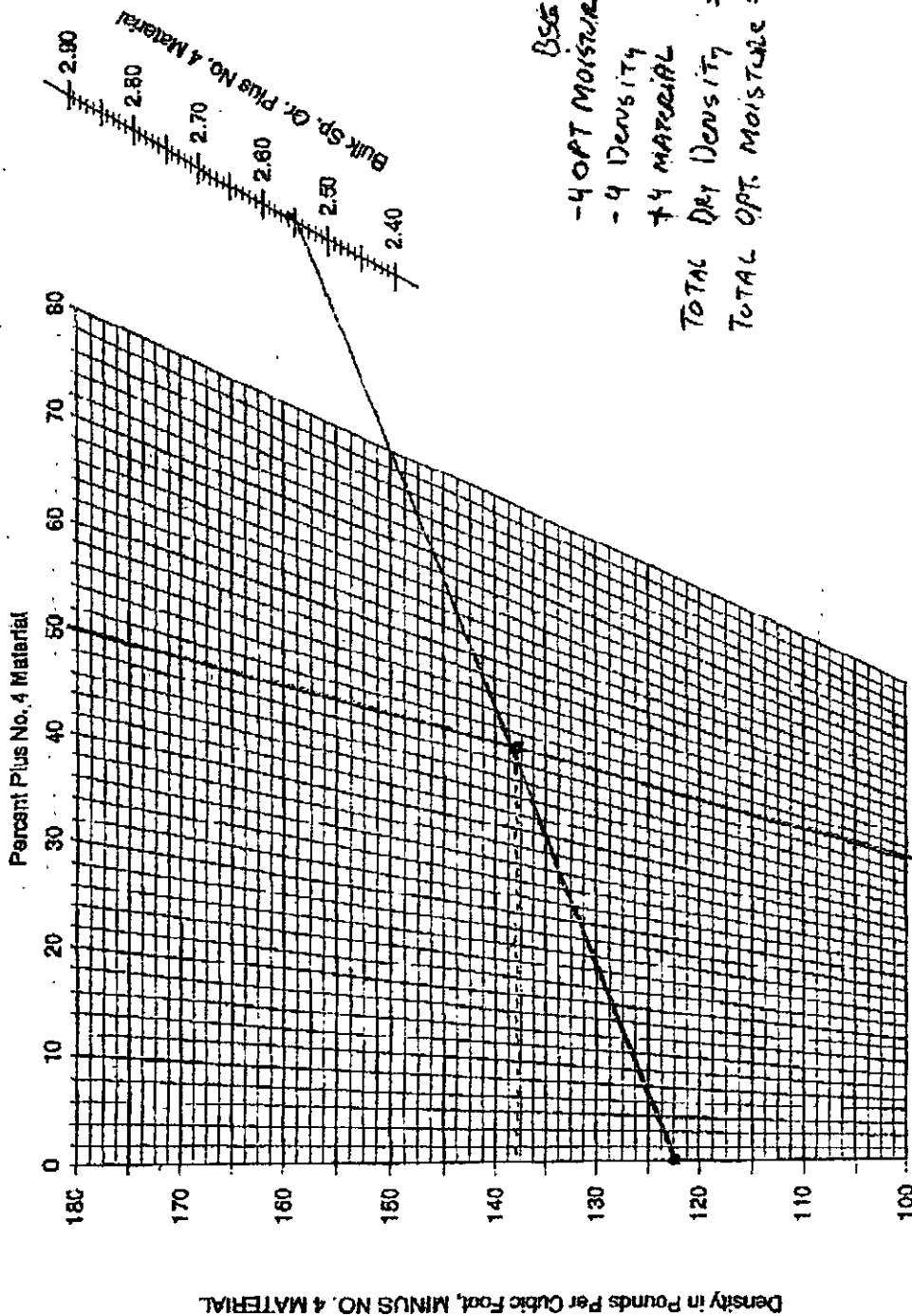
To: Ted or Randy Wirt	From: Tom Roberts
Fax: (804) 358-6646	Pages: 2
Phone:	Date: 11/30/2004
Re: DSC Richmond 21-A Procter	CC:
<input type="checkbox"/> Urgent <input checked="" type="checkbox"/> For Review <input type="checkbox"/> Please Comment <input type="checkbox"/> Please Reply <input type="checkbox"/> Please Recycle	



NOMOGRAPH FOR DETERMINING TOTAL DENSITIES OF SOILS

VTM-1

Revised 10/1/98



1-3

*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

July 2005

**APPENDIX H
EPA WASTE DISPOSAL FACILITY APPROVAL TO ACCEPT CERCLA-GENERATED
WASTES**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
DE-9J

October 28, 2004

Mr. Greg Wrenn
MACTEC Engineering and Consulting
3200 Town Point Drive, Suite 100
Kennesaw, GA 30144

Re: Michigan Disposal Waste Treatment Plant - MID
000-724-831
Wayne Disposal Incorporated - MID 048-090-633

Dear Mr. Wrenn:

This letter is a follow-up to my e-mail exchange earlier today with Michael LaPrade regarding the acceptability of the Michigan Disposal and Wayne Disposal facilities to receive waste under the requirements of 40 CFR §300.440 commonly known as the CERCLA off-site rule.

As I documented in my e-mail message, Michigan Disposal is an acceptable facility most recently inspected on June 18, 2004. Wayne Disposal is also an acceptable facility most recently inspected on May 26, 2004.

If you have questions, please contact me at (312) 353-8207, United States Environmental Protection Agency, Region 5 – DE-9J, 77 W. Jackson Boulevard, Chicago, Illinois 60604.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "William W. Damico".

William W. Damico, Regional Off-site Rule Coordinator
Enforcement and Compliance Assurance Branch
Waste Pesticides and Toxics Division

APPENDIX I
EQ FACILITY COMPLIANCE CONFIRMATION

Inspecting Agency	Transmittal Date	Inspection Date	Summary
MDEQ-WHMD	7/1/2004	6/18/2004	NOV (2Q04) MDEQ alleged that MDWTP was in violation of the following: 1) 5 containers and 1 pallet not having a label, or marked with the words "Hazardous Waste", did not have a hazardous waste number nor a date accepted for storage. 2) 5 aisles were identified as being blocked. 3) 11 containers were identified as being outside the boundary of the container storage area. 4) asked MDWTP to submit documentation when repair work on pavement and curbing is made. EQ Response (8/5/04) Alleged violations #1-3 were corrected during the inspection. In addition, MDWTP management has retrained its employees regarding the placement of hazardous waste within container storage area boundaries specified in our permit. For alleged violation #4, MDWTP completed the repairs to the pavement/curbing and attached as-built drawings. IC (2Q04) Solid Waste Inspection Record Review of Submittals of Recent Incidents - MDEQ expressed concern regarding incidents occurring during the 3rd shift at MDWTP.
MDEQ-WHMD	6/15/2004	6/3/2004	EQ Response (5/14/04) The following addressed the MDEQ's concerns: 1) Operations occurring during the 3rd shift - 3rd shift processes the majority of containers; however management has confirmed that the 3rd shift is following the procedures in the Operating License. 2) Audit of 3rd Shift Procedures - Management at MDWTP is planning to physically evaluate activities occurring during the 3rd shift and to look for ways of improving operations. 3) Other Ideas for Improvement - Other ideas for improvement beyond compliance have been discussed since our new Director of Operations at MDWTP started employment in March 2004. Ideas include: container sequencing; distributing the processing of containerized waste throughout all 3 shifts; and pre-treatment on an as-needed basis.
MDEQ-WHMD	4/1/2004	NA	Solid Waste Disposal Area License Renewal. Submitted on 3/8/04. Administratively Complete. 90-day Public Comment Period 3/1/04 - 6/8/04.
WC-DOE	3/24/2004	NA	Solid Waste Disposal Area License - Issued 6/7/2004, Expiration 6/7/2009. 5 year License
MDEQ-WHMD	6/7/2004	3/17/2004	IC (1Q04) Solid Waste Inspection
MDEQ-WHMD	3/24/2004	3/10/2004	NOV (1Q04) MDEQ alleged that MDWTP was in violation of the following: 1) a spill of gray solid material; 2) containers in poor condition; 3) container w/o a label; 4) a container w/o a cap; 5) double stacking of containers. EQ Response (5/4/04) Alleged violations #1-4 were corrected during the inspection. For alleged violation #5, MDWTP does not agree that double-stacking 55-gallon containers is a violation of their permit.
MDEQ-WHMD	3/31/2004		MDEQ Response (5/21/04) RTC

MDEQ = MI Department of Environmental Quality
WCAQM = Wayne County Air Quality Mgt
WCLRM = Wayne County Land Resource Mgt
AQD = Air Quality Division

LOV = Letter of Violation
LOW = Letter of Warning
RTC = Return to Compliance

Last Updated: 2/4/2005
MDWTP Compliance History 2Q04,
MDWTP 3 yrs

Inspecting Agency	Transmittal Date	Inspection Date	Summary
MDEQ-WHMD	3/25/2004		MDEQ reviewed and approved MDWTP's request for an extension to the HW Reapplication Deadline from 3/30/04 to 4/30/04.
MDEQ-WHMD	3/8/2004		MDWTP submitted the HW Reapplication on 4/30/04. Consent Order 3/8/04 - Entered into Fast Track Consent Order 111-01-04 regarding three incidents that occurred in 2002. For all three incidents, MDWTP immediately self-reported upon discovery. Incident 1: A customer called us after we'd stabilized the customer's "non-hazardous" waste to indicate that new analysis revealed PCB contamination. The stabilized waste had been disposed in a Subtitle D landfill. We excavated the PCB waste from the Subtitle D landfill and properly disposed at WDI's TSCA permitted landfill. Incident 2: A MDWTP chemist certified a MDWTP tank of treated waste as passing all Land Disposal Restrictions based on analysis of treated waste from a different MDWTP treatment tank. The correct analysis revealed that the tank had been properly decharacterized and was no longer hazardous, but that the treatment standard for lead had not been met. ~Three loads of this material had been Subtitle D landfilled before the error was caught. The waste was quickly excavated from the Subtitle D landfill and treatment was completed at MDWTP. Incident 3: Through an anonymous tip, MDWTP management learned EQ Response (4/20/2004) - EQ submitted requesting termination of the Consent Order. DEQ Response (4/29/2004) - DEQ termination of Fast Track Consent Order effective 4/28/04. IC: No correspondence received.
MDEQ-AQD MDEQ-AQD	NA 12/4/2003	1/7/2004 NA	Site 2 (MDWTP/WDI/WES) Renewable Operating Permit (ROP) MI-ROP-M4782-2003 issued. Effective 1/1/04.
MDEQ-WHMD	11/24/2003	11/7/2003	NOV (4Q03): MDEQ alleged that MDWTP was in violation of the following: 1) containers were stored outside storage area, blocking aisle space and unobstructed movement for emergency vehicles; 2) a spill in the East Container Storage Area; 3) one container in poor condition; 4) container without hazardous waste number and date for storage; and 5) vehicle ramps, pavement, and curbing on the south side of the facility to ensure hazardous waste goes to the lined pond for treatment. EQ Response (12/23/03): MDWTP responded to the violation letter as follows: 1) The containers were moved during the inspection. 2) It container causing the alleged spill was overpacked. The spill was dried with floor-dry and removed from the container and placed into the same container. 3) This was corrected during the November 7, 2003 inspection. 4) The label was inadvertently ripped during the mechanical movement of that container. The container and surrounding containers were re-sampled and fingerprinted. Then the label was reprinted and placed onto the container during the inspection. 5) Soon after November 7, 2003 repairs were made to the asphalt in front of MDWTP.
MDEQ-WHMD	10/6/2003	9/11/2003	MDEQ Response (1/28/04) RTC IC (3Q03 insp) 1 issue: MDWTP personnel need to ensure that waste container labels are legible.

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Last Updated: 2/4/2005
MDWTP Compliance History 2Q04,
MDWTP 3 yrs

Inspecting Agency	Transmittal Date	Inspection Date	Summary
MDEQ-WHMD	6/30/2003	6/13/2003	EQ Response (10/21/03): MDWTP personnel were re-trained to be cognizant of the condition of the labels on the containers, to ensure the labels are legible. IC (2Q03 insp): Full Compliance EQ Response (7/29/03): Response to Comments/Issues. Site 2 has implemented a color coding system with regard to its TCLP extraction process. Transporter vehicles received on-site sign the Post-Inspection form stating that their vehicle was adequately washed. Also, employees at MDWTP were re-trained to check all vehicles dumping in MDWTP's treatment bays for residual waste remaining on the outside of the vehicles. Inspection (3/20/03): MDEQ-AQD alleged violation regarding 40 CFR 63, Subpart DD (Off-Site NESHAP).
MDEQ-AQD	4/9/2003	3/20/2003	EQ Response (5/5/2003): On behalf of MDWTP, our consultant Horizon Environmental provided a line-by-line response to the alleged violations. EQ Response (5/7/03): On behalf of MDWTP, our consultant Horizon Environmental provided an additional report entitled "Compliance Evaluation with the Offsite Waste and Recovery Operations NESHAP". No further response has been received from the MDEQ-AQD. IC (1Q01 insp): Full Compliance IC (4Q02 insp): Full Compliance MDEQ-AQD alleged that MDWTP failed to meet the required destruction efficiency across the carbon bed on the West Side of MDWTP. Response is due 11/25/02. Matter closed. EQ Response (11/25/02) MDWTP modified its air permit to resolve this matter. MDEQ Response (4/9/03) MDWTP's resolution with the Permit to Install was sufficient.
MDEQ-WHMD	11/26/2002	11/8/2002	IC (4Q02 insp): Full Compliance
MDEQ-WHMD	9/19/2002	9/12/2002	IC (3Q02 insp): Full Compliance
MDEQ-WMD	5/21/2002	5/15/2002	IC (2Q02 insp): Full Compliance
MDEQ-WMD	4/3/2002	3/20/2002	LOW (1Q02 insp): 1 alleged violation - 2 sections of pavement showing cracks. EQ Response (5/3/02): The cracks were repaired with coating/sealant. EQ Response (5/8/02): The cracks have been repaired. MDEQ Response (5/14/02): RTC
MDEQ-WMD	3/18/2002		Issuance of Solid Waste Disposal Area Operating License Renewal
MDEQ-AQD	5/14/2002	2/14/2002	LOV (Insp 2/14/02): MDEQ-AQD alleged that RTO had 2 days with unexplained episodes where it ran at temperatures below the permit limit. EQ Response: (5/28/02): On both dates the RTO was actually down for repairs. Documentation was attached to this letter.

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Last Updated: 2/4/2005

MDWTP Compliance History 2Q04,

MDWTP 3 yrs

Inspecting Agency	Transmittal Date	Inspection Date	Summary
USEPA	1/15/2002	*	Approval of Permit Modification Request to add newly listed waste codes (K-174 - K-175). EQ submitted Class 1 modification request on May 3, 2001 approved by the USEPA on 6/18/01. EQ submitted Class 2 modification request on 10/5/01.
MDEQ-WMD	12/27/2001	12/27/2001	Insp/RTC - MDEQ record review of information submitted on 8/22/01 by EQ. EQ's "Unmanifested Waste Report" reported an incident & resolution in which on 8/9/01 hazardous waste containing >50 ppm PCBs was mistakenly accepted & treated at the Plant. MDEQ was satisfied with our resolution to the incident.
MDEQ-WMD	12/21/2001	12/13/2001	IC w/ comments/issues (4Q01 insp) - Full Compliance w/ comments/issues were identified for us to respond to: 1) crack & gap program 2) tarp repair program 3) incidental material to duplicate in laboratory "mock tank"
MDEQ-WMD	12/18/2001	*	EQ Response (1/18/02) - 1) attached copy of Concrete Crack Repair Program 2) tarp system put into place on 1/28/98. Tarp repaired 12/14/01 3) using equivalent amount of paper, wood and/or plastic to simulate materials put into tanks.
MDEQ-WMD	*	9/5/2001	Alleged violation that MDWTP did not comply with Rule 299.9525 requiring TSDFs to file a notice with the office of the register of deeds in the county in which the TSDF is located.
USEPA	*	7/24/01 - 7/25/01	EQ Response (1/18/02) - stating a notice was filed on behalf of both facilities on 11/9/00.
MDEQ-WMD	7/16/2001	7/12/2001	IC (3Q01 insp) Full Compliance Multi-media inspection. No written correspondence received yet. Insp. believed to have gone very well.
MDEQ-WMD	6/27/2001	6/13/2001	Solid Waste Insp: IC EQ Response: Letter clarifying storage areas. LOW (2Q01 insp): 1 alleged violation - storing containers outside curbed area EQ Response (8/1/01) 2Q01 insp - EQ will stay within curbing outline in Attachment 7 of Operating License. MDEQ Response (8/2/01) 2Q01 insp - RTC.

MDEQ = MI Department of Environmental Quality
WCAQM = Wayne County Air Quality Mgt
WCLRM = Wayne County Land Resource Mgt
AQD = Air Quality Division

LOV = Letter of Violation
LOW = Letter of Warning
RTC = Return to Compliance

Last Updated: 2/4/2005
MDWTP Compliance History 2Q04,
MDWTP 3 yrs

*Final – Principal Threat Source Material Removal Action Completion Report
Operable Unit 4 – Former Fire Training Area
Defense Supply Center Richmond*

**APPENDIX J
EQ APPROVAL TO RECEIVE WASTE**



THE ENVIRONMENTAL QUALITY COMPANY

Generator Approval Notification

February 8, 2005

Customer: EQIS-ATLANTA

Fax: (404) 494-3560

STEVEN EDLAVITCH
DEFENSE SUPPLY CENTER RICHMOND
C/O ANDY ADAMS - ALL POINTS
2567 ATHENS HIGHWAY
GAINESVILLE, GA 30507

This Generator Approval Notification acknowledges the acceptability of waste material(s) into the EQ environmental protection facility identified below and ensures that this facility has the appropriate permit(s) issued by federal and state regulatory agencies to properly transport, treat, and/or dispose of the waste material(s).

EQ FACILITY: Michigan Disposal Waste Treatment Plant (MID000724831)
49350 North I-94 Service Drive, Belleville, Michigan 48111

Approval Number: 122104MBF

Generator EPA ID #: VA3971520751

Approved Container: TONS

Expires On: 12/21/2005

Waste Common Name: BURN PIT WASTE

Comments:

Primary Waste Code: D040

The Approval(s) listed above are based upon characterization information supplied to EQ by the Customer and the generator (if other than the Customer). The Customer is ultimately responsible for the accuracy and completeness of all such information, whether provided by the Customer or the generator. The Customer must notify the EQ Resource Team immediately upon knowledge of any changes to this information. This Approval and all wastes which are transported, delivered, or tendered to EQ under this Approval shall be subject to the attached Standard Terms and Conditions.

The Approval(s) will expire on the date(s) noted. Any new Approvals obtained from EQ on future business will be valid for a period of one (1) year from the date of issuance. Within 60 days of the Approval Expiration Date, you will be notified of the requirements for recertification.

YOUR BUSINESS. OUR SOLUTIONS. A PRODUCTIVE PARTNERSHIP®

Mail or fax to: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, Michigan 48111, Phone: 1-800-592-5489 Fax: 1-800-592-5379

**APPENDIX K
WASTE DISPOSAL MANIFESTS**



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

DO NOT WRITE IN THIS SPACE
ATT. DIS. REJ. PR.

Please print or type

Form Approved OMB No. 2050-0038

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751	Manifest Document No. 0001	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23297			A. State Manifest Document Number MI 8918260		B. State Generator's ID
4. Generator's Phone 804 778 3681			C. State Transporter's ID		
5. Transporter 1 Company Name ACTION RESOURCES		6. US EPA ID Number ALZ 000 007 237		D. Transporter's Phone 850-278-5845	
7. Transporter 2 Company Name		8. US EPA ID Number		E. State Transporter's ID	
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40360 N. I-94 SERVICE DRIVE BELLEVILLE MI 48111			10. US EPA ID Number MID000724831		G. State Facility's ID
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER) HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGIII, ERG# 171			12. Containers No. 001	Type DT	13. Total Quantity EST. 22
					14. Unit T
					15. Waste No. D040
J. Additional Descriptions for Materials Listed Above APPROVAL # 11A 122104MBF // TCE Contaminated Soil					K. Handling Codes
					a.
					b.
					c.
					d.
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-8829					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford					
Printed/Typed Name Steven Edavitch		Signature <i>[Signature]</i>		Date 01/04/05	
17. Transporter 1 Acknowledgment of Receipt of Materials		Printed/Typed Name Wayne Parker		Signature <i>[Signature]</i>	
		Signature <i>[Signature]</i>		Date 01/04/05	
18. Transporter 2 Acknowledgment of Receipt of Materials		Printed/Typed Name		Signature	
		Signature		Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19					
Printed/Typed Name		Signature		Date	
				01/04/05	

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ACCORDANCE WITH THE NATIONAL RESPONSE CENTER AT 1-800-424-9802 24 HOUR PER DAY.

GENERATOR
TRANSPORTER
FACILITY

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 369503
EQ Account #: 4506
Manifest / BOL: M18918260
Transporter: ACTION
Date: 01/05/2005
Time In: 8:10 AM
Time Out: 10:02 AM

Line	Description Generator	Qty.	Unit
01 - A	122104MBF - BURN PIT WASTE	21.860	TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND			
Gross: 76,720		Tare: 33,000	Net: 43,720

783 710

Required under authority of Part 111 and Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to criminal and/or civil penalties under Sections 324.11151 or 324.12116 MCL



WASTE MANAGEMENT DIVISION MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

DO NOT WRITE IN THIS SPACE ATT. DIS. REJ. PR.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST form with sections for generator information, transporter information, facility information, waste description, and signatures.

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN CENTER AT 1-800-424-8802 24 HOUR PER DAY.

GENERATOR TRANSPORTER FACILITY

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 369505
EQ Account #: 4506
Manifest / BOL: MI8918261
Transporter: ACTION
Date: 01/05/2005
Time In: 8:36 AM
Time Out: 10:16 AM

Line	Description Generator	Qty.	Unit
01 - A	122104MBF - BURN PIT WASTE	22.310	TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND			
Gross: 76,220		Tare: 31,600	Net: 44,620

NO SALVAGING ON PREMISES



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

DO NOT WRITE IN THIS SPACE
ATT. DIS. REJ. PR.

Required under authority of Part 111, and Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to criminal and/or civil penalties under Sections 324.11151 or 324.12116 MCL.

Please print or type

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751	Manifest Document No. 1003	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 22287				A. State Manifest Document Number MI 8918262		
4. Generator's Phone 804 279-3861				B. State Generator's ID		
5. Transporter 1 Company Name Action Resources		6. US EPA ID Number ALZ 000 007 737		C. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 800-228-8415		
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40350 N. L-94 SERVICE DRIVE BELLEVILLE MI 48111		10. US EPA ID Number MID000724831		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 800-522-5488		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)		12. Containers		13. Total Quantity		14. Waste No.
HM		No. Type		Unit		Wt/Vol
a. <input checked="" type="checkbox"/> HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGIII ERG# 171		001 DT		EST. 22 T		D040
b. <input type="checkbox"/>						
c. <input type="checkbox"/>						
d. <input type="checkbox"/>						
J. Additional Descriptions for Materials Listed Above APPROVAL #: 11A) 122104MBF // TCE Contaminated Soil						K. Handling Codes a. b. c. d.
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-0620						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Steven R. Edlwith			Signature <i>[Signature]</i>		Date Month Day Year 01 04 05	
17. Transporter 1 Acknowledgment of Receipt of Materials			Signature <i>[Signature]</i>		Date Month Day Year 01 10 05	
Printed/Typed Name Bobby Eustice			Signature <i>[Signature]</i>		Date Month Day Year	
18. Transporter 2 Acknowledgment of Receipt of Materials			Signature		Date Month Day Year	
Printed/Typed Name			Signature		Date Month Day Year	
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19						
Printed/Typed Name			Signature		Date Month Day Year	

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ACCORDANCE WITH THE NATIONAL RESPONSE PLAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOUR PER DAY.

