December 22, 2010

Ms. Alexandra Cleary
Program Manager
Hazardous Sites Response Program
Georgia Environmental Protection Division
2 Martin Luther King, Jr. Drive, SE
Suite 1462 East Floyd Tower
Atlanta, Georgia 30334

Subject: **Addendum to Voluntary Remediation Program Application for Thermo King Corporation - Louisville, Jefferson County, Georgia**
HSI Site No. 10702 Tax Parcel 0090-024
MACTEC Project 6122-09-0322

Dear Ms. Cleary:

Thermo King Corporation is hereby submitting the attached Addendum to the Voluntary Remediation Program Application for the Thermo King Corporation in Louisville, Jefferson County, Georgia (HSI Site No. 10702, Tax Parcel 0090-024). This Addendum is to complete the Voluntary Remediation Program Application and Voluntary Remediation Plan (VRP) initially submitted on January 29 and March 18, 2010 and to address the Environmental Protection Division's (EPD) subsequent comment letters dated May 17, August 31, and October 15, 2010 on the Application.

The Applications and Remediation Plans submitted on January 29 and March 18, 2010, provided data and some of the elements required by the January 2010 VRP checklist. Since the initial Application submittal, additional activities have been conducted to provide supplemental data for the VRP Application and to respond to EPD comments. These activities are summarized as follows and the data provided in the attachment and appendices listed below.

- Water samples were collected from the seeps and the surface water of Manson Branch in April 2010 and analyzed for site-specific volatile organic compounds (VOCs) using USEPA Method 8260B. A water sample from Seep C was also analyzed for 1,4-dioxane using the Selective Ion Monitoring (SIM) methodology. The results are presented on Table 4.6 and on Figure 4.8.

- Groundwater samples were collected from site monitoring wells MW-1 to MW-24 in June 2010. Monitoring wells MW-3, MW-5, MW-10, MW-14, MW-19, and MW-20, which have previously had detections of VOCs, were sampled using two sampling methods. The first sampling method was using passive diffusion bags (PDBs). The second sampling method was using low flow/flow stress purging/sampling via bladder pump. These six monitoring wells were analyzed for the site-specific VOCs using USEPA 8260B and for 1,4-dioxane using VOCs-Selective Ion Method methods. The other 18 monitoring wells MW-1, MW-2, MW-4, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-13, MW-15, MW-16, MW-17, MW-18, MW-21, MW-22, MW-23, and MW-24 were sampled using PDBs. The groundwater samples from the 18 monitoring were analyzed for the site-specific VOCs using USEPA 8260B. The analytical results are presented on Table 4.5.

- New Intermediate Water-Bearing Zone monitoring well (MW-25) was installed in June 2010 and subsequently sampled to investigate potential impacts to the Intermediate Zone in the area of the former south settling pond. The well construction diagram for this well is provided in Appendix F.

- Hydraulic conductivity tests were conducted in existing and new monitoring wells MW-17, MW-20, MW-22, MW-23, and MW-25. The results of the hydraulic conductivity tests are provided in Appendix G.

- A meeting was conducted with EPD representatives on September 23, 2010 to present the rationale, details and sketches for the proposed rip-rap remedy to better clarify the purpose of the remedy. This meeting was in response to EPD's letters dated May 17 and August 31, 2010. A summary of the meeting is presented in Appendix A. In the meeting, EPD requested the installation and sampling of 3 shallow monitoring wells located between the seeps and Manson Branch. EPD also requested the preparation of a groundwater fate and transport model for the Uppermost Water-Bearing Zone to evaluate the potential for VOCs detected in the Uppermost zone to impact Manson Branch.

- In response to EPD's request, monitoring wells MW-26, MW-27, and MW-28 were installed using hand-augers and pre-packed well screens. The wells were purged and sampled using low flow/low stress methodology with a peristaltic pump. Groundwater samples were collected and analyzed for site-specific VOCs using USEPA method 8260B. The well construction diagrams and the analytical results are provided in Appendices F and H and on Table 4.5, respectively.

- Water levels were measured in the site's 28 monitoring wells in October 2010 and potentiometric surface maps were prepared for the Uppermost Water-Bearing Zone and the Intermediate Water-Bearing Zone from this data (Figures 4.5 and 4.6).

- The ecological risk screening tables were also updated with the 2010 seep and surface water data.

- The Risk Reduction Standards were revised based EPD's May 17, 2010 letter and are included in Appendix A.

The data from these activities are presented on the tables and figures in Appendix A.

- In Attachment A the VRP Checklist was updated to include the 2010 data, the Title Report for the Thermo King property was included along with a list and maps of abutting property owners and a proposed Uniform Environmental Covenant for the site.

- The Remediation Plan was updated to clarify how the rip-rap remedy will be constructed (Appendix C).

- Modeling of the Uppermost Water-Bearing Zone was conducted to assess potential impacts to Manson Branch (Appendix D).

- A groundwater fate and transport model was prepared for the Intermediate Water-Bearing Zone (Appendix E).

The following documents are included in this transmittal to document the above 2010 activities and to complete the Voluntary Remediation Plan and Application:

Attachment A

- Updated VRP Checklist
- Thermo King Corporation Title Report
- List of Abutting Property Owners with Tax Maps
- Proposed Uniform Environmental Covenant

Appendix A

- Response to EPD's May 17, 2010 Comment Letter
- Summary of September 23, 2010 Meeting with EPD
- Table 3.0: Summary of Soil and Ground-Water Samples Collected
- Table 3.2: Summary of Monitoring Well Construction Data
- Table 4.0: Summary of Ground-Water Elevations
- Table 4.1: Summary of Hydraulic Conductivity Testing
- Table 4.2: Summary of Regulated Substances Detected in Surface Soil
- Table 4.3: Summary of Regulated Substances Detected in Subsurface Soil Samples
- Table 4.5: Summary of Regulated Substances Detected in Ground-Water Samples
- Table 4.6: Summary of Detected Constituents in Seeps and Surface Water

- Table 5.1: Comparison of 2010 Seep Water Concentrations to Aquatic Wildlife Screening Values
- Table 5.2: Summary of Ecological Risks in Surface Soil (0-1 ft)
- Table 5.3: Short-Tailed Shrew Toxicity Reference Values
- Table 5.4: Raccoon Toxicity Reference Values
- Table 5.5: Northern Bobwhite Toxicity Reference Values
- Table 5.6: Short-Tailed Shrew Exposure Parameters
- Table 5.7: Raccoon Exposure Parameters
- Table 5.8: Northern Bobwhite Exposure Parameters
- Table 5.9: NOAEL Risk Calculation for the Short-Tailed Shrew
- Table 5.10: NOAEL Risk Calculation for the Raccoon
- Table 5.11: NOAEL Risk Calculation for the Northern Bobwhite
- Table 5.12: TCE Seep Exposure Point Concentration for 2010
- Table 5.13: Summary of NOAEL Hazard Indices
- Table 6.0: Risk Reduction Standards for Ground Water
- Table 6.1: Risk Reduction Standards for Soil – Types 1 through 4
- Figure 3.0: Site Sampling Locations Map
- Figure 4.0: Hydrogeologic Profile Location Map
- Figure 4.1: Hydrogeologic Profile A-A'
- Figure 4.2: Hydrogeologic Profile B B'
- Figure 4.3: Hydrogeologic Profile C C'
- Figure 4.4: Hydrogeologic Profile D D'
- Figure 4.5: Potentiometric Surface Map for Uppermost Water Bearing Zone – October 2010
- Figure 4.6: Potentiometric Surface Map for Intermediate Water Bearing Zone – October 2010
- Figure 4.7: Distribution and Extent of Detected Constituents in Soil
- Figure 4.8: Distribution and Extent of Detected Constituents in Ground Water
- Figure 4.9: Iso concentration Map of Trichloroethene in Ground Water in the Uppermost Water Bearing Zone

- Figure 4.10: Iso concentration Map of cis 1,2 Dichloroethene in Ground Water in the Uppermost Water Bearing Zone
- Figure 6.0: Risk Reduction Standards Compliance Map
- Updated Calculations for Risk Reduction Standards

Appendix C

- Revised Remediation Plan with Conceptual Drawings of the Proposed Remedy
- Groundwater and Surface Water Usage Map
- Gantt Chart Schedule for Implementing Remediation Plan
- Revised Cost Estimate to Implement Remediation Plan

Appendix D: Results of the Modeling of Groundwater in the Uppermost Water-Bearing Zone and Potential Impacts to Manson Branch

Appendix E: Results of the Groundwater Fate & Transport Modeling of the Intermediate Water-Bearing Zone

Appendix F: Well Construction Diagrams for New Wells MW-25, MW-26, MW-27, and MW-28

Appendix G: 2010 Hydraulic Conductivity Testing Results

Appendix H: Laboratory Reports for 2010 Groundwater, Seep, and Surface Water Samples

The following VRP elements have already been submitted to EPD in the January 29 and March 18 Application documents and did not change based on the 2010 activities and are not being re-submitted with this transmittal.

- Applicants and PE/PG Certifications were submitted in the January 29, 210 Application and are not being re-submitted per Kristen Ritter's email of December 6, 2010.
- Warranty Deeds and Tax Maps for the Thermo King Corporation property were submitted in the January 29, 210 Application and are not being re-submitted.
- Response to EPD's Comments on the March 27, 2007 Revised Compliance Status Report
- Response to EPD's February 18, 2010 Comments on the January 29, 2010 VRP Application
- Table 3.1 Summary of Soil Boring Data
- Table 3.3 Summary of Soil Physical Testing Data
- Table 4.2A Delineation Criteria Table for Surface Soil
- Tables 4.3A Delineation Criteria Table for Subsurface Soils
- Table 4.4 Summary of Analytical Results from the Soil-Water Partition (Kd) Study

- Table 4.5A Delineation Criteria Table for Groundwater
- Table 5.0 Protected Animal and Plant Species Occurring within Jefferson and Surrounding Counties, Georgia
- Table 6.2 Summary of Trichloroethene and 1,1,1-Trichloroethane Soil-Water Partition (Kd) Values
- Figure 1.0 Site Location Map
- Figure 2.1 Manufacturing Building and Surrounding Area
- Figure 2.2 Site Layout Map
- Figure 3.1 Soil Sample Locations for Soil Partition Coefficient (Kd) Study
- Figure 4.11 Schematic Interpretation of Contaminant Migration
- Figure 5.1 Screening-Level Ecological Risk Evaluation Conceptual Site Model
- Figure 5.2 Screening-Level Ecological Risk Evaluation Food Chain Model
- Appendix B Vapor Intrusion Model was submitted in the January 29 Application and was revised based on EPD's February 18, 2010 Comments and re-submitted in the March 18, 2010 Application. The results of the 2010 activities did not affect the Vapor Intrusion Model and it is not being re-submitted with this transmittal.
- Gantt Chart Schedule for completing the VRP Application

This submittal provides the remaining elements to complete the VRP Application for the Thermo King Corporation site in Louisville, Jefferson County, Georgia. We request EPD's acceptance of this complete Application in lieu of a HSRA CAP or other HSRA submittals and request full acceptance of this site into the Georgia VRP Program.

Please contact the undersigned at 478-625-7241, if any questions arise.

Sincerely,

THERMO KING CORPORATION

Gregory L. McCray

Gregory McCray
Interim Plant Manager

Enclosures

cc: David Kolb – Thermo King Corporation – Louisville, GA
Dave Sordi – Ingersoll Rand Company
MACTEC

ATTACHMENT A:

UPDATED VRP CHECKLIST

TITLE REPORT FOR THERMO KING COPROPORATION

LIST OF ABUTTING PROPERTY OWNERS WITH TAX MAPS

PROPOSED UNIFORM ENVIRONMENTAL COVENANT

UPDATED VRP CHECKLIST

Voluntary Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION

COMPANY NAME	Thermo King Corporation				
CONTACT PERSON/TITLE	Mr. David A. Kolb				
ADDRESS	1430 Highway 24 East Louisville, Georgia 30434				
PHONE	478-625-7241	**FAX**	478-625-7756	**E-MAIL**	David_Kolb@irco.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP

NAME	Gregory J. Wrenn	**GA PE/PG NUMBER**	PE025565
COMPANY	MACTEC Engineering and Consulting, Inc		
ADDRESS	3200 Town Point Drive		

PHONE	770-421-3472	**FAX**	770-421-3486	**E-MAIL**	gjwrenn@mactec.com

APPLICANT'S CERTIFICATION

In order to be considered a qualifying property for the VRP:

(1) The property must have a release of regulated substances into the environment;
(2) The property shall not be:
- (A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.
- (B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or
- (C) A facility required to have a permit under Code Section 12-8-66.

(3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.
(4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.

In order to be considered a participant under the VRP:
- (1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action.
- (2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.

APPLICANT'S SIGNATURE	**[Signed Certification previously submitted in the January 29, 2010 Application]**		
APPLICANT'S NAME/TITLE (PRINT)		**DATE**	

Mail completed Voluntary Remediation Plan Application Form and Checklist, Voluntary Remediation Plan, and $5,000 Application Fee to:

Georgia Hazardous Sites Response Program
VRP Coordinator, Suite 1462
2 Martin Luther King Jr. Drive, SE
Atlanta, GA 30334

QUALIFYING PROPERTY INFORMATION –PROPERTY #1			
TAX PARCEL ID	0090 024	PROPERTY SIZE (ACRES)	110.46
PROPERTY ADDRESS	1430 Highway 24 East		
CITY	Louisville	COUNTY	Jefferson
LATITUDE	33° 0' 10" North	LONGITUDE	82° 23' 16" West
PROPERTY OWNER(S)	Thermo King Corporation	PHONE #	478-625-7241
MAILING ADDRESS	1430 Highway 24 East		
CITY	Louisville	STATE/ZIP	Georgia 30434
QUALIFYING PROPERTY INFORMATION –PROPERTY #2			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
LATITUDE		LONGITUDE	
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIP	
QUALIFYING PROPERTY INFORMATION –PROPERTY #3			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
LATITUDE		LONGITUDE	
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIP	
QUALIFYING PROPERTY INFORMATION –PROPERTY #4			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
LATITUDE		LONGITUDE	
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIP	

Please add additional sheets as necessary to include all qualifying properties.

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (leave Blank)
1	**$5,000 APPLICATION FEE** IN THE FORM OF A CHECK PAYABLE TO THE GEORGIA DEPARTMENT OF NATURAL RESOURCES.	**Submitted in the January 29, 2010 Application**	
2	**WARRANTY DEED(S)** FOR EACH QUALIFYING PROPERTY(IES).	**Submitted in the January 29, 2010 Application**	
3	**TAX PLAT** OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY(IES) BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBERS.	**Thermo King property plat was submitted in the January 29, 2010 Application. Abutting property information is included in Attachment A of this Addendum to the Application**	
4	**ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES** OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).	**Attached**	
a	**TABLE OF REGULATED SUBSTANCES RELEASED** AT THE QUALIFYING PROPERTY.	**In Appendix A of this Addendum to the Application: Tables 4.2, 4.3, 4.5, and 4.6**	
b	**TABLE OF SITE DELINEATION CONCENTRATION** FOR EACH REGULATED SUBSTANCE ALONG WITH A REFERENCE TO THE SPECIFIC DELINEATION CRITERIA USED [i.e. 12-8-108(1)(A), 12-8-108(1)(B), 12-8-108(1)(C), 12-8-108(1)(D), OR 12-8-108(1)(E) FOR EACH REGULATED SUBSTANCE. CALCULATIONS FOR 12-8-108(1)(E) MUST BE INCLUDED TO DEMONSTRATE OTHER CRITERIA DO NOT EXCEED 12-8-108(1)(E)].	**In Appendix A of this Addendum to the Application: Tables 4.2, 4.3, 4.5, and 4.6. Also in the January 29, 2010 Application paragraphs 2 and 3 of Section 2.3.**	

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (leave Blank)
i	**SITE DELINEATION MAP** OF MINIMUM SCALE OF 1"= 200' AND VERTICAL CROSS-SECTIONS SHOWING DELINEATION OF REGULATED SUBSTANCES TO SITE DELINEATION CONCENTRATIONS HORIZONTALLY AND VERTICALLY, INCLUDING PROPERTY BOUNDARIES. SITE DELINEATION MAY NOT BE EXTRAPOLATED.	**In Appendix A of this Addendum to the Application: Figures 4.1, 4.2, 4.3, 4.4, 4.7, and 4.8**	
c	**TABLE OF CLEANUP STANDARDS** FOR EACH REGULATED SUBSTANCE AND EACH MEDIA LISTED BELOW ALONG WITH A REFERENCE TO THE SPECIFIC CLEANUP STANDARD USED [i.e. DEFAULT TYPE 1 RRS, SITE SPECIFIC TYPE 2 RRS, DEFAULT TYPE 3 RRS, SITE SPECIFIC TYPE 4 RRS, OR TYPE 5 RRS]. COMPLETE CALCULATIONS MUST BE PROVIDED FOR EACH REGULATED SUBSTANCE IN EACH MEDIA.	**In Appendix C (Remediation Plan) of this Addendum to the Application: Tables VRP-2 and VRP-3.**	
i	**SOURCE**	**See Section 2.3 of the January 29, 2010 Application.**	
ii	**SOIL** (SOIL HORIZONS MUST BE SPECIFIED WHERE DEPTH-SPECIFIC SOIL CRITERIA ARE APPLIED)	**See Site Hydrogeology (Section 2.2) of the January 29, 2010 Application and Figures 4.0 through 4.4 in Appendix A of this Addendum to the Application**	
iii	**GROUNDWATER** IF THE APPLICANT IS REQUESTING REMOVAL FROM THE HAZARDOUS SITE INVENTORY PURSUANT TO 12-8-107(g)(2), A NOTATION TO THAT EFFECT MUST BE INCLUDED IN THE TABLE.	**Not applicable to this site**	
iv	**VAPOR INTRUSION** (PLEASE REFER TO THE FOLLOWING LINK: http://www.epa.gov/epawaste/hazard/correctiveaction/eis/vapor/complete.pdf)	**See Appendix B of the January 29, 2010 Application**	
v	**SURFACE WATER** (INCLUDING ECOLOGICAL RISK ASSESSMENT (http://www.gaepd.org/Documents/hsraguideCSRRRS.html - Ecological))	**See Section 2.4 of the January 29, 2010 Application and Tables 4.6 and Tables 5.1 through 5.13 in Appendix A of this Addendum to the Application**	

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (leave Blank)
d	**CURRENT STATUS** OF QUALIFYING PROPERTY(IES)	**See Sections 1.0 and 2.0 of the January 29, 2010 Application and Attachment A of this Addendum to the Application**	
i	**NARRATIVE AND TABULAR SUMMARY** OF ALL PERTINENT FIELD DATA AND THE RESULTS OF ALL FINAL LAB ANALYSES THAT ARE SUPPORTED BY SUFFICIENT QA/QC CONTROL DATA TO VALIDATE THE RESULTS. (NOTE: MOST RECENT GROUNDWATER DATA MUST HAVE BEEN COLLECTED WITHIN 6 MONTHS OF RECEIPT OF APPLICATION.)	**Existing field and laboratory results are summarized on Tables 3.0 through 5.13 in Appendix A of the January 29, 2010 Application and in Appendix A of this Addendum to the Application. The most recent groundwater data is from June and October 2010. Laboratory reports for the 2010 Groundwater and Surface Water result are in Appendix H of this Addendum to the Application. Appendix F provides well construction diagrams for the new wells installed in 2010 and Appendix G provides the results of hydraulic conductivity testing conducted in 2010.**	

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (leave Blank)
ii	**MAPS AND VERTICAL CROSS-SECTIONS** OF APPROPRIATE SCALE DEPICTING CONCENTRATIONS FOR ALL REGULATED SUBSTANCES SUPERIMPOSED UPON SITE STRATIGRAPHIC FEATURES AND MONITORING WELLS. POINT OF DEMONSTRATION (POD) WELL MUST BE INCLUDED, IF APPLICABLE.	**See Figures 4.1 through 4.4 and 4.7 through 4.10 in Appendix A of this Addendum to the Application.**	
iii	**DESCRIPTION OF ANY HUMAN OR ENVIRONMENTAL RECEPTORS** WHO MAY HAVE BEEN OR COULD POTENTIALLY BE EXPOSED TO A RELEASE AT THE SITE.	**See Section 2.4 of the January 29, 2010 Application**	
e	**MAP** (MINIMUM SCALE OF 1" = 200') OR LESS DEPICTING THE POTENTIOMETRIC SURFACE OF GROUNDWATER. POD WELL MUST BE INCLUDED, IF APPLICABLE.	**See Figures 4.5 and 4.6 in Appendix A of this Addendum to the Application.**	
f	**FIGURE OF GROUNDWATER USAGE** (DRINKING, IRRIGATION, ETC.) **AND SURFACE WATER** (RECREATIONAL, FISHING, ETC.) WITHIN THE AREA OF THE RELEASE AND 1,000' DOWNGRADIENT.	**See Figure VRP-1 in Appendix C (Remediation Plan) of this Addendum to the Application**	
g	**ENUMERATE AND DESCRIBE ACTIONS** PLANNED TO BRING THE QUALIFYING PROPERTY(IES) INTO COMPLIANCE WITH THE CLEANUP STANDARDS SPECIFIED IN 4.c. ABOVE. **IF UTILIZING REPRESENTATIVE CONCENTRATIONS,** DOCUMENTATION REGARDING THE EXPOSURE UNIT, EXPOSURE DURATION, EXPOSURE POINT CONCENTRATION, ETC. MUST BE INCLUDED.	**See Appendix C (Remediation Plan) of this Addendum to the Application and the Risk Reduction Standards calculations in Appendix A of this Addendum**	
h	**MODEL** FOR POINT OF EXPOSURE: APPLICANT MUST EITHER PROVIDE A COPY OF THE MODEL OR LICENSE FOR USE, OR PURCHASING INFORMATION (PURCHASE OF A MODEL WILL BE BILLED TO THE APPLICANT BY EPD) ALONG WITH A TABLE OF ALL INPUT AND OUTPUT PARAMETERS AND SUPPORTING DOCUMENTATION. A SENSITIVITY ANALYSIS MUST ALSO BE INCLUDED.	**See Appendix D for model of the Uppermost zone aquifer and Appendix E for model of the Intermediate zone aquifer in this Addendum to the Application**	
i	**MILESTONE SCHEDULE** INLCUDING SEMI-ANNUAL REPORTING AND SUBMITTAL OF A FINAL COMPLIANCE STATUS REPORT. GANTT CHART FORMAT PREFERRED.	**See Figure VRP-5 in Appendix C**	

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (leave Blank)
		(Remediation Plan) in this Addendum to the Application	
j	**COST ESTIMATE** FOR IMPLEMENTING THE CORRECTIVE ACTION AND ANY CONTINUING ACTIONS SPECIFED IN THE VOLUNTARY REMEDIATION PLAN.	**See Table VRP-1 in Appendix C (Remediation Plan) in this Addendum to the Application**	
k	**SIGNED AND SEALED PE/PG CERTIFICATION** AND SUPPORTING DOCUMENTATION: "I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances. Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." _____ _____ Printed Name and GA PE/PG Number Date _____ Signature and Stamp	**Signed certification previously submitted in the January 29, 2010 Application**	

TITLE REPORT FOR THERMO KING COPROPORATION

ABBOT, MURPHY AND HARVEY, P.C.
ATTORNEYS AND COUNSELLORS AT LAW
190 EAST SEVENTH STREET
POST OFFICE BOX 31
LOUISVILLE, GEORGIA 30434
TELEPHONE (478) 625-7281
FACSIMILE (478) 625-8200
EMAIL JMURPHY_AMHLAW@BELLSOUTH.NET

JOHN R. MURPHY III

W. WRIGHT ABBOT (1892-1969)
JAMES C. ABBOT (1926-1997)
FRED K. HARVEY, JR. (1944-2006)

December 6, 2010
By Email and Regular Mail

Mr. David A . Kolb
ESH and Facility Manager
Thermo King Corporation
1430 Highway 24 East
Louisville , GA 30434

CERTIFICATE OF TITLE
Property Of
THERMO KING CORPORATION

All that tract or parcel of land, together with all improvements located thereon, lying and being in the 82nd GMD, Jefferson County, Georgia, containing **110.47 acres**, more or less, fronting to the North on Georgia Highway 24, slightly East of the City of Louisville, and being bounded now or formerly as follows: On the East by property of Lizzie Quarterman, property of Tommie Quarterman, property of David Quarterman, and property of Mary Clark; on the South by property of Mary Clark; on the West by property of Industrial Development Corporation of Louisville; and on the North by Georgia Highway 24. Said property is composed of that certain **54.47-acre** tract which is shown as PARCEL 2 on plat of survey by Frank J. Ford, Surveyor, dated June 14, 1961, and recorded in Deed Book 62, Page 376, Jefferson County Records; and that certain **56.00-acre** tract which appears on plat of survey by Surveying Solutions, Inc., Jeffrey L. Nipper, Georgia Registered Land Surveyor No. 2736, dated June 27, 2002, revised July 2, 2002 and July 3, 2002, and recorded in Plat Book 2, Page 255, Jefferson County Records. Reference is made to each of said recorded plats for a fuller and more particular description.

This is to certify that I have conducted an examination of the public records of Jefferson County, Georgia, as correctly indexed, regarding the property described above, and BASED UPON SUCH EXAMINATION, it is my opinion that the marketable, fee simple title to the aforesaid property is vested in THERMO KING CORPORATION.

Such fee simple title, however, is subject to the following liens, restrictions, easements, objections and other exceptions, to-wit:

1. Statutory liens of general contractors, sub-contractors, materialmen, mechanics or laborers, of which no notice appears of record. If any improvements have been placed on this property within the past 90 days, proof is required that all bills of labor and materials have been paid in full.

2. Any encroachments, easements, measurements, party walls or other facts which a current, correct survey of the premises would show.

3. Rights, if any, of parties who may be in possession under claims not appearing of record, or other matters not of record, including any rights or claims in appliances or personal property attached or unattached to the real estate or buildings, forgery, insanity, or minority of a maker.

4. All zoning laws, ordinances or regulations, and all governmental regulations of the use and occupancy of the above-described property, including the regulation of the land or any building or structure thereon, or the effect of any violation of any such zoning laws, ordinances or regulations.

5. This property does not lie within a planned unit development or a condominium.

6. This property is identified on the Jefferson County Tax Digest as Parcel 024 on Map 0090, and is returned as a 110.46-acre parcel, billed to Thermo King Corporation. (Please note the 0.01-acre discrepancy). The 2010 property taxes and the 2010 inventory and equipment taxes are now due and payable, but have not yet been paid. The due date is December 20.

7. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated November 8, 1967, and recorded in Deed Book 74, Page 436, Jefferson County Records.

8. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated April 9, 1968, and recorded in Deed Book 76, Page 538, Jefferson County Records.

9. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated April 1, 1971, and recorded in Deed Book 90, Page 269, Jefferson County Records.

10. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated August 16, 1972, and recorded in Deed Book 95, Page 399, Jefferson County Records.

11. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated November 14, 1972, and recorded in Deed Book 95, Page 409, Jefferson County Records.

12. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated October 17, 1973, and recorded in Deed Book 101, Page 211, Jefferson County Records.

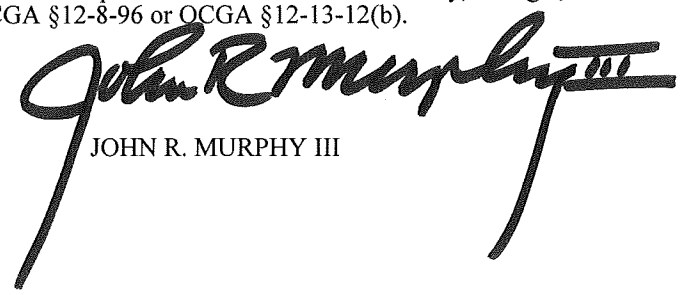
13. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated January 23, 1974, and recorded in Deed Book 103, Page 222, Jefferson County Records.

14. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated February 9, 1989, and recorded in Deed Book 171, Page 283, Jefferson County Records.

15. Power Line (Service) Easement from Thermo King Corp to Georgia Power Company, dated January 31, 1990, and recorded in Deed Book 177, Page 137, Jefferson County Records.

16. The subject property is not listed on the Federal National Priorities List pursuant to CERCLA (42 U.S.C. §9601). The public records do not show that the property is currently affected by any order or directive by the Federal Environmental Protection Agency or the Environmental Protection Division of the Georgia Department of Natural Resources.

17. There have been no liens filed on the public records of Jefferson County, Georgia, affecting the subject property, pursuant to OCGA §12-8-96 or OCGA §12-13-12(b).

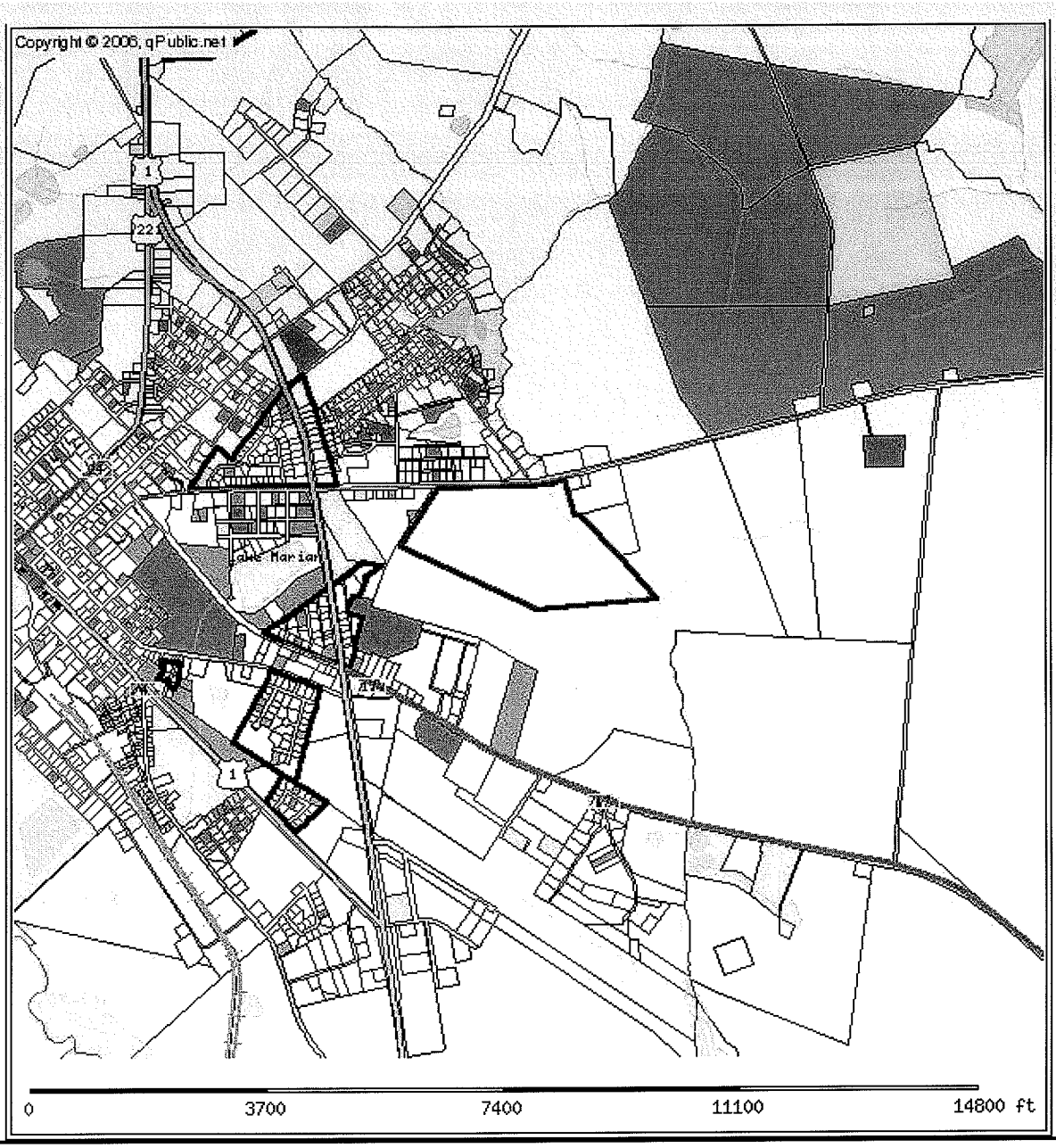


JOHN R. MURPHY III

cc: Ms. Rhonda Quinn

LIST OF ABUTTING PROPERTY OWNERS WITH TAX MAPS

Property Parcel Identification	**Parcel Owner and Contact Information**
Thermo King Corporation (VRP Applicant) Parcel 0090 024 (110.47 acres) Location: 1430 E. Highway 24	Thermo King Corp. c/o Real Property Tax Advisor 3424 Peachtree Road, Suite 430 Atlanta, GA 30326
Lizzie W. Quarterman (borders Thermo King Corp property on the northeast corner) Parcel 0090 023 (1.18 acres) 1786 Highway 24 East Louisville, GA 30434	Lizzie W. Quarterman 1786 Highway 24 East Louisville, GA 30434
Tommie W. Quarterman (borders Thermo King Corp property on the northeast corner) Parcel 0090 071 (10 acres) 0 Highway 24	Tommie W. Quarterman 8239 Bent Meadow Drive Converse, TX 78109
David Quarterman (borders Thermo King Corp property on the east side) Parcel 0090 074 (10 acres) 0 Highway 24	David Quarterman 1786 Highway 24 East Louisville, GA 30434
Mary Clark (borders Thermo King Corp property on the east, south and southwest sides) Parcel 0090 025 (272.04 acres) 2134 Highway 24	Mary Clark (formerly owned by Ethel B. Clark) P.O. Box 188 Louisville, GA 30434
Industrial Development Corporation of Louisville, Inc. (borders Thermo King Corp property on the west side) Parcel L004 004 (1.48 acres)	Industrial Development Corporation of Louisville, Inc. P.O. Box 467 Louisville, GA 30434



PARCEL INFORMATION TABLE	
Selected Parcel	0090 024
Class Code (NOTE: Not Zoning Info)	I5
Taxing District	County
Acres	110.46
OWNERSHIP INFORMATION	
Name	THERMO KING CORP
Mailing Address	C/O REAL PROPERTY TAX ADVISOR 3424 PEACHTREE RD STE 430 ATLANTA, GA 30326
Situs/Physical Address	1430 E HWY 24
VALUES	
Land Value	$552,300.00
Improvement Value	$3,305,498.00
Accessory Value	$171,617.00
Total Value	$4,029,415.00

LAST 2 SALES

Date	Price	Reason	Qual
07-2002	$128,800	3F	U
01-1965	$0	NM	U

PARCEL INFORMATION TABLE	
Selected Parcel	0090 023
Class Code (NOTE: Not Zoning Info)	R3
Taxing District	County
Acres	1.18
OWNERSHIP INFORMATION	
Name	QUARTERMAN LIZZIE W
Mailing Address	1786 HWY 24 EAST LOUISVILLE, GA 30434
Situs/Physical Address	1786 HWY 24 E
VALUES	
Land Value	$8,189.00
Improvement Value	$38,225.00
Accessory Value	$5,313.00
Total Value	$51,727.00

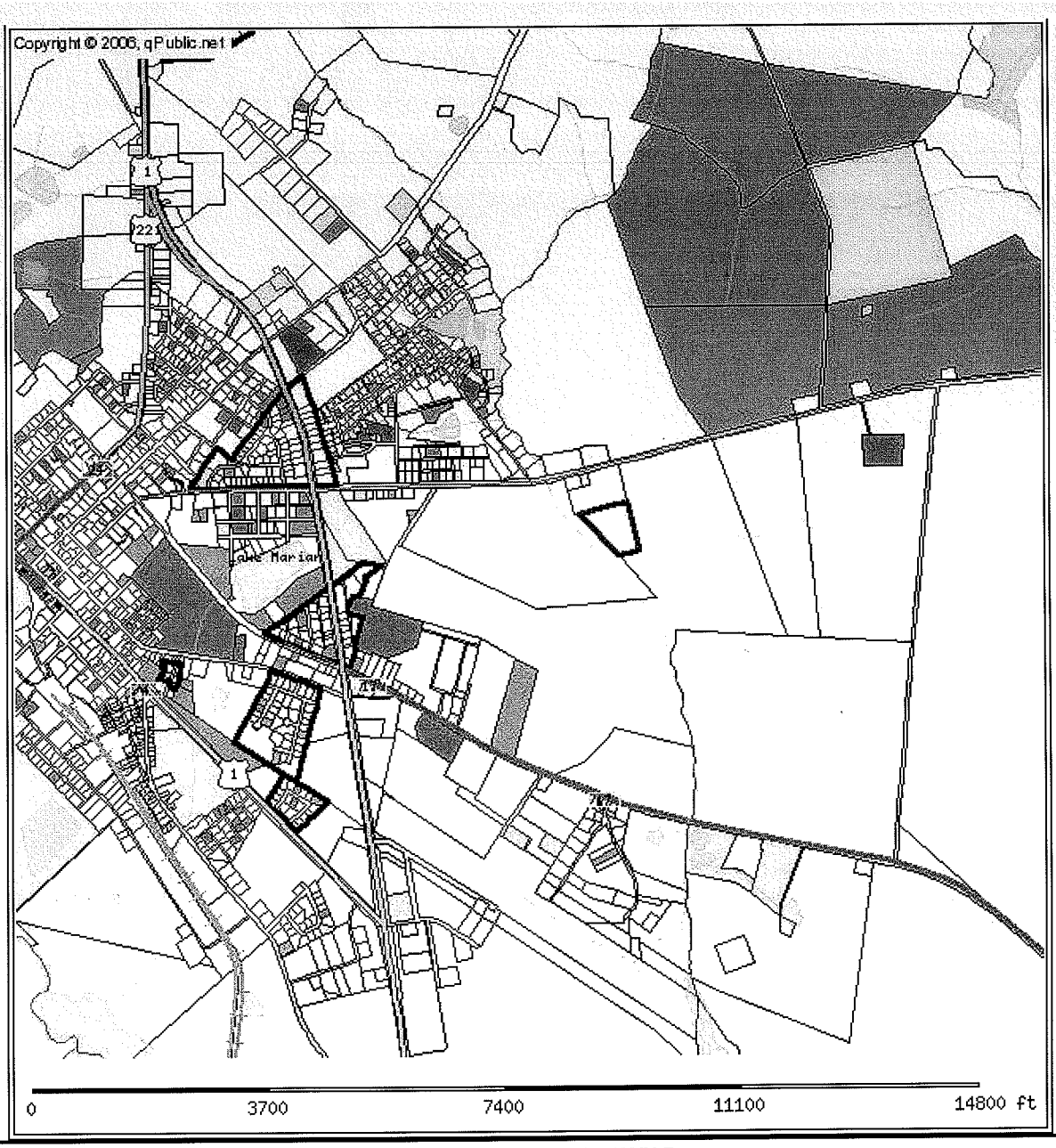
LAST 2 SALES

Date	Price	Reason	Qual
01-1994	$0	3	U

PARCEL INFORMATION TABLE	
Selected Parcel	0090 071
Class Code (NOTE: Not Zoning Info)	V3
Taxing District	County
Acres	10
OWNERSHIP INFORMATION	
Name	QUARTERMAN TOMMIE
Mailing Address	8239 BENT MEADOW DR CONVERSE, TX 78109
Situs/Physical Address	0 HWY 24
VALUES	
Land Value	$40,045.00
Improvement Value	$0.00
Accessory Value	$0.00
Total Value	$40,045.00

LAST 2 SALES

Date	Price	Reason	Qual
08-2001	$20,000	LM	Q



PARCEL INFORMATION TABLE	
Selected Parcel	0090 074
Class Code (NOTE: Not Zoning Info)	V3
Taxing District	County
Acres	10
OWNERSHIP INFORMATION	
Name	QUARTERMAN DAVID
Mailing Address	1786 HIGHWAY 24 EAST LOUISVILLE, GA 30434
Situs/Physical Address	0 HWY 24
VALUES	
Land Value	$38,260.00
Improvement Value	$0.00
Accessory Value	$0.00
Total Value	$38,260.00

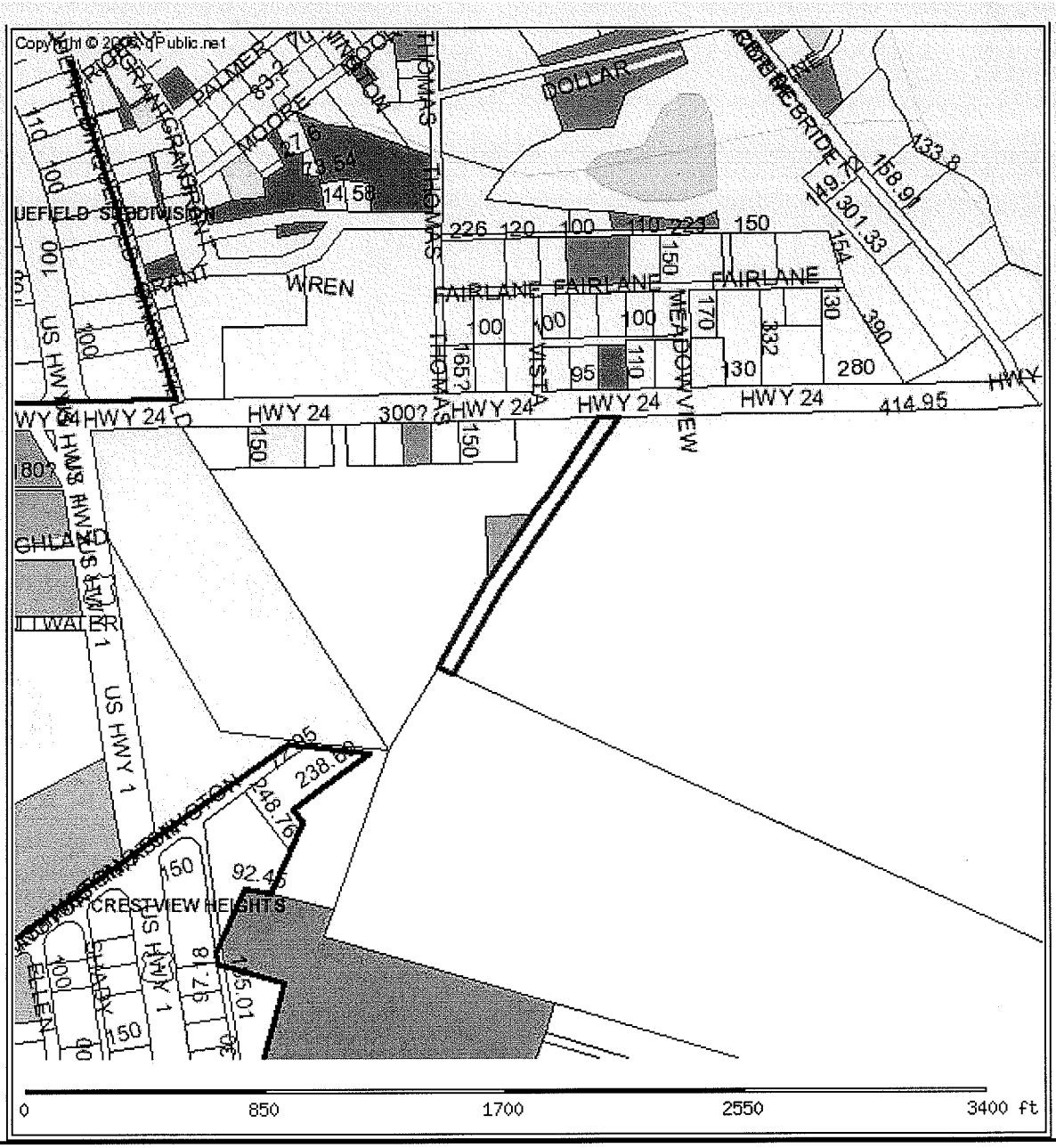
LAST 2 SALES

Date	Price	Reason	Qual
04-2005	$0	3E	U

PARCEL INFORMATION TABLE	
Selected Parcel	0090 025
Class Code (NOTE: Not Zoning Info)	J5
Taxing District	County
Acres	272.04
OWNERSHIP INFORMATION	
Name	CLARK MARY
Mailing Address	P O BOX 188 LOUISVILLE, GA 30434
Situs/Physical Address	2134 HWY 24
VALUES	
Land Value	$408,310.00
Improvement Value	$115,263.00
Accessory Value	$10,347.00
Total Value	$533,920.00

LAST 2 SALES

Date	Price	Reason	Qual
06-2004	$0	3H	U
02-1986	$0	NM	U



PARCEL INFORMATION TABLE	
Selected Parcel	L004 004
Class Code (NOTE: Not Zoning Info)	R3
Taxing District	Louisville
Acres	1.48
OWNERSHIP INFORMATION	
Name	INDUSTRIAL DEVELOPMENT
Mailing Address	CORP OF LOUISVILLE INC P O BOX 467 LOUISVILLE, GA 30434
Situs/Physical Address	0
VALUES	
Land Value	$8,708.00
Improvement Value	$0.00
Accessory Value	$0.00
Total Value	$8,708.00

LAST 2 SALES

Date	Price	Reason	Qual
07-1988	$10	LM	Q
07-1978	$0	NM	U

PROPOSED UNIFORM ENVIRONMENTAL COVENANT

After Recording Return to:

Georgia Environmental Protection Division
Response and Remediation Program
2 Martin Luther King, Jr. Drive, SE
Suite 1462 East
Atlanta, Georgia 30334

Environmental Covenant

This instrument is an Environmental Covenant executed pursuant to the Georgia Uniform Environmental Covenants Act, OCGA § 44-16-1, *et seq.* This Environmental Covenant subjects the Property identified below to the activity and/or use limitations specified in this document. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded in accordance with OCGA § 44-16-8(a).

Fee Owner of Property/Grantor:	Thermo King Corporation 1430 Highway 24 East Louisville, Georgia 30434
Grantee/Holder:	Thermo King Corporation 1430 Highway 24 East Louisville, Georgia 30434
Grantee/Entity with express power to enforce:	State of Georgia Department of Natural Resources Environmental Protection Division 2 Martin Luther King Jr. Drive, SE Suite 1152 East Tower Atlanta, GA 30334
Parties with interest in the Property:	none

Property:

The property subject to this Environmental Covenant is the <Thermo King Corporation> (hereinafter "Property"), located on <1430 Highway 24 East> in <Louisville>, <Jefferson> County, Georgia. These tracts of land was conveyed on January 18, 1965 from the Draper Corporation to Thermo King Corporation recorded in Deed Book 62, Page 376 (54.47-acre tract) and on July 24, 2002 from Mrs. Ethel B. (Mrs. R.H. Jr) Clark to Thermo King Corporation recorded in Deed Book 325, Page 81 and on Plat Book 2, Page 255 (56.00-acre tract), <Jefferson> County Records. The area is located in Land Lot (Louisville, GA is not in the Land Lot system) 0090 024 (parcel) of the 82th GMD District of <Jefferson> County, Georgia. <Property is a total of 110.47 acres zoned industrial, bounded on the North by Highway 24 East, on the East by properties owned by Lizzie Quarterman, Tommie Quarterman, David Quarterman, and Ethel B. Clark, bounded on the South by other property owned by Ethel B. Clark and bounded on the West by Industrial Development Corporation of Louisville, Inc > A complete legal description of the area is attached as Exhibit A and maps of the area is attached as Exhibit B.

Tax Parcel Number(s):

<0090 024> of <Jefferson> County, Georgia

Name and Location of Administrative Records:

The corrective action at the Property that is the subject of this Environmental Covenant is described in the following document[s]:

- Voluntary Remediation Plan and Application Fee Pursuant to the Georgia Voluntary Remediation Program Act, Thermo King Corporation – Louisville, Georgia, HSI Site # 10702, dated January 29, 2010, March 18, 2010, and December 22, 2010.