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
 49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
 5600 FULTON INDUSTRIAL BLVD SW
 ATLANTA, GA 30336

Receipt ID: 369500
 EQ Account #: 4506
 Manifest / BOL: M18918262
 Transporter: ACTION
 Date: 01/05/2005
 Time In: 7:56 AM
 Time Out: 9:33 AM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE	22.610 TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND		
Gross: 78,520 Tare: 33,300 Net: 45,220		



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

783 714

Required under authority of Part 111 and
Part 121 of Act 451, 1994, as amended

DO NOT WRITE IN THIS SPACE
ATT. DIS. REJ. PR.

Failure to file may subject you to
criminal and/or civil penalties under
Sections 324.11151 or 324.12116 MCL.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751		Manifest Document No. R004		2. Page 1 of		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23287						A. State Manifest Document Number MI 8918263			
4. Generator's Phone 804 279-3351						B. State Generator's ID			
5. Transporter 1 Company Name ACTION RESOURCES				6. US EPA ID Number AL2000007237		C. State Transporter's ID			
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone 800 223-8845		E. State Transporter's ID	
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40350 N. I-94 SERVICE DRIVE BELLEVILLE MI 48111						10. US EPA ID Number MID000724831		G. State Facility's ID	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGII, ERG# 171						12. Containers No. Type 001 DT		13. Total Quantity Unit EST. 22 T	
14. Additional Descriptions for Materials Listed Above APPROVAL # 11A) 122104mBF // TCE Contaminated Soil						K. Handling Codes a. b. c. d.			
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-0620									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR: if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name Steven R. Edlwith				Signature <i>[Signature]</i>		Date Month Day Year 01/10/05			
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name FRANKIE SOUTH				Signature <i>[Signature]</i>		Date Month Day Year 01/10/05			
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name				Signature		Date Month Day Year			
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19 Printed/Typed Name				Signature		Date Month Day Year			

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ACCORDANCE WITH THE NATIONAL RESPONSE PLAN AT 1-800-292-4768 OR OUT OF STATE AT 517-373-7680 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-6862 24 HOUR PER DAY.

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
 49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
 5600 FULTON INDUSTRIAL BLVD SW
 ATLANTA, GA 30336

Receipt ID: 369502
 EQ Account #: 4506
 Manifest / BOL: MI8918263
 Transporter: ACTION
 Date: 01/05/2005
 Time In: 8:10 AM
 Time Out: 9:43 AM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE	22.430 TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND Gross: 78,020 Tare: 33,160 Net: 44,860		

783 716

Required under authority of Part 111 and Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to criminal and/or civil penalties under Sections 324.11151 or 324.12116 MCL.



WASTE MANAGEMENT DIVISION MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

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Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST. 1. Generator's US EPA ID No. VA3971520751. 2. Page 1 of 1. 3. Generator's Name and Mailing Address: DEFENSE SUPPLY CENTER RICHMOND. 4. Generator's Phone: 804 779-3661. 5. Transporter 1 Company Name: ACTION RESOURCES. 6. US EPA ID Number: ALR 000 007 237. 7. Transporter 2 Company Name. 9. Designated Facility Name and Site Address: MICHIGAN DISPOSAL WASTE TREATMENT PLANT. 10. US EPA ID Number: MID000724831.

Table with 5 columns: a, b, c, d (rows) and 12, 13, 14, 15 (columns). Row a: HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, POIII, ERG# 171. 12. Containers No. 001, Type DT. 13. Total Quantity EST 22. 14. Unit Wt/Vol T. 15. Waste No. D040.

J. Additional Descriptions for Materials Listed Above: APPROVAL # 11A 122104mBF // TCE Contaminated Soil. K. Handling Codes a, b, c, d.

15. Special Handling Instructions and Additional Information: 24 HOUR EMERGENCY CONTACT: 800-275-8629

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

17. Transporter 1 Acknowledgment of Receipt of Materials. Printed/Typed Name: Steven R. Edlwith. Signature: [Signature]. Date: 01/04/05. 18. Transporter 2 Acknowledgment of Receipt of Materials. Printed/Typed Name: DAVID PENNINGTON. Signature: [Signature]. Date: 01/04/05.

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name. Signature. Date.

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN PART AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8902 24 HOUR PER DAY.

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
 49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
 5600 FULTON INDUSTRIAL BLVD SW
 ATLANTA, GA 30336

Receipt ID: 369501
 EQ Account #: 4506
 Manifest / BOL: MI8918264
 Transporter: ACTION
 Date: 01/05/2005
 Time In: 8:03 AM
 Time Out: 9:39 AM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE	22.350 TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND Gross: 77,080 Tare: 32,380 Net: 44,700		

NO SALVAGING ON PREMISES



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

783 718

DO NOT WRITE IN THIS SPACE

ATT. DIS. REJ. PR.

Required under authority of Part 111 and Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to criminal and/or civil penalties under Sections 324.11151 or 324.12116 MCL.

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751		Manifest Document No. 0006		2. Page of		Information in the shaded areas is not required by Federal law.						
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 6000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23287						A. State Manifest Document Number MI 8918265								
4. Generator's Phone 804 279-3881						B. State Generator's ID								
5. Transporter 1 Company Name ACTION RESOURCES				6. US EPA ID Number ALC 000 007 239		G. State Transporter's ID								
7. Transporter 2 Company Name						D. Transporter's Phone 300 278-3845								
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40350 N. I-94 SERVICE DRIVE BELLEVILLE MI 48111						8. US EPA ID Number MID000724831		E. State Transporter's ID						
						F. Transporter's Phone								
						G. State Facility's ID								
						Facility's Phone								
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER). HM						12. Containers No. Type		13. Total Quantity		14. Waste Unit W/Vol		15. Waste No.		
a. <input checked="" type="checkbox"/> HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9. UN3077, PGIII ERG# 171						001 DT		EST 22		T		D040		
b. <input type="checkbox"/>														
c. <input type="checkbox"/>														
d. <input type="checkbox"/>														
J. Additional Descriptions for Materials Listed Above APPROVAL # 11A) 122104MBF // TCE Contaminated Soil										K. Handling Codes a. b. c. d.				
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-6829														
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.														
Printed/Typed Name Steven R. Edlwith						Signature <i>[Signature]</i>			Date Month Day Year 01/04/05					
17. Transporter 1 Acknowledgment of Receipt of Materials						Printed/Typed Name Scott Guxton			Signature <i>[Signature]</i>			Date Month Day Year 01/10/05		
18. Transporter 2 Acknowledgment of Receipt of Materials						Printed/Typed Name			Signature			Date Month Day Year		
19. Discrepancy Indication Space														
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.														
Printed/Typed Name						Signature			Date Month Day Year					

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN DETROIT AT 1-800-292-4708 OR OUT OF STATE AT 517-373-7680 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-6802 24 HOUR PER DAY.

EQ-The Environmental Quality Co.

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 369504
EQ Account #: 4506
Manifest / BOL: M18918265
Transporter: ACTION
Date: 01/05/2005
Time In: 8:18 AM
Time Out: 10:06 AM

Line	Description	Qty.	Unit
01 - A	122104MBF - BURN PIT WASTE	23.170	TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND			
Gross: 78,940 Tare: 32,600 Net: 46,340			

NO SALVAGING ON PREMISES

783 720

Required under authority of Part 111, and Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to criminal and/or civil penalties under Sections 324.11151 or 324.12116 MCL.



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

DO NOT WRITE IN THIS SPACE

ATT. DIS. REJ. PR.

Form Approved OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751	Manifest Document No. 0207	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 6000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA23297				A. State Manifest Document Number MI 8918266		
4. Generator's Phone 804 278-3681				B. State Generator's ID		
5. Transporter 1 Company Name US Bulk Transport, Inc		6. US EPA ID Number PAD 987 347 515		C. State Transporter's ID VS16458 PA	D. Transporter's Phone 800-642-8910	
7. Transporter 2 Company Name		8. US EPA ID Number		E. State Transporter's ID	F. Transporter's Phone	
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40350 N. 194 SERVICE DRIVE BELLEVILLE MI 48111				10. US EPA ID Number MID000724831		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER) HM				12. Containers No.	13. Total Quantity	14. Waste Unit Wt/Vol
a.	<input checked="" type="checkbox"/>	HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGIII ERG# 171		001 DT	EST. ZZ	T
b.	<input type="checkbox"/>					
c.	<input type="checkbox"/>					
d.	<input type="checkbox"/>					
J. Additional Descriptions for Materials Listed Above APPROVAL # 11A) 122104mBF // TCE Contaminated Soil						K. Handling Codes a. b. c. d.
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-6829						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford						
Printed/Typed Name Steven R. Etkinitch				Signature <i>[Signature]</i>		Date Month Day Year 01 19 05
17. Transporter 1 Acknowledgment of Receipt of Materials				Printed/Typed Name Victor H Tracy		Date Month Day Year 01 19 05
18. Transporter 2 Acknowledgment of Receipt of Materials				Signature <i>[Signature]</i>		Date Month Day Year
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name				Signature		Date Month Day Year

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOUR PER DAY.

EQ-The Environmental Quality Co.

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30336

Receipt ID: 369528
EQ Account #: 4506
Manifest / BOL: MI8918268
Transporter: USBULK
Date: 01/05/2005
Time In: 12:34 PM
Time Out: 2:02 PM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE	24.630 TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND		
Gross: 80,920 Tare: 31,660 Net: 49,260		



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

783 722
DO NOT WRITE IN THIS SPACE
ATT. DIS. REJ. PR.

Required under authority of Part 111 and Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to criminal and/or civil penalties under Sections 324.11151 or 324.12115 MCL.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751		Manifest Document No. 0008		2. Page 1 of		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23207						A. State Manifest Document Number MI 8918267							
4. Generator's Phone 804 278-3881						B. State Generator's ID							
5. Transporter 1 Company Name US Bulk Transport Inc.				6. US EPA ID Number PA0 987 347 515		C. State Transporter's ID VA 95 001 711							
7. Transporter 2 Company Name						D. Transporter's Phone 800 642 8910							
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 4060 N. I-04 SERVICE DRIVE BELLEVILLE MI 48111						E. State Transporter's ID							
10. US EPA ID Number MID000724831						F. Transporter's Phone							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER). HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGIII, ERG# 171						12. Containers No. Type 001 DT		13. Total Quantity EST. 22		14. Waste Unit Wt/Vol T		15. Waste No. D040	
J. Additional Descriptions for Materials Listed Above APPROVAL # 11A 122104MBF // TCE Contaminated Soil										K. Handling Codes a b c d			
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-8629													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name Steven E. Edlwith				Signature <i>[Signature]</i>				Date 01 09 05					
17. Transporter 1 Acknowledgment of Receipt of Materials													
Printed/Typed Name Chauncey Bowser				Signature <i>[Signature]</i>				Date 01 09 05					
18. Transporter 2 Acknowledgment of Receipt of Materials													
Printed/Typed Name				Signature				Date					
19. Discrepancy Indication Space													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.													
Printed/Typed Name				Signature				Date					

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-9802 24 HOUR PER DAY.

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
 49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
 5600 FULTON INDUSTRIAL BLVD SW
 ATLANTA, GA 30336

Receipt ID: 369555
 EQ Account #: 4506
 Manifest / BOL: M18918267
 Transporter: USBULK
 Date: 01/05/2005
 Time In: 2:26 PM
 Time Out: 3:59 PM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE	22.670 TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND Gross: 78,500 Tare: 33,160 Net: 45,340		

NO SALVAGING ON PREMISES



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

783 724

Required under authority of Part 111 and
Part 121 of Act 451, 1994, as amended.

DO NOT WRITE IN THIS SPACE
ATT. DIS. REJ. PR.

Failure to file may subject you to
criminal and/or civil penalties under
Sections 324.11151 or 324.12116 MCL.

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971520751	Manifest Document No. 1009	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23287			A. State Manifest Document Number MI 8918268		B. State Generator's ID	
4. Generator's Phone 804 778-3861			6. US EPA ID Number PAD 987 347 515		C. State Transporter's ID MI-75-724-01A	
5. Transporter 1 Company Name US Bulk Transport			8. US EPA ID Number		D. Transporter's Phone 500-692-8910	
7. Transporter 2 Company Name			E. State Transporter's ID		F. Transporter's Phone	
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 49360 N. I-94 SERVICE DRIVE BELLEVILLE MI 48111			10. US EPA ID Number MID000724831		G. State Facility's ID	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID NUMBER) HM			12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol
a. <input checked="" type="checkbox"/> HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGIII ERG# 171			001 DT		EST 23	T
b. <input type="checkbox"/>						
c. <input type="checkbox"/>						
d. <input type="checkbox"/>						
J. Additional Descriptions for Materials Listed Above APPROVAL #: 11A) 122104mBF // TCE Contaminated Soil					K. Handling Codes a. b. c. d.	
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-8620						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Steven R. Edlavitch			Signature <i>[Signature]</i>		Date Month Day Year 01 04 05	
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name SEE Brian Bowser			Signature <i>[Signature]</i>		Date Month Day Year 11 04 05	
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name			Signature		Date Month Day Year	
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name			Signature		Date Month Day Year	

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-424-8602 24 HOUR PER DAY. OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-292-4706

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
 49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
 5600 FULTON INDUSTRIAL BLVD SW
 ATLANTA, GA 30336

Receipt ID: 369557
 EQ Account #: 4506
 Manifest / BOL: M18918268
 Transporter: USBULK
 Date: 01/05/2005
 Time In: 2:30 PM
 Time Out: 4:24 PM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE VA3971520751 DEFENSE SUPPLY CENTER RICHMOND	25.720 TONS
Gross: 81,640 Tare: 30,200 Net: 51,440		



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

783 726

DO NOT WRITE IN THIS SPACE
ATT. DIS. REJ. PR.

Required under authority of Part 111 and
Part 121 of Act 451, 1994, as amended.

Failure to file may subject you to
criminal and/or civil penalties under
Sections 324.11151 or 324.12116 MCL.

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No VA3971520751	Manifest Document No. 2010	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23287			A. State Manifest Document Number MI 8918269	B. State Generator's ID	
4. Generator's Phone 804 779 3881			C. State Transporter's ID X3577148 PA		D. Transporter's Phone 800 697-8910
5. Transporter 1 Company Name US Bulk Transport INC.		6. US EPA ID Number L7AD 987 347 515	E. State Transporter's ID		F. Transporter's Phone
7. Transporter 2 Company Name		8. US EPA ID Number	G. State Facility's ID		H. Facility's Phone
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 48350 N. I-94 SERVICE DRIVE BELLEVILLE MI 48111			10. US EPA ID Number MID000724831		800 587 5400
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER) HM			12. Containers	13. Total Quantity	14. Unit
a. <input checked="" type="checkbox"/> HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UR3077, PGII, ERG# 171			No. 001	Type DT	Quantity EST. 22
b. <input type="checkbox"/>					Unit T
c. <input type="checkbox"/>					Waste No. D040
d. <input type="checkbox"/>					
J. Additional Descriptions for Materials Listed Above APPROVAL #: 11A) 122104MBF // TCE Contaminated Soil					K. Handling Codes a. b. c. d.
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-8828					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name Steven R. Edlaritch		Signature <i>[Signature]</i>		Date Month 01 Day 04 Year 95	
17. Transporter 1 Acknowledgment of Receipt of Materials					
Printed/Typed Name CHESTER CONLEY		Signature <i>[Signature]</i>		Date Month 01 Day 10 Year 95	
18. Transporter 2 Acknowledgment of Receipt of Materials					
Printed/Typed Name		Signature		Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Date	

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN ACCORDANCE WITH THE NATIONAL RESPONSE PLAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-6802 24 HOUR PER DAY.

EQ The Environmental Quality Co.

Michigan Disposal Waste Treatment Plant

49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
5600 FULTON INDUSTRIAL BLVD SW
ATLANTA, GA 30335

Receipt ID: 369546
EQ Account #: 4506
Manifest / BOL: M18918269
Transporter: USBULK
Date: 01/05/2005
Time In: 2:06 PM
Time Out: 3:43 PM

Line	Description Generator	Qty.	Unit
01 - A	122104MBE - BURN PIT WASTE	25.230	TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND			
Gross: 80,940 Tare: 30,480 Net: 50,460			



WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY

783 728

Required under authority of Part 111 and
Part 121 of Act 451, 1994, as amended.

DO NOT WRITE IN THIS SPACE

ATT DIS REJ PR

Failure to file may subject you to
criminal and/or civil penalties under
Sections 324.11151 or 324.12116 MCL.

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. VA3971320751	Manifest Document No. 0011	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEFENSE SUPPLY CENTER RICHMOND 8000 JEFFERSON DAVIS HIGHWAY RICHMOND, VA 23287				A. State Manifest Document Number MF 8918270		
4. Generator's Phone 804 278-3861				B. State Generator's ID		
5. Transporter 1 Company Name US Bulk Transports, Inc.		6. US EPA ID Number PAD 987 347 515		C. State Transporter's ID X5-ALD75 PA		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 800-642-8910		
9. Designated Facility Name and Site Address MICHIGAN DISPOSAL WASTE TREATMENT PLANT 40360 N. 184 SERVICE DRIVE BELLEVILLE MI 48111		10. US EPA ID Number MID000724831		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 800-682-6489		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER) HM		12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol
a. <input checked="" type="checkbox"/>	HAZARDOUS WASTE, SOLID, N.O.S., (TRICHLOROETHYLENE), 9, UN3077, PGIII, ERG# 171	001 DT		EST. 22		T
b. <input type="checkbox"/>						
c. <input type="checkbox"/>						
d. <input type="checkbox"/>						
J. Additional Descriptions for Materials Listed Above APPROVAL # 11A) 122104MBF // TCE Contaminated Soil						K. Handling Codes a. b. c. d.
15. Special Handling Instructions and Additional Information 24 HOUR EMERGENCY CONTACT: 800-275-6829						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR; if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name John R. Edlarity				Signature <i>[Signature]</i>		Date Month Day Year 01 04 05
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name Ted HANES				Signature <i>[Signature]</i>		Date Month Day Year 01 04 05
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name				Signature		Date Month Day Year
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19						
Printed/Typed Name				Signature		Date Month Day Year

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-6862 24 HOUR PER DAY.

EQ-The Environmental Quality Co.
Michigan Disposal Waste Treatment Plant
 49350 North I-94 Service Drive, Belleville, Michigan 48111

Receipt

EQIS-ATLANTA
 5600 FULTON INDUSTRIAL BLVD SW
 ATLANTA, GA 30336

Receipt ID: 369545
 EQ Account #: 4506
 Manifest / BOL: M18916270
 Transporter: USBULK
 Date: 01/05/2005
 Time In: 2:03 PM
 Time Out: 3:51 PM

Line	Description Generator	Qty. Unit
01 - A	122104MBF - BURN PIT WASTE	24.010 TONS
VA3971520751 DEFENSE SUPPLY CENTER RICHMOND		
Gross: 80,520 Tare: 32,500 Net: 48,020		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 730 *supa*

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343579

Section I GENERATOR (Generator completes all of Section I)

Defense Supply Center

a. Generator Name: 800J Jefferson Davis Hwy b. Generating Location: _____
 c. Address: Richmond VA 23297 d. Address: _____
804-279-8070 e. Phone No.: _____
 f. Phone No.: _____

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE: L17Y432453 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 22 Units: 0 Y: 0 No.: 0 TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION. I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edwith Generator Authorized Agent Name
[Signature] Signature
010505 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Cecil R. Cross Jr.
 703-441-0999 PRINT / TYPE
 d. Phone No.: _____ e. Truck No.: _____
 f. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
Cecil R. Cross Jr. Driver Signature
010505 Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____ Driver Signature
 _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

OLD DOMINION LANDFILL 226-6198

a. Site Name: _____ c. Phone No.: _____
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____
 e. Discrepancy Indication Space: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

[Signature] Name of Authorized Agent
[Signature] Signature
010505 Receipt Date

2184

Section IV ASBESTOS (Generator completes a-d, f, g; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

d. Operator's Name & Title: _____

783 731

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

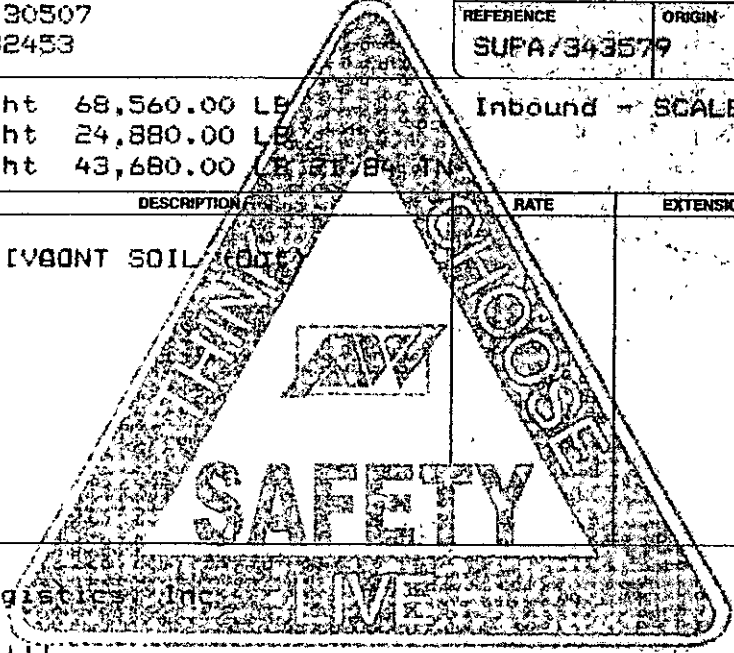
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351450	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 9:48 am
DATE OUT 5 January 2005		TIME OUT 10:04 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE SUPA/343579	ORIGIN VIRGINIA	

00 Gross Weight 68,560.00 LB
Tare Weight 24,880.00 LB
Net Weight 43,680.00 LB

Inbound - SCALE TICKET

QTY.	UNT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
21.84	TN	23 IVQNT SOIL (OUT)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

CHECKS

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE *C.L. Cady*

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343580

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center
b. Generating Location: 8000 Jefferson Davis Hwy
c. Address: Richmond VA 23297
d. Address: _____
e. Phone No.: 804-279-8070
f. Phone No.: _____

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____
h. Owner's Phone No.: _____

i. BFI WASTE CODE: L17Y43245B
Containers: _____

j. Description of Waste: Soil
k. Quantity: EST 25 Units No. TYPE BA

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Steven R. Edwintch
Signature: [Signature]
Shipment Date: 010505

TYPE	
DM	METAL DRUM
DP	PLASTIC DRUM
B	BAG
BA	8 MIL PLASTIC BAG or WRAP
T	TRUCK
O	OTHER

UNITS	
P	POUNDS
Y	YARDS
M ³	CUBIC METERS
Y ³	CUBIC YARDS
O	OTHER

Section II: TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I	TRANSPORTER II
a. Name: Reece Services Inc	h. Name: _____
Address: 17756 Colonial Port Rd Dumfries VA 22026	i. Address: _____
c. Driver Name / Title: [Signature] 703-44-0999 PRINT / TYPE	j. Driver Name / Title: _____ PRINT / TYPE
d. Phone No.: _____ e. Truck No.: 2168	k. Phone No.: _____ l. Truck No.: _____
f. Vehicle License No. / State: 103-905 Acknowledgement of Receipt of Materials.	m. Vehicle License No. / State: _____ Acknowledgement of Receipt of Materials.
g. Driver Signature: [Signature] Shipment Date: 010505	n. Driver Signature: _____ Shipment Date: _____

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

OLD DOMINION LANDFILL 226-0198

a. Site Name: 100 CHARLES CITY RD
b. Physical Address: RICHMOND, VA 23231
c. Phone No.: _____
d. Mailing Address: _____

e. Discrepancy Indication Space: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: [Signature]
Signature: [Signature]
Receipt Date: 010505

Section IV: ASBESTOS (Generator complete a-d, f, g; Operator * completes e, h)

a. Operator's * Name: _____
b. Operator's * Phone No.: _____
c. Operator's * Address: _____

Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

3207

783 733

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

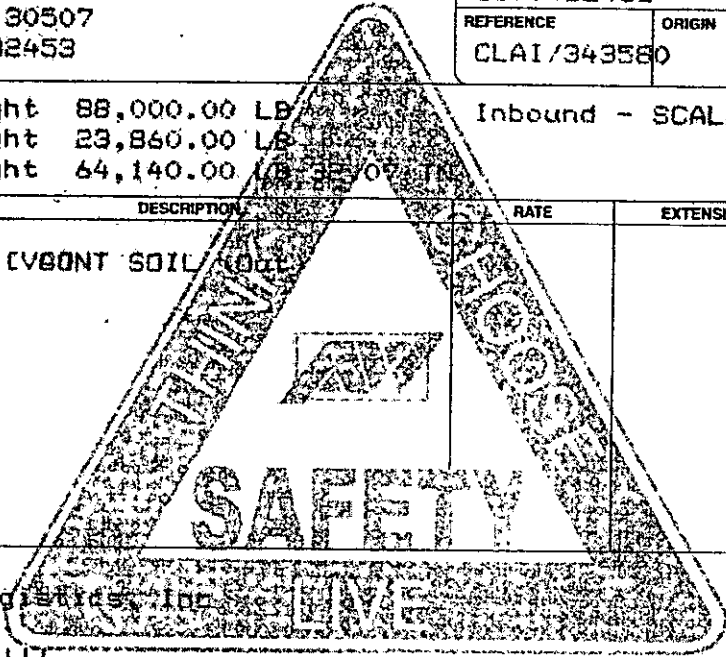
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351460	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 10:10 am
DATE OUT 5 January 2005		TIME OUT 10:22 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE CLAI/343580	ORIGIN VIRGINIA	

00 Gross Weight 88,000.00 LB
Tare Weight 23,860.00 LB
Net Weight 64,140.00 LB

Inbound - SCALE TICKET

QTY	UNT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
32.07	TN	23 (V)BONT SOIL (OIL)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

CLAIBORNE

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 734 10 *dy*

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343581

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	V	4	3	2	A	S
---	---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 25 Units: 0 No.: 0 TYPE: BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlavitch Generator Authorized Agent Name
[Signature] Signature
010505 Shipment Date

Section II: TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I
 a. Name: Reece Services Inc / TIS
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Lyn Berry
 PRINT / TYPE
 d. Phone No.: 703 441 0999 e. Truck No.: 10
 f. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 g. [Signature] Driver Signature
010505 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____
 _____ Driver Signature
 _____ Shipment Date

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231
 e. Discrepancy Indication Space: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. [Signature] Name of Authorized Agent
[Signature] Signature
010505 Receipt Date

2902

Section IV: ASBESTOS (Generator complete a-d; f, g; Operator I completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Operator's Name & Title: _____

783 735

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

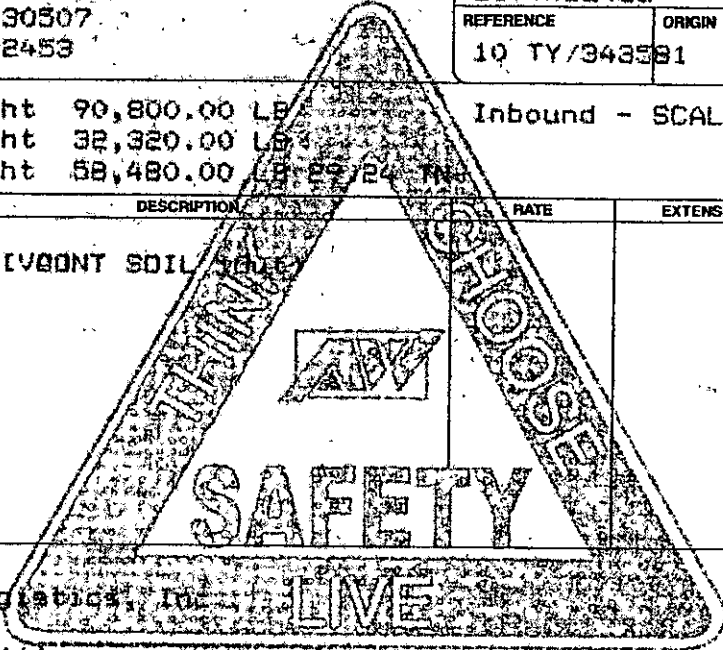
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351469	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 10:17 am
DATE OUT 5 January 2005		TIME OUT 10:29 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE 10 TY/348581	ORIGIN VIRGINIA	

00 Gross Weight 90,800.00 LB
Tare Weight 32,320.00 LB
Net Weight 58,480.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
29.24	TN	23 IVONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 736 *Sup 1*

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343582

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8001 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-3070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE

--	--	--	--	--	--	--	--	--	--

L17Y42453 Containers

--	--	--	--	--	--	--	--

j. Description of Waste: Soil k. Quantity EST 23 Units No. TYPE

--	--	--	--	--	--	--	--

0 Y 0 BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER
UNITS	
P	- POUNDS
Y	- YARDS
M	- CUBIC METERS
Y*	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlmanitch Generator Authorized Agent Name [Signature] Signature 010505 Shipment Date

Section II TRANSPORTER (Generator complete a-d; Transporter I complete e-h; Transporter II complete i-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Cecil R. Cross Jr.
PRINT / TYPE
 d. Phone No.: 703-441-0999 e. Truck No.: _____
 f. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
Cecil R. Cross Jr. Driver Signature 010505 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____ Driver Signature _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231
 e. Discrepancy Indication Space: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. [Signature] Name of Authorized Agent [Signature] Signature 010505 Receipt Date 2488

Section IV ASBESTOS (Generator complete a-d; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Operator Name & Title _____

783 737

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

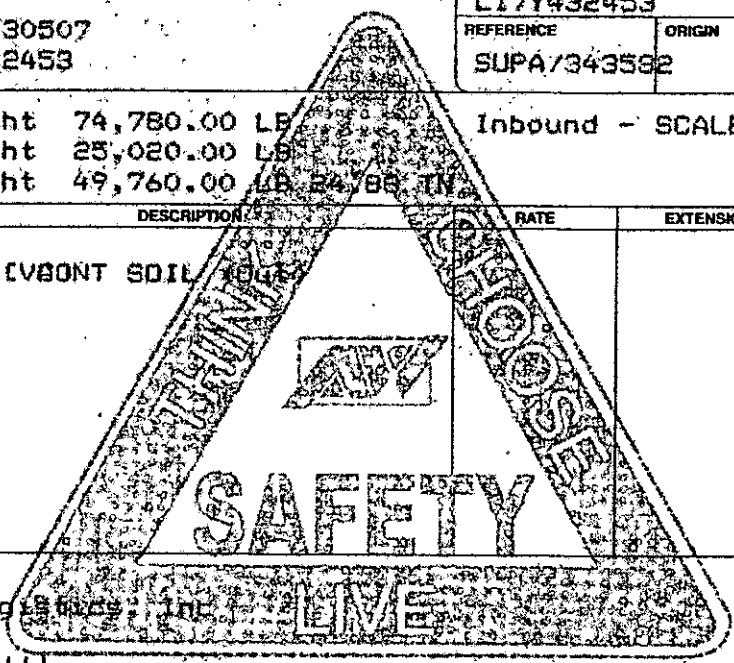
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351498	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 11:11 am
DATE OUT 5 January 2005		TIME OUT 11:24 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE SUPA/343582	ORIGIN VIRGINIA	

00 Gross Weight 74,780.00 LB
 Tare Weight 25,020.00 LB
 Net Weight 49,760.00 LB 24.88 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
24.88	TN	23 CVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CHECKS

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE

C. L. Cady

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343583

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 i. BFI WASTE CODE:

L	1	7	4	3	2	4	3								
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 25 Units:

0	Y				
---	---	--	--	--	--

 No.:

0					
---	--	--	--	--	--

 TYPE:

0	BA
---	----

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlertch Generator Authorized Agent Name
[Signature] Signature
010505 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Walker RAINES
 d. Phone No.: 703-441-0999 e. Truck No.: 2
 f. Vehicle License No. / State: VA 102-437
 Acknowledgement of Receipt of Materials:
 g. Walker Raine Driver Signature
010505 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____ Driver Signature
 _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent
[Signature] Signature
010505 Receipt Date
3562

Section IV ASBESTOS (Generator completes a-d, f, g; Operator * completes e, j)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

783 739

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
E3231

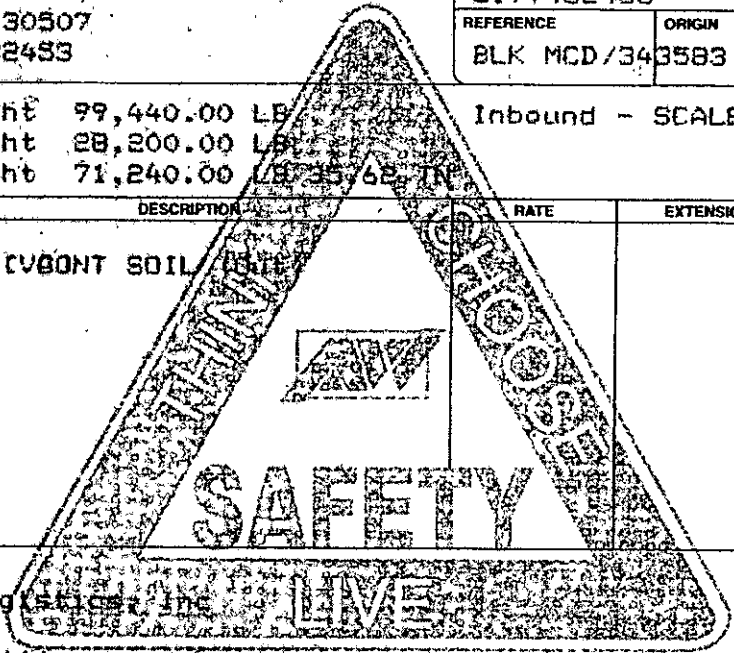
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract #L17Y432453

SITE 01	TICKET 351504	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 11:22 am
DATE OUT 5 January 2005		TIME OUT 11:32 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE BLK MCD/343583	ORIGIN VIRGINIA	

OO Gross Weight 99,440.00 LB
Tare Weight 28,200.00 LB
Net Weight 71,240.00 LB 35.62 TN
Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
35.62	TN	23 CVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

McDUGAN

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE

Walter Haines

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

It's the Right Thing!



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 740 *Plan*

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343584

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L17	432453								
-----	--------	--	--	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity: Est 25 Units: 0 No: 0 TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlwith Generator Authorized Agent Name
[Signature] Signature
010505 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

e. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: CLAIR BARNE WOODRIF
 d. Phone No.: 703-441-0999 e. Truck No.: 2188
 f. Vehicle License No. / State: 103-953 VA
 Acknowledgement of Receipt of Materials.
[Signature] Driver Signature
010505 Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____ Driver Signature
 _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231
 e. Discrepancy Indication Space: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. [Signature] Name of Authorized Agent
[Signature] Signature
010505 Receipt Date

3236

Section IV ASBESTOS (Generator complete a-d, f, g; Operator A completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

a. Operator's Name & Title: _____

783 741

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

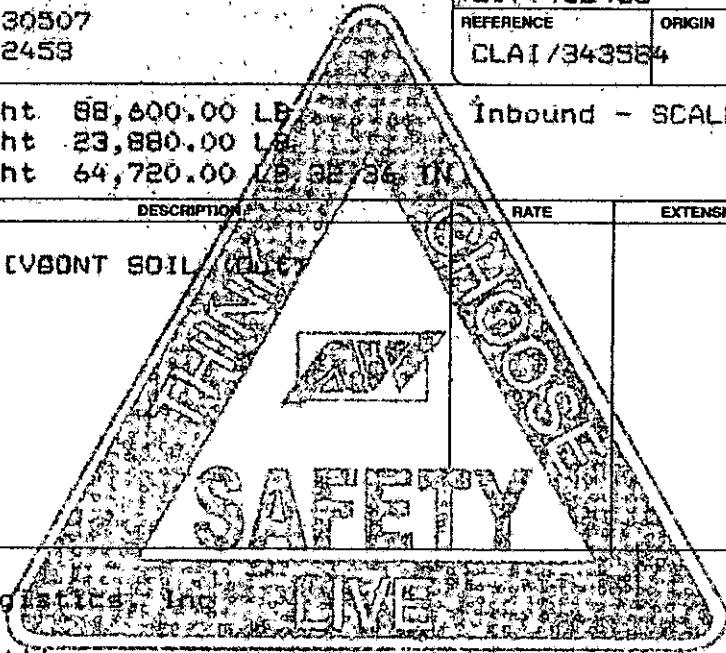
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351509	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005	TIME IN 11:32 am	
DATE OUT 5 January 2005	TIME OUT 11:44 am	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE CLAI/343534	ORIGIN VIRGINIA	

00 Gross Weight 88,600.00 LB
 Tare Weight 23,880.00 LB
 Net Weight 64,720.00 LB 32736 IN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
32.36	TN	23 CVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CLAIBORNE

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 742 10TY

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343585

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297 e. Phone No.: 804-279-3070 f. Phone No.: _____

If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. EFI WASTE CODE:

L	1	7	4	3	2	4	3
---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity: Est 25 Units:

0	Y	0	0	0	0
---	---	---	---	---	---

 No.

0	0	0	0
---	---	---	---

 TYPE:

0	BA
---	----

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
C	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlowitch Generator Authorized Agent Name
[Signature] Signature
010505 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Lyn Berkley
703-441-0999 PRINT / TYPE
 d. Phone No.: _____ e. Truck No.: 10
 f. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 g. [Signature] Driver Signature
010505 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____
 _____ Shipment Date

Section III DESTINATION (Generator completes a-d; Destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent: _____ Signature
010505 Receipt Date
3386

Section IV ASBESTOS (Generator complete a-d; i, g; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

783 743

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

1010E7
All Points Logistics, Inc
2567 Athens Highway

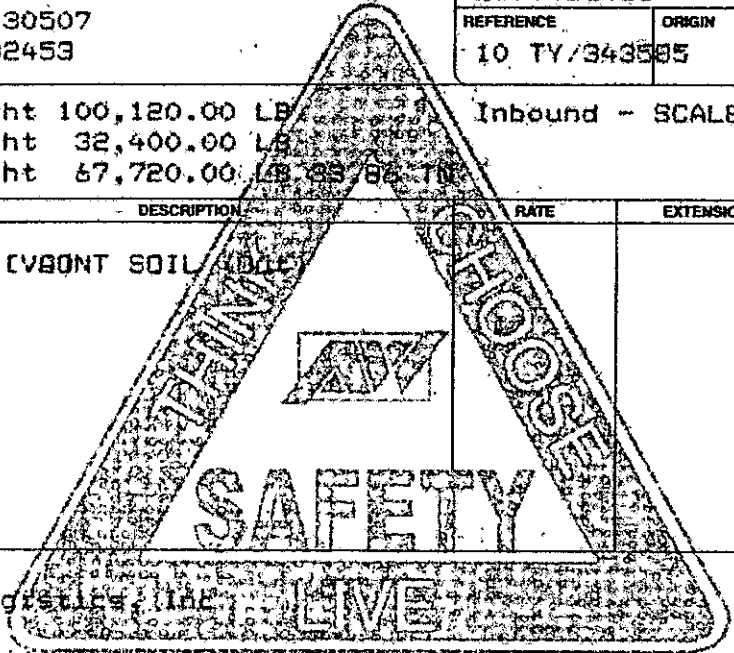
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351519	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 11:42 am
DATE OUT 5 January 2005		TIME OUT 12:00 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE 10 TY/343585	ORIGIN VIRGINIA	

00 Gross Weight 100,120.00 LB
 Tare Weight 32,400.00 LB
 Net Weight 67,720.00 LB

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
33.86	TN	23 CVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

TY TRK *It's the Right Thing!*

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

10 195 783 744 80000

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343551

Section I GENERATOR (Generator completes all of Section I.)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-275-8070 f. Phone No.: _____

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

BFI WASTE CODE

L	J	Y	4	3	2	4	3
---	---	---	---	---	---	---	---

 Containers _____
 Description of Waste: Soil k. Quantity 83724 Units

0	Y	0	0	0	0
---	---	---	---	---	---

 No.

0	0	0	0	0	0
---	---	---	---	---	---

 TYPE

0	B	A
---	---	---

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steve Edinger Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator complete a-d; Transporter I complete a-g; Transporter II complete h-r)

TRANSPORTER I		TRANSPORTER II	
a. Name: <u>Reece Services Inc / T.V.'S</u>		h. Name: _____	
Address: <u>17756 Colonial Port Rd</u> <u>Dumfries VA 22026</u>		i. Address: _____	
c. Driver Name / Title: <u>Lyn Berry</u> PRINT / TYPE		j. Driver Name / Title: _____ PRINT / TYPE	
d. Phone No.: <u>703-441-9999</u>	e. Truck No. <u>10</u>	k. Phone No.: _____	l. Truck No.: _____
f. Vehicle License No. / State: <u>17-324 HA</u>		m. Vehicle License No. / State: _____	
Acknowledgement of Receipt of Materials.		Acknowledgement of Receipt of Materials.	
g. <u>[Signature]</u> Driver Signature	<u>010405</u> Shipment Date	n. _____ Driver Signature	_____ Shipment Date

Section III DESTINATION (Generator completes a-d; Destination site completes e-r)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2190 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. [Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date
27.94 (circled)

Section IV ASBESTOS (Generator complete a-d; Operator* completes a)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____

GENERATOR'S CERTIFICATION: hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

a. Operator's Name & Title: _____

783 745

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

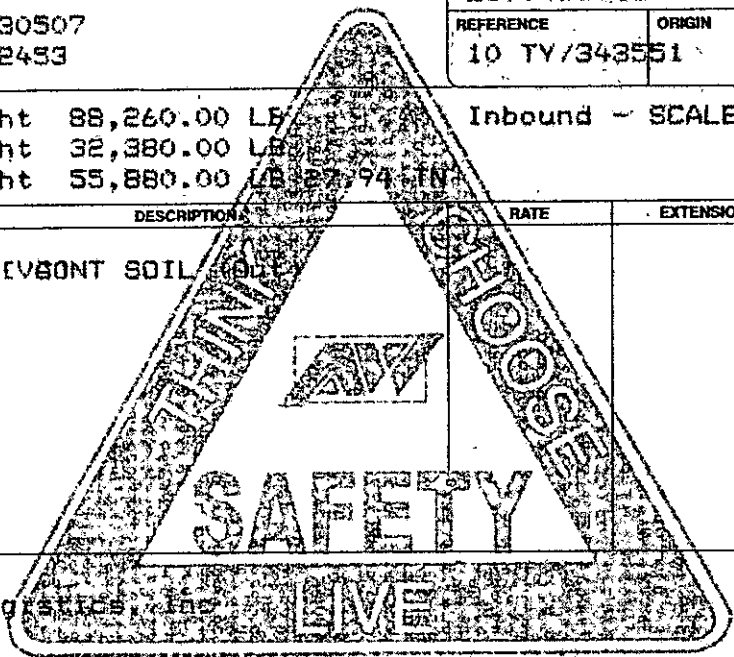
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SYE 01	TICKET 351003	GRID
WEIGHMASTER D800058		
DATE IN 4 January 2005		TIME IN 9:29 am
DATE OUT 4 January 2005		TIME OUT 9:35 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE 10 TY/343551	ORIGIN VIRGINIA	

00 Gross Weight 88,260.00 LB Inbound - SCALE TICKET
 Tare Weight 32,380.00 LB
 Net Weight 55,880.00 LB @ 27.94 TN

QTY.	UNT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
27.94	TN	23 EVBONT SOIL				



All Points Logistics

HAVE A GREAT DAY !!!

SAFETY MEMOS:

TY TRK

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

Super 783 746

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343552

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity: Est 21 Units: 0 Y: 0 No.: 0 TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261

Steve Edgworth Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-j)

TRANSPORTER I

a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Cecil K. Cross Jr.
 PRINT / TYPE
 d. Phone No.: 703-441-0999 e. Truck No.: _____
 f. Vehicle License No. / State: ZZ-027P / VA
 Acknowledgement of Receipt of Materials:
Cecil K. Cross Jr.
010405 Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:

 n. _____
 Driver Signature _____ Shipment Date _____

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent Signature
[Signature] Signature
010408 Receipt Date
2194

Section IV ASBESTOS (Generator complete a-d, f, g; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 747

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

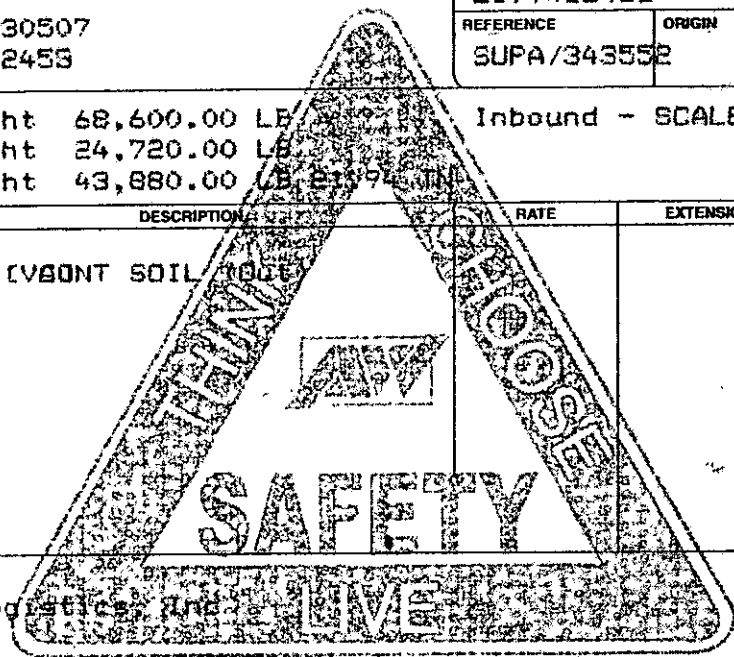
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351011	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005		TIME IN 9:21 am
DATE OUT 4 January 2005		TIME OUT 9:41 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE SUPA/343552	ORIGIN VIRGINIA	

00 Gross Weight 68,600.00 LB
Tare Weight 24,720.00 LB
Net Weight 43,880.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
21.94	TN	23 (V80NT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CHEEKS

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

C. K. Cross

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 748 15mg MCD

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343553

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE: L177432453 Containers: _____
 Description of Waste: Soil k. Quantity Est 21 Units 0 No. 0 TYPE BA
 TYPE: DM - METAL DRUM, DP - PLASTIC DRUM, B - BAG, BA - 6 MIL. PLASTIC BAG or WRAP, T - TRUCK, O - OTHER
 UNITS: P - POUNDS, Y - YARDS, M³ - CUBIC METERS, Y³ - CUBIC YARDS, O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven E. Lavitch Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I		TRANSPORTER II	
a. Name: <u>Reece Services Inc</u>		h. Name: _____	
Address: <u>17756 Colonial Port Rd</u> <u>Dumfries VA 22026</u>		i. Address: _____	
c. Driver Name / Title: <u>J M SUGAN OWNER</u>		j. Driver Name / Title: _____	
d. Phone No.: <u>703-441-0999</u>	e. Truck No.: <u>#1</u>	k. Phone No.: _____	l. Truck No.: _____
f. Vehicle License No. / State: <u>VA 102-438 A</u>		m. Vehicle License No. / State: _____	
g. Driver Signature: <u>[Signature]</u>	n. Driver Signature: _____		
Shipment Date: <u>010405</u>	Shipment Date: _____		

Section III DESTINATION (Generator completes a-d; Destination site completes e-l)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date: 010405