These documents are available at the following locations:

Georgia Environmental Protection Division
Response and Remediation Program
2 MLK Jr. Drive, SE, Suite 1462 East Tower
Atlanta, GA 30334
M-F 8:00 AM to 4:30 PM excluding state holidays

Thermo King Corporation
1430 Highway 24 East
Louisville, GA 30434

Description of Contamination and Corrective Action:

This Property has been listed on the state's hazardous site inventory and has been designated as needing corrective action due to the presence of hazardous wastes, hazardous constituents, or hazardous substances regulated under state law. Contact the property owner or the Georgia Environmental Protection Division for further information concerning this Property. This notice is provided in compliance with the Georgia Hazardous Site Response Act.

This Declaration of Covenant is made pursuant to the Georgia Uniform Environmental Covenants Act, O.C.G.A. § 44-16-1 *et seq*. by <Thermo King Corporation>, its successors and assigns, < Thermo King Corporation >, and the State of Georgia, Department of Natural Resources, Environmental Protection Division (hereinafter "EPD"), its successors and assigns. This Environmental Covenant is required because a release of <Volatile Organic Compounds (VOCs): Trichloroethene; cis-1,2-Dichloroethene; 1,1-Dichloroethene; 1,4-Dioxane; 1,1,1-Trichloroethane; Tetrachloroethene, and Toluene> occurred on the Property. < Trichloroethene; cis-1,2-Dichloroethene; 1,1-Dichloroethene; 1,4-Dioxane; 1,1,1-Trichloroethane; Tetrachloroethene, and Toluene > are "regulated substances" as defined under the Georgia Hazardous Site Response Act, O.C.G.A. § 12-8-90 *et seq.*, and the rules promulgated thereunder (hereinafter "HSRA" and "Rules", respectively). The Corrective Action consists of the installation and maintenance of engineering controls (<To control/preclude the surface expression of those seeps where VOC concentrations exceed In-stream Surface Water Quality Criteria (ISWQC), a rip rap cover will be placed to create an exposure barrier to the seep water. Also, the building floor slab will be designated as an exposure barrier to the area of the underlying impacted soils. Future operations that require penetration of that designated floor slab area will be conducted using a health and safety plan prepared specifically for the proposed barrier affecting activity.>) and institutional controls (<institutional controls (deed restrictions) will be used to restrict use of site

groundwater and to maintain the floor slab exposure barrier>) to protect human health and the environment.

Grantor, < Thermo King Corporation > (hereinafter "<Thermo King Corporation >"), hereby binds Grantor, its successors and assigns to the activity and use restriction(s) for the Property identified herein and grants such other rights under this Environmental Covenant in favor of the < Thermo King Corporation > and EPD. EPD shall have full right of enforcement of the rights conveyed under this Environmental Covenant pursuant to HSRA, O.C.G.A. § 12-8-90 *et seq*., and the rules promulgated thereunder. Failure to timely enforce compliance with this Environmental Covenant or the use or activity limitations contained herein by any person shall not bar subsequent enforcement by such person and shall not be deemed a waiver of the person's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict EPD from excising any authority under applicable law.

< Thermo King Corporation > makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, pursuant to O.C.G.A. § 44-16-5(a); is perpetual, unless modified or terminated pursuant to the terms of this Covenant pursuant to O.C.G.A. § 44-16-9; and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereinafter "Owner"). Should a transfer or sale of the Property occur before such time as this Environmental Covenant has been amended or revoked then said Environmental Covenant shall be binding on the transferee(s) or purchaser(s).

The Environmental Covenant shall inure to the benefit of < Thermo King Corporation >, EPD, < Thermo King Corporation > and their respective successors and assigns and shall be enforceable by the Director or his agents or assigns, <Thermo King Corporation > or its successors and assigns, < Thermo King Corporation > or its successors and assigns, and other party(ies) as provided for in O.C.G.A. § 44-16-11 in a court of competent jurisdiction.

Activity and/or Use Limitation(s)

1. Registry. Pursuant to O.C.G.A. § 44-16-12, this Environmental Covenant and any amendment or termination thereof, may be contained in EPD's registry for environmental covenants.

2. Notice. The Owner of the Property must give thirty (30) day advance written notice to EPD of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Corrective Action. The Owner of the Property must also give thirty (30) day advance written notice to EPD of the Owner's intent to change the use of the Property, apply for building permit(s), or propose any site work that would affect the Property.

3. Notice of Limitation in Future Conveyances. Each instrument hereafter conveying an interest in the Property subject to this Environmental Covenant shall contain a notice of the activity and use limitations set forth in this Environmental Covenant and shall provide the recorded location of the Environmental Covenant.

4. Monitoring. <*Groundwater samples will be collected from designated monitoring wells and analyzed for site-specific VOCs for a monitoring period of at least 5 years. Water samples will be collected from designated seeps and from designated locations in Manson Branch and analyzed for site-specific VOCs for a monitoring period of at least 5 years.* >

5. Periodic Reporting. Annually, by no later than <12/31/2011> following the effective date of this Environmental Covenant, the Owner shall submit to EPD an Annual Report as specified in the <schedule presented in the Voluntary Remediation Plan, dated December 22, 2010. >.

6. Activity and Use Limitation(s). The Property shall be used only for non-residential uses, as defined in Section 391-3-19-.02 of the Rules and defined in and allowed under the <Jefferson> County's zoning regulations as of the date of this Environmental Covenant. Any residential use on the Property shall be prohibited. Any activity on the Property that may result in the release or exposure to the regulated substances that were contained as part of the Corrective Action, or create a new exposure pathway, is prohibited. With the exception of work necessary for the maintenance, repair, or replacement of engineering controls, activities that are prohibited <if appropriate – for example, in the capped areas include, but are not limited to the following: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork>.

7. Groundwater Limitation. The use or extraction of groundwater beneath the Property for drinking water or for any other non-remedial purposes shall be prohibited.

8. Permanent Markers. Permanent markers on each side of the Property shall be installed and maintained that delineate the restricted area as specified in Section 391-3-19-.07(10) of the Rules. Disturbance or removal of such markers is prohibited.

9. Right of Access. In addition to any rights already possessed by EPD and/or the < Thermo King Corporation >, the Owner shall allow authorized representatives of EPD and/or < Thermo King Corporation > the right to enter the Property at reasonable times for the purpose of evaluating the Corrective Action; to take samples, to inspect the Corrective Action conducted at the Property, to determine compliance with this Environmental Covenant, and to inspect records that are related to the Corrective Action.

10. Recording of Environmental Covenant and Proof of Notification. Within thirty (30) days after the date of the Director's signature, the Owner shall file this Environmental Covenant with the Recorders of Deeds for each County in which the Property is located, and send a file stamped copy of this Environmental Covenant to EPD within thirty (30) days of recording. Within that time period, the Owner shall also send a file-stamped copy to each of the following: (1) < Thermo King Corporation >, (2) each person holding a recorded interest in the Property subject to the covenant, (3) each person in possession of the real property subject to the covenant, (4) each municipality, county, consolidated government, or other unit of local government in which real property subject to the covenant is located, and (5) each owner in fee simple whose property abuts the property subject to the Environmental Covenant.

11. Termination or Modification. The Environmental Covenant shall remain in full force and effect in accordance with O.C.G.A. § 44-5-60, unless and until the Director determines that the Property is in compliance with the Type 1, 2, 3, or 4 Risk Reduction Standards, as defined in Georgia Rules of Hazardous Site Response (Rules) Section 391-3-19-.07 and removes the Property from the Hazardous Site Inventory, whereupon the Environmental Covenant may be amended or revoked in accordance with Section 391-3-19-08(7) of the Rules and O.C.G.A. § 44-16-1 *et seq*.

12. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

13. No Property Interest Created in EPD. This Environmental Covenant does not in any way create any interest by EPD in the Property that is subject to the Environmental Covenant. Furthermore, the act of approving this Environmental Covenant does not in any way create any interest by EPD in the Property in accordance with O.C.G.A. § 44-16-3(b).

Representations and Warranties.

Grantor hereby represents and warrants to the other signatories hereto:

a) That the Grantor has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;
b) That the Grantor is the sole owner of the Property and holds fee simple title which is free, clear and unencumbered;
c) That the Grantor has identified all other parties that hold any interest (e.g., encumbrance) in the Property and notified such parties of the Grantor's intention to enter into this Environmental Covenant;
d) That this Environmental Covenant will not materially violate, contravene, or constitute a material default under any other agreement, document or instrument to which Grantor is a party, by which Grantor may be bound or affected;
e) That the Grantor has served each of the people or entities referenced in Activity 10 above with an identical copy of this Environmental Covenant in accordance with O.C.G.A. § 44-16-4(d).
f) That this Environmental Covenant will not materially violate or contravene any zoning law or other law regulating use of the Property; and
g) That this Environmental Covenant does not authorize a use of the Property that is otherwise prohibited by a recorded instrument that has priority over the Environmental Covenant.

Notices.

Any document or communication required to be sent pursuant to the terms of this Environmental Covenant shall be sent to the following persons:

Georgia Environmental Protection Division
Branch Chief
Land Protection Branch
2 Martin Luther King Jr. Drive SE
Suite 1154 East Tower
Atlanta, GA 30334

<Thermo King Corporation
1430 Highway 24 East
Louisville, Georgia 30434
>

Grantor has caused this Environmental Covenant to be executed pursuant to The Georgia Uniform Environmental Covenants Act, on the _____ day of _____, 20___.

<NAME OF GRANTOR>

_____

[Name of Signatory]

[Title]

Dated: _____

<NAME OF HOLDER>

_____

[Name of Person Acknowledging Receipt]
[Title]

Dated: _____

STATE OF GEORGIA
ENVIRONMENTAL PROTECTION DIVISION

_____

[Name of Person Acknowledging Receipt]
[Title]

Dated: _____

[INDIVIDUAL ACKNOWLEDGMENT]

STATE OF Georgia
COUNTY OF Jefferson

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

_____
Notary Public in and for the State of
Georgia, residing at _____.
My appointment expires_____.

[CORPORATE ACKNOWLEDGMENT]

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

_____
Notary Public in and for the State of
Georgia, residing at _____.
My appointment expires_____.

[REPRESENTATIVE ACKNOWLEDGEMENT]

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the _____ [type of authority] of _____ [name of party being represented] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

_____
Notary Public in and for the State of
Georgia, residing at _____.
My appointment expires _____.

Exhibit A
Legal Description

COMMONWEALTH OF MASSACHUSETTS — Warranty Deed
COUNTY OF WORCHESTER

THIS INDENTURE made this 18th day of January, 1965, by and between DRAPER CORPORATION a corporation of the State of Maine, with principal offices at Hopedale, Massachusetts, of the First Part, and THERMO KING CORPORATION, a corporation of the State of Delaware, the principal offices at Bloomington, Minnesota, of the Second Part:

WITNESSETH: That the said Party of the First Part, for and in consideration of the sum of Ten ($10.00) Dollars and other valuable considerations, in hand paid, at and before the sealing and delivering of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed, and by these presence does grant, bargain, sell, alien, convey and confirm unto the said Party of the Second Part, its successors and assigns, all the following described property, to-wit:

All that tract or parcel of land situate, lying and being in the 82nd District G.M. of Jefferson County, Georgia, containing Fifty Four and Forty Seven One-hundredths (54.47) acres more or less, being Parcel No. 2 appearing on plat of survey made by Frank J. Ford, Surveyor, dated June 14, 1961, and recorded in the office of the Clerk of Superior Court of Jefferson County, Georgia, in Deed Book 62, page 376, and being bounded on the North by Georgia State Highway 24 leading from Louisville to Waynesboro, Georgia, on the East by property of R. H. Clark, Jr., on the South by property of R. H. Clark, Jr., and on the West by Parcel No. 1 appearing on said plat.

Said premises are conveyed subject to two electric line and pole easements executed by R. H. Clark, Jr., the first being to Georgia Power Company dated July 5, 1949 and recorded in said Office in Deed Book 3-L, Page 513 and the second being to Jefferson County Electric Membership Corporation dated September 20, 1948 and recorded in said office in Deed Book 3-N, page 389.

TO HAVE AND TO HOLD the said above granted and described property, with all and singular the rights, members and appurtenances thereunto appertaining, to the only proper use, benefit and behoof of the said Party of the Second Part, its successors and assigns, in FEE SIMPLE, and the said Party of the First Part, the said bargained property above described unto the said Party of the Second Part, its successors and assigns, against the said Party of the First Part, its successors and assigns, and against all and every other person or persons shall and will and does hereby, warrant and forever defend, by virtue of these presents.

IN WITNESS WHEREOF, the said Party of the First Part has hereunto set its hand and affixed its seal, and delivered these presents the day and year first above written.

Signed, sealed and delivered in the presence of:

Thad R. Jackson

Charles W Mongeon (N.P. SEAL)
Notary Public

DOCUMENTARY STAMP UNITED STATES INTERNAL REVENUE $1.35 1-9-65

DRAPER CORPORATION (CORP. SEAL)

by James H. Richardson
Financial Vice President

Attest: Robert D Douley
Secretary

CERTIFICATION OF VOTE

This certifies that at a regular meeting of the Directors of Draper Corporation, duly held at the office of the corporation in Hopedale, Massachusetts, on November 27, 1964, a quorum being present and acting throughout, the following vote was unanimously passed:

VOTED: That the Financial Vice Presidant, James H. Richardson, be and hereby is authorized and empowered to make, in such form as he shall determine, and to sign, seal, acknowledged and deliver on behalf of the corporation a warranty deed conveying to Thermo King, a Delaware corporation, certain land with buildings thereon located inthe 82nd District G.M. of Jefferson County, Georgia, containing 54.47 acres more or less and being the same land conveyed to this corporation by Louisville Chamber of Commerce by deed dated June 14, 1961, and recorded in the office of the Clerk of Superior Court of Jefferson County, Georgia in Deed Book 62, page 387.

I further certify that the deed to which this certificate is attached was prepared and executed in accordance with the authority granted in the above vote and that the land described in said deed is the same land described in said vote.

(CORPORATION SEAL)
Jan. 18, 1965

Robert D Dauley
Secretary of Draper Corporation

Filed and recorded in office February 4th, 1965
E. J. Smith, Clerk of Courts, bm

GEORGIA, JEFFERSON COUNTY

THIS INDENTURE made this 20th day of January, 1965, by and between Jefferson County Electric Membership Corporation, a corporation of Jefferson County, Georgia, Party of the First Part, and Thermo-King Corporation, a corporation of the State of Minnesota, Party of the Second Part,

WITNESSETH

WHEREAS, Party of the Second Part recently purchased the property hereinafter described;

WHEREAS, by instrument dated September 20, 1948, and recorded in the Office of the Clerk of the Superior Court of Jefferson County, Georgia, in Deed Book 3-N, page 389, one R. H. Clark, a predecessor in title, conveyedto Party of the First Part an electric line and pole easement as to property hereinafter described was a part; and,

WHEREAS, Party of the First Part has constructed no lines and poles on said property and does not propose to do so;

NOW, THEREFORE, in consideration of Ten ($10.00) Dollars cash in had paid, receipt whereof is hereby acknowledged, Party of the First Part hereby remises, releases, and forever quitclaims to Party of the Second Part, its successors and assigns, al the right, title and interest, claim or demand Party of the First Part has or may have had in and to the following described property, to-wit:

All that tract or parcel of land situate, lying and being in the 82nd District G.M. of Jefferson County, Georgia, containing Fifty Four and Forty Seven One-hundredths (54.47) acres, more or less, being Parcel No. 2 appearing on plat of survey made by Frank J. Ford Surveyor, dated June 14, 1961, and recorded in the Office of the Clerk of Superior Court of Jefferson County, Georgia, in Deed Book 62, page 376, and being bounded on the North by Georgia State Highway 24 leading from Louisville to Waynesboro, Georgia, on the East by property of R. H. Clark, Jr., on the South by property of R. H. Clark, Jr., and on the West by Parcel No. 1 appearing on said plat.

TO HAVE AND TO HOLD the said property to the said Party of the Second Part so that neither the said Party of the First Part nor its successors nor any other person or persons claiming under it shall at any time, by any means, or ways, have, claim or demand any right or title to the aforesaid property or its appurtenances or any rights thereof.

IN WITNESS WHEREOF, the said Party of the First Part has hereunto set its hand, affixed its seal and delivered these presents, theday and year first above written.

Signed, sealed and delivered in the presence of:

Mary R. Gibson

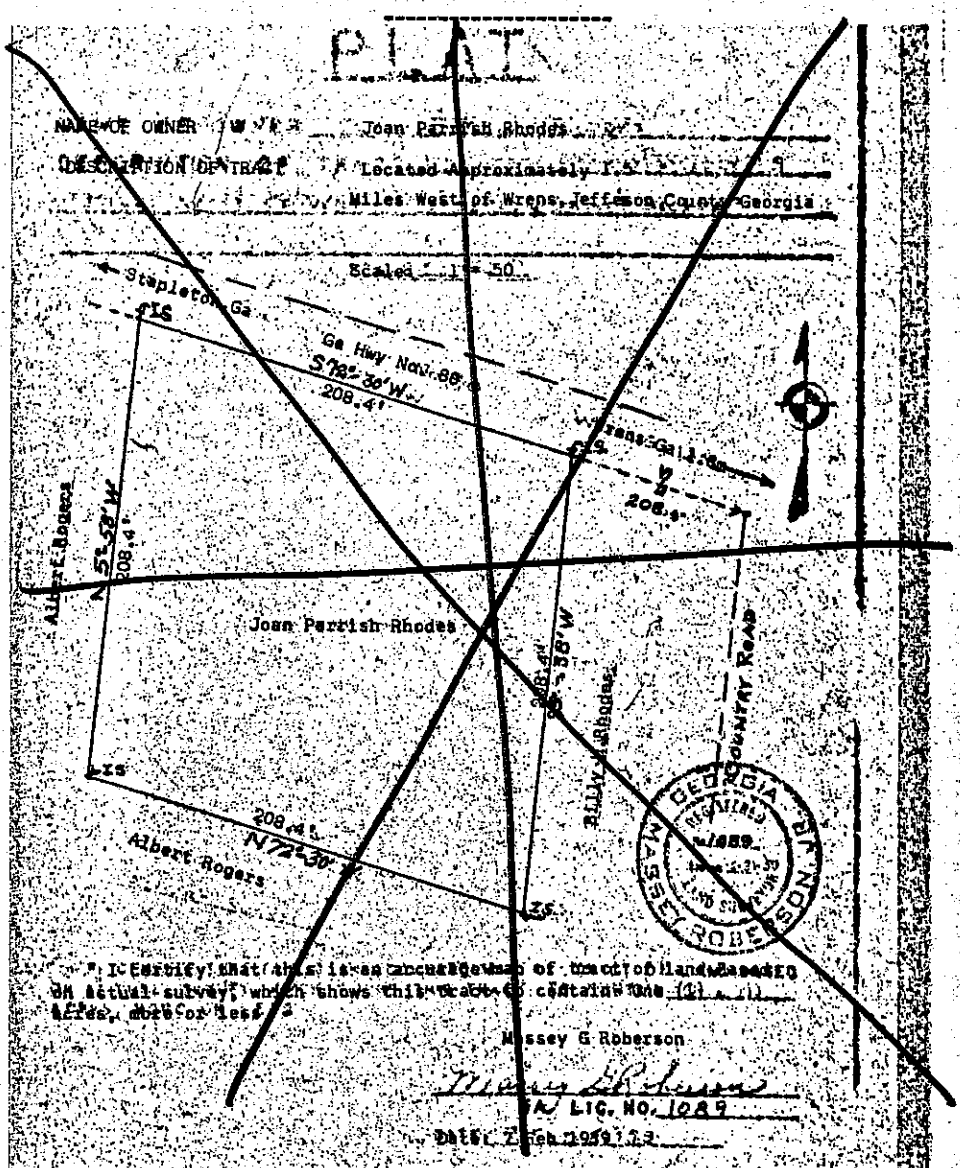
Doris W. Stanley, N.P. (N.P. SEAL)
Notary Public
Notary Public, Jefferson County, Georgia
My Commission Expires Jan. 27, 1968

JEFFERSON COUNTY ELECTRIC MEMBERSHIP CORPORATION

By: L C Rowland President

Attest: J Smith Johnson Secretary

Filed and recorded in office February 4th, 1965
E. J. Smith, Clerk of Court, bm



Recorded February 5,1965

JEFFERSON COUNTY, GEORGIA
Real Estate Transfer Tax
Paid $ 28.80
Date 7-24-02
Deputy Clerk of Superior Court

GEORGIA JEFFERSON COUNTY
OFFICE OF CLERK OF SUPERIOR COURT
FILED FOR RECORD 7-24 2002
4:05 O'CLOCK P M
RECORDED 7-25 2002 IN
Deed BOOK 325 PAGE 81-82
DEPUTY CLERK

SPACE ABOVE THIS LINE FOR RECORDING DATA
NOTE TO CLERK OF SUPERIOR COURT:
AFTER RECORDING, THIS DOCUMENT
SHOULD BE RETURNED TO:
W. Darr Smith, Esquire
Hunton & Williams
600 Peachtree Street, N.E.
Suite 4100
Atlanta, GA 30308-2216

WARRANTY DEED

STATE OF GEORGIA

COUNTY OF JEFFERSON

THIS INDENTURE, made this 24th day of July, 2002, by and between MRS. ETHEL B. (Mrs. R. H., Jr.) CLARK, of Jefferson County, Georgia, of the First Part (hereinafter called "Grantor"); and THERMO KING CORPORATION, a Delaware corporation, with a place of business in Jefferson County, Georgia, of the Second Part (hereinafter called "Grantee");

W I T N E S S E T H:

That Grantor, for and in consideration of the sum of TEN ($10.00) DOLLARS AND OTHER VALUABLE CONSIDERATIONS, in hand paid, at and before the sealing and delivery of these presents, the receipt of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell and convey unto Grantee, his heirs and assigns, the following described property:

> All that tract or parcel of land lying and being in the 82nd GMD, Jefferson County, Georgia, containing **56.000** acres, and being as appears on plat of survey by Surveying Solutions, Inc., Jeffrey L. Nipper, Georgia Registered Land Surveyor No. 2736, dated June 27, 2002, revised July 2, 2002 and July 3, 2002, and recorded in Plat Book 2, Page 255, Jefferson County Records. Said property fronts to the North on Georgia Highway 24, and is bounded now or formerly as follows: On the East by property of Lizzie Quarterman, property of Tommie Quarterman, and other property of Ethel B. Clark; on the South by other property of

Ethel B. Clark; on the West by other property of Ethel B. Clark and property of Thermo King Corporation; and on the North by Georgia Highway 24. Reference is made to said recorded plat for a fuller and more particular description.

The above-described property is a portion of that 656-acre tract which is described in Warranty Deed from Roger H. Clark, Jr. to Ethel B. Clark, dated October 30, 1964, and recorded in Deed Book 3-Z, Page 519, Jefferson County Records.

TO HAVE AND TO HOLD the said tract or parcel of land, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of Grantee, its successors and assigns, forever, in Fee Simple.

AND GRANTOR, for her heirs, executors and administrators, will warrant and forever defend the right and title to the above-described property, unto Grantee, its successors and assigns, against the claims of all persons whomsoever.

IN WITNESS WHEREOF, Grantor has hereunto set her hand and seal, the day and year first above written.

Ethel B. Clark (L.S.)
MRS. ETHEL B. (Mrs. R. H., Jr.) CLARK

Signed, sealed and delivered
in the presence of:

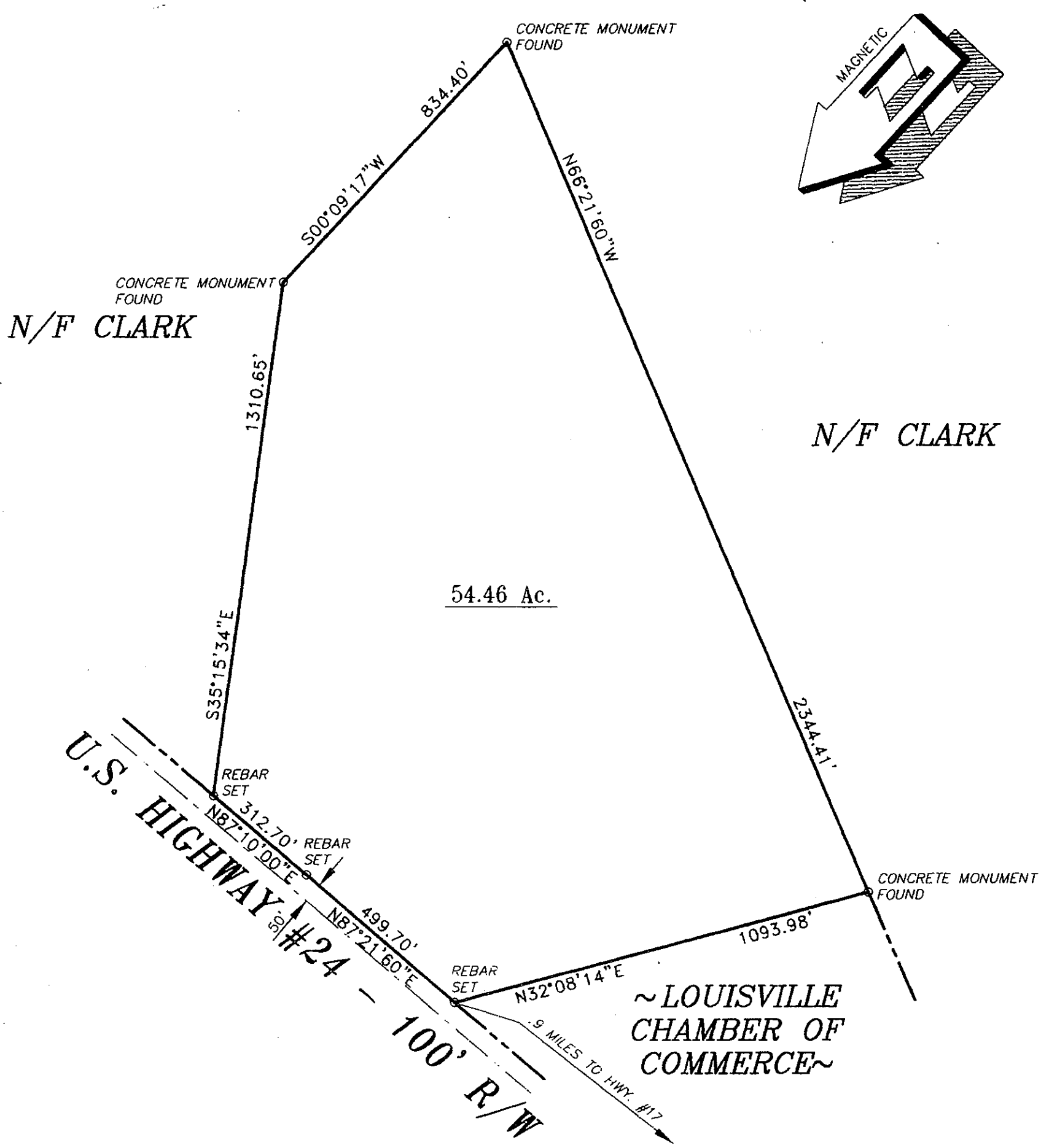
John T. Murphy
Unofficial Witness

Marilyn W. Murphy
Notary Public, State of Georgia
My Commission Expires:

MARILYN W. MURPHY NOTARY PUBLIC JEFFERSON COUNTY, GA. Comm. Exp.

(NOTARIAL SEAL)

Exhibit B
Property Plats



PLAT FOR

THERMO KING FACILITY

308th. G.M.D.

JEFFERSON COUNTY, GEORGIA

SCALE: 1"=300' JULY 26, 2000

300' 150' 0 300' 600'

SCALE IN FEET

TOPCON GTS-3
MAP CLOSURE-1/1,013,138'
OPEN TRAVERSE

THIS PLAT IS SUBJECT TO ALL EASEMENTS, RIGHTS-OF-WAY AND PROTECTIVE COVENANTS OF RECORD.

RECORDING COPY

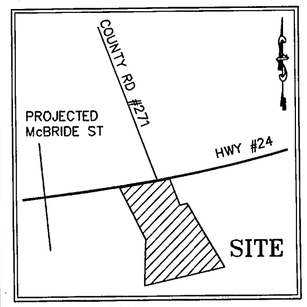
GEORGIA REGISTERED No. 1753 LAND SURVEYOR JOHN A. McGILL 7/27/07

JOHN A. McGILL, R.L.S. #1753
McGILL & ASSOCIATES LAND SURVEYORS
934 SHIELDS POND ROAD
THOMSON, GEORGIA 30824
(706) 595-5612

G.I.D. 00123

AREA

2,439,360 sq.ft.
56.000 acres



VICINITY MAP
N.T.S.

GEORGIA HIGHWAY #24

RIGHT-OF-WAY VARIES

CURVE TABLE				
CURVE	LENGTH	RADIUS	CHORD BRG.	CHORD DIST.
C1	462.94	2914.77	N84°19'43"E	462.45
C2	125.48	2914.77	N77°20'43"E	125.47

P.O.B.
N 1092778.4852
E 588719.7566
(NAD 83/94) GA EAST

COUNTY ROAD #271

APPROXIMATE 1.0 MILES TO HWY. #17

N 1092891.4992
E 589859.0736

7'x6' BOX CULVERT

R/W PER REF. #1

R/W PER REF. #2

IPS #4 RB

50.0'

15" RCP

BUILDING

APPROX. DIR.

BLDG.

ASPHALT PAVEMENT

R/W MON 0.6' NORTH OF PROPERTY CORNER

#4 RB 0.18' EAST OF PROPERTY LINE

N/F TOMMIE QUARTEMAN D.B. 206 PG. 154

N/F LIZZIE QUARTEMAN D.B. 206 PG. 151

N/F TOMMIE QUARTEMAN D.B. 298 PG. 158

NAD 83/94 GA. E

LINE TABLE		
LINE	LENGTH	BEARING
L1	414.95	N88°52'43"E
L2	20.00	S10°13'17"E
L3	61.46	N79°10'43"E
L4	20.00	N11°25'17"W
L5	84.33	N76°06'43"E
L6	589.60	S13°50'49"E
L7	100.00'	N76°06'29"E
L8	1777.58'	S42°16'15"E
L9	1870.91'	S84°56'22"W
L10	834.34	N01°24'28"E
L11	1305.05	N34°00'52"W

SWAMP

N/F THERMO KING REFERENCE #1

IPF CMF

N12°32'02"W 7676.41'

TREE LINES (TYP)

P.O.C.
NGS LA-1AZMK
(NAD 83/94) GA EAST
N 1085285.0188
E 590385.6764

N/F ETHEL CLARK D.B. 157 PG. 58

CMF 0.27' EAST OF PROPERTY CORNER (DISTURBED)

GENERAL NOTES

1. INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER, AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION SHOWN HEREON AS TO SUCH UNDERGROUND INFORMATION.
2. BASIS OF BEARINGS NAD 84/94 G.A. EAST GRID.
3. THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,209 FEET AND AN ANGULAR ERROR OF 06" PER ANGLE POINT AND WAS ADJUSTED USING THE LEAST SQUARE METHOD.
4. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND WAS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 588,234 FEET.
5. EQUIPMENT USED: TOPCON 605 ELECTRONIC TOTAL STATION.
6. FIELD WORK FOR BOUNDARY SURVEY COMPLETED ON OR ABOUT 6/14/02. FIELD WORK FOR TOPOGRAPHIC SURVEY STILL IN PROGRESS AS OF THE DATE SHOWN HEREON.
7. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON. ONLY THE DOCUMENTS NOTED HEREON WERE SUPPLIED BY THE SURVEYOR. NO ABSTRACT OF TITLE, NOR TITLE COMMITMENT, NOR RESULTS OF TITLE SEARCHES WERE FURNISHED TO THE SURVEYOR. THERE MAY BE OTHER DOCUMENTS OF RECORD THAT WOULD AFFECT THIS PARCEL.
8. ELEVATIONS ARE BASED ON M.S.L. (NAVD 88).
9. SOME ASBUILT INFORMATION TAKEN FROM AERIAL PHOTOGRAPHY.
10. PROPERTY WAS UNIMPROVED AT THE TIME OF THIS SURVEY.

LEGEND

IPS	IRON PIN SET	LP	LAMP POLE
IPF	IRON PIN FOUND	-Z-Z-	POWERLINE
R/W	CONC. MONUMENT FOUND	MH	MAN HOLE
SS	SANITARY SEWER	CB	CATCH BASIN
FC	FENCE CORNER	JB	JUNCTION BOX
-X-X-	FENCE	DI	DROP INLET
OT	OPEN TOP PIN	HW	HEAD WALL
CT	CRIMP TOP PIN	CMP	CORRUGATED METAL PIPE
#4 REBAR	REINFORCING BAR	RCP	REINFORCED CONC. PIPE
CL	CENTERLINE	SSE	SEWER EASEMENT
R/W	RIGHT-OF-WAY	DE	DRAINAGE EASEMENT
WL	WATER LINE	FH	FIRE HYDRANT
C/O	CLEAN OUT	WV	WATER VALVE
CH	CHORD BEARING	WM	WATER METER
C	CHORD	GV	GAS VALVE
	POWER POLE	GM	GAS METER
POC	POINT OF COMMENCEMENT	POB	POINT OF BEGINNING

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

REFERENCES

1. SURVEY FOR THERMO KING DATED 1-6-02. SURVEYED BY McGILL & ASSOCIATES LAND SURVEYORS.
2. G.A. DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP. DATED 10-19-85. PROJECT #BRS 0937(6). PAGE 3 OF 3
3. SURVEY FOR LIZZIE W. QUARTERMAN. DATED 11-23-93. SURVEYED BY WILLIAM L. JOHNSON.
4. SURVEY FOR TOMMY QUARTERMAN. DATED 7-23-01. SURVEYED BY STEVE BARGERON & ASSOCIATES.

SURVEYORS CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAT OR MAP IS, TO THE BEST OF MY KNOWLEDGE, A TRUE AND CORRECT REPRESENTATION OF THE LAND PLATTED HEREON, THAT ALL AS-BUILT CONDITIONS ARE CORRECTLY SHOWN AND THAT THIS SURVEY MEETS CURRENT "MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS"

JEFFREY L. NIPPER, GA. PLS NO. 2736 — DATE 7/3/02

SURVEYING SOLUTIONS, INC.
P.O. BOX 329 REX, GEORGIA 30273-0329
TELEPHONE (770) 961-0305 FAX (678) 422-7868
e-mail address: jnipper@surveyingsolutions.com

ALL MATTERS PERTAINING TO TITLE ARE EXCEPTED

© This plat was prepared for the exclusive use of the person, persons, or entity named hereon. This plat does not extend to any unnamed person, persons, or entity without the express recertification of the surveyor naming such person, persons, or entity.

GEORGIA REGISTERED No. 2736 PROFESSIONAL LAND SURVEYOR JEFFREY L. NIPPER

JEFFREY L. NIPPER, GA. PLS #2736
3309 WEATHERED WOOD WAY
REX, GEORGIA 30273
PHONE: (770) 961-0305

REVISION(#)	BY:	DATE:
(1) PER COMMENTS	JN	7/2/02
CORRECTED CMD & ROAD NAME	JN	7/3/02

DATE: 6/27/02
JOB # 02-126
SCALE: 1" = 200'
PLAT BOOK ,PAGE
DEED BOOK ,PAGE

SURVEY PREPARED FOR:

THERMO KING CORPORATION & LAWYERS TITLE INSURANCE CORPORATION

LAND LOT / NA G.M.D. 82 JEFFERSON COUNTY, GEORGIA
LOT N/A BLOCK N/A UNIT N/A SUBDIVISION N/A
SURVEYED: R.F. & C.B. COMPUTED: R.D. APPROVED: J.N.

APPENDIX A

RESPONSE TO COMMENTS and SUPPORTING TABLES and FIGURES TO THE ADDENDUM TO THE VOLUNTARY REMEDIATION PLAN APPLICATION and UPDATED CALCULATIONS FOR RISK REDUCTION STANDARDS

Response to Georgia Environmental Protection Division May 17, 2010 Comments on the March 18, 2010 VRP Application and EPD Correspondence

Georgia Department of Natural Resources
2 Martin Luther King, Jr. Dr. S.E., Suite 1462 East, Atlanta, Georgia 30334
Chris Clark, Commissioner
Environmental Protection Division
F. Allen Barnes, Director
Land Protection Branch
Mark Smith, Branch Chief
404-657-8600

May 17, 2010

COPY

VIA E-MAIL AND REGULAR MAIL

Thermo King Corporation
c/o Mr. David A. Kolb, ESH and Facility Manager
1430 Highway 24 East
Louisville, Georgia 30434

Re: Revision to Voluntary Remediation Plan and Application, March 18, 2010
Thermo King Corporation Site, HSI Site No. 10702
Louisville, Jefferson County, Georgia
Tax Parcel 0090-024

Dear Mr. Kolb:

The Georgia Environmental Protection Division (EPD) has reviewed the March 18, 2010, Revision to Voluntary Remediation Plan (VRP) and Application, which has been submitted in lieu of a corrective action plan (CAP) for the above referenced qualifying property. EPD has noted the following items:

Ecological Risk Assessment Comment

1. Your response to EPD's comment 16 states heavy rip rap will be placed in the gully where Seep C and Manson Branch #2 are located such that seep water flows below the rip rap surface. EPD does not agree that placement of rip rap is an acceptable engineering control that eliminates exposure to contaminated surface water coming from the seeps. Additionally, by allowing the contamination to continue to discharge from the seeps, you are in violation of §12-5-29(a) of the Georgia Water Quality Control Act.

   Other alternatives may include a groundwater/surface water extraction and treatment system, a permeable reactive barrier, etc. This office has been advised extracted groundwater may be treated under your existing pretreatment system. Please also be aware that you may need to apply for a stream buffer variance for such corrective actions.

Risk Reduction Standard (RRS) Comment

2. It appears that default soil/water partition coefficients (Kd) were calculated using a fraction organic carbon in soil (f_{oc}) value of 0.02. Consistent with the EPA, EPD uses a default f_{oc} value of 0.002 (0.2%) as specified in Equation 10 (default parameter definition) of the *United States EPA Soil Screening Guidance: User's Guide (July 1996)*. The f_{oc} value of 0.02 cited in Table 3 of Georgia's Rules for Hazardous Site Response Chapter 391-3-19 (Rules) refers to the derivation of the soil-to-air volatilization factor in the RAGs equation Part B.

   The following table presents approved EPD-calculated Soil Screening Level (SSL) values for each regulated substance released at the site. The values were calculated using a default dilution attention factor (DAF) of 20 and input parameters provided in Tables K-6a and K-6b.

EPD Approved SSL Values					
Site Contaminant	T1/T3 SSL (mg/kg)	T2 SSL (mg/kg)	T4 SSL (mg/kg)	Overall Cs (mg/kg)	Rationale
1,1,1-TCA	1.4E+00	1.9E+01	1.7E+02	1.7E+02	
1,1,2-TCA	3.2E-02	1.6E-02	5.5E-02	5.5E-02	
1,1-DCE	5.0E-02	7.2E-01	6.8E+00	6.8E+00	
1,4-Dioxane	2.1E-02	2.4E-02	8.2E-02	8.2E-02	
cis-1,2-DCE	4.1E-01	9.4E-01	5.9E+00	5.9E+00	
Chloroform	4.4E-01	1.1E-02	3.7E-02	**4.4E-01**	T1/T3>T4
Ethylbenzene	1.6E+01	3.4E-01	1.2E+00	**1.6E+01**	T1/T3>T4
Isopropylbenzene (Cumene)	1.6E-01	6.9E+00	6.2E+01	6.2E+01	
Methylene chloride	2.5E-02	2.8E-01	9.2E-01	9.2E-01	
Naphthalene	1.3E+00	9.2E-02	3.2E-01	**1.3E+00**	T1/T3>T4
PCE	4.5E-02	1.2E-02	4.0E-02	**4.5E-02**	T1/T3>T4
Toluene	1.4E+01	1.2E+01	8.8E+01	8.8E+01	
TCE	1.8E+00	1.8E+00	1.8E+00	**1.8E+00**	EPD approved 01/19/2007
Xylene	2.0E+02	1.2E+00	1.1E+01	**2.0E+02**	T1/T3>T4

Please note Tables K3 and K4 must be revised to include these values.

Schedule

3. Your proposal to submit a copy of the proposed Uniform Environmental Covenant for the qualifying property and list of names/contact information for adjoining properties with tax parcel ID numbers with the completed VRP and Application is acceptable.
4. Your proposal to submit a copy of a current title report for the qualifying property with the completed VRP and Application is acceptable.
5. EPD requests the submittal of a financial assurance instrument for the amount of $400,112 by no later than June 28, 2010. Model financial assurance instruments can be located at http://www.gaepd.org/Files_PDF/forms/hwb/HSIModel.pdf.

EPD hereby provisionally accepts Thermo King into the Voluntary Remediation Program pursuant to the January 29, 2010 VRP and Application. If you have any questions, please contact Kristen Ritter Rivera of the Response and Remediation Program at (404) 657-8600.

Sincerely,

Mark Smith

Mark Smith, Chief
Land Protection Branch

c: David Sordi, Ingersoll Rand
Rhonda N. Quinn, MACTEC

S:\RDRIVE\Kristen\HSI\ThermoKing\VRP\revised vrp application comments_apr2010.doc

RESPONSE TO GEORGIA ENVIRONMENTAL PROTECTION DIVISION MAY 17, 2010 COMMENTS ON THE MARCH 18, 2010 VOLUNTARY REMEDIATION PLAN AND APPLICATION FOR THERMO KING – LOUISVILLE, JEFFERSON COUNTY, GEORGIA SITE (HSI 10702)

Ecological Risk Assessment

1. *Your response to EPD's comment 16 states heavy rip rap will be placed in the gully where Seep C and Manson Branch #2 are located such that seep water flows below the rip rap surface. EPD does not agree that placement of rip rap is an acceptable engineering control that eliminates exposure to contaminated surface water coming from the seeps. Additionally, by allowing the contamination to continue to discharge from the seeps, you are in violation of §12-5-29(a) of the Georgia Water Quality Control Act. Other alternatives may include a groundwater/surface water extraction and treatment system, a permeable reactive barrier, etc. This office has been advised extracted groundwater may be treated under your existing pretreatment system. Please also be aware that you may need to apply for a stream buffer variance for such corrective actions.*

Response to Comment 1:
Representatives with Thermo King and MACTEC met with EPD on September 23, 2010 to discuss the rationale for the proposed rip-rap remedy, and to present additional details and sketches of the proposed rip-rap remedy, along with photographs of the seeps and of Manson Branch to help describe the rip-rap remedy and how it will operate. In the meeting, EPD requested the installation of three shallow monitoring wells between the seeps and Manson Branch to investigate the groundwater quality and flow conditions near the stream and modeling of the Uppermost Water-Bearing Zone to evaluate if the VOC concentrations in the Uppermost Zone would impact the surface water in Manson Branch above in-stream water quality criteria (ISWQC). In a letter dated October 15, 2010, EPD stated that they would evaluate the acceptability of the proposed placement of rip-rap based on the completed voluntary remediation program application and investigation and remediation plan submitted by Thermo King. If the conceptual site model confirms the pathways or the absence of exposure as discussed in the meeting, EPD anticipates the placement of rip-rap will be an appropriate corrective action to address the seeps. Appendix D of the December 2010 Application provides the results of a model of the Uppermost Water-Bearing Zone and indicates that water quality in Manson Branch will not be impacted above Georgia ISWQC.

Risk Reduction Standard (RRS)

2. *It appears that default soil/water partition coefficients (Kd) were calculated using a fraction organic carbon in soil (f_{oc}) value of 0.02. Consistent with the EPA, EPD uses a default f_{oc} value of 0.002 (0.2%) as specified in Equation 10 (default parameter definition) of the United States EPA Soil Screening Guidance: User's Guide (July 1996). The f_{oc} value of 0.02 cited in Table 3 of Georgia's Rules for Hazardous Site Response Chapter 391-3-19 (Rules) refers to the derivation of the soil-to-air volatilization factor in the RAGS equation Part B.*

   The following table presents approved EPD-calculated Soil Screening Level (SSL) values for each regulated substance released at the site. The values were calculated using a default dilution attention factor (DAF) of 20 and input parameters provided in Tables K-6a and K-6b.

EPD Approved SSL Values					
Site Containment	***T1/T3 SSL (mg/kg)***	***T2 SSL (mg/kg)***	***T4 SSL (mg/kg)***	***Overall Cs (mg/kg)***	***Rationale***
1,1,1-TCA	*1.4E+00*	*1.9E+01*	*1.7E+02*	*1.7E+02*	
1,1,2-TCA	*3.2E-02*	*1.6E-02*	*5.5E-02*	*5.5E-02*	
1,1-DCE	*5.0E-02*	*7.2E-01*	*6.8E+00*	*6.8E+00*	
1,4-Dioxane	*2.1E-02*	*2.4E-02*	*8.2E-02*	*8.2E-02*	
Cis-1,2-DCE	*4.1E-01*	*9.4E-01*	*5.9E+00*	*5.9E+00*	
Chloroform	*4.4E-01*	*1.1E-02*	*3.7E-02*	***4.4E-01***	*T1/T3>T4*
Ethylbenzene	*1.6E+01*	*3.4E-01*	*1.2E+00*	***1.6E+01***	*T1/T3>T4*
Isopropylbenzene (Cumene)	*1.6E-01*	*6.9E+00*	*6.2E+01*	*6.2E+01*	
Methylene chloride	*2.5E-02*	*2.8E-01*	*9.2E-01*	*9.2E-01*	
Naphthalene	*1.3E+00*	*9.2E-02*	*3.2E-01*	***1.3E+00***	*T1/T3>T4*
PCE	*4.5E-02*	*1.2E-02*	*4.0E-02*	***4.5E-02***	*T1/T3>T4*
Toluene	*1.4E+01*	*1.2E+01*	*8.8E+01*	*8.8E+01*	
TCE	*1.8E+00*	*1.8E+00*	*1.8E+00*	***1.8E+00***	*EPD approved 01/19/07*
Xylene	*2.0E+02*	*1.2E+00*	*1.1E+01*	***2.0E+02***	*T1/T3>T4*

Response to Comment 2:
The foc value has been revised to 0.002. Except for the SSLs listed by EPD for 1,4-dioxane, the revised SSLs (i.e., soil to groundwater leaching values) are in agreement with those provided by EPD in their comment. The toxicity values for 1,4-dioxane were updated in IRIS on August 11, 2010. As a result, the groundwater RRS changed causing the calculated SSLs to be lower than those provided by EPD. The supporting documentation for the SSL calculations are provided in the Addendum to the VRP Application (Appendix A). The revised RRS are presented on Tables 6.0, 6.1, VRP-2 and VRP-3 and on the RRS calculations at the end of Appendix A.

MACTEC
engineering and constructing a better tomorrow

August 4, 2010

Mr. Mark Smith
Chief, Land Protection Branch
Georgia Environmental Protection Division
2 Martin Luther King, Jr. Drive, SE
Suite 1462 East Floyd Tower
Atlanta, Georgia 30334

Subject: **Status Report for VRP Application**
Thermo King Corporation - Louisville, Jefferson County, Georgia
HSI Site No. 10702 Tax Parcel 0090-024
MACTEC Project 6122-09-0322

Dear Mr. Smith:

On behalf of Thermo King Corporation, MACTEC Engineering and Consulting, Inc. (MACTEC) is providing this status report of activities conducted for the completion of the Voluntary Remediation Program (VRP) Application for the Thermo King Corporation site in Louisville, Georgia. This status report summarizes the activities completed as of July 30, 2010, documents a June 4, 2010 telephone conversation regarding EPD's comments on the remediation plan, and presents an updated schedule for submittal of the completed VRP Application.