Section IV ASBESTOS (Generator complete a-d; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in a respects in proper condition for transport by highway according to applicable international and government regulations

a. Operator's Name & Title: _____

783 749

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

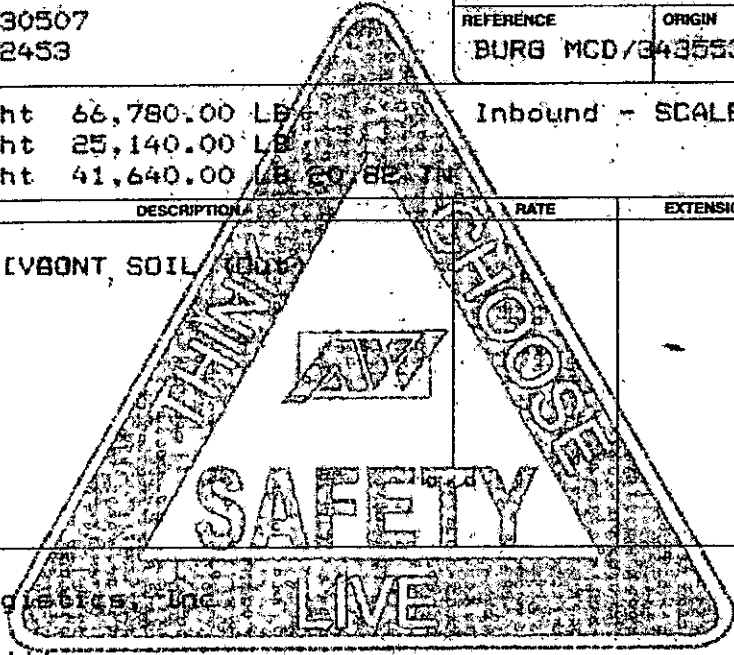
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 951013	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005	TIME IN 9:23 am	
DATE OUT 4 January 2005	TIME OUT 9:44 am	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE BURG MCD/343553	ORIGIN VIRGINIA	

00 Gross Weight 66,780.00 LB
Tare Weight 25,140.00 LB
Net Weight 41,640.00 LB 20/82 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
20.82	TN	23 (VBONT, SOIL (LITE				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

SAFETY MEMOS:

MCDUGAN

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE

It's the Right Thing!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343554

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond, VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 i. BFI WASTE CODE:

L	1	7	7	4	3	2	4	5	8
---	---	---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 25 Units:

0	Y	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---

 No.: _____ TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Steve Elliott Signature: [Signature] Shipment Date:

0	1	0	4	0	5
---	---	---	---	---	---

Section II TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I

e. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Walter Paines PRINT / TYPE
 d. Phone No.: 703-441-0999 e. Truck No.: 2
 f. Vehicle License No. / State: VA 102-437
 Acknowledgement of Receipt of Materials.
 g. Driver Signature: [Signature] Shipment Date:

1	2	0	4	0	4
---	---	---	---	---	---

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____ PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. Driver Signature: _____ Shipment Date:

--	--	--	--	--	--

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

OLD COMINION LANDFILL 226-6198

a. Site Name: _____ c. Phone No.: _____
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date:

0	1	0	4	0	5
---	---	---	---	---	---

Section IV ASBESTOS (Generator complete a-d; Operator completes e-f)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Operator's Name & Title: _____

33609

783 751

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

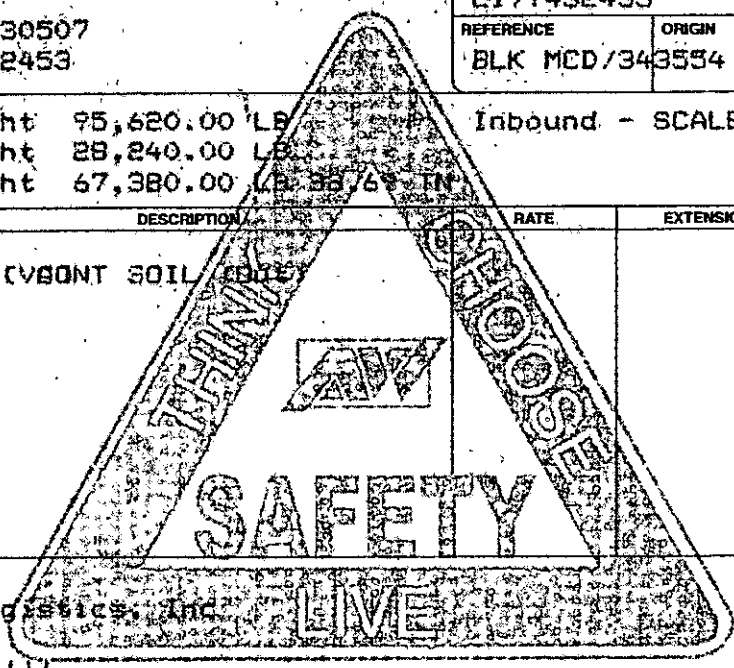
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351014	GRID
WEIGHMASTER D800058		
DATE IN 4 January 2005		TIME IN 9:25 am
DATE OUT 4 January 2005		TIME OUT 9:45 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE BLK MCD/34	ORIGIN 3554	VIRGINIA

00 Gross Weight 95,620.00 LB
Tare Weight 28,240.00 LB
Net Weight 67,380.00 LB 33/6" TN
Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
33.69	TN	23 (V80NT SOIL)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

MCDOLGAN

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

Walter Rainer

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



783 752 *Car*

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is **NOT** asbestos waste, complete only Sections I, II and III.

No. 343555

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	4	3	2	4	3
---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity Est. 24 Units:

0	Y	0	0	0	0
---	---	---	---	---	---

 No.

0	0	0	0	0	0
---	---	---	---	---	---

 TYPE:

0	BA
---	----

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven E. Edkewitch Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Chris Boone PRINT / TYPE
703-441-0999 e. Truck No.: 2188
 d. Phone No.: _____ f. Vehicle License No. / State: 104-983
 Acknowledgement of Receipt of Materials:
[Signature] Driver Signature
010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____ PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. Driver Signature: _____ Shipment Date: _____

Section III DESTINATION (Generator completes a-d; Destination Site completes e-l)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA. 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date

3149

Section IV ASBESTOS (Generator completes a-d; Operator completes e-l)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

g. Operator's Name & Title: _____

783 753

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc.
2567 Athens Highway

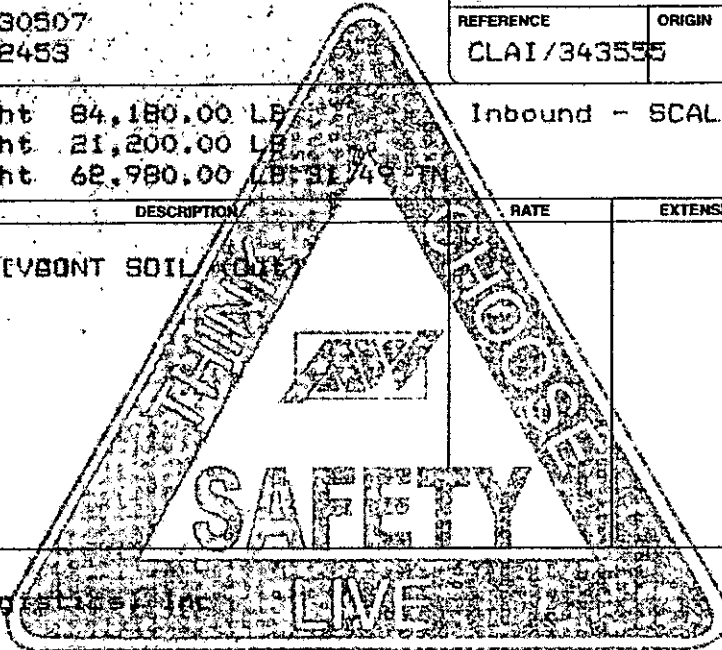
Gainesville, GA 30507
Contract #L17Y432453

SITE 01	TICKET 351077	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005		TIME IN 11:12 am
DATE OUT 4 January 2005		TIME OUT 11:20 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE CLAI/343535	ORIGIN VIRGINIA	

00 Gross Weight 84,180.00 LB
Tare Weight 21,200.00 LB
Net Weight 62,980.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.49	TN	23 EVBONT SOIL				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CLAIBORNE

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

Tony Clarke

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 754 10TY

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343556

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	4	3	2	4	5								
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 23 Units: 0 No.: 0 TYPE: BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION. I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Steven R. Edlwith Signature: [Signature] Shipment Date: 010405

Section II: TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 a. Name: Reece Services Inc / T/S
 Address: 17756 Colonial Port Rd
Lumfries VA 22026
 c. Driver Name / Title: Lyn Berry PRINT / TYPE
 d. Phone No.: 703-441-0999 e. Truck No.: 10
 f. Vehicle License No. / State: 14-378
 Acknowledgement of Receipt of Materials.
 g. Driver Signature: [Signature] Shipment Date: 010405

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____ PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. Driver Signature: _____ Shipment Date: _____

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23234

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date: 010405

Section IV: ASBESTOS (Generator completes a-d; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

Operator's Name & Title: _____

783 755

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

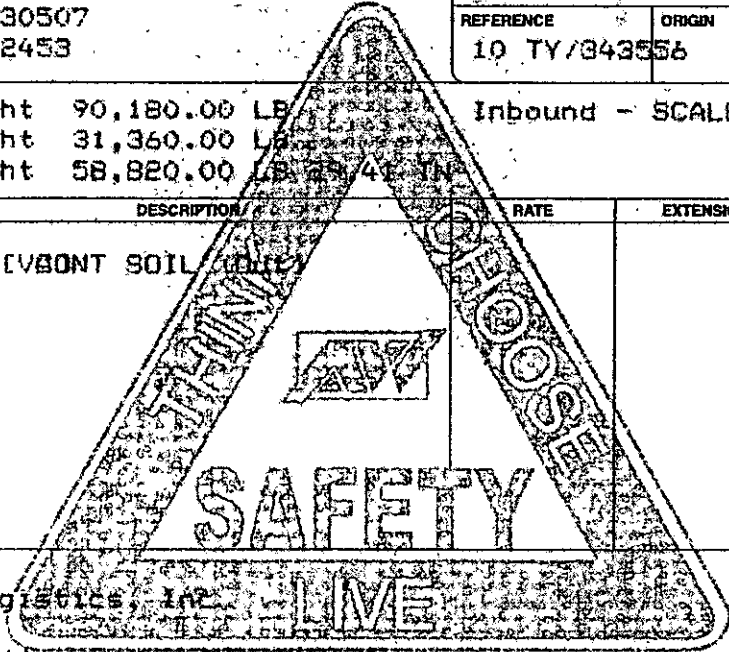
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351080	GRID
DS00058		WEIGHMASTER
DATE IN 4 January 2005		TIME IN 11:11 am
DATE OUT 4 January 2005		TIME OUT 11:23 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE 10 TY/343556	ORIGIN VIRGINIA	

00 Gross Weight 90,180.00 LB
 Tare Weight 31,360.00 LB
 Net Weight 58,820.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
29.41	TN	23 (VBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

TY TRK

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 756 *Dupa*



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is **NOT** asbestos waste, complete only Sections I, II and III.

No. 343557

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	I	7	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 21 Units: 0 No.: 0 TYPE: BA
 TYPE: DM - METAL DRUM, DP - PLASTIC DRUM, B - BAG, BA - 6 MIL PLASTIC BAG or WRAP, T - TRUCK, O - OTHER
 UNITS: P - POUNDS, Y - YARDS, M³ - CUBIC METERS, Y³ - CUBIC YARDS, O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R Gullerich Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I		TRANSPORTER II	
a. Name: <u>Reece Services Inc</u>		h. Name: _____	
Address: <u>17756 Colonial Port Rd</u> <u>Dumfries VA 22026</u>		i. Address: _____	
c. Driver Name / Title: <u>Cecil R. Cross, Jr.</u> 703-441-0999 PRINT / TYPE		j. Driver Name / Title: _____ PRINT / TYPE	
d. Phone No.: _____	e. Truck No.: _____	k. Phone No.: _____	l. Truck No.: _____
f. Vehicle License No. / State: _____		m. Vehicle License No. / State: _____	
Acknowledgement of Receipt of Materials: <u>Cecil R. Cross, Jr.</u> <u>010405</u> Driver Signature Shipment Date		n. _____ Driver Signature Shipment Date	

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent [Signature] Signature 010405 Receipt Date 2147

Section IV ASBESTOS (Generator complete a-d, f, g; Operator * completes e, j)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

a. Operator's Name & Title: _____

783 757

BFI OLD DOMINION
2001 CHARLES CITY RD.
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

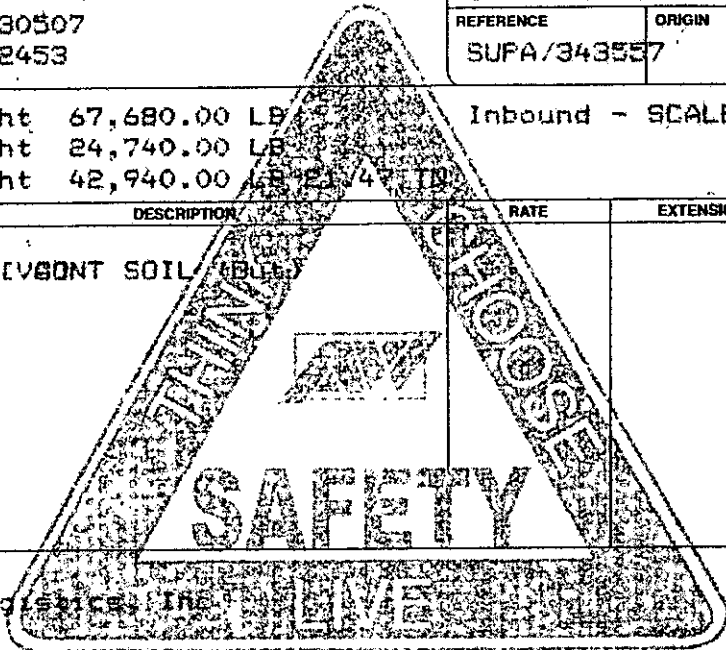
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351085	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005		TIME IN 11:17 am
DATE OUT 4 January 2005		TIME OUT 11:28 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE SUPA/343557	ORIGIN VIRGINIA	

00 Gross Weight 67,680.00 LB
Tare Weight 24,740.00 LB
Net Weight 42,940.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
21.47	TN	23 EVGONT SOIL (BLE)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

CHEEKS

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

It's the Right Thing!

SIGNATURE

C. L. Casper

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



783 758

Borg M.D

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343558

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 i. BFI WASTE CODE:

L17Y432458									
------------	--	--	--	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity EST 21 Units:

0	Y				
---	---	--	--	--	--

 No:

0					
---	--	--	--	--	--

 TYPE:

0	BA
---	----

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edworthy Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: J M Dorgan / owner
 d. Phone No.: 703-441-0999 e. Truck No.: 7
 f. Vehicle License No. / State: VA 102-438 A
 Acknowledgement of Receipt of Materials:
[Signature] g. 010405 Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____ 010405 Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent [Signature] Signature 010405 Receipt Date

Section IV ASBESTOS (Generator completes a-d; f, g; Operator * completes e, h)

a. Operators * Name: _____ b. Operator's * Phone No.: _____
 c. Operators * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

e. Operator's Name & Title: _____

783-759

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

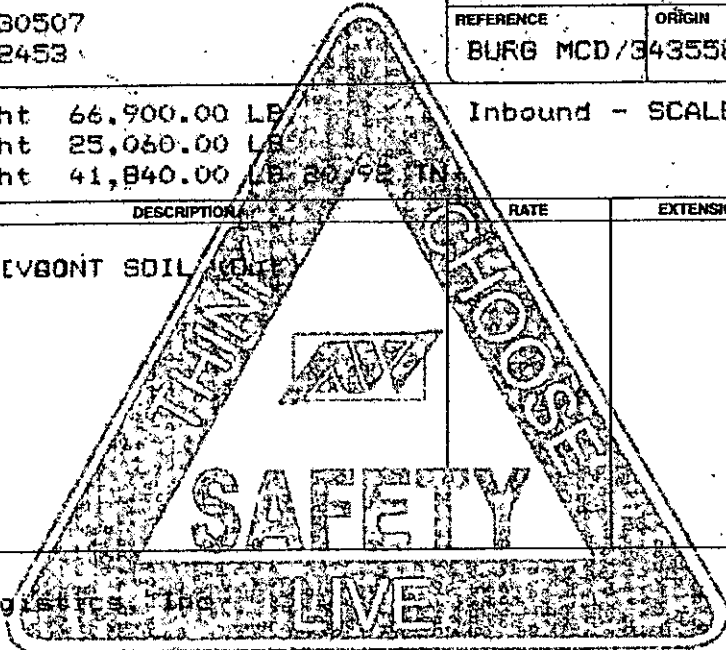
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351086	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005		TIME IN 11:17 am
DATE OUT 4 January 2005		TIME OUT 11:29 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE BURG MCD/343558	ORIGIN VIRGINIA	

00 Gross Weight 66,900.00 LB
Tare Weight 25,060.00 LB
Net Weight 41,840.00 LB 20/92 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
20.92	TN	23 EVBONT SOIL				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

SAFETY MEMOS:

McDUBAN

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

It's the Right Thing!

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

No. 343559

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 BFI WASTE CODE:

L	1	7	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---

 Containers: _____
 Description of Waste: Soil k. Quantity EST 24 Units:

0	Y	0	0	0	0
---	---	---	---	---	---

 No.:

0	0	0	0	0	0
---	---	---	---	---	---

 TYPE:

0	BA
---	----

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Steven R. Edworthy Signature: [Signature] Shipment Date:

0	1	0	4	0	5
---	---	---	---	---	---

Section II TRANSPORTER (Generator complete a-d, Transporter complete e-g, Transporter I complete h-n)

TRANSPORTER I		TRANSPORTER II													
a. Name:	<u>Reece Services Inc</u>	h. Name:	_____												
Address:	<u>17756 Colonial Port Rd</u>	i. Address:	_____												
	<u>Dumfries VA 22026</u>		_____												
c. Driver Name / Title:	<u>Walter Raines</u>	j. Driver Name / Title:	_____												
	<u>703-441-0999</u> PRINT / TYPE		_____ PRINT / TYPE												
d. Phone No.:	<u>703-441-0999</u>	k. Phone No.:	_____												
	e. Truck No.: <u>2</u>	l. Truck No.:	_____												
f. Vehicle License No. / State:	<u>VA 102-437</u>	m. Vehicle License No. / State:	_____												
Acknowledgement of Receipt of Materials:		Acknowledgement of Receipt of Materials:													
g. Driver Signature:	<u>Walter Raines</u>	n. Driver Signature:	_____												
	Shipment Date: <table border="1"><tr><td>1</td><td>2</td><td>0</td><td>4</td><td>0</td><td>5</td></tr></table>	1	2	0	4	0	5		Shipment Date: <table border="1"><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>						
1	2	0	4	0	5										

Section III DESTINATION (Generator completes a-d, destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date:

0	1	0	4	0	5
---	---	---	---	---	---

3417

Section IV ASBESTOS (Generator complete a-d, i, g, Operator complete e, f)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

783 761

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23291

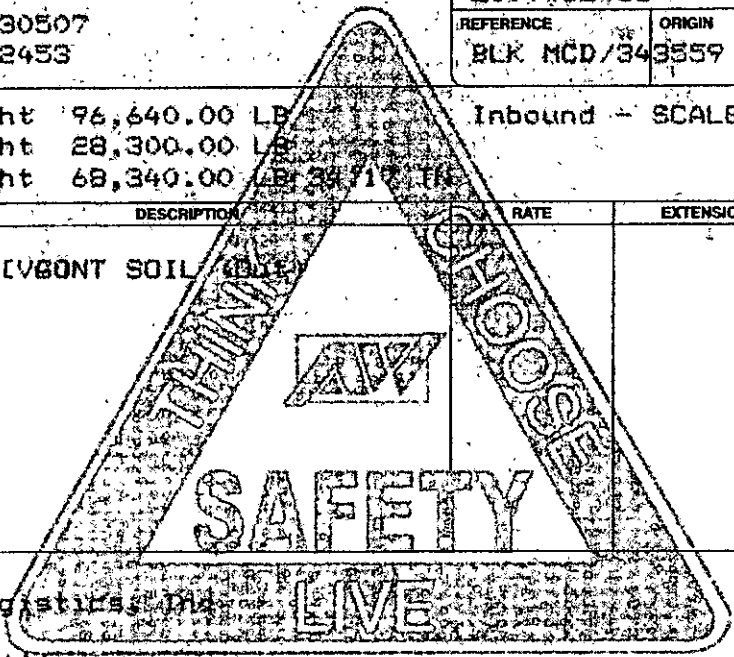
101027
All Points Logistics, Inc.
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351088	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005	TIME IN 11:22 am	
DATE OUT 4 January 2005	TIME OUT 11:33 am	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE BLK MCD/34	ORIGIN 3559	VIRGINIA

00 Gross Weight 76,640.00 LB Inbound - SCALE TICKET
 Tare Weight 28,300.00 LB
 Net Weight 68,340.00 LB

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
34.17	TN	23 CVBONT SOIL (DYE)				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

McDUGAN

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 762 10 Jan

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343560

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
8000 Jefferson Davis Hwy
 c. Address: Richmond, VA 23297 d. Address: _____
 e. Phone No.: 804-279-8070 f. Phone No.: _____

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE: LI7Y432458 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST Units: 0 Y: 0 No.: 0 TYPE: BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 8 MIL PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlowitz [Signature] 010405
 Generator Authorized Agent Name Signature Shipment Date

Section II: TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I			TRANSPORTER II		
a. Name:	<u>Reece Services Inc</u>	<u>1 F15</u>	h. Name:	_____	_____
b. Address:	<u>17756 Colonial Port Rd</u>	<u>Dumfries VA 22026</u>	i. Address:	_____	_____
c. Driver Name / Title:	<u>[Signature]</u>	<u>[Signature]</u>	j. Driver Name / Title:	_____	_____
d. Phone No.:	<u>703-441-0999</u>	<u>10</u>	k. Phone No.:	_____	_____
f. Vehicle License No. / State:	_____	_____	m. Vehicle License No. / State:	_____	_____
Acknowledgement of Receipt of Materials.			Acknowledgement of Receipt of Materials.		
g. <u>[Signature]</u>	<u>010405</u>	_____	n. <u>[Signature]</u>	_____	_____
City Signature	Shipment Date		Driver Signature	Shipment Date	

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231
 e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] [Signature] 010405 3479
 Name of Authorized Agent Signature Receipt Date

Section IV: ASBESTOS (Generator completes a-d; f, g; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 763

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

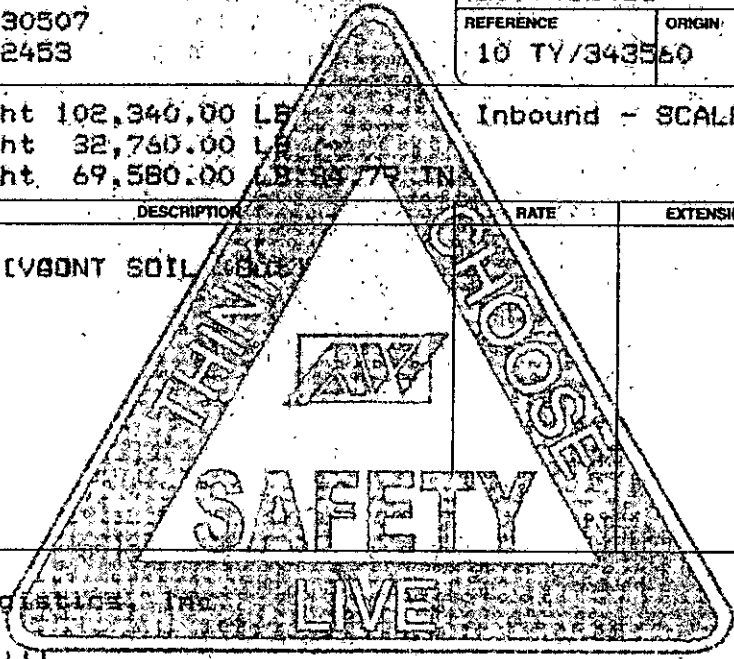
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351215	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005	TIME IN 2:11 pm	
DATE OUT 4 January 2005	TIME OUT 2:22 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE 10 TY/343560	ORIGIN VIRGINIA	

00 Gross Weight 102,340.00 LB Inbound - SCALE TICKET
 Tare Weight 32,760.00 LB
 Net Weight 69,580.00 LB

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
34.79	TN	23 (V)ONT SOIL (BLU)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343561

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297

e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	Y	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---	---

 Containers: _____

j. Description of Waste: Soil k. Quantity: 8775 Units: 0 Y: 0 No.: 0 TYPE: BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlitz Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-f; Transporter I completes a-g; Transporter II completes h-i)

TRANSPORTER I
 Name: Reece Services Inc
 b. Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Clair Borne Hamilton
 d. Phone No.: 703-441-0999 e. Truck No.: 2188
 f. Vehicle License No. / State: 10V-993
 Acknowledgement of Receipt of Materials.
 g. [Signature] Driver Signature
010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____
 _____ Driver Signature
 _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Steven R. Edlitz Name of Authorized Agent
[Signature] Signature
010405 Receipt Date
32.60

Section IV ASBESTOS (Generator completes a-d, f, g; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 d. Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 765

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

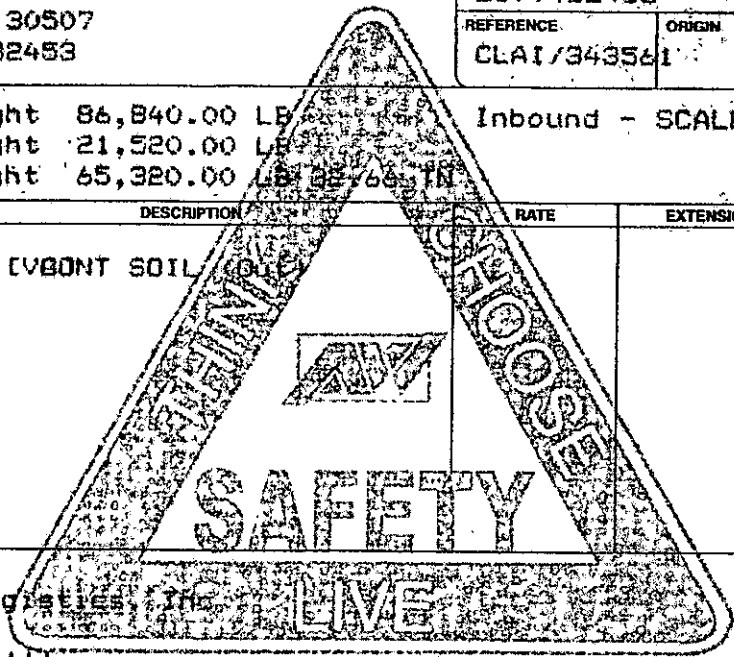
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351141	GRID
WEIGHMASTER D500058		
DATE IN 4 January 2005		TIME IN 12:35 pm
DATE OUT 4 January 2005		TIME OUT 12:48 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE CLAI/343561	ORIGIN VIRGINIA	

Gross Weight 86,840.00 LB
Tare Weight 21,520.00 LB
Net Weight 65,320.00 LB @ 27.66 IN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
32.66	TN	23 CVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

CLAIBORNE

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

Troy Claborn

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 766 10 Ty



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.