Summary of Activities for VRP Application

The following activities have been conducted toward the completion of the VRP Application:

- The initial VRP Application was submitted on January 29, 2010.
- A revised VRP Application was submitted on March 19, 2010 in response to EPD's comment letter of February 18, 2010.
- Water samples were collected from the hillside seeps to the west of Manson Branch and from the surface water in Manson Branch on April 20-22, 2010 and analyzed for site-specific volatile organic compounds (VOCs).
- Intermediate water-bearing zone monitoring well MW-25 was installed on June 4, 2010.

FEDEX TRACK # 7340 8865 3175

MACTEC Engineering and Consulting, Inc.
3200 Town Point Drive, Suite 100 • Kennesaw, GA 30144 • Phone: 770.421.3400 • Fax: 770.421.3486
www.mactec.com

- Groundwater samples were collected from the 24 site monitoring wells on June 1-4, 2010. Six monitoring wells (MW-3, MW-5, MW-10, MW-14, MW-19, and MW-20) with previous and consistent detections of VOCs were sampled using both passive diffusion bag samplers (PDBs) and low flow/low stress purging and sampling techniques. These six wells were analyzed for site-specific VOCs using USEPA method 8260B and for 1,4-dioxane using Selective Ion Monitoring to obtain lower quantitation limits. The 18 monitoring wells that have not had detections of VOCs were sampled using PDBs for site-specific VOCs using USEPA method 8260B.
- In-situ hydraulic conductivity tests were conducted in five intermediate water-bearing zone monitoring wells (MW-17, MW-20, MW-22, MW-23, and MW-25).
- New monitoring well MW-25 was purged and sampled on June 24, 2010 using low flow/low stress purging and sampling techniques and was analyzed for site-specific VOCs using USEPA method 8260B and for 1,4-dioxane using Selective Ion Monitoring.
- A draft Uniform Environmental Covenant has been prepared and is under legal review.
- A current title report is in the process of being prepared.
- Contact information for adjacent property owners is being collected.
- The groundwater and surface water usage map is being prepared.

June 4, 2010 Telephone Conversation with EPD Regarding the May 17, 2010 Letter

In a telephone conversation on June 4, 2010, MACTEC's Mr. Larry Neal and EPD's Ms. Kristen Ritter Rivera discussed EPD's May 17, 2010 letter. The discussion focused on EPD's concerns with the proposed seep rip-rap remedy. Mr. Neal explained that the function and design of the rip-rap cover was to physically cover the seeps to keep them in the subsurface (i.e., not "surface water") while the open voids in the rip-rap covering would still allow ventilation for natural gas transfer of VOCs from the underlying water. EPD agreed that as long as the rip rap remedy prevented discharge to surface water at concentrations exceeding in-stream water quality criteria, this remedy would be acceptable. It was also clarified that the EPD letter did not constitute a notice of a violation. EPD also agreed that the financial assurance instrument could be submitted when EPD accepts the voluntary remediation plan.

Updated Schedule for Submittal of the Completed VRP Application

As described above, Thermo King has been working to collect the necessary data to complete the VRP Application. Before the VRP application can be completed, additional investigation will be needed to evaluate the impact of the proposed rip-rap cover remedy on potential wetlands located in the remediation area that borders the west side of Manson Branch. Based on this delineation, the design of the rip-rap cover may need to be modified. Because of the additional investigation and modifications to the remediation plan, Thermo King expects that the submittal date of the completed VRP will be on or before December 2010.

Please contact the undersigned if any questions arise.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Rhonda N. Quinn, P.G.
Senior Geologist
Georgia Professional Geologist # 1031

A. David Alcott, P.E.
Senior Principal Engineer

For A. David Alcott
with permission

Gregory J. Wrenn, P.E.
Senior Remediation Engineer/Project Manager
Georgia Professional Engineer # 025565

cc: David Kolb – Thermo King Corporation – Louisville, GA
Dave Sordi – Ingersoll Rand Company

Georgia Department of Natural Resources
2 Martin Luther King, Jr. Dr. S.E., Suite 1462 East, Atlanta, Georgia 30334
Chris Clark, Commissioner
Environmental Protection Division
F. Allen Barnes, Director
Land Protection Branch
Mark Smith, Branch Chief
404-657-8600

August 31, 2010

COPY

VIA E-MAIL AND REGULAR MAIL

Thermo King Corporation
c/o Mr. David A. Kolb, ESH and Facility Manager
1430 Highway 24 East
Louisville, Georgia 30434

Re: Status Report for VRP Application, August 4, 2010
Thermo King Corporation Site, HSI Site No. 10702
Louisville, Jefferson County, Georgia
Tax Parcel 0090-024

Dear Mr. Kolb:

The Georgia Environmental Protection Division (EPD) has reviewed the August 4, 2010 Status Report for VRP Application. EPD did not request the submittal of this status report, nor does the report meet the requirements of a status report. EPD emphasizes the use of rip-rap is not an acceptable remedy for the contaminated seep water. Please see Comment 1 of EPD's letter dated May 17, 2010. In summary, Thermo King needs to meet the requirements of the Voluntary Remediation Program Act.

EPD anticipates receipt of all the items listed in its letter dated February 18, 2010 by no later than December 31, 2010. If you have any questions, please contact Kristen Ritter Rivera of my staff at (404) 657-8600.

Sincerely,

David Reuland
Response and Remediation Program

c: David Sordi, Ingersoll Rand
Rhonda N. Quinn, MACTEC

S:\RDRIVE\Kristen\HSI\ThermoKing\VRP\status report_aug 4.doc

MEETING SUMMARY

A meeting at the Environmental Protection Division (EPD) office to discuss the Voluntary Remediation Program (VRP) Application for the Thermo King Louisville, Georgia site commenced at 2:30 pm Thursday, September 23, 2010. Attending were the following individuals:

Alexandra Cleary	EPD
David Reuland	EPD
Kristen Ritter-Rivera	EPD
Dominic Weatherill	EPD
David Kolb	Thermo King
Greg Wrenn	MACTEC
Rhonda Quinn	MACTEC

The following summarizes the meeting:

- Mr. Wrenn presented a slide presentation (attached) briefly summarizing site background information, key points regarding the rationale for the proposed rip-rap remedy, additional details and sketches of the proposed rip-rap remedy, and photographs of seeps and Manson Branch.
- Discussion during and after the presentation centered around whether the seeps were waters of the State and subject to in-stream water quality standards, the acceptability of covering the seeps to prevent surface expression of groundwater, and whether the data from the seeps was adequate to demonstrate that contaminated groundwater was not discharging to Manson Branch, which all agreed was a regulated water of the State.
- After the slide presentation, EPD indicated that the proposed installation of rip-rap over the impacted seeps appeared to be acceptable. EPD also expressed concern regarding the new detections of TCE in Seep H in 2010 and the lack of groundwater monitoring points down-gradient of the impacted seeps and Manson Branch. EPD suggested that contaminant fate-and-transport modeling of the uppermost water bearing unit to help predict the potential future magnitude and duration of impacts to Manson Branch, in conjunction with additional groundwater sampling points and/or pore-water sampling beneath the sediments in Manson Branch, would provide useful data to evaluate the potential that contaminated groundwater exceeding in-stream water quality criteria was passing beneath the seeps and discharging to Manson Branch (or would in the future).
- It was pointed out that continued sampling of Manson Branch was planned to verify continued compliance with in-stream standards, but MACTEC and Thermo King agreed that fate-and-transport modeling of the uppermost water bearing unit would be included in the updated VRP Application and agreed to install additional groundwater monitoring points between the impacted seeps and Manson Branch. These monitoring points would be incorporated into the long-term monitoring plan in the VRP Application.
- The meeting adjourned at approximately 3:45 pm.

THERMO KING

Louisville, Georgia

September 23, 2010

Voluntary Remediation Program Application Status Meeting

MACTEC Engineering and Consulting, Inc.

MACTEC

Discussion Topics

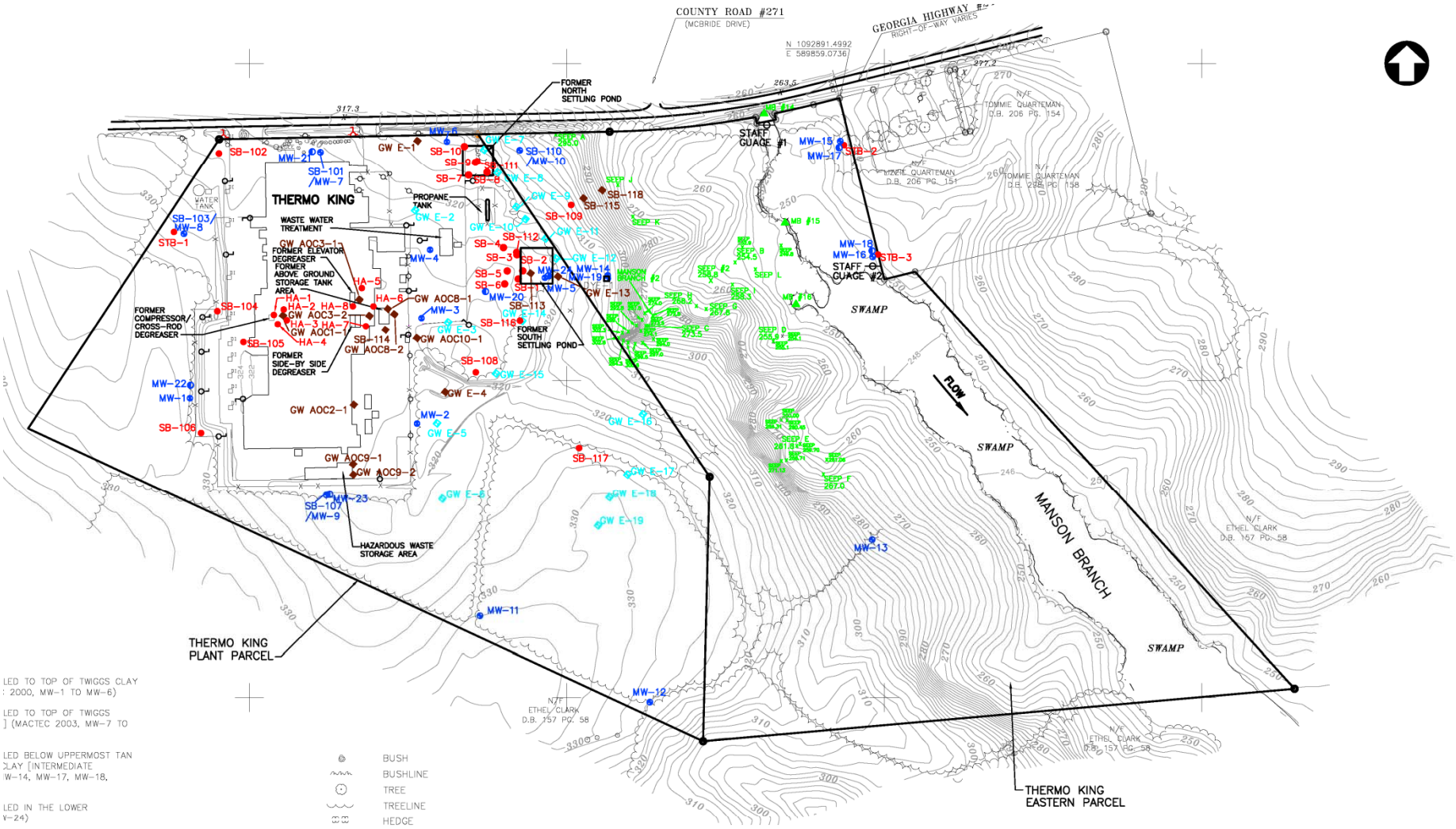
- VRP Application and Voluntary Remediation Plan submitted March 18, 2010
- EPD Comment Letters of May 17, 2010 and August 31, 2010
- Additional Details of Proposed Remedy
  - Conceptual Model
  - Photographs of Seeps and Surface Water
- Path Forward for Completion of VRP Application

MACTEC

Aerial Photograph

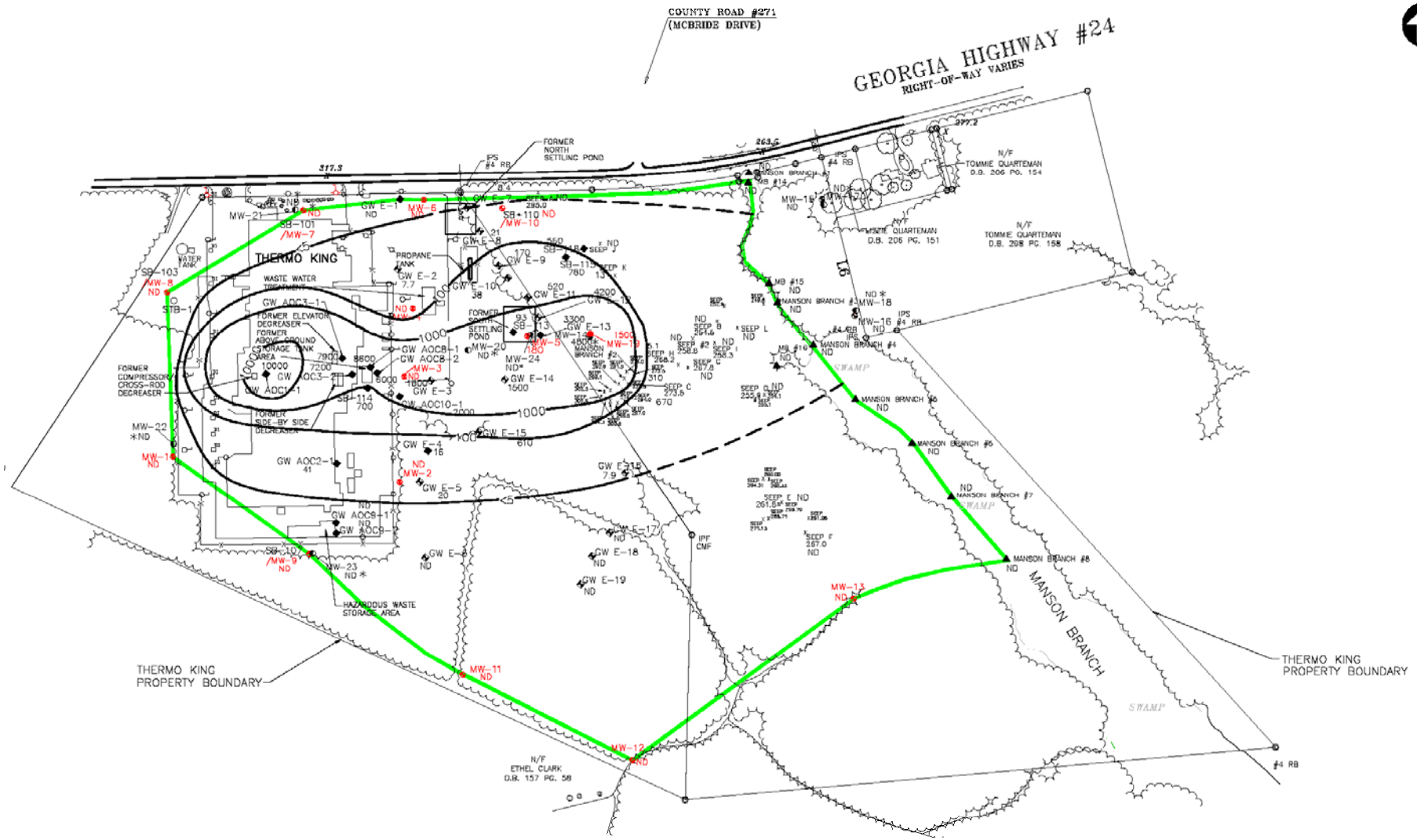
MACTEC

Site Layout and Sampling Locations



MACTEC

TCE in Groundwater – Uppermost WBU



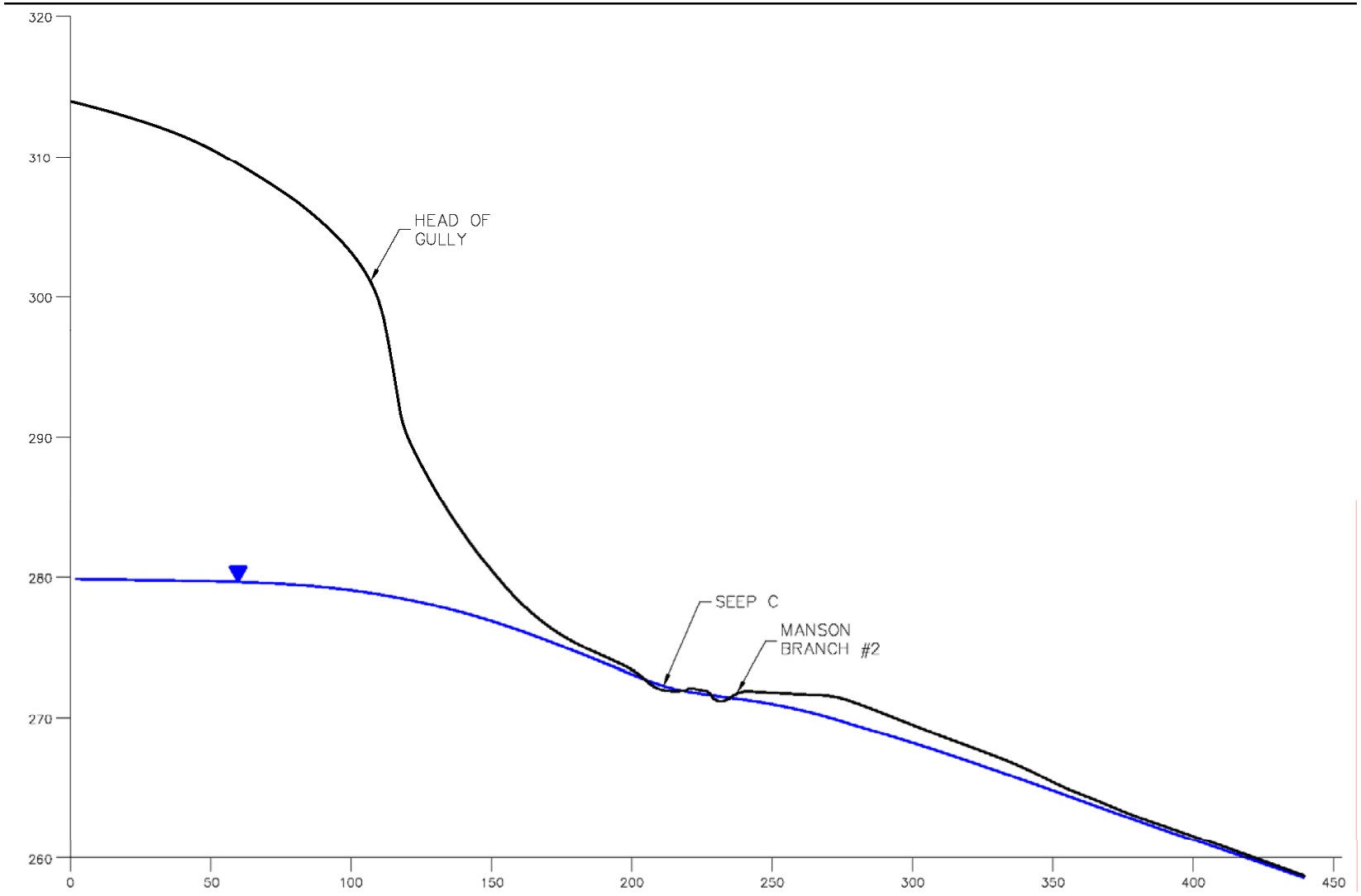
MACTEC

Key Points

- Numerous isolated seeps where groundwater is exposed then infiltrates back into the ground are present along the slope above Manson Branch
- Seeps are discontinuous with Manson Branch and flow intermittently
- Seeps MB#2, C, and H currently exhibit TCE concentrations above GA In-stream Criteria (30 ug/L)
- SLERA indicates acceptable risk to ecological receptors
- Placement of rip-rap over seeps would control erosion and surface expression of groundwater
- Seeps #2, B, C, I & G and Manson Branch are proposed as monitoring points

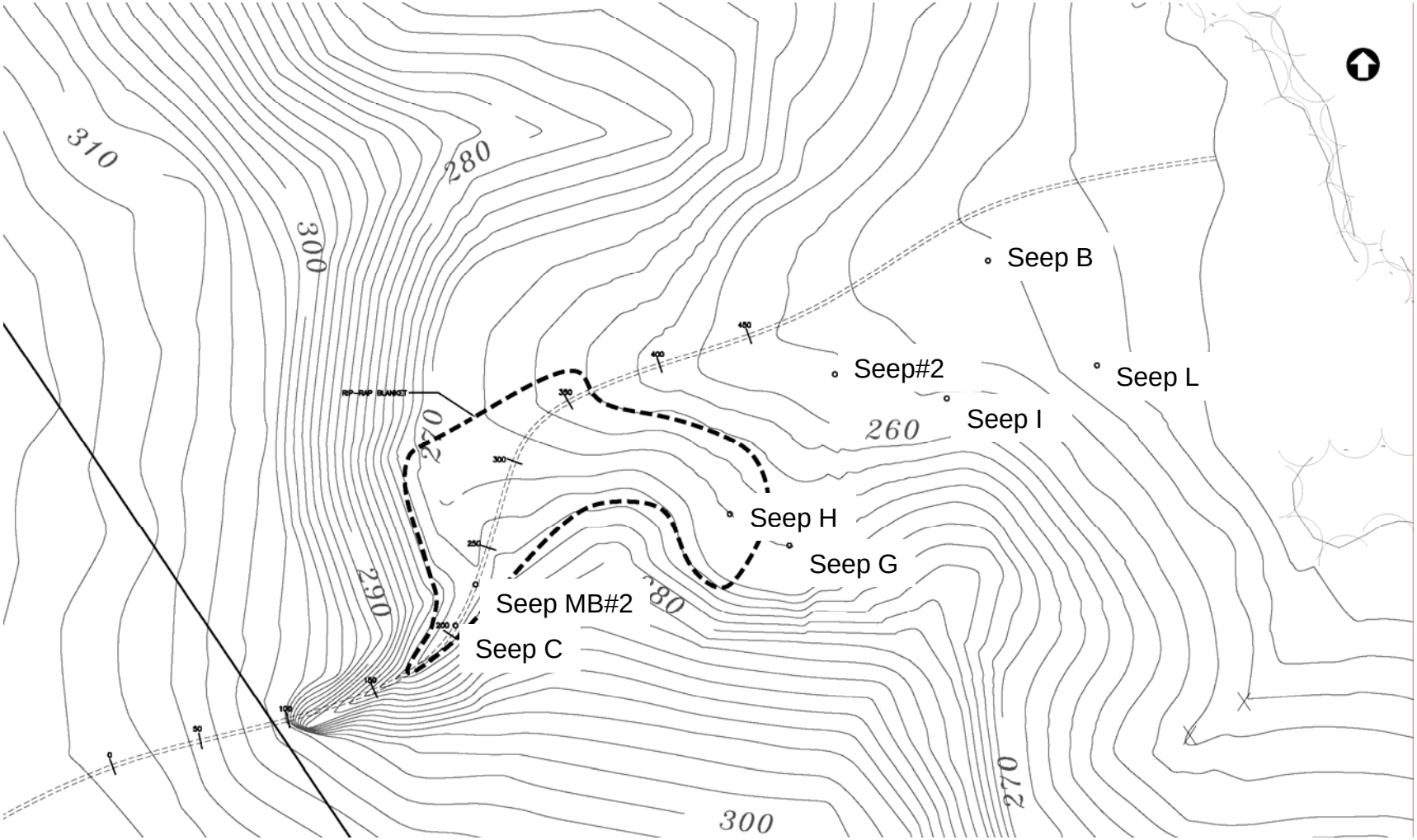
MACTEC

Cross-Section View



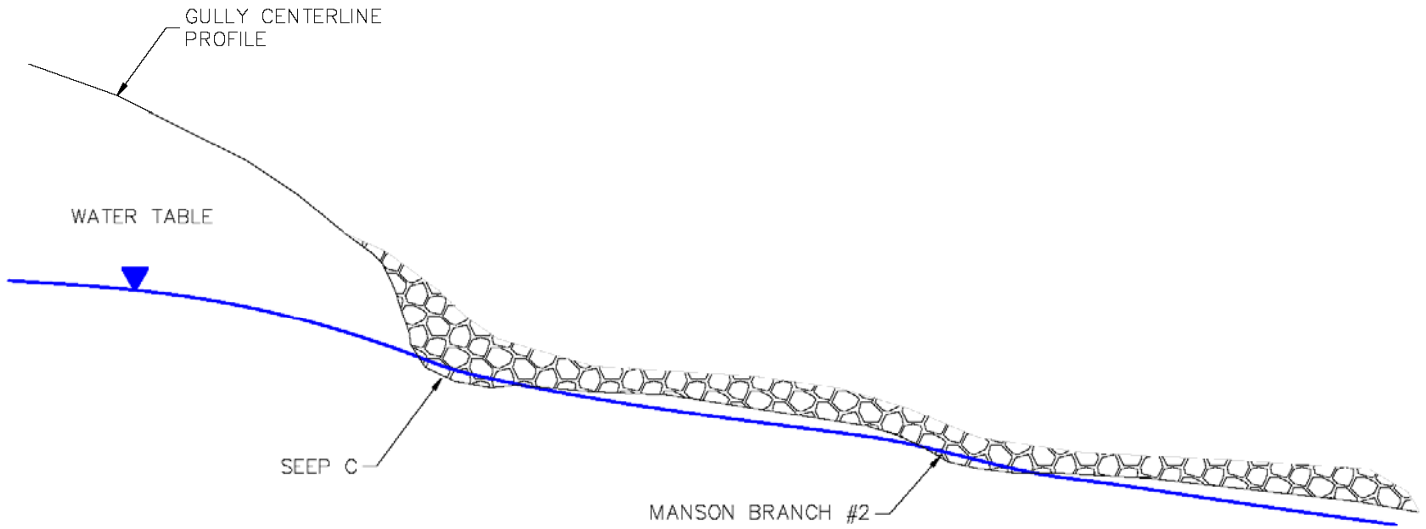
MACTEC

Proposed Extent of Rip-Rap Blanket



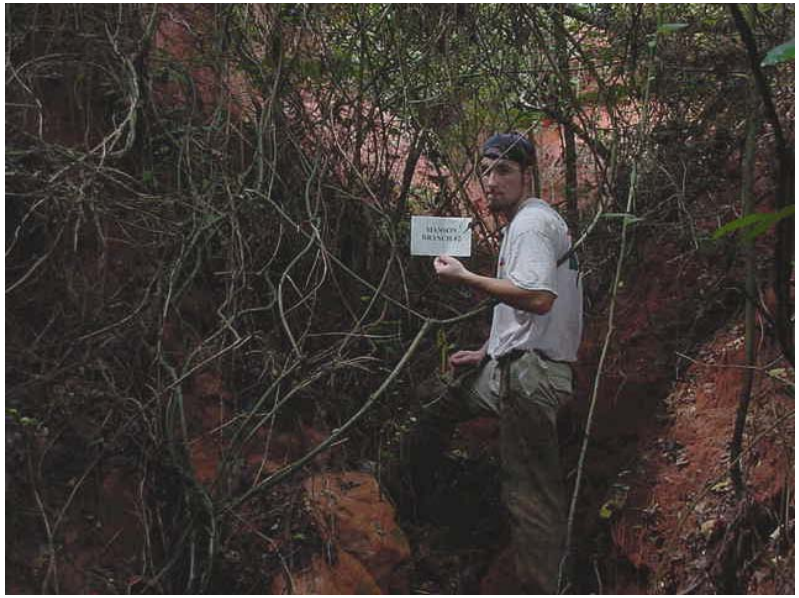
MACTEC

Profile Through Seep C & MB #2



MACTEC

Seep MB #2 and Seep C

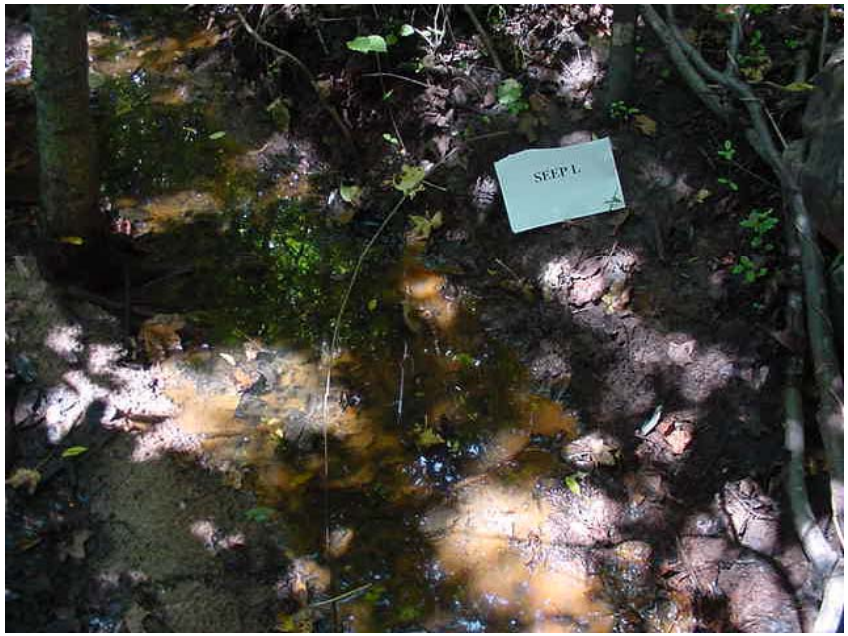


MACTEC

Seep G and Seep H

MACTEC

Seep B, Seep L, and Seep I



MACTEC

Seep D, Seep J, and Seep K

MACTEC

Manson Branch

MACTEC

Georgia Department of Natural Resources
2 Martin Luther King, Jr. Dr. S.E., Suite 1462 East, Atlanta, Georgia 30334
Chris Clark, Commissioner
Environmental Protection Division
F. Allen Barnes, Director
Land Protection Branch
Mark Smith, Branch Chief
404-657-8600

October 15, 2010

VIA E-MAIL AND REGULAR MAIL

COPY

Thermo King Corporation
c/o Mr. David A. Kolb, ESH and Facility Manager
1430 Highway 24 East
Louisville, Georgia 30434

Re: September 23, 2010 Meeting Summary and Proposed Well Locations
Thermo King Corporation Site, HSI Site No. 10702
Louisville, Jefferson County, Georgia
Tax Parcel 0090-024

Dear Mr. Kolb:

The Georgia Environmental Protection Division (EPD) has reviewed the September 23, 2010 Meeting Summary and Proposed Well Locations submitted by MACTEC via email on September 29, 2010. The well locations are acceptable. However, it is your responsibility based on the counsel of your environmental professional to obtain sufficient data to support and augment the site-specific conceptual site model (CSM). Based on the results, your environmental professional may recommend the installation of additional wells.

EPD will evaluate the acceptability of the proposed placement of rip-rap based on the completed voluntary remediation application and investigation and remediation plan scheduled for submittal by no later than December 31, 2010. If the revised CSM confirms the pathways as presented in the meeting, EPD anticipates the placement of rip-rap will be an appropriate corrective action to address the seeps.

If you have any questions, please contact Kristen Ritter Rivera of my staff at (404) 657-8600.

Sincerely,

Alexandra Y Cleary

Alexandra Y. Cleary
Program Manager
Response and Remediation Program

c: David Sordi, Ingersoll Rand
Rhonda N. Quinn, MACTEC
Greg Wrenn, MACTEC

S:\RDRIVE\Kristen\HSI\ThermoKing\VRP\9.23.10 mtg summary response.doc

TABLES

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
SB-1	SB-1	Soil	10-11	02/03/00	30.0	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-2	SB-2	Soil	1.5-3.5	02/03/00	NM	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-3	SB-3	Soil	5-6	02/03/00	0.0	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-4	SB-4	Soil	8-9	02/03/00	NM	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-5	SB-5	Soil	8-9	02/03/00	84.0	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-6	SB-6	Soil	0-10	02/03/00	NA	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-7	SB-7	Soil	7-8	02/03/00	54.0	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-8	SB-8	Soil	7-8	02/03/00	NM	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-9	SB-9	Soil	8-9	02/03/00	NM	NA	NA	NA	NA	VOCs	Rotosonic soil coring
SB-10	SB-10	Soil	5-6	02/03/00	NM	NA	NA	NA	NA	VOCs	Rotosonic soil coring
GW-E-1	SO-E-1	Soil	0-4	09/25/00	0	NA	NA	NA	NA	VOCs	SO-E-1 (0-2 ft) DPT
	SO-E-1	Soil	4-8	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	8-12	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	12-16	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	16-20	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	20-24	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	24-28	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	28-32	09/25/00	0	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	32-36	09/25/00	4	NA	NA	NA	NA	VOCs	Wet Soil at 34Ft, SO-E-1 (32-34) DPT
	SO-E-1	Soil	36-40	09/25/00	5	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	40-44	09/25/00	12	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	44-48	09/25/00	4	NA	NA	NA	NA	None	DPT
	SO-E-1	Soil	48-52	09/25/00	0	NA	NA	NA	NA	None	DPT
	GW-E-1	Groundwater	34	09/25/00	NA	6.36	0.260	20.6	5.5	VOCs	GW-E-1 (34) DPT
	GW-E-1	Groundwater	48	09/25/00	NA	NM	NM	NM	NM	VOCs	GW-E-1 (48) DPT, Boring terminated 55 ft
GW-E-2	GW-E-2	Soil	55	09/26/00	1	NA	NA	NA	NA	None	DPT, Boring terminated 56 ft
	GW-E-2	Groundwater	55	09/26/00	NA	6.36	0.172	25.1	67.5	VOCs	GW-E-2 (55) DPT
GW-E-3	GW-E-3	Soil	0-4	09/28/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	4-8	09/28/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	8-12	09/28/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	12-16	09/28/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	16-20	09/28/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	20-24	09/29/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	24-28	09/30/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	28-32	09/28/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	32-36	09/28/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	36-40	09/28/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	40-44	09/28/00	NM	NA	NA	NA	NA	None	DPT, Wet soil at 44 ft.
	GW-E-3	Soil	44-48	09/28/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	48-52	09/28/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	52-56	09/28/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-3	Soil	56-60	09/28/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-3	Groundwater	44-48	10/02/00	NA	6.43	0.439	31.8	72	VOCs	GW-E-3 (44-48) DPT
	GW-E-3	Groundwater	52-56	10/02/00	NA	7.07	0.369	29.9	999	VOCs	GW-E-3 (52-55) DPT
	GW-E-3	Groundwater	56-60	10/02/00	NA	7.07	0.285	28.2	118	VOCs	GW-E-3 (56-60) DPT, Boring terminated 60 ft
GW-E-4	SO-E-4	Soil	0-4	09/27/00	3	NA	NA	NA	NA	VOCs	SO-E-4 (0-2) DPT
	SO-E-4	Soil	4-8	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	8-12	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	12-16	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	16-20	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	20-24	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	24-28	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	28-32	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	32-36	09/27/00	0	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	36-40	09/27/00	NM	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	40-44	09/27/00	NM	NA	NA	NA	NA	VOCs	SO-E-4 (40-42) DPT
	SO-E-4	Soil	44-48	09/27/00	NM	NA	NA	NA	NA	None	Wet Soil at 44Ft. DPT
	SO-E-4	Soil	48-52	09/27/00	NM	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	52-56	09/27/00	NM	NA	NA	NA	NA	None	DPT
	SO-E-4	Soil	56-61	09/27/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-4	Groundwater	44-48	09/27/00	NA	4.51	0.076	17.5	989	VOCs	GW-E-4 (44-48) DPT
	GW-E-4	Groundwater	48-52	09/27/00	NA	4.67	0.085	17.9	999	VOCs	GW-E-4 (48-52) DPT
	GW-E-4	Groundwater	60-61	09/27/00	NA	6.54	0.219	21.6	32	VOCs	GW-E-4 (60-61) DPT, Boring terminated 61 ft
GW-E-5	GW-E-5	Soil	0-4	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	4-8	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	8-12	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	12-16	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	16-20	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	20-24	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	24-28	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	28-32	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	32-36	09/27/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	36-40	09/28/00	0	NA	NA	NA	NA	None	DPT
	GW-E-5	Soil	40-44	09/27/00	NM	NA	NA	NA	NA	None	Wet Soil at 42 Ft. DPT
	GW-E-5	Soil	44-48	09/27/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-5	Groundwater	40-44	09/28/00	NA	5.00	0.089	17.5	100	VOCs	GW-E-5 (40-44) DPT
	GW-E-5	Groundwater	44-48	09/28/00	NA	4.58	0.063	19.1	98	VOCs	GW-E-5 (44-48) DPT
	GW-E-5	Groundwater	54-58	10/10/00	NA	4.86	0.136	13.6	752	VOCs	GW-E-5 (54-58) DPT, Boring terminated 58 ft
GW-E-6	GW-E-6	Soil	0-6	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	6-10	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	10-15	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	15-20	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	20-22	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	22-24	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	24-26	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	26-40	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	40-44	10/03/00	NM	NA	NA	NA	NA	None	Wet Soil at 40 Ft. DPT
	GW-E-6	Soil	44-48	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	48-52	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	52-56	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	56-60	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Soil	60-64	10/03/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-6	Groundwater	40-44	10/03/00	NA	6.86	0.476	27.8	999	VOCs	GW-E-6 (40-44) DPT
	GW-E-6	Groundwater	52-56	10/03/00	NA	5.84	0.097	26.4	23.4	VOCs	GW-E-6 (52-56) DPT
	GW-E-6	Groundwater	56-60	10/03/00	NA	6.77	0.386	16.6	115	VOCs	GW-E-6 (56-60) DPT, Boring terminated 64 ft
GW-E-7	GW-E-7	Groundwater	31-35	10/03/00	NA	6.57	0.490	18.9	368	VOCs	GW-E-7 (31-35) DPT
	GW-E-7	Groundwater	35-39	10/03/00	NA	6.13	0.220	19.5	750	VOCs	GW-E-7 (35-39) DPT
	GW-E-7	Groundwater	48-52	10/03/00	NA	6.90	0.223	19.3	102	VOCs	GW-E-7 (48-52) DPT, Boring terminated 56 ft
GW-E-8	GW-E-8	Groundwater	40-44	10/04/00	NA	5.30	0.109	23.4	650	VOCs	GW-E-8 (40-44) DPT
	GW-E-8	Groundwater	44-48	10/04/00	NA	5.77	0.132	25.4	243	VOCs	GW-E-8 (44-48) DPT
	GW-E-8	Groundwater	50-54	10/04/00	NA	6.92	0.313	27.6	107	VOCs	GW-E-8 (50-54) DPT, Boring terminated 54 ft
GW-E-9	GW-E-9	Groundwater	38-42	10/04/00	NA	6.42	0.283	31.7	107	VOCs	GW-E-9 (38-42) DPT
	GW-E-9	Groundwater	44-48	10/04/00	NA	5.45	0.112	31.5	1140	VOCs	GW-E-9 (44-48) DPT
	GW-E-9	Groundwater	50-54	10/04/00	NA	6.90	0.283	29.0	500	VOCs	GW-E-9 (50-54) DPT, Boring terminated 54 ft
GW-E-10	GW-E-10	Groundwater	44-48	10/04/00	NA	5.27	0.143	26.0	999	VOCs	GW-E-10 (44-48) DPT
	GW-E-10	Groundwater	48-52	10/04/00	NA	5.85	0.144	25.4	80	VOCs	GW-E-10 (48-52) DPT, Boring terminated 53 ft
GW-E-11	GW-E-11	Groundwater	44-48	10/05/00	NA	5.11	0.226	24.1	83	VOCs	GW-E-11 (44-48) DPT
	GW-E-11	Groundwater	50-54	10/05/00	NA	6.34	0.179	25.8	79	VOCs	GW-E-11 (50-54) DPT
	GW-E-11	Groundwater	54-58	10/05/00	NA	6.93	0.241	24.7	112	VOCs	GW-E-11 (54-58) DPT, Boring terminated 59 ft

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
GW-E-12	GW-E-12	Soil	0-4	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	4-8	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	8-12	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	12-16	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	16-20	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	20-24	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	24-28	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	28-32	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	32-36	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	36-40	10/05/00	0.0	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	40-44	10/05/00	NM	NA	NA	NA	NA	None	Wet Soil at 40 Ft. DPT
	GW-E-12	Soil	44-48	10/05/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-12	Soil	48-54	10/05/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-12	Groundwater	40-44	10/05/00	NA	5.34	0.094	31.3	999	VOCs	GW-E-12 (40-44) DPT
	GW-E-12	Groundwater	44-48	10/05/00	NA	4.88	0.093	28.1	139	VOCs	GW-E-12 (44-48) DPT
	GW-E-12	Groundwater	50-54	10/06/00	NA	5.47	0.323	19.6	220	VOCs	GW-E-12 (50-54) DPT, Boring terminated 54 ft
GW-E-13	SO-E-13	Soil	0-4	10/09/00	<0.5	NA	NA	NA	NA	VOCs	SO-E-13 (0-4 Ft.) DPT
	SO-E-13	Soil	4-8	10/09/00	<0.5	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	8-12	10/09/00	5.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	12-14	10/09/00	7.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	14-16	10/09/00	7.0	NA	NA	NA	NA	VOCs	SO-E-13 (14-16 Ft.) DPT
	SO-E-13	Soil	16-18	10/09/00	7.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	18-20	10/09/00	2.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	20-22	10/09/00	0.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	22-24	10/09/00	0.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	24-28	10/09/00	0.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	28-32	10/09/00	0.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	32-36	10/09/00	0.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	36-40	10/09/00	0.0	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	38-40	10/09/00	<0.5	NA	NA	NA	NA	VOCs	SO-E-13 (38-40) DPT
	SO-E-13	Soil	40-44	10/09/00	NM	NA	NA	NA	NA	None	DPT, Soil wet at 44 ft
	SO-E-13	Soil	44-48	10/09/00	NM	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	48-52	10/09/00	NM	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	52-56	10/09/00	NM	NA	NA	NA	NA	None	DPT
	SO-E-13	Soil	56-60	10/09/00	NM	NA	NA	NA	NA	None	DPT
	GW-E-13	Groundwater	44-48	10/09/00	NA	4.51	0.102	17.2	794	VOCs	GW-E-13 (44-48) DPT
	GW-E-13	Groundwater	48-52	10/09/00	NA	4.63	0.091	18.6	313	VOCs	GW-E-13 (48-50) DPT
	GW-E-13	Groundwater	56-60	10/09/00	NA	6.71	0.258	20.8	362	VOCs	GW-E-13 (56-60) DPT, Boring terminated 64 ft
GW-E-14	GW-E-14	Groundwater	48-52	10/06/00	NA	6.15	0.186	28.4	216	VOCs	GW-E-14 (48-52) DPT
	GW-E-14	Groundwater	52-56	10/06/00	NA	5.63	0.104	27.4	210	VOCs	GW-E-14 (52-56) DPT
	GW-E-14	Groundwater	56-60	10/06/00	NA	5.66	0.121	28.3	552	VOCs	GW-E-14 (56-60) DPT, Boring terminated 60 ft
GW-E-15	GW-E-15	Groundwater	48-52	10/11/00	NA	5.76	0.130	17.6	960	VOCs	GW-E-15 (48-52) DPT
	GW-E-15	Groundwater	54-58	10/11/00	NA	5.04	0.092	17.5	425	VOCs	GW-E-15 (54-58) DPT
	GW-E-15	Groundwater	61-65	10/11/00	NA	6.88	0.240	19.5	966	VOCs	GW-E-15 (61-65) DPT, Boring terminated 65 ft
GW-E-16	GW-E-16	Groundwater	40-44	10/23/00	NA	4.47	0.106	21.2	118	VOCs	GW-E-16 (40-44) DPT
	GW-E-16	Groundwater	50-54	10/23/00	NA	6.44	0.118	23.1	345	VOCs	GW-E-16 (50-54) DPT
	GW-E-16	Groundwater	57-61	10/23/00	NA	NM	NM	NM	NM	VOCs	GW-E-16 (57-61) DPT, Boring terminated 61 ft
GW-E-17	GW-E-17	Groundwater	48-52	10/26/00	NA	6.07	0.075	16.4	30	VOCs	GW-E-17 (48-52) DPT
	GW-E-17	Groundwater	55-59	10/26/00	NA	5.00	0.060	25.3	278	VOCs	GW-E-17 (55-59) DPT
	GW-E-17	Groundwater	62-66	10/26/00	NA	6.33	0.261	24.3	999	VOCs	GW-E-17 (62-66) DPT, Boring terminated 79 ft
GW-E-18	GW-E-18	Groundwater	51-55	10/25/00	NA	6.37	0.158	27.8	123	VOCs	GW-E-18 (51-55) DPT
	GW-E-18	Groundwater	60-64	10/25/00	NA	6.09	0.146	27.1	91	VOCs	GW-E-18 (60-64) DPT
	GW-E-18	Groundwater	68-72	10/25/00	NA	6.31	0.186	22.6	154	VOCs	GW-E-18 (68-72) DPT, Boring terminated 74 ft
GW-E-19	GW-E-19	Groundwater	51-55	10/25/00	NA	5.07	0.048	19.9	999	VOCs	GW-E-19 (51-53) DPT
	GW-E-19	Groundwater	59-63	10/25/00	NA	5.07	0.049	21.9	999	VOCs	GW-E-19 (59-63) DPT
	GW-E-19	Groundwater	70-74	10/25/00	NA	6.84	0.304	24.5	843	VOCs	GW-E-19 (70-74) DPT, Boring terminated 78.5 ft
GW-AOC-1-1	SO-AOC-1-1	Soil	0-2	10/31/00	31.0	NA	NA	NA	NA	VOCs	SO-AOC-1-1 (0-2) DPT
	SO-AOC-1-1	Soil	4-6	10/31/00	42.0	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	8-10	10/31/00	44.0	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	14-16	10/31/00	310.0	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	18-20	10/31/00	71.0	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	24-26	10/31/00	180.0	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	29-31	10/31/00	>1000	NA	NA	NA	NA	VOCs	SO-AOC-1-1 (29-31) DPT
	SO-AOC-1-1	Soil	34-36	10/31/00	770.0	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	38-40	10/31/00	>1000	NA	NA	NA	NA	VOCs	Wet Soil at 40 Ft. SO-AOC-1-1 (38-40) DPT
	SO-AOC-1-1	Soil	44-48	10/31/00	NM	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	48-52	10/31/00	NM	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	52-56	10/31/00	NM	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	56-60	10/31/00	NM	NA	NA	NA	NA	None	DPT
	SO-AOC-1-1	Soil	60-62	10/31/00	NM	NA	NA	NA	NA	None	DPT
	GW-AOC-1-1	Groundwater	40-44	10/31/00	NA	6.15	0.176	25.0	999	VOCs	GW-AOC-1-1 (40-44) DPT
	GW-AOC-1-1	Groundwater	52-56	10/31/00	NA	5.93	0.130	26.5	47	VOCs	GW-AOC-1-1 (52-56) DPT
	GW-AOC-1-1	Groundwater	59-63	10/31/00	NA	6.81	0.276	25.6	77	VOCs	GW-AOC-1-1 (59-63) DPT, Boring terminated 62.5 ft
GW-AOC-2-1	SO-AOC-2-1	Soil	0-2	10/17/00	16.0	NA	NA	NA	NA	VOCs	SO-AOC-2-1 (0-2) DPT
	SO-AOC-2-1	Soil	4-6	10/17/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-2-1	Soil	8-10	10/17/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-2-1	Soil	14-16	10/17/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-2-1	Soil	18-20	10/17/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-2-1 (18-20) DPT
	SO-AOC-2-1	Soil	24-26	10/17/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-2-1	Soil	28-31	10/17/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-2-1	Soil	34-36	10/17/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-2-1	Soil	38-40	10/17/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-2-1 (38-40) DPT, Soil wet at 42 ft
	GW-AOC-2-1	Groundwater	42-46	10/17/00	NA	6.19	0.235	23.8	999	VOCs	GW-AOC-2-1 (42-46) DPT
	GW-AOC-2-1	Groundwater	52-56	10/17/00	NA	5.02	0.149	27.4	51	VOCs	GW-AOC-2-1 (52-56) DPT
	GW-AOC-2-1	Groundwater	62-66	10/17/00	NA	6.58	0.311	26.3	10	VOCs	GW-AOC-2-1 (62-66) DPT, Boring terminated 67 ft
GW-AOC-3-1	SO-AOC-3-1	Soil	0-2	10/30/00	8.0	NA	NA	NA	NA	VOCs	SO-AOC-3-1 (0-2) DPT
	SO-AOC-3-1	Soil	4-6	11/01/00	25.0	NA	NA	NA	NA	None	DPT
	SO-AOC-3-1	Soil	8-10	11/01/00	30.0	NA	NA	NA	NA	None	DPT
	SO-AOC-3-1	Soil	14-16	11/01/00	45.0	NA	NA	NA	NA	None	DPT
	SO-AOC-3-1	Soil	18-20	11/01/00	33.0	NA	NA	NA	NA	None	DPT
	SO-AOC-3-1	Soil	24-26	11/01/00	18.0	NA	NA	NA	NA	None	DPT
	SO-AOC-3-1	Soil	29-31	11/01/00	54.0	NA	NA	NA	NA	VOCs	SO-AOC-3-1 (29-31) DPT
	SO-AOC-3-1	Soil	34-36	11/01/00	14.0	NA	NA	NA	NA	None	DPT
	SO-AOC-3-1	Soil	38-40	11/01/00	11.0	NA	NA	NA	NA	VOCs	SO-AOC-3-1 (38-40) DPT, Soil wet at 40 ft
	GW-AOC-3-1	Groundwater	40-44	11/01/00	NA	5.26	0.130	27.3	55	VOCs	GW-AOC-3-1 (40-44) DPT
	GW-AOC-3-1	Groundwater	50-54	11/01/00	NA	5.91	0.137	28.6	243	VOCs	GW-AOC-3-1 (50-54) DPT
	GW-AOC-3-1	Groundwater	55-59	11/01/00	NA	6.19	0.156	28.4	35	VOCs	GW-AOC-3-1 (55-59) DPT, Boring terminated 59 ft
GW-AOC-3-2	SO-AOC-3-2	Soil	0-2	10/30/00	50	NA	NA	NA	NA	VOCs	SO-AOC-3-2 (0-2) DPT
	SO-AOC-3-2	Soil	4-6	10/30/00	40	NA	NA	NA	NA	None	DPT
	SO-AOC-3-2	Soil	8-10	10/30/00	>100	NA	NA	NA	NA	VOCs	SO-AOC-3-2 (8-10) DPT
	SO-AOC-3-2	Soil	14-16	10/30/00	54	NA	NA	NA	NA	None	DPT
	SO-AOC-3-2	Soil	18-20	10/30/00	33	NA	NA	NA	NA	None	DPT
	SO-AOC-3-2	Soil	24-26	10/30/00	25	NA	NA	NA	NA	None	DPT
	SO-AOC-3-2	Soil	29-31	10/30/00	48	NA	NA	NA	NA	None	DPT
	SO-AOC-3-2	Soil	34-36	10/30/00	45	NA	NA	NA	NA	None	DPT
	SO-AOC-3-2	Soil	38-40	10/30/00	50	NA	NA	NA	NA	VOCs	SO-AOC-3-2 (38-40) DPT
	SO-AOC-3-2	Soil	40-44	10/30/00	NM	NA	NA	NA	NA	None	Wet Soil at 42 Ft. DPT
	GW-AOC-3-2	Groundwater	40-44	10/30/00	NA	5.17	0.124	27.8	175	VOCs	GW-AOC-3-2 (40-44) DPT
	GW-AOC-3-2	Groundwater	48-52	10/30/00	NA	4.54	0.120	28.0	588	VOCs	GW-AOC-3-2 (48-52) DPT
	GW-AOC-3-2	Groundwater	60-64	10/30/00	NA	6.75	0.249	26.0	137	VOCs	GW-AOC-3-2 (60-64) DPT, Boring terminated 63.5 ft