If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343562

Section I GENERATOR (Generator completes all of Section I.)

Defense Supply Center
 a. Generator Name: 8000 Jefferson Davis Hwy b. Generating Location: _____
 c. Address: Richmond VA 23297 d. Address: _____

e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L17Y	432458								
------	--------	--	--	--	--	--	--	--	--

 Containers: _____

j. Description of Waste: Soil k. Quantity: 5522 Units No. _____ TYPE: BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlmanich Generator Authorized Agent Name [Signature] Signature 010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter completes a-g; Transporter II complete h-r)

TRANSPORTER I
 a. Name: Reece Services Inc / T1's
 b. Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Lyn Berry PRINT / TYPE
703-441-0999
 d. Phone No.: _____ e. Truck No.: 10
 f. Vehicle License No. / State: 17-248 HA
 Acknowledgement of Receipt of Materials:
 g. [Signature] Driver Signature 010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____ PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____ Driver Signature _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

OLD DOMINION LANDFILL 276-6198
 a. Site Name: _____ c. Phone No.: _____
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
[Signature] Name of Authorized Agent [Signature] Signature 010405 Receipt Date 2942

Section IV ASBESTOS (Generator completes a-d; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____

Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 767

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc.
2567 Athens Highway

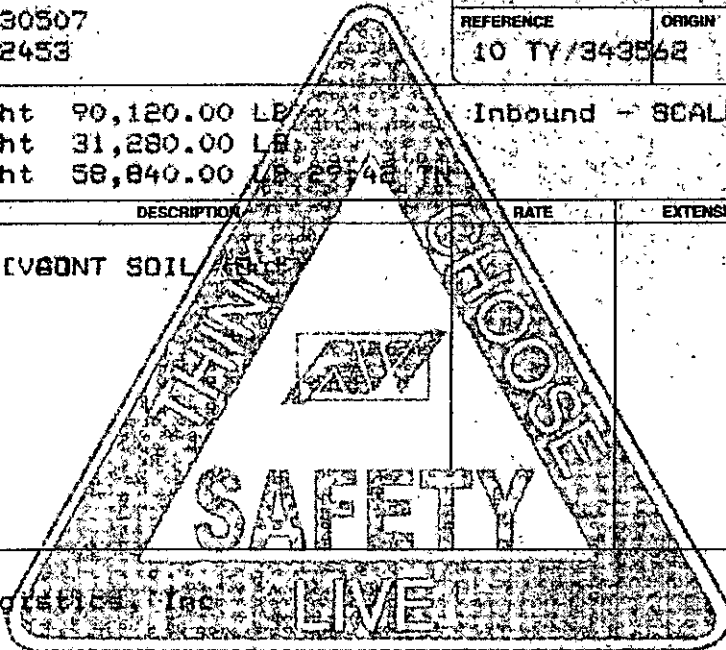
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351149	GRID
DS00058		WEIGHMASTER
DATE IN 4 January 2005	TIME IN 12:43 pm	
DATE OUT 4 January 2005	TIME OUT 12:55 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE 10 TY/343562	ORIGIN VIRGINIA	

00 Gross Weight 90,120.00 LB
Tare Weight 31,280.00 LB
Net Weight 58,840.00 LB

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
29.42	TN	23 EV60NT SOIL				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS: TY'S TRUCKING
 Hard hats MUST be worn.
 High Visibility vests MUST be worn.
 Passengers MUST remain in vehicle at all times.

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 768



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

No. 343563

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

Section II GENERATOR (Generator completes all of Section II)

Defense Supply Center

a. Generator Name: 8000 Jefferson Davis Hwy b. Generating Location: _____
 c. Address: Richmond VA 23297 d. Address: _____
 e. Phone No.: 804-279-8070 f. Phone No.: _____

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE: L17Y432453 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 2 Units: 0 No.: 0 TYPE: BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlman Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 Driver Name / Title: Cecil R. Cross Jr.
 Phone No.: 703-441-0999 PRINT / TYPE
 Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
Cecil R. Cross Jr. Signature
010405 Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 Driver Name / Title: _____ PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____ Signature
 _____ Shipment Date

Section III DESTINATION (Generator completes a-d; Destination Site completes e-f)

OLD DOMINION LANDFILL

a. Site Name: _____ c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA. 23231 d. Mailing Address: _____
 e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Name of Authorized Agent: _____ Signature: _____ Receipt Date: 010405 2130

Section IV ASBESTOS (Generator completes a-d; f; g; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 769

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2557 Athens Highway

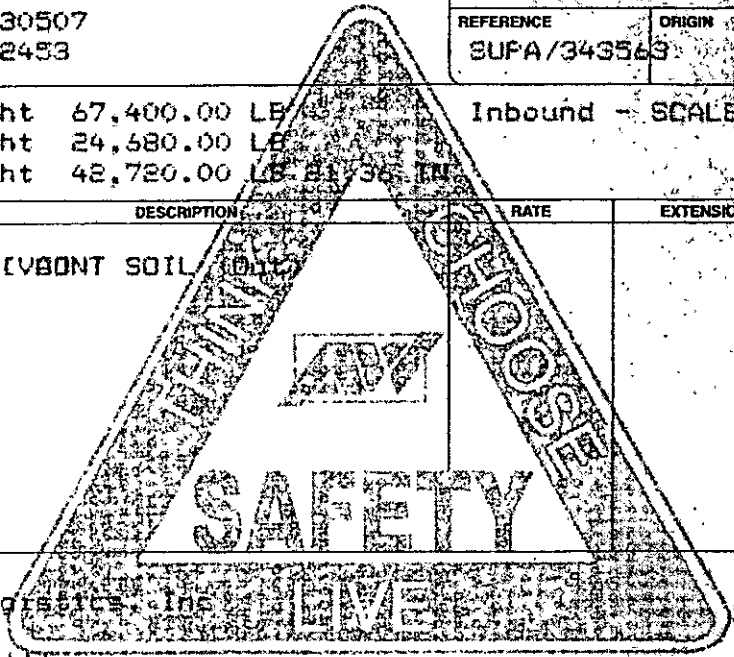
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351158	GRID
WEIGHMASTER DS00058		
DATE IN 4 January 2005		TIME IN 12:53 pm
DATE OUT 4 January 2005		TIME OUT 1:07 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE SUFA/343563	ORIGIN VIRGINIA	

00 Gross Weight 67,400.00 LB
 Tare Weight 24,580.00 LB
 Net Weight 42,720.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
21.36	TN	23 (V)BONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CHECKS

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE

C.L. Cook

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



783 770

Burg MeD

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.

If waste is NOT asbestos waste, complete only Sections I, II, and III.

No. 343564

Section I GENERATOR (Generator completes all of Section I.)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297

e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L1	7	4	3	2	4	5
----	---	---	---	---	---	---

 Containers: _____

j. Description of Waste: Soil k. Quantity: 32 Units: 0 No.: 0 TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP.
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven K. Edmunds [Signature] 010405
 Generator Authorized Agent Name Signature Shipment Date

Section II TRANSPORTER (Generator completes a-d, Transporter I completes a-d, Transporter II completes e-f.)

TRANSPORTER I

a. Name: Reece Services Inc
 b. Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: J. McDougan / OWNER
 d. Phone No.: 703-441-0999 e. Truck No.: #1
 f. Vehicle License No. / State: VA 102-438 H
 Acknowledgement of Receipt of Materials:
[Signature] 010405
 Driver Signature Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:

 n. _____
 Driver Signature Shipment Date

Section III DESTINATION (Generator completes a-d, destination site completes e-f.)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
[Signature] [Signature] 010405
 Name of Authorized Agent Signature Receipt Date

2142

Section IV ASBESTOS (Generator completes a-d, f, g, Operator * completes e.)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 c. Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

d. Operator's Name & Title: _____

783 771

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2587 Athens Highway

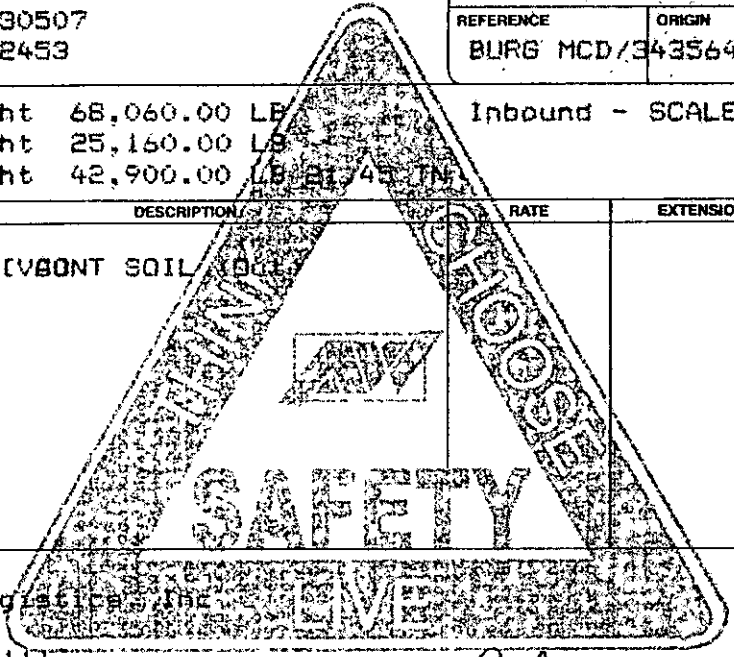
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351160	GRID
WEIGHMASTER D900058		
DATE IN 4 January 2005		TIME IN 12:58 pm
DATE OUT 4 January 2005		TIME OUT 1:09 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE BURG MCD/343564	ORIGIN VIRGINIA	

00 Gross Weight 68,060.00 LB
 Tare Weight 25,160.00 LB
 Net Weight 42,900.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
21.45	TN	23 (VBONT SOIL (0.1				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

McDUGAN

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

John Mc
McDugan

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 772

D/K Med



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343565

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297

e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---

 Containers: _____

j. Description of Waste: Soil k. Quantity: EST 22 Units:

0	Y
---	---

 No.:

0	BA
---	----

 TYPE: _____

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER
UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restriction, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlrich Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II: TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Cumfries VA 22026
 c. Driver Name / Title: Walter Raines
 PRINT / TYPE
 d. Phone No.: 703-441-0999 e. Truck No.: Q
 f. Vehicle License No. / State: VA 102-437
 Acknowledgement of Receipt of Materials.
 g. Walter Raines Driver Signature
010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____ Driver Signature
 _____ Shipment Date

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date

36411

Section IV: ASBESTOS (Generator complete e-d; Operator * completes a.)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____

Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 773

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

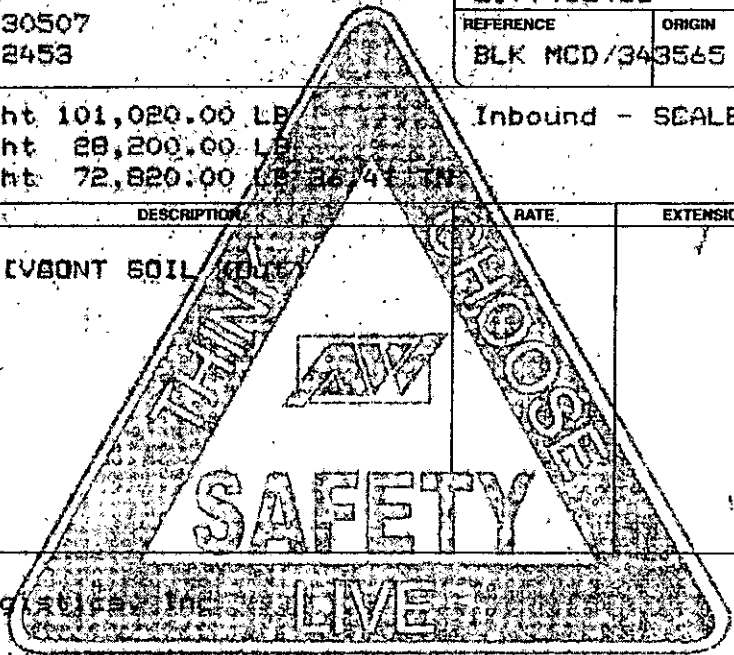
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351170	GRID
WEIGHMASTER DS00058		
DATE IN A January 2005		TIME IN 1:12 pm
DATE OUT A January 2005		TIME OUT 1:24 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE BLK MCD/343565	ORIGIN VIRGINIA	

00 Gross Weight 101,020.00 LB Inbound - SCALE TICKET
 Tare Weight 28,200.00 LB
 Net Weight 72,820.00 LB

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
36.41	TN	23 CVBONT SOIL (0.05)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

McDUGAN

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE Walter Raines

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



78580

783 774

Clay

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343566

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 3000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297

e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	Y	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---	---

 Containers: _____

j. Description of Waste: Soil k. Quantity: 5 22 Units No. 0 TYPE BA

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER
UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 266 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlich Generator Authorized Agent Name [Signature] Signature 010405 Shipment Date

Section II TRANSPORTER (Generator completes a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, aa, ab, ac, ad, ae, af, ag, ah, ai, aj, ak, al, am, an, ao, ap, aq, ar, as, at, au, av, aw, ax, ay, az, ba, bb, bc, bd, be, bf, bg, bh, bi, bj, bk, bl, bm, bn, bo, bp, bq, br, bs, bt, bu, bv, bw, bx, by, bz, ca, cb, cc, cd, ce, cf, cg, ch, ci, cj, ck, cl, cm, cn, co, cp, cq, cr, cs, ct, cu, cv, cw, cx, cy, cz, da, db, dc, dd, de, df, dg, dh, di, dj, dk, dl, dm, dn, do, dp, dq, dr, ds, dt, du, dv, dw, dx, dy, dz, ea, eb, ec, ed, ee, ef, eg, eh, ei, ej, ek, el, em, en, eo, ep, eq, er, es, et, eu, ev, ew, ex, ey, ez, fa, fb, fc, fd, fe, ff, fg, fh, fi, fj, fk, fl, fm, fn, fo, fp, fq, fr, fs, ft, fu, fv, fw, fx, fy, fz, ga, gb, gc, gd, ge, gf, gg, gh, gi, gj, gk, gl, gm, gn, go, gp, gq, gr, gs, gt, gu, gv, gw, gx, gy, gz, ha, hb, hc, hd, he, hf, hg, hh, hi, hj, hk, hl, hm, hn, ho, hp, hq, hr, hs, ht, hu, hv, hw, hx, hy, hz, ia, ib, ic, id, ie, if, ig, ih, ii, ij, ik, il, im, in, io, ip, iq, ir, is, it, iu, iv, iw, ix, iy, iz, ja, jb, jc, jd, je, jf, jg, jh, ji, jj, jk, jl, jm, jn, jo, jp, jq, jr, js, jt, ju, jv, jw, jx, jy, jz, ka, kb, kc, kd, ke, kf, kg, kh, ki, kj, kk, kl, km, kn, ko, kp, kq, kr, ks, kt, ku, kv, kw, kx, ky, kz, la, lb, lc, ld, le, lf, lg, lh, li, lj, lk, ll, lm, ln, lo, lp, lq, lr, ls, lt, lu, lv, lw, lx, ly, lz, ma, mb, mc, md, me, mf, mg, mh, mi, mj, mk, ml, mm, mn, mo, mp, mq, mr, ms, mt, mu, mv, mw, mx, my, mz, na, nb, nc, nd, ne, nf, ng, nh, ni, nj, nk, nl, nm, nn, no, np, nq, nr, ns, nt, nu, nv, nw, nx, ny, nz, oa, ob, oc, od, oe, of, og, oh, oi, oj, ok, ol, om, on, oo, op, oq, or, os, ot, ou, ov, ow, ox, oy, oz, pa, pb, pc, pd, pe, pf, pg, ph, pi, pj, pk, pl, pm, pn, po, pp, pq, pr, ps, pt, pu, pv, pw, px, py, pz, qa, qb, qc, qd, qe, qf, qg, qh, qi, qj, qk, ql, qm, qn, qo, qp, qq, qr, qs, qt, qu, qv, qw, qx, qy, qz, ra, rb, rc, rd, re, rf, rg, rh, ri, rj, rk, rl, rm, rn, ro, rp, rq, rr, rs, rt, ru, rv, rw, rx, ry, rz, sa, sb, sc, sd, se, sf, sg, sh, si, sj, sk, sl, sm, sn, so, sp, sq, sr, ss, st, su, sv, sw, sx, sy, sz, ta, tb, tc, td, te, tf, tg, th, ti, tj, tk, tl, tm, tn, to, tp, tq, tr, ts, tt, tu, tv, tw, tx, ty, tz, ua, ub, uc, ud, ue, uf, ug, uh, ui, uj, uk, ul, um, un, uo, up, uq, ur, us, ut, uu, uv, uw, ux, uy, uz, va, vb, vc, vd, ve, vf, vg, vh, vi, vj, vk, vl, vm, vn, vo, vp, vq, vr, vs, vt, vu, vv, vw, vx, vy, vz, wa, wb, wc, wd, we, wf, wg, wh, wi, wj, wk, wl, wm, wn, wo, wp, wq, wr, ws, wt, wu, wv, ww, wx, wy, wz, xa, xb, xc, xd, xe, xf, xg, xh, xi, xj, xk, xl, xm, xn, xo, xp, xq, xr, xs, xt, xu, xv, xw, xx, xy, xz, ya, yb, yc, yd, ye, yf, yg, yh, yi, yj, yk, yl, ym, yn, yo, yp, yq, yr, ys, yt, yu, yv, yw, yx, yy, yz, za, zb, zc, zd, ze, zf, zg, zh, zi, zj, zk, zl, zm, zn, zo, zp, zq, zr, zs, zt, zu, zv, zw, zx, zy, zz)

TRANSPORTER I		TRANSPORTER II	
Name: <u>Reece Services Inc</u>	h. Name: _____	Name: _____	h. Name: _____
Address: <u>1756 Colonial Port Rd</u>	i. Address: _____	Address: _____	i. Address: _____
<u>Dumfries VA 22026</u>			
c. Driver Name / Title: <u>CLAY Borne</u>	j. Driver Name / Title: _____	Driver Name / Title: _____	j. Driver Name / Title: _____
PRINT / TYPE	PRINT / TYPE	PRINT / TYPE	PRINT / TYPE
c. Phone No.: <u>703-441-0999</u>	e. Truck No.: <u>2188</u>	k. Phone No.: _____	l. Truck No.: _____
f. Vehicle License No. / State: <u>103-985</u>	m. Vehicle License No. / State: _____	m. Vehicle License No. / State: _____	m. Vehicle License No. / State: _____
Acknowledgement of Receipt of Materials.	Acknowledgement of Receipt of Materials.	Acknowledgement of Receipt of Materials.	Acknowledgement of Receipt of Materials.
g. <u>[Signature]</u> Driver Signature <u>010405</u> Shipment Date	n. _____ Driver Signature _____ Shipment Date	n. _____ Driver Signature _____ Shipment Date	n. _____ Driver Signature _____ Shipment Date

Section III DESTINATION (Generator completes a, d, destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. [Signature] Name of Authorized Agent [Signature] Signature 010405 Receipt Date 3140

Section IV ASBESTOS (Generator completes a, d, f, g, Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Operator's Name & Title: _____

783 775

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

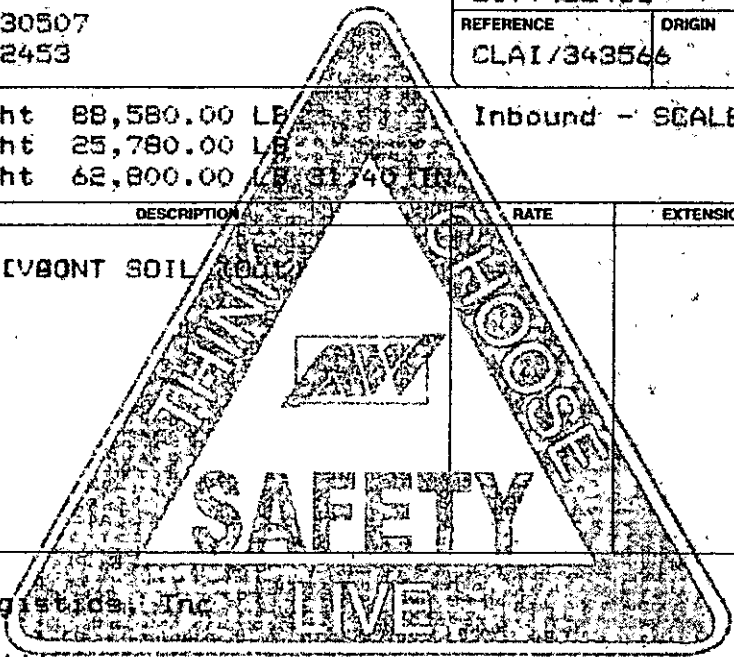
101027
All Points Logistics, Inc
2367 Athens Highway

Gainesville, GA 30507
Contracts: #L17Y432453

SITE 01	TICKET 351200	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005	TIME IN 1:50 pm	
DATE OUT 4 January 2005	TIME OUT 2:03 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE CLAI/343566	ORIGIN VIRGINIA	

01 Gross Weight 88,580.00 LB Inbound - SCALE TICKET
 Tare Weight 25,780.00 LB
 Net Weight 62,800.00 LB @ 1740 IN

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.40	TN	23 CVBONT SOIL (BOLL)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS: CLAIBORNE

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 776 *Supr*



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343567

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	Y	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---	---

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 22 Units: 0 No.: 0 TYPE: BA

DM - METAL DRUM
DP - PLASTIC DRUM
B - BAG
BA - 6 MIL. PLASTIC BAG of WRAP
T - TRUCK
O - OTHER

- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edla-fis Generator Authorized Agent Name [Signature] Signature 010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 b. Address: 17756 Colonia Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Cecil R. Cross Jr.
 d. Phone No.: 703-441-0995 e. Truck No.: _____
 f. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 g. Cecil R. Cross Jr. Driver Signature 010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____ Driver Signature _____ Shipment Date