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
GW-AOC-8-1	SO-AOC-8-1	Soil	0-2	10/11/00	11.0	NA	NA	NA	NA	VOCs	SO-AOC-8-1 (0-2) DPT
	SO-AOC-8-1	Soil	4-6	10/11/00	NM	NA	NA	NA	NA	None	DPT
	SO-AOC-8-1	Soil	8-10	10/11/00	20.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-1	Soil	14-16	10/11/00	40.0	NA	NA	NA	NA	VOCs	SO-AOC-8-1 (14-16) DPT
	SO-AOC-8-1	Soil	18-20	10/11/00	29.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-1	Soil	24-26	10/11/00	33.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-1	Soil	29-31	10/11/00	13.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-1	Soil	34-36	10/11/00	25.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-1	Soil	38-40	10/11/00	47.0	NA	NA	NA	NA	VOCs	SO-AOC-8-1 (38-40) DPT, Soil wet at 41 ft
	GW-AOC-8-1	Groundwater	40-44	10/18/00	NA	5.40	0.065	29.2	10	VOCs	GW-AOC-8-1 (40-44) DPT
	GW-AOC-8-1	Groundwater	49-53	10/18/00	NA	5.48	0.135	21.9	175	VOCs	GW-AOC-8-1 (49-53) DPT
	GW-AOC-8-1	Groundwater	58-62	10/18/00	NA	NM	0.262	22.7	87	VOCs	GW-AOC-8-1 (58-62) DPT, Boring terminated 62 ft
GW-AOC-8-2	SO-AOC-8-2	Soil	0-2	10/12/00	6.0	NA	NA	NA	NA	VOCs	SO-AOC-8-2 (0-2) DPT
	SO-AOC-8-2	Soil	4-6	10/12/00	10.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-2	Soil	8-10	10/12/00	12.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-2	Soil	14-16	10/12/00	22.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-2	Soil	18-20	10/12/00	62.0	NA	NA	NA	NA	VOCs	SO-AOC-8-2 (18-20) DPT
	SO-AOC-8-2	Soil	24-26	10/12/00	18.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-2	Soil	29-31	10/12/00	5.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-2	Soil	34-36	10/12/00	8.0	NA	NA	NA	NA	None	DPT
	SO-AOC-8-2	Soil	38-40	10/12/00	14.0	NA	NA	NA	NA	VOCs	SO-AOC-8-2 (38-40) DPT, Soil wet at 42 ft
	GW-AOC-8-2	Groundwater	42-46	10/19/00	NA	6.03	0.108	27.8	86	VOCs	GW-AOC-8-2 (42-46) DPT
	GW-AOC-8-2	Groundwater	50-54	10/19/00	NA	NM	NM	NM	NM	VOCs	GW-AOC-8-2 (50-54) DPT
	GW-AOC-8-2	Groundwater	56-60	10/19/00	NA	NM	NM	NM	NM	VOCs	GW-AOC-8-2 (56-60) DPT, Boring terminated 60 ft
GW-AOC-9-1	SO-AOC-9-1	Soil	0-2	10/19/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-9-1 (0-2) DPT
	SO-AOC-9-1	Soil	4-6	10/19/00	40.0	NA	NA	NA	NA	VOCs	SO-AOC-9-2 (4-6) DPT
	SO-AOC-9-1	Soil	8-10	10/19/00	39.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-1	Soil	14-16	10/19/00	16.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-1	Soil	18-20	10/19/00	4.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-1	Soil	24-26	10/19/00	3.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-1	Soil	29-31	10/19/00	3.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-1	Soil	34-36	10/19/00	6.0	NA	NA	NA	NA	VOCs	SO-AOC-9-1 (34-36) DPT
	SO-AOC-9-1	Soil	38-40	10/19/00	4.0	NA	NA	NA	NA	None	Soil Wet at 40 Ft. DPT
	GW-AOC-9-1	Groundwater	40-44	10/19/00	NA	5.76	0.054	26.5	496	VOCs	GW-AOC-9-1 (40-44) DPT
	GW-AOC-9-1	Groundwater	50-54	10/20/00	NA	NM	NM	NM	NM	VOCs	GW-AOC-9-1 (50-54) DPT
	GW-AOC-9-1	Groundwater	58-62	10/20/00	NA	NM	NM	NM	NM	VOCs	GW-AOC-9-1 (58-62) DPT, Boring terminated 62 ft
GW-AOC-9-2	SO-AOC-9-2	Soil	0-4	10/20/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-9-2 (0-2) DPT
	SO-AOC-9-2	Soil	4-8	10/20/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-9-2 (4-6) DPT
	SO-AOC-9-2	Soil	8-12	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	12-16	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	17-20	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	20-24	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	24-28	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	28-32	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	32-36	10/20/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-9-2 (32-34) DPT
	SO-AOC-9-2	Soil	36-40	10/20/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-9-2	Soil	40-44	10/20/00	0.0	NA	NA	NA	NA	None	DPT, Soil wet at 44 ft
	GW-AOC-9-2	Groundwater	44-48	10/20/00	NA	4.93	0.110	25.5	209	VOCs	GW-AOC-9-2 (44-48) DPT
	GW-AOC-9-2	Groundwater	50-54	10/20/00	NA	5.92	0.077	26.0	532	VOCs	GW-AOC-9-2 (50-54) DPT
	GW-AOC-9-2	Groundwater	58-62	10/20/00	NA	6.27	0.148	26.3	389	VOCs	GW-AOC-9-2 (58-62) DPT, Boring terminated 64 ft
GW-AOC-10-1	SO-AOC-10-1	Soil	0-2	10/12/00	0.0	NA	NA	NA	NA	VOCs	SO-AOC-10-1 (0-2) DPT
	SO-AOC-10-1	Soil	4-6	10/12/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-10-1	Soil	8-10	10/12/00	0.0	NA	NA	NA	NA	None	DPT
	SO-AOC-10-1	Soil	14-16	10/12/00	8.0	NA	NA	NA	NA	None	DPT
	SO-AOC-10-1	Soil	18-20	10/12/00	12.0	NA	NA	NA	NA	VOCs	SO-AOC-10-1 (18-20) DPT
	SO-AOC-10-1	Soil	24-26	10/12/00	11.0	NA	NA	NA	NA	None	DPT
	SO-AOC-10-1	Soil	29-31	10/12/00	6.0	NA	NA	NA	NA	None	DPT
	SO-AOC-10-1	Soil	34-36	10/12/00	8.0	NA	NA	NA	NA	None	DPT
	SO-AOC-10-1	Soil	38-40	10/12/00	24.0	NA	NA	NA	NA	VOCs	Wet soil at 40 Ft. SO-AOC-10-1 (38-40) DPT
	GW-AOC-10-1	Groundwater	44-48	10/18/00	NA	6.26	0.194	21.7	10	VOCs	GW-AOC-10-1 (44-48) DPT
	GW-AOC-10-1	Groundwater	52-56	10/18/00	NA	4.74	0.152	29.0	103	VOCs	GW-AOC-10-1 (52-56) DPT
	GW-AOC-10-1	Groundwater	60-64	10/18/00	NA	6.59	0.194	28.8	999	VOCs	GW-AOC-10-1 (60-64) DPT, Boring terminated 64 ft
STB-1	STB-1	Soil	60-60.5	11/27/00	NM	NA	NA	NA	NA	pH, TOC	Sand, Rotosonic soil coring
	STB-1	Soil	67-69.5	11/27/00	NM	NA	NA	NA	NA	Water Retention, Permeability, Grain Size, and Specific Gravity	Rotosonic soil coring
	STB-1	Soil	72	11/27/00	NM	NA	NA	NA	NA	pH, TOC	Clay, Rotosonic soil coring
	STB-1	Soil	72-73	11/27/00	NM	NA	NA	NA	NA	Water Retention, Permeability, Grain Size, and Specific Gravity	Clay, Rotosonic soil coring
STB-2	STB-2	Soil	0-12	03/27/03	NM	NA	NA	NA	NA	None	DPT
STB-3	STB-3	Soil	0-12.5	03/14/03	NM	NA	NA	NA	NA	None	DPT
SB-101/ MW-7	0-2	Soil	0-2	02/06/03	1.1	NA	NA	NA	NA	VOCs	SB-101 (0-2 ft), Rotosonic soil coring
	2-4	Soil	2-4	02/06/03	2.4	NA	NA	NA	NA	None	Rotosonic soil coring
	4-6	Soil	4-6	02/06/03	18.3	NA	NA	NA	NA	None	Rotosonic soil coring
	6-8	Soil	6-8	02/06/03	5.0	NA	NA	NA	NA	None	Rotosonic soil coring
	8-10	Soil	8-10	02/06/03	11.8	NA	NA	NA	NA	None	Rotosonic soil coring
	10-12	Soil	10-12	02/06/03	21.5	NA	NA	NA	NA	None	Rotosonic soil coring
	12-14	Soil	12-14	02/06/03	2617.0	NA	NA	NA	NA	VOCs	SB-101 (12-14 ft), Rotosonic soil coring
	14-16	Soil	14-16	02/06/03	41.7	NA	NA	NA	NA	None	Rotosonic soil coring
	16-18	Soil	16-18	02/06/03	68.5	NA	NA	NA	NA	None	Rotosonic soil coring
	18-20	Soil	18-20	02/06/03	828.0	NA	NA	NA	NA	None	Rotosonic soil coring
	20-22	Soil	20-22	02/06/03	77.2	NA	NA	NA	NA	None	Rotosonic soil coring
	22-24	Soil	22-24	02/06/03	24.8	NA	NA	NA	NA	None	Rotosonic soil coring
	24-26	Soil	24-26	02/06/03	21.1	NA	NA	NA	NA	None	Rotosonic soil coring
	26-28	Soil	26-28	02/06/03	17.8	NA	NA	NA	NA	None	Rotosonic soil coring
	28-30	Soil	28-30	02/06/03	10.9	NA	NA	NA	NA	None	Rotosonic soil coring
	30-32	Soil	30-32	02/06/03	9.0	NA	NA	NA	NA	None	Rotosonic soil coring
	32-34	Soil	32-34	02/06/03	18.1	NA	NA	NA	NA	None	Rotosonic soil coring
	34-36	Soil	34-36	02/06/03	17.6	NA	NA	NA	NA	None	Rotosonic soil coring
	36-38	Soil	36-38	02/06/03	16.4	NA	NA	NA	NA	VOCs	SB-101 (36-38 ft), Rotosonic soil coring
	38-40	Soil	38-40	02/06/03	NM	NA	NA	NA	NA	None	Wet Soil at 40 ft, Rotosonic soil coring
	40-42	Soil	40-42	02/06/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	42-44	Soil	42-44	02/06/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	44-46	Soil	44-46	02/06/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	46-48	Soil	46-48	02/06/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring, Boring terminated 58 ft

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
SB-102	1.0	Soil	1.0	1/21/2003	0.0	NA	NA	NA	NA	VOCs	SB-102 (0-2 ft), DPT
	2.0	Soil	2.0	1/21/2003	0.0	NA	NA	NA	NA		
	3.0	Soil	3.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	4.0	Soil	4.0	1/21/2003	0.1	NA	NA	NA	NA	None	DPT
	5.0	Soil	5.0	1/21/2003	80.2	NA	NA	NA	NA	VOCs	SB-102 (5-6 ft), DPT
	6..0	Soil	6.0	1/21/2003	5.0	NA	NA	NA	NA		
	7.0	Soil	7.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	9.0	Soil	9.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	10.0	Soil	10.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	11.0	Soil	11.0	1/21/2003	75.7	NA	NA	NA	NA	None	DPT
	12.0	Soil	12.0	1/21/2003	16.1	NA	NA	NA	NA	None	DPT
	13.0	Soil	13.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	14.0	Soil	14.0	1/21/2003	1.8	NA	NA	NA	NA	None	DPT
	15.0	Soil	15.0	1/21/2003	77.6	NA	NA	NA	NA	None	DPT
	16.0	Soil	16.0	1/21/2003	15.7	NA	NA	NA	NA	None	DPT
	17.0	Soil	17.0	1/21/2003	66.3	NA	NA	NA	NA	None	DPT
	18.0	Soil	18.0	1/21/2003	15.2	NA	NA	NA	NA	None	DPT
	19.0	Soil	19.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	20.0	Soil	20.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	21.0	Soil	21.0	1/21/2003	22.7	NA	NA	NA	NA	None	DPT
	22.0	Soil	22.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	23.0	Soil	23.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	24.0	Soil	24.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	25.0	Soil	25.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	26.0	Soil	26.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	27.0	Soil	27.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	28.0	Soil	28.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	29.0	Soil	29.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	30.0	Soil	30.0	1/21/2003	NM	NA	NA	NA	NA	None	DPT
	31.0	Soil	31.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	32.0	Soil	32.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	33.0	Soil	33.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	34.0	Soil	34.0	1/21/2003	NM	NA	NA	NA	NA	None	DPT
	35.0	Soil	35.0	1/21/2003	0.0	NA	NA	NA	NA	VOCs	SB-102 (35-36 ft), DPT
	36.0	Soil	36.0	1/21/2003	0.0	NA	NA	NA	NA		
	37.0	Soil	37.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT
	38.0	Soil	38.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT, Soil wet at 38.5 ft
	39.0	Soil	39.0	1/21/2003	0.0	NA	NA	NA	NA	None	DPT, Boring terminated 41 ft
SB-103/MW-8	0-2	Soil	0-2	2/6/2003	1.8	NA	NA	NA	NA	VOCs	SB-103 (0-2 ft), Rotosonic soil coring
	2-4	Soil	2-4	2/6/2003	13.0	NA	NA	NA	NA	None	Rotosonic soil coring
	4-6	Soil	4-6	2/6/2003	164.0	NA	NA	NA	NA	None	Rotosonic soil coring
	6-8	Soil	6-8	2/6/2003	502.0	NA	NA	NA	NA	None	Rotosonic soil coring
	8-10	Soil	8-10	2/6/2003	32.6	NA	NA	NA	NA	None	Rotosonic soil coring
	10-12	Soil	10-12	2/6/2003	23.7	NA	NA	NA	NA	None	Rotosonic soil coring
	12-14	Soil	12-14	2/6/2003	10.3	NA	NA	NA	NA	None	Rotosonic soil coring
	14-16	Soil	14-16	2/6/2003	5.3	NA	NA	NA	NA	None	Rotosonic soil coring
	16-18	Soil	16-18	2/6/2003	9.1	NA	NA	NA	NA	None	Rotosonic soil coring
	18-20	Soil	18-20	2/6/2003	60.3	NA	NA	NA	NA	None	Rotosonic soil coring
	20-22	Soil	20-22	2/6/2003	66.2	NA	NA	NA	NA	None	Rotosonic soil coring
	22-24	Soil	22-24	2/6/2003	441.0	NA	NA	NA	NA	None	Rotosonic soil coring
	24-26	Soil	24-26	2/6/2003	45.0	NA	NA	NA	NA	None	Rotosonic soil coring
	26-28	Soil	26-28	2/6/2003	579.0	NA	NA	NA	NA	VOCs	SB-103 (26-28 ft), Rotosonic soil coring
	28-30	Soil	28-30	2/6/2003	402.0	NA	NA	NA	NA	None	Rotosonic soil coring
	30-32	Soil	30-32	2/6/2003	394.0	NA	NA	NA	NA	None	Rotosonic soil coring
	32-34	Soil	32-34	2/6/2003	379.0	NA	NA	NA	NA	None	Rotosonic soil coring
	34-36	Soil	34-36	2/6/2003	369.0	NA	NA	NA	NA	None	Rotosonic soil coring
	36-38	Soil	36-38	2/6/2003	361.0	NA	NA	NA	NA	None	Rotosonic soil coring
	38-40	Soil	38-40	2/6/2003	412.0	NA	NA	NA	NA	None	Rotosonic soil coring
	40-42	Soil	40-42	2/6/2003	362.0	NA	NA	NA	NA	None	Rotosonic soil coring
	42-44	Soil	42-44	2/6/2003	389.0	NA	NA	NA	NA	None	Rotosonic soil coring
	44-46	Soil	44-46	2/6/2003	388.0	NA	NA	NA	NA	None	Rotosonic soil coring, Soil wet at 46 ft
	46-48	Soil	46-48	2/6/2003	NM	NA	NA	NA	NA	VOCs	SB-103 (46-48 ft), Rotosonic soil coring, Boring terminated 72 ft
SB-104	1.0	Soil	1.0	1/21/2003	0.0	NA	NA	NA	NA	VOCs	SB-104 (0-2 ft), Rotosonic soil coring
	3.0	Soil	3.0	1/21/2003	0.0	NA	NA	NA	NA	None	Rotosonic soil coring
	5.0	Soil	5.0	1/21/2003	2.0	NA	NA	NA	NA	None	Rotosonic soil coring
	7.0	Soil	7.0	1/21/2003	0.4	NA	NA	NA	NA	None	Rotosonic soil coring
	8.0	Soil	8.0	1/21/2003	7.1	NA	NA	NA	NA	None	Rotosonic soil coring
	10.0	Soil	10.0	1/21/2003	0.2	NA	NA	NA	NA	None	Rotosonic soil coring
	11.0	Soil	11.0	1/21/2003	12.3	NA	NA	NA	NA	None	Rotosonic soil coring
	13.0	Soil	13.0	1/21/2003	0.2	NA	NA	NA	NA	None	Rotosonic soil coring
	14.0	Soil	14.0	1/21/2003	18.6	NA	NA	NA	NA	None	Rotosonic soil coring
	16.0	Soil	16.0	1/21/2003	20.0	NA	NA	NA	NA	None	Rotosonic soil coring
	17.0	Soil	17.0	1/21/2003	31.2	NA	NA	NA	NA	None	Rotosonic soil coring
	19.0	Soil	19.0	1/21/2003	0.8	NA	NA	NA	NA	None	Rotosonic soil coring
	20.0	Soil	20.0	1/21/2003	49.0	NA	NA	NA	NA	None	Rotosonic soil coring
	22.0	Soil	22.0	1/21/2003	144.0	NA	NA	NA	NA	VOCs	SB-104 (21-22 ft), Rotosonic soil coring
	24.0	Soil	24.0	1/21/2003	23.0	NA	NA	NA	NA	None	Rotosonic soil coring
	26.0	Soil	26.0	1/21/2003	58.4	NA	NA	NA	NA	None	Rotosonic soil coring
	28.0	Soil	28.0	1/21/2003	53.0	NA	NA	NA	NA	None	Rotosonic soil coring
	30.0	Soil	30.0	1/21/2003	67.1	NA	NA	NA	NA	None	Rotosonic soil coring
	32.0	Soil	32.0	1/21/2003	19.5	NA	NA	NA	NA	None	Rotosonic soil coring
	34.0	Soil	34.0	1/21/2003	0.3	NA	NA	NA	NA	None	Rotosonic soil coring
	36.0	Soil	36.0	1/21/2003	22.5	NA	NA	NA	NA	None	Rotosonic soil coring
	38.0	Soil	38.0	1/21/2003	131.0	NA	NA	NA	NA	None	Rotosonic soil coring
	40.0	Soil	40.0	1/21/2003	2.6	NA	NA	NA	NA	VOCs	SB-104 (40-42 ft), Rotosonic soil coring
	42.0	Soil	42.0	1/21/2003	44.0	NA	NA	NA	NA		
	42-45	Soil	42-45	1/21/2003	0.0	NA	NA	NA	NA	None	Rotosonic soil coring
	45-46	Soil	45-46	1/21/2003	0.0	NA	NA	NA	NA	None	Rotosonic soil coring, Soil wet at 47 ft
	46-47	Soil	46-47	1/21/2003	0.0	NA	NA	NA	NA	None	Rotosonic soil coring, Boring terminated 48 ft
SB-105	1.0	Soil	1.0	1/22/2003	1.8	NA	NA	NA	NA	VOCs	SB-105 (0-2 ft), DPT
	3.0	Soil	3.0	1/22/2003	0.2	NA	NA	NA	NA	None	DPT
	5.0	Soil	5.0	1/22/2003	4.3	NA	NA	NA	NA	None	DPT
	7.0	Soil	7.0	1/22/2003	0.0	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	1/22/2003	4.6	NA	NA	NA	NA	None	DPT
	10.0	Soil	10.0	1/22/2003	0.0	NA	NA	NA	NA	None	DPT
	11.0	Soil	11.0	1/22/2003	27.1	NA	NA	NA	NA	VOCs	SB-105 (11-12 ft), DPT
	13.0	Soil	13.0	1/22/2003	23.8	NA	NA	NA	NA	None	DPT
	14.0	Soil	14.0	1/22/2003	14.2	NA	NA	NA	NA	None	DPT
	16.0	Soil	16.0	1/22/2003	9.9	NA	NA	NA	NA	None	DPT
	18.0	Soil	18.0	1/22/2003	7.9	NA	NA	NA	NA	None	DPT
	20.0	Soil	20.0	1/22/2003	10.3	NA	NA	NA	NA	None	DPT
	22.0	Soil	22.0	1/22/2003	7.8	NA	NA	NA	NA	None	DPT
	24.0	Soil	24.0	1/22/2003	2.3	NA	NA	NA	NA	None	DPT
	26.0	Soil	26.0	1/22/2003	3.6	NA	NA	NA	NA	None	DPT
	28.0	Soil	28.0	1/22/2003	3.7	NA	NA	NA	NA	None	DPT
	30.0	Soil	30.0	1/22/2003	0.1	NA	NA	NA	NA	None	DPT
	32.0	Soil	32.0	1/22/2003	0.4	NA	NA	NA	NA	None	DPT
	35.0	Soil	35.0	1/22/2003	64.8	NA	NA	NA	NA	None	DPT
	37.0	Soil	37.0	1/22/2003	82.0	NA	NA	NA	NA	VOCs	SB-105 (37-38 ft), DPT
	39.0	Soil	39.0	1/22/2003	21.2	NA	NA	NA	NA	None	DPT, Soil wet at 40.6 ft, Boring terminated 42 ft