Section III DESTINATION (Generator completes a-d; Destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent [Signature] Signature 010405 Receipt Date 2322

Section IV ASBESTOS (Generator completes a-d; Operator completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

|||||

783 777

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

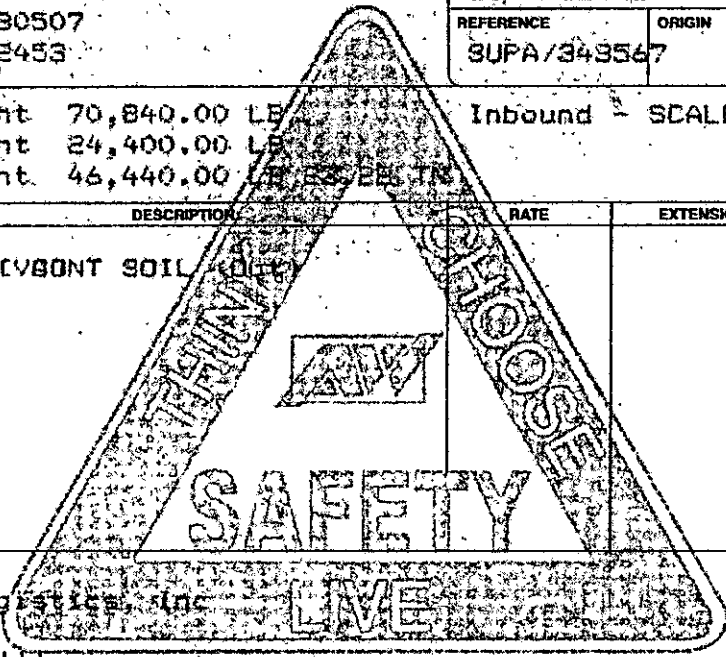
101027
All Points Logistics, Inc
2367 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351230	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005	TIME IN 2:27 pm	
DATE OUT 4 January 2005	TIME OUT 2:42 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE SUPA/343567	ORIGIN VIRGINIA	

00 Gross Weight 70,840.00 LB Inbound SCALE TICKET
Tare Weight 24,400.00 LB
Net Weight 46,440.00 LB

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
23.22	TN	23 CVBONT SOIL (0.5)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CHECKS

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

C. L. Cross

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 778

OK MD



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343568

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 BFI WASTE CODE:

L	1	7	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---

 Containers: _____
 Description of Waste: Soil k. Quantity: 5725 Units: 0 Y: 0 No.: 0 TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations, AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 269 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlanick Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 Driver Name / Title: Walter Raines
 Phone No.: 703-441-0999 PRINT / TYPE
 e. Truck No.: 2
 Vehicle License No. / State: VA 102-437
 Acknowledgement of Receipt of Materials: 010405
Walter Raines Driver Signature
[Signature] Shipment Date

TRANSPORTER II

h. Name: McDowman
 i. Address: _____
 j. Driver Name / Title: _____ PRINT / TYPE
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials: _____
 n. Driver Signature: _____ Shipment Date: _____

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
[Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date
3541

Section IV ASBESTOS (Generator completes a-d, f, g; Operator* completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 d. Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

e. Operator's Name & Title: _____

783 779

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23291

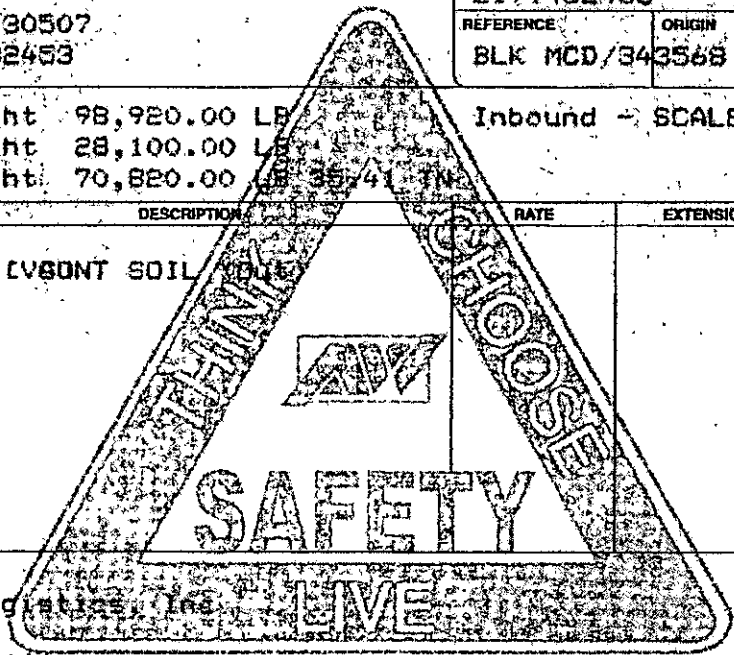
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 251293	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005	TIME IN 2:35 pm	
DATE OUT 4 January 2005	TIME OUT 2:47 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE BLK MCD/343568	ORIGIN VIRGINIA	

00 Gross Weight 98,920.00 LB
Tare Weight 28,100.00 LB
Net Weight 70,820.00 LB
Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
35.41	TN	23 (V)SONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

McDUGAN

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

Walter Raines

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

Burgin



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343569

Section I GENERATOR (Generator completes all of Section I.)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 BFI WASTE CODE:

L	1	7	4	3	2	4	3
---	---	---	---	---	---	---	---

 Containers: _____
 Description of Waste: Soil k. Quantity EST 21 Units:

0	Y
---	---

 No.:

0	0
---	---

 TYPE:

0	BA
---	----

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 269 and is no longer a hazardous waste as defined by 40 CFR Part 261

Steven R. Edmitch Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

Name: Reece Services Inc
 b. Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: J McDougan / OWNER
 d. Phone No.: 703-441-0999 e. Truck No.: #1
 f. Vehicle License No. / State: VA 102-438
 Acknowledgement of Receipt of Materials:
[Signature] Driver Signature
010405 Shipment Date

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____
 Driver Signature: _____
 Shipment Date: _____

Section III DESTINATION (Generator completes a-d; Destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
[Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date
2283

Section IV ASBESTOS (Generator complete a-d, f, g; Operator * completes e.)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 d. Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

783 781

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

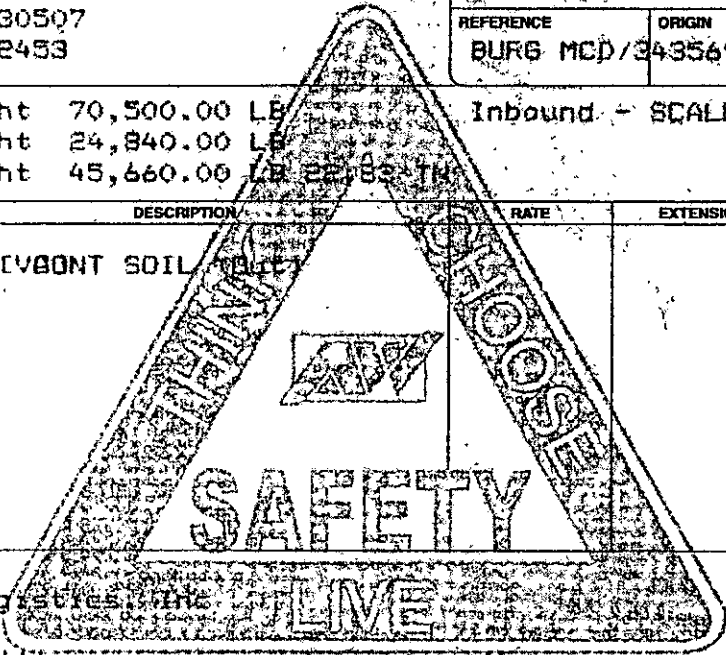
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351238	GRID
SUSAN		WEIGHMASTER
DATE IN 4 January 2005		TIME IN 2:41 pm
DATE OUT 4 January 2005		TIME OUT 2:54 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE BURG MCD/343569	ORIGIN VIRGINIA	

00 Gross Weight 70,500.00 LB
Tare Weight 24,840.00 LB
Net Weight 45,660.00 LB 22,830 TN
Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
22.83	TN	23 (V80NT SOIL				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

McDUGAN

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

783 782 *Clai*



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343570

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 i. BFI WASTE CODE:

L	1	7	Y	4	3	2	4	5						
---	---	---	---	---	---	---	---	---	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity: Est 25 Units:

0	Y				
---	---	--	--	--	--

 No.:

0					
---	--	--	--	--	--

 TYPE:

0					BA
---	--	--	--	--	----

- TYPE**
 DM - METAL DRUM
 DP - PLASTIC DRUM
 B - BAG
 BA - 6 MIL. PLASTIC BAG or WRAP
 T - TRUCK
 O - OTHER
- UNITS**
 P - POUNDS
 Y - YARDS
 M³ - CUBIC METERS
 Y³ - CUBIC YARDS
 O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Eckhardt Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II: TRANSPORTER (Generator completes a-d, Transporter I completes e-g, Transporter II completes h-j)

TRANSPORTER I
 a. Name: Reece Services Inc
 b. Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Clai Borne / Handing
 d. Phone No.: 703-441-0999 e. Truck No.: 2189
 f. Vehicle License No. / State: 109-993
 Acknowledgement of Receipt of Materials:
 g. [Signature] Driver Signature
010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____
 Driver Signature _____ Shipment Date _____

Section III: DESTINATION (Generator completes a-d, destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date

3193

Section IV: ASBESTOS (Generator completes a-d, f, g, Operator I completes b, Operator II completes c, e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 Operator's * Address: _____
 d. Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 783

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

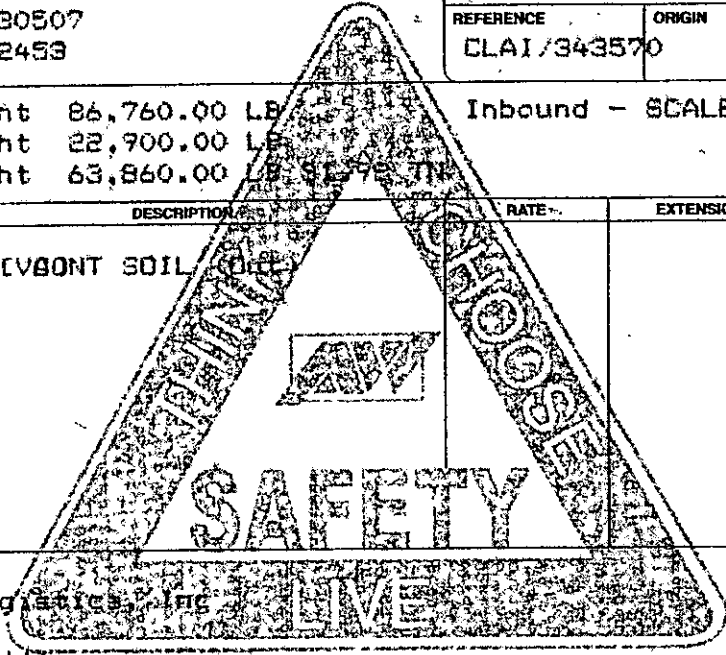
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351266	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005		TIME IN 3:20 pm
DATE OUT 4 January 2005		TIME OUT 3:30 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE CLAI/343570	ORIGIN VIRGINIA	

00 Gross Weight 86,760.00 LB Inbound - SCALE TICKET
 Tare Weight 22,900.00 LB
 Net Weight 63,860.00 LB

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.93	TN	23 CVBONT SOIL (01)				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CLAIBORNE

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.

If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343571

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center
 b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy
Richmond, VA 23297
 d. Address: _____

e. Phone No.: 804-279-8070
 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____
 h. Owner's Phone No.: _____

i. BFI WASTE CODE: L17Y432453 Containers: _____
 TYPE: _____

j. Description of Waste: Soil
 k. Quantity: EST 25 Units: 0 No.: 0 TYPE: BA
 TYPE Legend:
 DM - METAL DRUM
 DP - PLASTIC DRUM
 B - BAG
 BA - 6 MIL PLASTIC BAG or WRAP
 T - TRUCK
 O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Steven R. Edmuntz Signature: [Signature] Shipment Date: 010405

Section II TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I
 a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026

c. Driver Name / Title: Lyn Berry
 PRINT / TYPE: _____
 d. Phone No.: 703-441-0999 e. Truck No.: 10
 f. Vehicle License No. / State: _____

Acknowledgement of Receipt of Materials.
 g. Driver Signature: [Signature] Shipment Date: 010405

TRANSPORTER II
 h. Name: _____
 i. Address: _____

j. Driver Name / Title: _____
 PRINT / TYPE: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____

Acknowledgement of Receipt of Materials.
 n. Driver Signature: _____ Shipment Date: _____

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 276-6198
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date: 010405

Section IV ASBESTOS (Generator complete a-d, f, g; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No: _____
 Operator's * Address: _____

Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

783 785

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

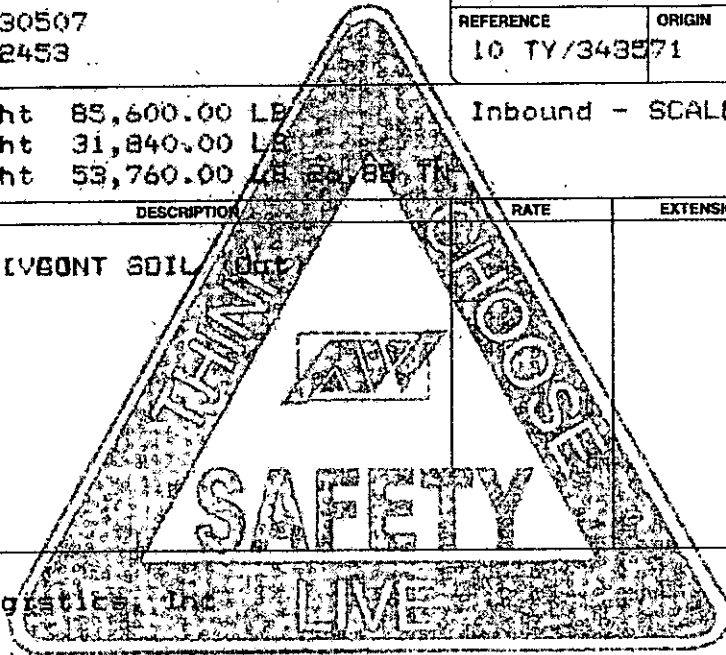
Gaensville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 851268	GRID
WEIGHMASTER BUSAN		
DATE IN 4 January 2005		TIME IN 3:25 pm
DATE OUT 4 January 2005		TIME OUT 3:34 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE 10 TY/348571	ORIGIN VIRGINIA	

00 Gross Weight 85,600.00 LB
Tare Weight 31,840.00 LB
Net Weight 53,760.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
26.88	TN	23 IVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

TY TRK

It's the Right Thing!

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



783 786 BIK med

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343572

Section I GENERATOR (Generator completes all of Section I.)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297

e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	4	3	2	4	5												
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 25 Units: 0 No.: 0 TYPE: BA

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Eckhardt Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I complete e-g; Transporter II complete h-j)

TRANSPORTER I

Name: Reece Services Inc
 b. Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: Walter Raines
 d. Phone No.: 703-441-0995 e. Truck No.: 2
 f. Vehicle License No. / State: VA 02-437
 Acknowledgement of Receipt of Materials:
 g. Walter Raines Driver Signature
010405 Shipment Date

TRANSPORTER II

h. Name: McDonough
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. _____ Driver Signature
 _____ Shipment Date

Section III DESTINATION (Generator completes a-c; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA. 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date
3188

Section IV ASBESTOS (Generator completes a-d; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____
 d. Special Handling Instructions or additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

e. Operator's Name & Title: _____

783 787

BFI OLD DOMINION
2001 CHARLES CITY RD.
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

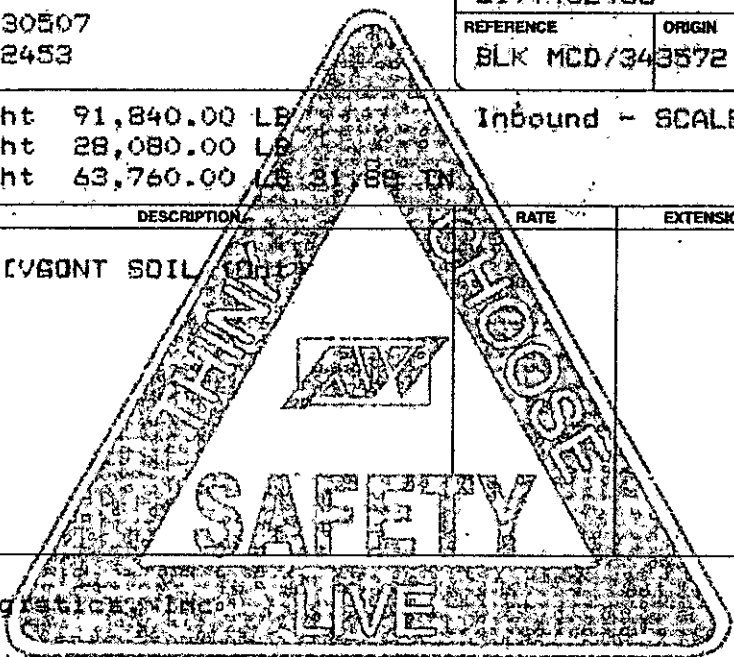
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351284	GRID
SUSAN WEIGHMASTER		
DATE IN 4 January 2005		TIME IN 3:58 pm
DATE OUT 4 January 2005		TIME OUT 4:05 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE BLK MCD/343572	ORIGIN VIRGINIA	

00 Gross Weight 91,840.00 LB
 Tare Weight 28,080.00 LB
 Net Weight 63,760.00 LB 31.88 TN

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.88	TN	23. IVBONT SOIL (1000)				



All Points Logistics, Inc.

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

McDUGAN

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE *Walter R...*

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



68840 783 788 mcd

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
 If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343573

Section I: GENERATOR (Generator completes all of Section I)

Defense Supply Center

a. Generator Name: 8000 Jefferson Davis Hwy b. Generating Location: _____
 c. Address: Richmond VA 23297 d. Address: _____
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:
 g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	Y	4	3	2	4	5	3
---	---	---	---	---	---	---	---	---	---

 Containers: _____

j. Description of Waste: Soil k. Quantity: EST 21 Units:

0	Y
---	---

 No.:

0	BA
---	----

 TYPE: _____

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edmitch Generator Authorized Agent Name [Signature] Signature 010405 Shipment Date

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL. PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

Section II: TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I	TRANSPORTER II
a. Name: <u>Reece Services Inc</u>	h. Name: _____
Address: <u>17756 Colonial Port Rd</u> <u>Dumfries VA 22026</u>	i. Address: _____
c. Driver Name / Title: <u>J McDougal / DRIVER</u>	j. Driver Name / Title: _____
d. Phone No.: <u>703-44-0999</u>	k. Phone No.: _____
e. Truck No.: <u>[Handwritten]</u>	l. Truck No.: _____
f. Vehicle License No. / State: <u>VA 1DZ 438</u>	m. Vehicle License No. / State: _____
g. Driver Signature: <u>[Signature]</u> <u>010405</u> Shipment Date	n. Driver Signature: _____ _____ Shipment Date

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2160 CHARLES CITY RD
RICHMOND, VA. 23231 d. Mailing Address: _____
 e. Discrepancy Indication Base: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: [Signature] [Signature] Signature 010405 Receipt Date

Section IV: ASBESTOS (Generator complete a-d; Operator * completes e-f)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____
 Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations.

2202

783 789

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

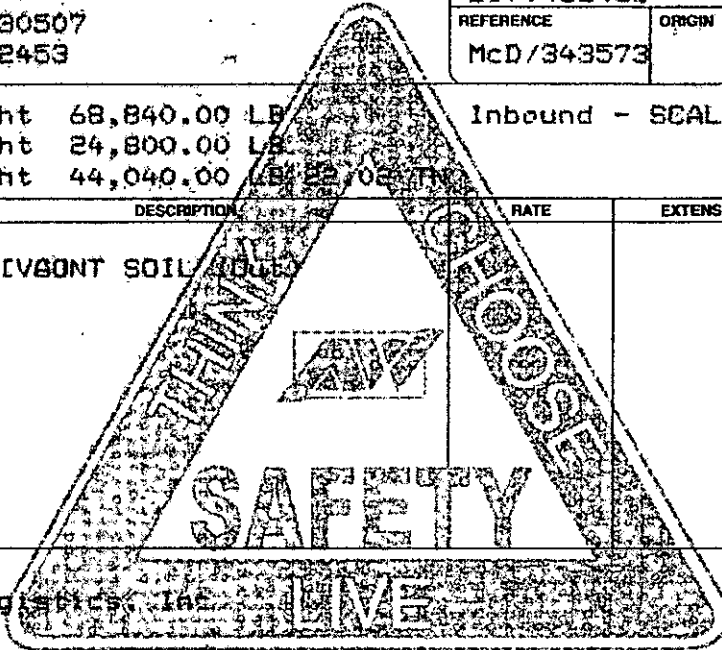
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351465	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005		TIME IN 10:15 am
DATE OUT 5 January 2005		TIME OUT 10:25 am
VEHICLE L17Y432453		ROLL OFF
REFERENCE McD/343573	ORIGIN VIRGINIA	

00 Gross Weight 68,840.00 LB
 Tare Weight 24,800.00 LB
 Net Weight 44,040.00 LB 22/05/05 TN
 Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX.	TOTAL
22.02	TN	23 IVBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

McDUGAN

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

Gal Win

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 790

Supp

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343574

Section I: GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____
 BFI WASTE CODE:

L	1	7	4	3	2	4	5	8
---	---	---	---	---	---	---	---	---

 Containers: _____
 Description of Waste: Soil k. Quantity: 5 Units: 25 No.: _____ TYPE: BA

0	Y	0	BA
---	---	---	----

- TYPE**
- DM - METAL DRUM
 - DF - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL. PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND; If the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Eckhardt Signature 010405 Shipment Date

Section II: TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: BE Check JR.
 d. Phone No.: 703-441-0999 e. Truck No.: 40460
 f. Vehicle License No. / State: 32-0277, VA
 Acknowledgement of Receipt of Materials:
BE Check Jr Shipment Date: 010405

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 Driver Signature: _____ Shipment Date: _____

Section III: DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No.: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD d. Mailing Address: _____
RICHMOND, VA. 23231

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. Name of Authorized Agent: D Signature: D Receipt Date: 010405

22603

Section IV: ASBESTOS (Generator completes a-d, f, g; Operator* completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

Operator's Name & Title: _____

783 791

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

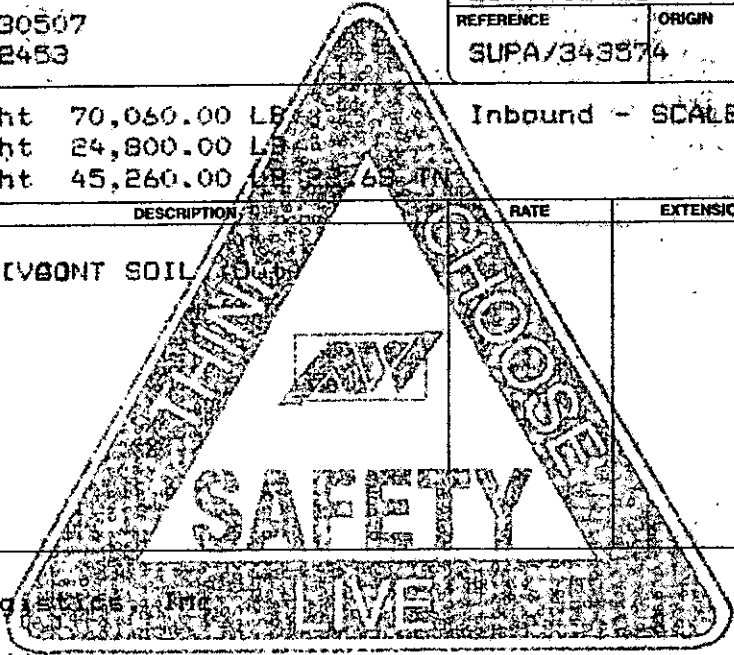
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351270	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005		TIME IN 4:06 pm
DATE OUT 4 January 2005		TIME OUT 4:14 pm
VEHICLE L17Y432453		ROLL OFF
REFERENCE SUPA/343574	ORIGIN VIRGINIA	

00 Gross Weight 70,060.00 LB
Tare Weight 24,800.00 LB
Net Weight 45,260.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
22.65	TN	23 (VBONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CHECKS

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

[Handwritten Signature]

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 792 *Uva*

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343575

Section I GENERATOR (Generator completes all of Section I)

Defense Supply Center

a. Generator Name: 8000 Jefferson Davis Hwy b. Generating Location: _____
 c. Address: Richmond VA 23297 d. Address: _____
 e. Phone No.: 804-279-8070 f. Phone No.: _____

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L17Y	432453								
------	--------	--	--	--	--	--	--	--	--

 Containers: _____

j. Description of Waste: Soil k. Quantity EST 25 Units:

						0	Y				
--	--	--	--	--	--	---	---	--	--	--	--

 No.

						0					
--	--	--	--	--	--	---	--	--	--	--	--

 TYPE:

											BA
--	--	--	--	--	--	--	--	--	--	--	----

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
B	- BAG
BA	- 6 MIL PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlaulich Signature: [Signature] Shipment Date:

0	1	0	4	0	5
---	---	---	---	---	---

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I

a. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: CLAU BERNE
 d. Phone No.: 703-441-0999 PRINT / TYPE
 e. Truck No.: 2188
 f. Vehicle License No. / State: 103-993
 Acknowledgement of Receipt of Materials:
 g. Driver Signature: [Signature] Shipment Date:

0	1	0	4	0	5
---	---	---	---	---	---

TRANSPORTER II

h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ PRINT / TYPE
 l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials:
 n. Driver Signature: _____ Shipment Date:

--	--	--	--	--	--

Section III DESTINATION (Generator completes a-d; destination site completes e-f)

OLD DOMINION LANDFILL 226-6198

a. Site Name: _____ c. Phone No.: _____
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: [Signature] Signature: [Signature] Receipt Date:

0	1	0	4	0	5
---	---	---	---	---	---

3160

Section IV ASBESTOS (Generator completes a-d, f, g; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

d. Operator's Name & Title: _____

783 793

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
2567 Athens Highway

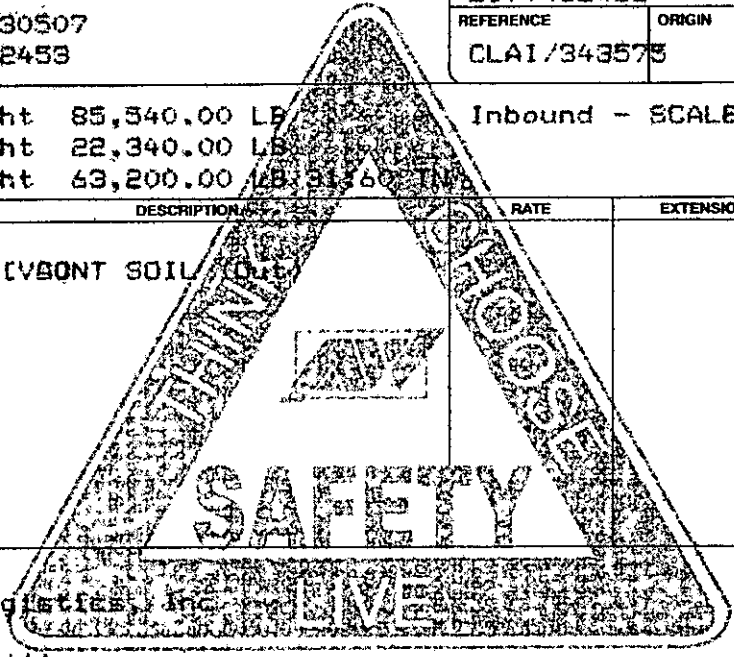
Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351305	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005	TIME IN 4:35 pm	
DATE OUT 4 January 2005	TIME OUT 4:47 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE CLAI/343575	ORIGIN VIRGINIA	

00 Gross Weight 85,540.00 LB
 Tare Weight 22,340.00 LB
 Net Weight 63,200.00 LB

Inbound - SCALE TICKET

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.60	TN	23 CVBONT SOIL Out				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

SAFETY MEMOS:

CLAIBORNE

It's the Right Thing!

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

Tony Claborn

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

783 794

10/24

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOI asbestos waste, complete only Sections I, II and III.

No. 343576

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-8070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	4	3	2	4	5						
---	---	---	---	---	---	---	---	--	--	--	--	--	--

 Containers: _____
 j. Description of Waste: Soil k. Quantity: EST 25 Units:

0	Y				
---	---	--	--	--	--

 No.:

0					
---	--	--	--	--	--

 TYPE:

0	BA
---	----

- TYPE**
- DM - METAL DRUM
 - DP - PLASTIC DRUM
 - B - BAG
 - BA - 6 MIL PLASTIC BAG or WRAP
 - T - TRUCK
 - O - OTHER
- UNITS**
- P - POUNDS
 - Y - YARDS
 - M³ - CUBIC METERS
 - Y³ - CUBIC YARDS
 - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlert Generator Authorized Agent Name [Signature] Signature 010405 Shipment Date

Section II TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I
 e. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd / TRS
Dumfries VA 22026
 c. Driver Name / Title: Lyn Perry
703-441-0999 PRINT / TYPE
 d. Phone No.: _____ e. Truck No.: 10
 f. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 g. [Signature] Driver Signature 010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____ Shipment Date

Section III DESTINATION (Generator completes a-d; destination site completes e-h)

OLD DOMINION LANDFILL 226-6198
 a. Site Name: _____ c. Phone No.: _____
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent [Signature] Signature 010405 Receipt Date

2958

Section IV ASBESTOS (Generator complete a-d, f, g; Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____
 Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and government regulations.

a. Operator's Name & Title: _____

783 795

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

101027
All Points Logistics, Inc
8567 Athens Highway

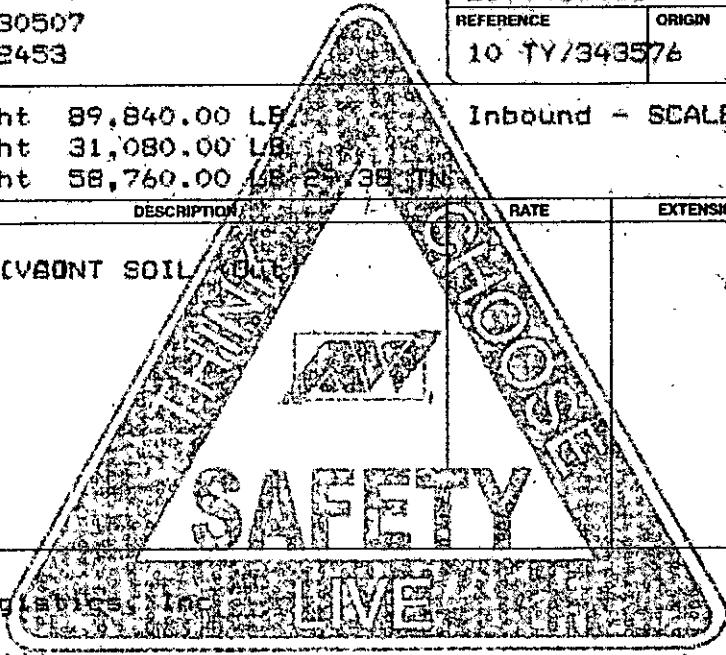
Gainesville, GA 30507
Contract #L17Y432453

SITE 01	TICKET 351307	GRID
WEIGHMASTER SUSAN		
DATE IN 4 January 2005	TIME IN 4:37 pm	
DATE OUT 4 January 2005	TIME OUT 4:52 pm	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE 10 TY/343576	ORIGIN VIRGINIA	

00 Gross Weight 89,840.00 LB
 Tare Weight 31,080.00 LB
 Net Weight 58,760.00 LB

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
29.38	TN	23 CV80NT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



783 796 BIK McD

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
 If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 343577

Section I: GENERATOR (Generator completes all of Section I)

Generator Name: Defense Supply Center
Generating Location: 8000 Jefferson Davis Hwy
Address: Richmond VA 23291
Phone No.: 804-279-8070

Owner's Name: _____ **Owner's Phone No.:** _____

BFI WASTE CODE: L17Y4324S3
Description of Waste: Soil

Quantity: EST 25 Units **No.:** 0 **TYPE:** BA

Containers: _____

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations. AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Steven R. Edlman **Signature:** [Signature] **Shipment Date:** 010405

TYPE	
DM	- METAL DRLM
DP	- PLASTIC DFUM
B	- BAG
BA	- 6 MIL PLASTIC BAG or WRAP
T	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
M ³	- CUBIC METERS
Y ³	- CUBIC YARDS
O	- OTHER

Section II: TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-n)

TRANSPORTER I	TRANSPORTER II
Name: Reece Services Inc	Name: McDougan
Address: 17756 Colonial Port Rd Dumfries VA 22026	Address: _____
Driver Name / Title: Walter Rames	Driver Name / Title: _____
Phone No.: 703-441-0999	Phone No.: _____
Truck No.: 2	Truck No.: _____
Vehicle License No. / State: VA 102-437	Vehicle License No. / State: _____
Acknowledgement of Receipt of Materials: [Signature] 010405	Acknowledgement of Receipt of Materials: _____
Driver Signature: Walter Rames	Driver Signature: _____
Shipment Date: 010405	Shipment Date: _____

Section III: DESTINATION (Generator completes a-d; destination site completes e-h)

Site Name: OLD DOMINION LANDFILL
Physical Address: 2100 CHARLES CITY RD
 RICHMOND, VA 23231
Phone No.: 226-6198

Discrepancy Indication Space: _____

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent: [Signature] **Signature:** [Signature] **Receipt Date:** 010505

Section IV: ASBESTOS (Generator complete a-d, f, g; Operator * completes e)

Operator's Name: _____ **Operator's Phone No.:** _____

Operator's Address: _____

Special Handling Instructions and additional information: _____

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

3544

783 797

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

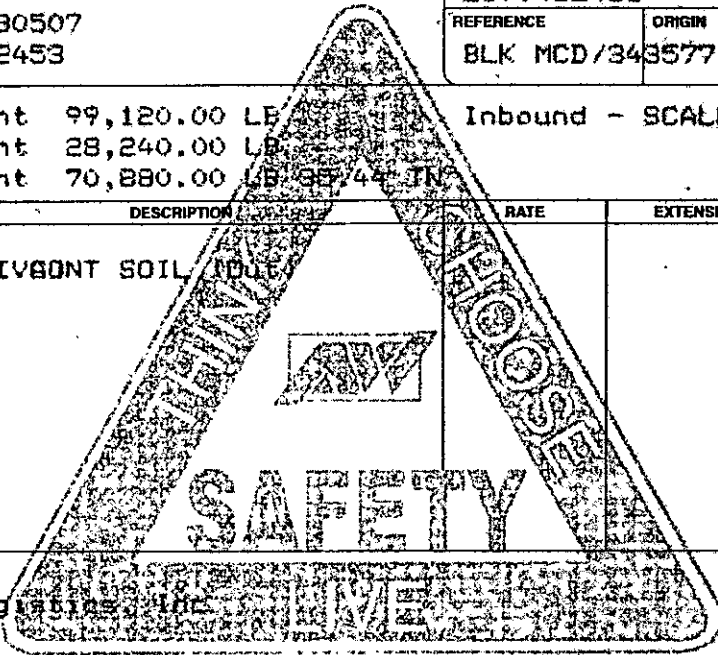
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351455	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005	TIME IN 10:03 am	
DATE OUT 5 January 2005	TIME OUT 10:13 am	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE BLK MCD/343577	ORIGIN VIRGINIA	

00 Gross Weight 99,120.00 LB Inbound - SCALE TICKET
 Tare Weight 28,240.00 LB
 Net Weight 70,880.00 LB 35.44 TN

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
35.44	TN	23 (V)BONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS: McDUGAN

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE Walter Rains

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



783 798 Supp

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No: 343578

Section I GENERATOR (Generator completes all of Section I)

a. Generator Name: Defense Supply Center b. Generating Location: _____
 c. Address: 8000 Jefferson Davis Hwy d. Address: _____
Richmond VA 23297
 e. Phone No.: 804-279-3070 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE:

L	1	7	Y	4	3	2	4	5	B
---	---	---	---	---	---	---	---	---	---

 Soil
 j. Description of Waste: _____
 k. Quantity EST 25 Units No. TYPE

0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---

 0 Y 0 BA
 Containers: _____
 TYPE:
 DM - METAL DRUM
 DP - PLASTIC DRUM
 B - BAG
 BP - 6 MIL. PLASTIC BAG or WRAP
 T - TRUCK
 O - OTHER
 UNITS:
 P - POUNDS
 Y - YARDS
 M³ - CUBIC METERS
 Y³ - CUBIC YARDS
 O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Steven R. Edlertch Generator Authorized Agent Name
[Signature] Signature
010405 Shipment Date

Section II TRANSPORTER (Generator complete a-d, Transporter I complete e-g, Transporter II complete h-n)

TRANSPORTER I
 e. Name: Reece Services Inc
 Address: 17756 Colonial Port Rd
Dumfries VA 22026
 c. Driver Name / Title: BE CHEEK JR.
703-441-0999 PRINT / TYPE
 c. Phone No.: _____ e. Truck No.: 40460
 f. Vehicle License No. / State: 22-027 D VA.
 Acknowledgement of Receipt of Materials.
[Signature] Driver Signature
010405 Shipment Date

TRANSPORTER II
 h. Name: _____
 i. Address: _____
 j. Driver Name / Title: _____
 k. Phone No.: _____ l. Truck No.: _____
 m. Vehicle License No. / State: _____
 Acknowledgement of Receipt of Materials.
 n. _____
 Driver Signature _____
 Shipment Date _____

Section III DESTINATION (Generator completes a-d, destination site completes e-f)

a. Site Name: OLD DOMINION LANDFILL c. Phone No: 226-6198
 b. Physical Address: 2100 CHARLES CITY RD
RICHMOND, VA. 23231 d. Mailing Address: _____

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
 f. [Signature] Name of Authorized Agent
[Signature] Signature
010405 Receipt Date
2505 (circled)

Section IV ASBESTOS (Generator complete a-d, f, g, Operator * completes e)

a. Operator's * Name: _____ b. Operator's * Phone No.: _____
 c. Operator's * Address: _____

Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations

783 799

BFI OLD DOMINION
2001 CHARLES CITY RD
RICHMOND VA
23231

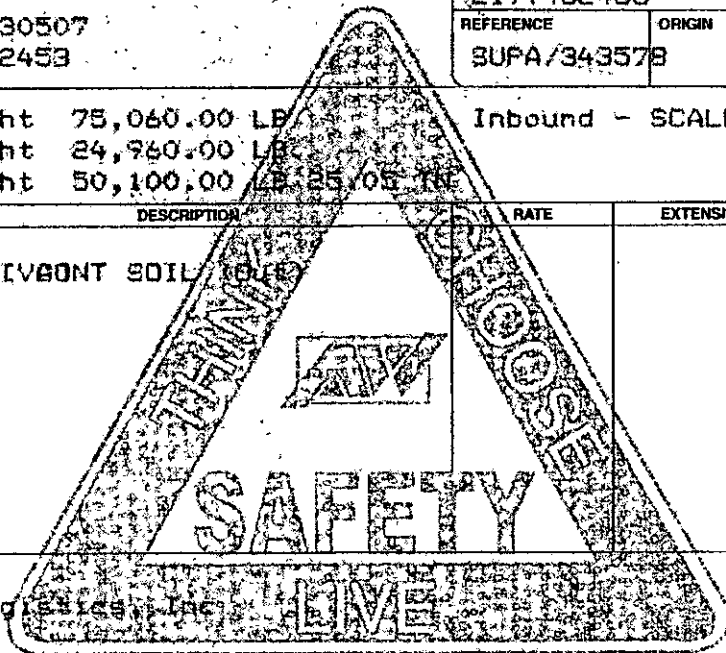
101027
All Points Logistics, Inc
2567 Athens Highway

Gainesville, GA 30507
Contract: #L17Y432453

SITE 01	TICKET 351359	GRID
WEIGHMASTER SUSAN		
DATE IN 5 January 2005	TIME IN 7:14 am	
DATE OUT 5 January 2005	TIME OUT 7:33 am	
VEHICLE L17Y432453	ROLL OFF	
REFERENCE SUFA/343578	ORIGIN VIRGINIA	

00 Gross Weight 75,060.00 LB
Tare Weight 24,960.00 LB
Net Weight 50,100.00 LB @ 25.05 TN
Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.05	TN	23 IV8ONT SOIL				



All Points Logistics, Inc

HAVE A GREAT DAY !!!

It's the Right Thing!

SAFETY MEMOS:

CHECKS

- Hard hats MUST be worn.
- High Visibility vests MUST be worn.
- Passengers MUST remain in vehicle at all times.

SIGNATURE C. R. Cross

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

APPENDIX L
SCHNEIDER ANALYTICAL LABORATORY REPORT

SCHNEIDER LABORATORIES INCORPORATED

2512 WEST CARY STREET • RICHMOND, VA • 23220-5117
804-353-6778 • 800-785-LABS (5227) • (FAX) 804-353-6928

Excellence in Service and Technology

AIHA 8936, ELLAP 8936, NVLAP 1150, NYELAP 11413, CAELAP 2078, NC 593

LABORATORY ANALYSIS REPORT

INDUSTRIAL SOLVENTS PROFILE

ACCOUNT:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/19/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/19/2004
P.O.#		CLIENT SAMPLE #:	L1-1
PROJECT NAME:	D.S.C.R.	SAMPLE DESCRIPT.:	L1-1
PROJECT NO.:	6301-03-0011	SLI SAMPLE NO.:	28256114
JOB LOCATION:	Chester, VA	SAMPLE TYPE:	3M 3500

Laboratory Analysis for Client's Sample Number L1-1 of Work Order 1143-04-16

ANALYTE NAME:	Sample	Total	Act Exp	8 hr TWA	Act Exp	8 hr TWA	Report	ANALYSIS METHOD	8 HR OSHA PEL (mg/m ³)*
	Volume (L)	Mass (mg)*	(mg/m ³)*	(ng/m ³)*	(PPM)	(PPM)	Limit (mg)**		
Acetone	21.65	< 0.033	< 1.524	< 1.714	< 0.642	< 0.722	0.033	NIOSH 1300	2400 [1000 PPM]
Benzene	19.17	< 0.031	< 1.612	< 1.813	< 0.505	< 0.568	0.031	NIOSH 1501	3.2 [1 PPM]
Carbon tetrachloride	16.31	< 0.032	< 1.938	< 2.180	< 0.308	< 0.346	0.032	NIOSH 1003	63 [10 PPM]
Chlorobenzene	15.82	< 0.031	< 1.978	< 2.226	< 0.430	< 0.483	0.031	NIOSH 1003	350 [75 PPM]
1,2-Dichloroethane	17.93	< 0.031	< 1.707	< 1.920	< 0.422	< 0.474	0.031	NIOSH 1003	200 [50 PPM]
Ethylbenzene	14.74	< 0.031	< 2.123	< 2.389	< 0.489	< 0.550	0.031	NIOSH 1501	435 [100 PPM]
Heptane	15.61	< 0.029	< 1.845	< 2.076	< 0.450	< 0.507	0.029	NIOSH 1500	2000 [400 PPM]
Hexane	17.28	< 0.028	< 1.620	< 1.823	< 0.460	< 0.517	0.028	NIOSH 1500	1800 [500 PPM]
Methyl ethyl ketone	19.60	< 0.033	< 1.684	< 1.894	< 0.571	< 0.642	0.033	NIOSH 2500	590 [200 PPM]
Methyl isobutyl ketone	16.20	< 0.030	< 1.870	< 2.104	< 0.457	< 0.514	0.030	NIOSH 1300	410 [100 PPM]
Methylene chloride	20.47	< 0.035	< 1.686	< 1.896	< 0.485	< 0.546	0.035	NIOSH 1005	87 [25 PPM]
Octane	14.36	< 0.029	< 1.991	< 2.240	< 0.426	< 0.479	0.029	NIOSH 1500	2350 [500 PPM]
Styrene	16.61	< 0.034	< 2.185	< 2.458	< 0.513	< 0.577	0.034	NIOSH 1501	215 [50 PPM]
Tetrachloroethylene	15.28	< 0.029	< 1.904	< 2.142	< 0.281	< 0.316	0.029	NIOSH 1003	678 [100 PPM]
Toluene	16.96	< 0.030	< 1.769	< 1.990	< 0.470	< 0.528	0.030	NIOSH 1500	750 [200 PPM]
1,1,1-Trichloroethane	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030	NIOSH 1003	1900 [350 PPM]
1,1,2-Trichloroethane	16.04	< 0.032	< 1.970	< 2.217	< 0.361	< 0.406	0.032	NIOSH 1003	45 [10 PPM]
Trichloroethylene	16.79	< 0.030	< 1.768	< 1.990	< 0.329	< 0.370	0.030	NIOSH 1022	537 [100 PPM]
m,p-Xylene	14.74	< 0.062	< 4.199	< 4.724	< 0.967	< 1.088	0.062	NIOSH 1501	435 [100 PPM]
o-Xylene	14.74	< 0.031	< 2.096	< 2.358	< 0.483	< 0.543	0.031	NIOSH 1501	435 [100 PPM]

Analyst: MARK B CHAMPION

Bernard H Howard
REVIEWED BY BERNARD H HOWARD, CHEMIST

Quality Control Data available upon request. *For true values, assume 2 significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Sample concentrations below the Minimum Reporting Limit are indicated with a "less than" (<) sign.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Results are not blank-corrected unless noted by analyst.

SCHNEIDER LABORATORIES INCORPORATED

2512 WEST CARY STREET • RICHMOND, VA • 23220-5117
804-353-6778 • 800-785-LABS (5227) • (FAX) 804-353-6928

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AIHA 8936, ELLAP 8936, NVLAP 1150, NYELAP 11413, CAELAP 2078, NC 593

LABORATORY ANALYSIS REPORT

INDUSTRIAL SOLVENTS PROFILE

ACCOUNT:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/19/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/19/2004
P.O.#		CLIENT SAMPLE #:	L2-1
PROJECT NAME:	D.S.C.R.	SAMPLE DESCRIP.:	L2-1
PROJECT NO.:	6301-03-0011	SLI SAMPLE NO.:	28256115
JOB LOCATION:	Chester, VA	SAMPLE TYPE:	3M 3500

Laboratory Analysis for Client's Sample Number L2-1 of Work Order 1143-04-16

ANALYTE NAME:	Sample	Total	Act Exp	8 hr TWA	Act Exp	8 hr TWA	Report	ANALYSIS	8 HR OSHA
	Volume (L)	Mass (mg)*	(mg/m ³)*	(mg/m ³)*	(PPM)	(PPM)	Limit (mg)**	METHOD	PEL (mg/m ³)*
Acetone	21.65	< 0.033	< 1.524	< 1.714	< 0.642	< 0.722	0.033	NIOSH 1300	2400 [1000 PPM]
Benzene	19.17	< 0.031	< 1.612	< 1.813	< 0.505	< 0.568	0.031	NIOSH 1501	3.2 [1 PPM]
Carbon tetrachloride	16.31	< 0.032	< 1.938	< 2.180	< 0.308	< 0.346	0.032	NIOSH 1003	63 [10 PPM]
Chlorobenzene	15.82	< 0.031	< 1.978	< 2.226	< 0.430	< 0.483	0.031	NIOSH 1003	350 [75 PPM]
1,2-Dichloroethane	17.93	< 0.031	< 1.707	< 1.920	< 0.422	< 0.474	0.031	NIOSH 1003	200 [50 PPM]
Ethylbenzene	14.74	< 0.031	< 2.123	< 2.389	< 0.489	< 0.550	0.031	NIOSH 1501	435 [100 PPM]
Heptane	15.61	< 0.029	< 1.845	< 2.076	< 0.450	< 0.507	0.029	NIOSH 1500	2000 [400 PPM]
Hexane	17.28	< 0.028	< 1.620	< 1.823	< 0.460	< 0.517	0.028	NIOSH 1500	1800 [500 PPM]
Methyl ethyl ketone	19.60	< 0.033	< 1.684	< 1.894	< 0.571	< 0.642	0.033	NIOSH 2500	590 [200 PPM]
Methyl isobutyl ketone	16.20	< 0.030	< 1.870	< 2.104	< 0.457	< 0.514	0.030	NIOSH 1300	410 [100 PPM]
Methylene chloride	20.47	< 0.035	< 1.686	< 1.896	< 0.485	< 0.546	0.035	NIOSH 1005	87 [25 PPM]
Octane	14.36	< 0.029	< 1.991	< 2.240	< 0.426	< 0.479	0.029	NIOSH 1500	2350 [500 PPM]
Styrene	15.61	< 0.034	< 2.185	< 2.458	< 0.513	< 0.577	0.034	NIOSH 1501	215 [50 PPM]
Tetrachloroethylene	15.28	< 0.029	< 1.904	< 2.142	< 0.281	< 0.316	0.029	NIOSH 1003	678 [100 PPM]
Toluene	16.96	< 0.030	< 1.769	< 1.990	< 0.470	< 0.528	0.030	NIOSH 1500	750 [200 PPM]
1,1,1-Trichloroethane	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030	NIOSH 1003	1900 [350 PPM]
1,1,2-Trichloroethane	16.04	< 0.032	< 1.970	< 2.217	< 0.361	< 0.406	0.032	NIOSH 1003	45 [10 PPM]
Trichloroethylene	16.79	< 0.030	< 1.768	< 1.990	< 0.329	< 0.370	0.030	NIOSH 1022	537 [100 PPM]
m,p-Xylene	14.74	< 0.062	< 4.199	< 4.724	< 0.967	< 1.088	0.062	NIOSH 1501	435 [100 PPM]
o-Xylene	14.74	< 0.031	< 2.096	< 2.358	< 0.483	< 0.543	0.031	NIOSH 1501	435 [100 PPM]

Analyst: MARK B CHAMPION

Bernard H Howard
REVIEWED BY BERNARD H HOWARD, CHEMIST

Quality Control Data available upon request. *For true values, assume 2 significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Sample concentrations below the Minimum Reporting Limit are indicated with a "less than" (<) sign.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Results are not blank-corrected unless noted by analyst.

SCHNEIDER LABORATORIES

INCORPORATED

2512 WEST CARY STREET - RICHMOND, VA - 23220-5117
804-353-6778 - 800-785-LABS (5227) - (FAX) 804-353-6928

Excellence in Service and Technology

AIHA 8936, ELLAP 8936, NVLAP 1150, NYELAP 11413, CAELAP 2078, NC 593

LABORATORY ANALYSIS REPORT

INDUSTRIAL SOLVENTS PROFILE

ACCOUNT:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/19/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/19/2004
P.O.#		CLIENT SAMPLE #:	L3-1
PROJECT NAME:	D.S.C.R.	SAMPLE DESCRIPT.:	L3-1
PROJECT NO.:	6301-03-0011	SLI SAMPLE NO.:	28256116
JOB LOCATION:	Chester, VA	SAMPLE TYPE:	3M 3500

Laboratory Analysis for Client's Sample Number L3-1 of Work Order 1143-04-16

ANALYTE NAME:	Sample	Total	Act Exp	8 hr TWA	Act Exp	8 hr TWA	Report	ANALYSIS	8 HR OSHA
	Volume (L)	Mass (mg)*	(mg/m ³)*	(mg/m ³)*	(PPM)	(PPM)	Limit (mg)**	METHOD	PEL (mg/m ³)*
Acetone	21.65	< 0.033	< 1.524	< 1.714	< 0.642	< 0.722	0.033	NIOSH 1300	2400 [1000 PPM]
Benzene	19.17	< 0.031	< 1.612	< 1.813	< 0.505	< 0.568	0.031	NIOSH 1501	3.2 [1 PPM]
Carbon tetrachloride	16.31	< 0.032	< 1.938	< 2.180	< 0.308	< 0.346	0.032	NIOSH 1003	63 [10 PPM]
Chlorobenzene	15.62	< 0.031	< 1.978	< 2.226	< 0.430	< 0.483	0.031	NIOSH 1003	350 [75 PPM]
1,2-Dichloroethane	17.93	< 0.031	< 1.707	< 1.920	< 0.422	< 0.474	0.031	NIOSH 1003	200 [50 PPM]
Ethylbenzene	14.74	< 0.031	< 2.123	< 2.389	< 0.489	< 0.550	0.031	NIOSH 1501	435 [100 PPM]
Heptane	15.61	< 0.029	< 1.845	< 2.076	< 0.450	< 0.507	0.029	NIOSH 1500	2000 [400 PPM]
Hexane	17.28	< 0.028	< 1.620	< 1.823	< 0.460	< 0.517	0.028	NIOSH 1500	1800 [500 PPM]
Methyl ethyl ketone	19.60	< 0.033	< 1.684	< 1.894	< 0.571	< 0.642	0.033	NIOSH 2500	590 [200 PPM]
Methyl isobutyl ketone	16.20	< 0.030	< 1.870	< 2.104	< 0.457	< 0.514	0.030	NIOSH 1300	410 [100 PPM]
Methylene chloride	20.47	< 0.035	< 1.686	< 1.896	< 0.485	< 0.546	0.035	NIOSH 1005	87 [25 PPM]
Octane	14.36	< 0.029	< 1.991	< 2.240	< 0.426	< 0.479	0.029	NIOSH 1500	2350 [500 PPM]
Styrene	15.61	< 0.034	< 2.185	< 2.458	< 0.513	< 0.577	0.034	NIOSH 1501	215 [50 PPM]
Tetrachloroethylene	15.28	< 0.029	< 1.904	< 2.142	< 0.281	< 0.316	0.029	NIOSH 1003	678 [100 PPM]
Toluene	16.96	< 0.030	< 1.769	< 1.990	< 0.470	< 0.528	0.030	NIOSH 1500	750 [200 PPM]
1,1,1-Trichloroethane	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030	NIOSH 1003	1900 [350 PPM]
1,1,2-Trichloroethane	16.04	< 0.032	< 1.970	< 2.217	< 0.361	< 0.406	0.032	NIOSH 1003	45 [10 PPM]
Trichloroethylene	16.79	< 0.030	< 1.768	< 1.990	< 0.329	< 0.370	0.030	NIOSH 1022	537 [100 PPM]
m,p-Xylene	14.74	< 0.062	< 4.199	< 4.724	< 0.967	< 1.088	0.062	NIOSH 1501	435 [100 PPM]
o-Xylene	14.74	< 0.031	< 2.096	< 2.358	< 0.483	< 0.543	0.031	NIOSH 1501	435 [100 PPM]

Analyst: MARK B CHAMPION

REVIEWED BY BERNARD H HOWARD, CHEMIST

Quality Control Data available upon request. *For true values, assume 2 significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Sample concentrations below the Minimum Reporting Limit are indicated with a "less than" (<) sign.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

INDUSTRIAL SOLVENTS PROFILE

ACCOUNT:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/19/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/19/2004
P.O.#		CLIENT SAMPLE #:	L3-1
PROJECT NAME:	D.S.C.R.	SAMPLE DESCRIP.:	L3-1
PROJECT NO.:	6301-03-0011	SLI SAMPLE NO.:	28256116
JOB LOCATION:	Chester, VA	SAMPLE TYPE:	3M 3500

Laboratory Analysis for Client's Sample Number L3-1 of Work Order 1143-04-16

ANALYTE NAME:	Sample	Total	Act Exp	8 hr TWA	Act Exp	8 hr TWA	Report	ANALYSIS METHOD	8 HR OSHA PEL (mg/m) ³
	Volume (L)	Mass (mg) [*]	(mg/m) ³	(mg/m) ³	(PPM)	(PPM)	Limit (mg) ^{**}		
Acetone	21.65	< 0.033	< 1.524	< 1.714	< 0.642	< 0.722	0.033	NIOSH 1300	2400 [1000 PPM]
Benzene	19.17	< 0.031	< 1.612	< 1.813	< 0.505	< 0.568	0.031	NIOSH 1501	3.2 [1 PPM]
Carbon tetrachloride	16.31	< 0.032	< 1.938	< 2.180	< 0.308	< 0.346	0.032	NIOSH 1003	63 [10 PPM]
Chlorobenzene	15.82	< 0.031	< 1.978	< 2.226	< 0.430	< 0.483	0.031	NIOSH 1003	350 [75 PPM]
1,2-Dichloroethane	17.93	< 0.031	< 1.707	< 1.920	< 0.422	< 0.474	0.031	NIOSH 1003	200 [50 PPM]
Ethylbenzene	14.74	< 0.031	< 2.123	< 2.389	< 0.489	< 0.550	0.031	NIOSH 1501	435 [100 PPM]
Heptane	15.61	< 0.029	< 1.845	< 2.076	< 0.450	< 0.507	0.029	NIOSH 1500	2000 [400 PPM]
Hexane	17.28	< 0.028	< 1.620	< 1.823	< 0.460	< 0.517	0.028	NIOSH 1500	1800 [500 PPM]
Methyl ethyl ketone	19.60	< 0.033	< 1.684	< 1.894	< 0.571	< 0.642	0.033	NIOSH 2500	590 [200 PPM]
Methyl isobutyl ketone	16.20	< 0.030	< 1.870	< 2.104	< 0.457	< 0.514	0.030	NIOSH 1300	410 [100 PPM]
Methylene chloride	20.47	< 0.035	< 1.686	< 1.896	< 0.485	< 0.546	0.035	NIOSH 1005	87 [25 PPM]
Octane	14.36	< 0.029	< 1.991	< 2.240	< 0.426	< 0.479	0.029	NIOSH 1500	2350 [500 PPM]
Styrene	15.61	< 0.034	< 2.185	< 2.458	< 0.513	< 0.577	0.034	NIOSH 1501	215 [50 PPM]
Tetrachloroethylene	15.28	< 0.029	< 1.904	< 2.142	< 0.281	< 0.316	0.029	NIOSH 1003	678 [100 PPM]
Toluene	16.96	< 0.030	< 1.769	< 1.990	< 0.470	< 0.528	0.030	NIOSH 1500	750 [200 PPM]
1,1,1-Trichloroethane	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030	NIOSH 1003	1900 [350 PPM]
1,1,2-Trichloroethane	16.04	< 0.032	< 1.970	< 2.217	< 0.361	< 0.406	0.032	NIOSH 1003	45 [10 PPM]
Trichloroethylene	16.79	0.058	3.448	3.879	0.642	0.722	0.030	NIOSH 1022	537 [100 PPM]
m,p-Xylene	14.74	< 0.062	< 4.199	< 4.724	< 0.967	< 1.088	0.062	NIOSH 1501	435 [100 PPM]
o-Xylene	14.74	< 0.031	< 2.096	< 2.358	< 0.483	< 0.543	0.031	NIOSH 1501	435 [100 PPM]

Analyst: MARK B CHAMPION

Bernard H. Howard
REVIEWED BY BERNARD H HOWARD, CHEMIST

Quality Control Data available upon request. *For true values, assume 2 significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Sample concentrations below the Minimum Reporting Limit are indicated with a "less than" (<) sign.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

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Received 12-6-04
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LABORATORY ANALYSIS REPORT

1,1-Dichloroethane Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/26/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,1-DCA (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.033	17.93	< 0.033	< 1.818	< 2.046	< 0.449	< 0.505	0.033
28256115	L2-1	540	0.033	17.93	< 0.033	< 1.818	< 2.046	< 0.449	< 0.505	0.033
28256116	L3-1	540	0.033	17.93	< 0.033	< 1.818	< 2.046	< 0.449	< 0.505	0.033
28256117	BS-1	540	0.033	17.93	< 0.033	< 1.818	< 2.046	< 0.449	< 0.505	0.033

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T. KHAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,1-Dichloroethane is 400 mg/m³ [100 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

cis-1,2-Dichloroethene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total cis1,2DiEt (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033
28256115	L2-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033
28256116	L3-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033
28256117	BS-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033

ANALYST: MARK B CHAMPION



REVIEWED BY THAO T. KRAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for cis-1,2-Dichloroethene is 790 mg/m³ [200 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

trans-1,2-Dichloroethene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/24/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/26/2004
PO NO.:			
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total trans1,2-DIET (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033
28256115	L2-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033
28256116	L3-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033
28256117	BS-1	540	0.035	19.01	< 0.033	< 1.726	< 1.941	< 0.435	< 0.490	0.033

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T. KHAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for trans-1,2-Dichloroethene is 790 mg/m³ [200 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

1,4-Dichlorobenzene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,4-DiCIBz (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.028	15.01	< 0.043	< 2.838	< 3.192	< 0.472	< 0.531	0.043
28256115	L2-1	540	0.028	15.01	< 0.043	< 2.838	< 3.192	< 0.472	< 0.531	0.043
28256116	L3-1	540	0.028	15.01	< 0.043	< 2.838	< 3.192	< 0.472	< 0.531	0.043
28256117	BS-1	540	0.028	15.01	< 0.043	< 2.838	< 3.192	< 0.472	< 0.531	0.043

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T. KHAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,4-Dichlorobenzene is 450 mg/m³ [75 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

1,2-Dichlorobenzene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.	MEDIA TYPE:	3M 3500
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA		

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,2-DiClBz (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.028	15.01	< 0.038	< 2.525	< 2.840	< 0.420	< 0.472	0.038
28256115	L2-1	540	0.028	15.01	< 0.038	< 2.525	< 2.840	< 0.420	< 0.472	0.038
28256116	L3-1	540	0.028	15.01	< 0.038	< 2.525	< 2.840	< 0.420	< 0.472	0.038
28256117	BS-1	540	0.028	15.01	< 0.038	< 2.525	< 2.840	< 0.420	< 0.472	0.038

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T. KHAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,2-Dichlorobenzene is 300(C) mg/m³ [50(C) PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

Trichloroethylene Analysis by NIOSH 1022 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/19/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.	MEDIA TYPE:	3M 3500
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA		

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total TCE (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.031	16.79	<0.030	<1.768	<1.990	<0.329	<0.370	0.030
28256115	L2-1	540	0.031	16.79	<0.030	<1.768	<1.990	<0.329	<0.370	0.030
28256116	L3-1	540	0.031	16.79	<0.030	<1.768	<1.990	<0.329	<0.370	0.030
28256117	BS-1	540	0.031	16.79	0.058	3.448	3.879	0.642	0.722	0.030

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T KHAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for Trichloroethylene is 537 mg/m³ [100 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

1,1,1-Trichloroethane Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/19/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.	MEDIA TYPE:	3M 3500
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA		

SLJ Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,1,1-Trichloroethane (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.031	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030
28256115	L2-1	540	0.031	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030
28256116	L3-1	540	0.031	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030
28256117	BS-1	540	0.031	16.69	< 0.030	< 1.798	< 2.023	< 0.329	< 0.371	0.030

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T KHAU, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,1,1-Trichloroethane is 1900 mg/m³ [350 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

Tetrachloroethylene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/19/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/26/2004
PO NO.:			
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total PCE (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.028	15.28	<0.029	<1.904	<2.142	<0.281	<0.316	0.029
28256115	L2-1	540	0.028	15.28	<0.029	<1.904	<2.142	<0.281	<0.316	0.029
28256116	L3-1	540	0.028	15.28	<0.029	<1.904	<2.142	<0.281	<0.316	0.029
28256117	BS-1	540	0.028	15.28	<0.029	<1.904	<2.142	<0.281	<0.316	0.029

ANALYST: MARK B CHAMPION


 REVIEWED BY THAO T. KHAU, CHEMIST
OSHA Permissible Exposure Limit (PEL) for Tetrachloroethylene is 678 mg/m³ [100 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

Vinyl chloride Analysis by NIOSH 1007 Method

ACCOUNT #:	1143-04-16	DATE COLLECTED:	11/17/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/18/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/26/2004
PO NO.:		DATE REPORTED:	11/26/2004
PROJECT NAME:	D.S.C.R.	MEDIA TYPE:	3M 3500
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Chester, VA		

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total VinCl (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28256114	L1-1	540	0.041	22.03	<0.015	<0.681	<0.766	<0.266	<0.300	0.015
28256115	L2-1	540	0.041	22.03	<0.015	<0.681	<0.766	<0.266	<0.300	0.015
28256116	L3-1	540	0.041	22.03	<0.015	<0.681	<0.766	<0.266	<0.300	0.015
28256117	BS-1	540	0.041	22.03	<0.015	<0.681	<0.766	<0.266	<0.300	0.015

ANALYST: MARK B CHAMPION


REVIEWED BY THAO T KHAO, CHEMIST

OSHA Permissible Exposure Limit (PEL) for Vinyl chloride is 2.6 mg/m³ [1 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

3m has no established D.E. value. The value 1.0 used as default.

783 815
Received 12-6-04
gpt

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LABORATORY ANALYSIS REPORT

1,1,1-Trichloroethane Analysis by NIOSH 1003 Method

ACCOUNT #: 1143-04-17 DATE COLLECTED: 11/18/2004
CLIENT: MACTEC ENGINEERING / KENNESAW GA DATE RECEIVED: 11/19/2004
ADDRESS: 3200 TOWNE POINT DR NW, SUITE 100 DATE ANALYZED: 11/24/2004
KENNESAW GA 30144-7088 DATE REPORTED: 11/29/2004
PO NO.:
PROJECT NAME: D.S.C.R.
PROJECT NO.: 6301-03-0011
JOB LOCATION: Richmond, VA MEDIA TYPE: 3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,1,1-Trichloroethane (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.031	17.61	< 0.030	< 1.703	< 2.023	< 0.312	< 0.371	0.030
28258136	L2-2	570	0.031	17.61	< 0.030	< 1.703	< 2.023	< 0.312	< 0.371	0.030
28258137	L3-2	570	0.031	17.61	< 0.030	< 1.703	< 2.023	< 0.312	< 0.371	0.030
28258138	BS-2	570	0.031	17.61	< 0.030	< 1.703	< 2.023	< 0.312	< 0.371	0.030

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,1,1-Trichloroethane is 1900 mg/m³ [350 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

Trichloroethylene Analysis by NIOSH 1022 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/24/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/29/2004
PO NO.:			
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total TCE (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.031	17.73	< 0.030	< 1.675	< 1.990	< 0.312	< 0.370	0.030
28258136	L2-2	570	0.031	17.73	< 0.030	< 1.675	< 1.990	< 0.312	< 0.370	0.030
28258137	L3-2	570	0.031	17.73	< 0.030	< 1.675	< 1.990	< 0.312	< 0.370	0.030
28258138	BS-2	570	0.031	17.73	0.086	4.857	5.768	0.904	1.073	0.030

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for Trichloroethylene is 537 mg/m³ [100 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

Tetrachloroethylene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/29/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total PCE (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.028	16.13	<0.029	<1.804	<2.142	<0.266	<0.316	0.029
28258136	L2-2	570	0.028	16.13	<0.029	<1.804	<2.142	<0.266	<0.316	0.029
28258137	L3-2	570	0.028	16.13	<0.029	<1.804	<2.142	<0.266	<0.316	0.029
28258138	BS-2	570	0.028	16.13	<0.029	<1.804	<2.142	<0.266	<0.316	0.029

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for Tetrachloroethylene is 678 mg/m³ [100 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

1,2-Dichlorobenzene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/29/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,2-DiClBz (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.028	15.85	<0.038	<2.392	<2.840	<0.398	<0.472	0.038
28258136	L2-2	570	0.028	15.85	<0.038	<2.392	<2.840	<0.398	<0.472	0.038
28258137	L3-2	570	0.028	15.85	<0.038	<2.392	<2.840	<0.398	<0.472	0.038
28258138	BS-2	570	0.028	15.85	<0.038	<2.392	<2.840	<0.398	<0.472	0.038

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,2-Dichlorobenzene is 300(C) mg/m³ [50(C) PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

1,4-Dichlorobenzene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/29/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,4-DICIBz (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.028	15.85	< 0.043	< 2.688	< 3.192	< 0.447	< 0.531	0.043
28258136	L2-2	570	0.028	15.85	< 0.043	< 2.688	< 3.192	< 0.447	< 0.531	0.043
28258137	L3-2	570	0.028	15.85	< 0.043	< 2.688	< 3.192	< 0.447	< 0.531	0.043
28258138	BS-2	570	0.028	15.85	< 0.043	< 2.688	< 3.192	< 0.447	< 0.531	0.043

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H. HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,4-Dichlorobenzene is 450 mg/m³ [75 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

trans-1,2-Dichloroethene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100	DATE ANALYZED:	11/24/2004
	KENNESAW GA 30144-7088	DATE REPORTED:	11/29/2004
PO NO.:			
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time --(min)	Flow Rate (L/min)	Sample Volume (L)	Total trans1,2-DiEt (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033
28258136	L2-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033
28258137	L3-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033
28258138	BS-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033

ANALYST: MARK B CHAMPION


 REVIEWED BY BERNARD H HOWARD, CHEMIST
OSHA Permissible Exposure Limit (PEL) for trans-1,2-Dichloroethene is 790 mg/m³ [200 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

cis-1,2-Dichloroethene Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/24/2004
PO NO.:		DATE REPORTED:	11/29/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total cis-1,2DiEt (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033
28258136	L2-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033
28258137	L3-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033
28258138	BS-2	570	0.035	20.06	< 0.033	< 1.635	< 1.941	< 0.412	< 0.490	0.033

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for cis-1,2-Dichloroethene is 790 mg/m³ [200 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

1,1-Dichloroethane Analysis by NIOSH 1003 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/26/2004
PO NO.:		DATE REPORTED:	11/29/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total 1,1-DCA (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.033	18.92	< 0.033	< 1.723	< 2.046	< 0.426	< 0.505	0.033
28258136	L2-2	570	0.033	18.92	< 0.033	< 1.723	< 2.046	< 0.426	< 0.505	0.033
28258137	L3-2	570	0.033	18.92	< 0.033	< 1.723	< 2.046	< 0.426	< 0.505	0.033
28258138	BS-2	570	0.033	18.92	< 0.033	< 1.723	< 2.046	< 0.426	< 0.505	0.033

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for 1,1-Dichloroethane is 400 mg/m³ [100 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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LABORATORY ANALYSIS REPORT

Vinyl chloride Analysis by NIOSH 1007 Method

ACCOUNT #:	1143-04-17	DATE COLLECTED:	11/18/2004
CLIENT:	MACTEC ENGINEERING / KENNESAW GA	DATE RECEIVED:	11/19/2004
ADDRESS:	3200 TOWNE POINT DR NW, SUITE 100 KENNESAW GA 30144-7088	DATE ANALYZED:	11/26/2004
PO NO.:		DATE REPORTED:	11/29/2004
PROJECT NAME:	D.S.C.R.		
PROJECT NO.:	6301-03-0011		
JOB LOCATION:	Richmond, VA	MEDIA TYPE:	3M 3500

SLI Sample No.	Client Sample No.	Sample Time (min)	Flow Rate (L/min)	Sample Volume (L)	Total VinCl (mg)*	Actual Exp (mg/m ³)*	8 Hour TWA (mg/m ³)*	Actual Exp (PPM)	8 Hour TWA (PPM)	Report Limit (mg)**
28258135	L1-2	570	0.041	23.26	< 0.015	< 0.645	< 0.766	< 0.252	< 0.300	0.015
28258136	L2-2	570	0.041	23.26	< 0.015	< 0.645	< 0.766	< 0.252	< 0.300	0.015
28258137	L3-2	570	0.041	23.26	< 0.015	< 0.645	< 0.766	< 0.252	< 0.300	0.015
28258138	BS-2	570	0.041	23.26	< 0.015	< 0.645	< 0.766	< 0.252	< 0.300	0.015

ANALYST: MARK B CHAMPION


REVIEWED BY BERNARD H HOWARD, CHEMIST

OSHA Permissible Exposure Limit (PEL) for Vinyl chloride is 2.6 mg/m³ [1 PPM] for 8 hour TWA.

* For true values assume two (2) significant figures.

** Reporting Limit represents the lowest reportable concentration of the tested substance.

Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled.

Standard and spike values are reported as percent recovery for Quality Control purposes.

Results are not blank-corrected unless noted by analyst.

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ADMINISTRATIVE RECORD

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