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
SB-106	2.0	Soil	2.0	1/23/2003	0.8	NA	NA	NA	NA	VOCs	SB-106 (0-2 ft), DPT
	4.0	Soil	4.0	1/23/2003	0.1	NA	NA	NA	NA	None	DPT
	5.0	Soil	5.0	1/23/2003	0.2	NA	NA	NA	NA	None	DPT
	7.0	Soil	7.0	1/23/2003	0.2	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	1/23/2003	0.4	NA	NA	NA	NA	None	DPT
	10.0	Soil	10.0	1/23/2003	0.0	NA	NA	NA	NA	None	DPT
	11.0	Soil	11.0	1/23/2003	0.1	NA	NA	NA	NA	None	DPT
	13.0	Soil	13.0	1/23/2003	0.1	NA	NA	NA	NA	None	DPT
	14.0	Soil	14.0	1/23/2003	0.5	NA	NA	NA	NA	None	DPT
	16.0	Soil	16.0	1/23/2003	0.0	NA	NA	NA	NA	None	DPT
	18.0	Soil	18.0	1/23/2003	0.0	NA	NA	NA	NA	None	DPT
	20.0	Soil	20.0	1/23/2003	0.0	NA	NA	NA	NA	None	DPT
	22.0	Soil	22.0	1/23/2003	0.2	NA	NA	NA	NA	None	DPT
	24.0	Soil	24.0	1/23/2003	0.1	NA	NA	NA	NA	None	DPT
	26.0	Soil	26.0	1/23/2003	0.3	NA	NA	NA	NA	None	DPT
	28.0	Soil	28.0	1/23/2003	0.2	NA	NA	NA	NA	None	DPT
	29.0	Soil	29.0	1/23/2003	0.8	NA	NA	NA	NA	VOCs	SB-106 (29-30 ft), DPT
	31.0	Soil	31.0	1/23/2003	0.1	NA	NA	NA	NA	None	DPT
	32.0	Soil	32.0	1/23/2003	0.2	NA	NA	NA	NA	None	DPT
	34.0	Soil	34.0	1/23/2003	0.5	NA	NA	NA	NA	None	DPT
	35.0	Soil	35.0	1/23/2003	0.4	NA	NA	NA	NA	None	DPT
	37.0	Soil	37.0	1/23/2003	0.6	NA	NA	NA	NA	None	DPT
	38.0	Soil	38.0	1/23/2003	0.3	NA	NA	NA	NA	None	DPT
	40.0	Soil	40.0	1/23/2003	0.4	NA	NA	NA	NA	None	DPT
	41.0	Soil	41.0	1/23/2003	1.0	NA	NA	NA	NA	None	DPT
	43.0	Soil	43.0	1/23/2003	1.1	NA	NA	NA	NA	VOCs	SB-106 (42-43 ft), DPT
	44-45	Soil	44-45	1/23/2003	0.2	NA	NA	NA	NA	None	DPT, Soil wet at 45.8 ft
	45-46	Soil	45-46	1/23/2003	0.2	NA	NA	NA	NA	None	DPT, Boring terminated 46 ft
SB-107/MW-9	0-2	Soil	0-2	2/7/2003	197.0	NA	NA	NA	NA	VOCs	SB-107 (0-2 ft), Rotosonic soil coring
	2-4	Soil	2-4	2/7/2003	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	4-6	Soil	4-6	2/7/2003	180.0	NA	NA	NA	NA	None	Rotosonic soil coring
	6-8	Soil	6-8	2/7/2003	160.0	NA	NA	NA	NA	None	Rotosonic soil coring
	8-10	Soil	8-10	2/7/2003	152.0	NA	NA	NA	NA	None	Rotosonic soil coring
	10-12	Soil	10-12	2/7/2003	285.0	NA	NA	NA	NA	None	Rotosonic soil coring
	12-14	Soil	12-14	2/7/2003	134.0	NA	NA	NA	NA	None	Rotosonic soil coring
	14-16	Soil	14-16	2/7/2003	642.0	NA	NA	NA	NA	VOCs	SB-107 (14-16 ft), Rotosonic soil coring
	16-18	Soil	16-18	2/7/2003	85.8	NA	NA	NA	NA	None	Rotosonic soil coring
	18-20	Soil	18-20	2/7/2003	96.1	NA	NA	NA	NA	None	Rotosonic soil coring
	20-22	Soil	20-22	2/7/2003	76.2	NA	NA	NA	NA	None	Rotosonic soil coring
	22-24	Soil	22-24	2/7/2003	35.4	NA	NA	NA	NA	None	Rotosonic soil coring
	24-26	Soil	24-26	2/7/2003	23.2	NA	NA	NA	NA	None	Rotosonic soil coring
	26-28	Soil	26-28	2/7/2003	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	28-30	Soil	28-30	2/7/2003	91.2	NA	NA	NA	NA	None	Rotosonic soil coring
	30-32	Soil	30-32	2/7/2003	204.0	NA	NA	NA	NA	None	Rotosonic soil coring
	32-34	Soil	32-34	2/7/2003	514.0	NA	NA	NA	NA	None	Rotosonic soil coring
	34-36	Soil	34-36	2/7/2003	258.0	NA	NA	NA	NA	None	Rotosonic soil coring
	36-38	Soil	36-38	2/7/2003	154.0	NA	NA	NA	NA	None	Rotosonic soil coring
	38-40	Soil	38-40	2/10/2003	184.0	NA	NA	NA	NA	VOCs	SB-107 (38-40 ft), Rotosonic soil coring, Soil wet at 41.5 ft, Boring terminated at 69 ft
SB-108	2.0	Soil	2.0	1/24/2003	0.1	NA	NA	NA	NA	VOCs	SB-108 (0-2 ft), DPT
	4.0	Soil	4.0	1/24/2003	0.2	NA	NA	NA	NA	None	DPT
	6.0	Soil	6.0	1/24/2003	0.0	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	1/24/2003	0.3	NA	NA	NA	NA	None	DPT
	9.0	Soil	9.0	1/24/2003	1.1	NA	NA	NA	NA	None	DPT
	11.0	Soil	11.0	1/24/2003	0.3	NA	NA	NA	NA	None	DPT
	12.0	Soil	12.0	1/24/2003	1.4	NA	NA	NA	NA	None	DPT
	14.0	Soil	14.0	1/24/2003	0.6	NA	NA	NA	NA	None	DPT
	15.0	Soil	15.0	1/24/2003	0.6	NA	NA	NA	NA	None	DPT
	17.0	Soil	17.0	1/24/2003	0.0	NA	NA	NA	NA	None	DPT
	18.0	Soil	18.0	1/24/2003	1.9	NA	NA	NA	NA	None	DPT
	20.0	Soil	20.0	1/24/2003	0.2	NA	NA	NA	NA	None	DPT
	21.0	Soil	21.0	1/24/2003	0.4	NA	NA	NA	NA	None	DPT
	23.0	Soil	23.0	1/24/2003	0.3	NA	NA	NA	NA	None	DPT
	24.0	Soil	24.0	1/24/2003	8.7	NA	NA	NA	NA	None	DPT
	26.0	Soil	26.0	1/24/2003	0.3	NA	NA	NA	NA	None	DPT
	27.0	Soil	27.0	1/24/2003	14.5	NA	NA	NA	NA	None	DPT
	29.0	Soil	29.0	1/24/2003	10.6	NA	NA	NA	NA	VOCs	SB-108 (29-30 ft), DPT
	30.0	Soil	30.0	1/24/2003	31.4	NA	NA	NA	NA		
	32.0	Soil	32.0	1/24/2003	4.8	NA	NA	NA	NA	None	DPT
	33.0	Soil	33.0	1/24/2003	7.9	NA	NA	NA	NA	None	DPT
	35.0	Soil	35.0	1/24/2003	4.7	NA	NA	NA	NA	None	DPT
	36.0	Soil	36.0	1/24/2003	28.5	NA	NA	NA	NA	None	DPT
	38.0	Soil	38.0	1/24/2003	5.3	NA	NA	NA	NA	None	DPT
	39.0	Soil	39.0	1/24/2003	2.1	NA	NA	NA	NA	None	DPT
	41.0	Soil	41.0	1/24/2003	3.7	NA	NA	NA	NA	None	DPT
	42.0	Soil	42.0	1/24/2003	0.9	NA	NA	NA	NA	None	DPT
	44.0	Soil	44.0	1/24/2003	3.2	NA	NA	NA	NA	None	DPT
	45.0	Soil	45.0	1/24/2003	0.6	NA	NA	NA	NA	VOCs	SB-108 (45-46 ft), DPT
	47.0	Soil	47.0	1/24/2003	8.3	NA	NA	NA	NA	None	Wet soil 47 ft, DPT, Boring terminated 50 ft.
SB-109	2.0	Soil	2.0	1/23/2003	1.1	NA	NA	NA	NA	VOCs	SB-109 (0-2 ft), DPT
	4.0	Soil	4.0	1/23/2003	0.2	NA	NA	NA	NA	None	DPT
	5.0	Soil	5.0	1/23/2003	1.0	NA	NA	NA	NA	None	DPT
	7.0	Soil	7.0	1/23/2003	0.0	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	1/23/2003	1.6	NA	NA	NA	NA	None	DPT
	10.0	Soil	10.0	1/23/2003	0.3	NA	NA	NA	NA	None	DPT
	11.0	Soil	11.0	1/23/2003	21.6	NA	NA	NA	NA	VOCs	SB-109 (11-12 ft), DPT
	13.0	Soil	13.0	1/23/2003	20.4	NA	NA	NA	NA	None	DPT
	15.0	Soil	15.0	1/23/2003	6.6	NA	NA	NA	NA	None	DPT
	17.0	Soil	17.0	1/23/2003	3.5	NA	NA	NA	NA	None	DPT
	19.0	Soil	19.0	1/23/2003	4.2	NA	NA	NA	NA	None	DPT
	21.0	Soil	21.0	1/23/2003	5.3	NA	NA	NA	NA	None	DPT
	23.0	Soil	23.0	1/23/2003	7.0	NA	NA	NA	NA	None	DPT
	25.0	Soil	25.0	1/23/2003	5.8	NA	NA	NA	NA	None	DPT
	27.0	Soil	27.0	1/23/2003	4.1	NA	NA	NA	NA	VOCs	SB-109 (27-28 ft), DPT
	29.0	Soil	29.0	1/23/2003	1.3	NA	NA	NA	NA	None	DPT, Soil wet at 28 ft
	31.0	Soil	31.0	1/23/2003	3.2	NA	NA	NA	NA	None	DPT, Boring terminated 33 ft

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
SB-110/MW-10	0-2	Soil	0-2	02/10/03	270.0	NA	NA	NA	NA	VOCs	SB-110 (0-2 ft), Rotosonic soil coring
	2-4	Soil	2-4	02/10/03	182.0	NA	NA	NA	NA	None	Rotosonic soil coring
	4-6	Soil	4-6	02/10/03	184.0	NA	NA	NA	NA	VOCs	SB-110 (4-6 ft), Rotosonic soil coring
	6-8	Soil	6-8	02/10/03	134.0	NA	NA	NA	NA	None	Rotosonic soil coring
	8-10	Soil	8-10	02/10/03	57.4	NA	NA	NA	NA	None	Rotosonic soil coring
	10-12	Soil	10-12	02/10/03	96.2	NA	NA	NA	NA	None	Rotosonic soil coring
	12-14	Soil	12-14	02/10/03	41.7	NA	NA	NA	NA	None	Rotosonic soil coring
	14-16	Soil	14-16	02/10/03	29.3	NA	NA	NA	NA	None	Rotosonic soil coring
	16-18	Soil	16-18	02/10/03	22.3	NA	NA	NA	NA	None	Rotosonic soil coring
	18-20	Soil	18-20	02/10/03	10.0	NA	NA	NA	NA	None	Rotosonic soil coring
	20-22	Soil	20-22	02/10/03	17.3	NA	NA	NA	NA	None	Rotosonic soil coring
	22-24	Soil	22-24	02/10/03	15.3	NA	NA	NA	NA	None	Rotosonic soil coring
	24-26	Soil	24-26	02/10/03	13.3	NA	NA	NA	NA	None	Rotosonic soil coring
	26-28	Soil	26-28	02/10/03	14.7	NA	NA	NA	NA	None	Rotosonic soil coring
	28-30	Soil	28-30	02/10/03	11.0	NA	NA	NA	NA	None	Rotosonic soil coring
	30-32	Soil	30-32	02/10/03	18.4	NA	NA	NA	NA	None	Rotosonic soil coring
	32-34	Soil	32-34	02/10/03	11.3	NA	NA	NA	NA	VOCs	SB-110 (32-34 ft), Rotosonic soil coring
	34-36	Soil	34-36	02/10/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	36-38	Soil	36-38	02/10/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	38-40	Soil	38-40	02/10/03	NM	NA	NA	NA	NA	None	Wet soil 40 ft, Rotosonic soil coring, Boring terminated 49.5 ft.
SB-111	2.0	Soil	2.0	01/22/03	0.5	NA	NA	NA	NA	VOCs	SB-111 (0-2 ft), DPT
	4.0	Soil	4.0	01/22/03	0.0	NA	NA	NA	NA	None	DPT
	6.0	Soil	6.0	01/22/03	2.2	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	01/22/03	2.4	NA	NA	NA	NA	None	DPT
	10.0	Soil	10.0	01/22/03	0.0	NA	NA	NA	NA	None	DPT
	12.0	Soil	12.0	01/22/03	0.0	NA	NA	NA	NA	None	DPT
	13.0	Soil	13.0	01/22/03	5.4	NA	NA	NA	NA	None	DPT
	15.0	Soil	15.0	01/22/03	3.8	NA	NA	NA	NA	None	DPT
	16.0	Soil	16.0	01/22/03	1.5	NA	NA	NA	NA	None	DPT
	18.0	Soil	18.0	01/22/03	0.0	NA	NA	NA	NA	None	DPT
	19.0	Soil	19.0	01/22/03	17.1	NA	NA	NA	NA	None	DPT
	21.0	Soil	21.0	01/22/03	10.6	NA	NA	NA	NA	VOCs	SB-111 (21-22 ft), DPT
	22.0	Soil	22.0	01/22/03	22.0	NA	NA	NA	NA		
	24.0	Soil	24.0	01/22/03	1.3	NA	NA	NA	NA	None	DPT
	26.0	Soil	26.0	01/22/03	8.6	NA	NA	NA	NA	None	DPT
	28.0	Soil	28.0	01/22/03	4.0	NA	NA	NA	NA	None	DPT
	29.0	Soil	29.0	01/22/03	7.2	NA	NA	NA	NA	None	DPT
	31.0	Soil	31.0	01/22/03	6.4	NA	NA	NA	NA	None	DPT
	33.0	Soil	33.0	01/22/03	18.8	NA	NA	NA	NA	VOCs	SB-111 (32-33 ft), DPT
	35.0	Soil	35.0	01/22/03	1.8	NA	NA	NA	NA	None	DPT, Soil wet at 34.3 ft, Boring terminated 37 ft
SB-112	2.0	Soil	2.0	01/23/03	0.5	NA	NA	NA	NA	VOCs	SB-112 (0-2 ft), DPT
	4.0	Soil	4.0	01/23/03	0.1	NA	NA	NA	NA	None	DPT
	6.0	Soil	6.0	01/23/03	0.1	NA	NA	NA	NA	None	DPT
	8.0	Soil	8.0	01/23/03	0.2	NA	NA	NA	NA	None	DPT
	9.0	Soil	9.0	01/23/03	0.6	NA	NA	NA	NA	None	DPT
	11.0	Soil	11.0	01/23/03	0.4	NA	NA	NA	NA	None	DPT
	12.0	Soil	12.0	01/23/03	2.4	NA	NA	NA	NA	None	DPT
	14.0	Soil	14.0	01/23/03	0.6	NA	NA	NA	NA	None	DPT
	15.0	Soil	15.0	01/23/03	12.7	NA	NA	NA	NA	None	DPT
	17.0	Soil	17.0	01/23/03	8.6	NA	NA	NA	NA	None	DPT
	18.0	Soil	18.0	01/23/03	57.9	NA	NA	NA	NA	VOCs	SB-112 (18-19 ft) / SB-200 (10-11), DPT
	20.0	Soil	20.0	01/23/03	40.3	NA	NA	NA	NA	None	DPT
	21.0	Soil	21.0	01/23/03	20.4	NA	NA	NA	NA	None	DPT
	23.0	Soil	23.0	01/23/03	2.1	NA	NA	NA	NA	None	DPT
	25.0	Soil	25.0	01/23/03	45.7	NA	NA	NA	NA	None	DPT
	27.0	Soil	27.0	01/23/03	32.1	NA	NA	NA	NA	None	DPT
	29.0	Soil	29.0	01/23/03	25.8	NA	NA	NA	NA	None	DPT
	31.0	Soil	31.0	01/23/03	20.6	NA	NA	NA	NA	None	DPT
	33.0	Soil	33.0	01/23/03	15.9	NA	NA	NA	NA	None	DPT
	35.0	Soil	35.0	01/23/03	20.1	NA	NA	NA	NA	None	DPT
	36.0	Soil	36.0	01/23/03	1.1	NA	NA	NA	NA	None	DPT
	38.0	Soil	38.0	01/23/03	5.1	NA	NA	NA	NA	VOCs	SB-112 (38-39 ft), DPT, Soil wet at 40.2 ft
	39.0	Soil	39.0	01/23/03	7.5	NA	NA	NA	NA		
	41.0	Soil	41.0	01/23/03	31.1	NA	NA	NA	NA	None	DPT, Boring terminated 41 ft
SB-113	0.2	Soil	0-2	2/3-5/03	141.0	NA	NA	NA	NA	VOC/SPLP VOC	SB-113 (0-2 ft), Rotosonic soil coring
	2-4	Soil	2-4	2/3-5/03	87.2	NA	NA	NA	NA	None	Rotosonic soil coring
	4-6	Soil	4-6	2/3-5/03	57.0	NA	NA	NA	NA	VOCs	SB-113 (4-6 ft), Rotosonic soil coring
	6-8	Soil	6-8	2/3-5/03	52.2	NA	NA	NA	NA	None	Rotosonic soil coring
	8-10	Soil	8-10	2/3-5/03	7.9	NA	NA	NA	NA	None	Rotosonic soil coring
	10-12	Soil	10-12	2/3-5/03	21.1	NA	NA	NA	NA	None	Rotosonic soil coring
	12-14	Soil	12-14	2/3-5/03	41.3	NA	NA	NA	NA	None	Rotosonic soil coring
	14-16	Soil	14-16	2/3-5/03	24.8	NA	NA	NA	NA	None	Rotosonic soil coring
	16-18	Soil	16-18	2/3-5/03	27.6	NA	NA	NA	NA	None	Rotosonic soil coring
	18-20	Soil	18-20	2/3-5/03	35.4	NA	NA	NA	NA	None	Rotosonic soil coring
	20-22	Soil	20-22	2/3-5/03	39.6	NA	NA	NA	NA	None	Rotosonic soil coring
	22-24	Soil	22-24	2/3-5/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	24-26	Soil	24-26	2/3-5/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	26-28	Soil	26-28	2/3-5/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	28-30	Soil	28-30	2/3-5/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	30-32	Soil	30-32	2/3-5/03	54.1	NA	NA	NA	NA	None	Rotosonic soil coring
	32-34	Soil	32-34	2/3-5/03	52.6	NA	NA	NA	NA	None	Rotosonic soil coring
	34-36	Soil	34-36	2/3-5/03	28.2	NA	NA	NA	NA	None	Rotosonic soil coring
	36-38	Soil	36-38	2/3-5/03	31.8	NA	NA	NA	NA	None	Rotosonic soil coring
	38-40	Soil	38-40	2/3-5/03	51.8	NA	NA	NA	NA	None	Rotosonic soil coring
	40-42	Soil	40-42	2/3-5/03	36.1	NA	NA	NA	NA	VOCs	SB-113 (40-42 ft), Rotosonic soil coring,
	42-44	Soil	42-44	2/3-5/03	NM	NA	NA	NA	NA	specific gravity, grain size, falling head perm, water retention	SB-113 (43-45 ft), Rotosonic soil coring, Soil wet at 42 ft
	44-46	Soil	44-46	2/3-5/03	NM	NA	NA	NA	NA		
	46-48	Soil	46-48	2/3-5/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	48-50	Soil	48-50	2/3-5/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring
	43.5-47.5	Groundwater	43.5-47.5	02/05/03	NA	NM	NM	NM	NM	VOCs	SB-113 (43.5-47.5) Uppermost, Rotosonic Isoflow system
	57-62	Groundwater	57-62	02/05/03	NA	NM	NM	NM	NM	VOCs	SB-113 (57-62) Twiggs, Rotosonic Isoflow system, Boring terminated 78.5 ft

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
SB-114	0-2	Soil	0-2	02/05/03	27.7	NA	NA	NA	NA	VOCs	SB-114 (0-2 ft), Rotosonic soil coring
	2-4	Soil	2-4	02/05/03	25.3	NA	NA	NA	NA	None	Rotosonic soil coring
	4-6	Soil	4-6	02/05/03	28.3	NA	NA	NA	NA	None	Rotosonic soil coring
	6-8	Soil	6-8	02/05/03	32.6	NA	NA	NA	NA	None	Rotosonic soil coring
	8-10	Soil	8-10	02/05/03	39.4	NA	NA	NA	NA	None	Rotosonic soil coring
	10-12	Soil	10-12	02/05/03	45.7	NA	NA	NA	NA	None	Rotosonic soil coring
	12-14	Soil	12-14	02/05/03	44.0	NA	NA	NA	NA	None	Rotosonic soil coring
	14-16	Soil	14-16	02/05/03	47.9	NA	NA	NA	NA	None	Rotosonic soil coring
	16-18	Soil	16-18	02/05/03	72.5	NA	NA	NA	NA	None	Rotosonic soil coring
	18-20	Soil	18-20	02/05/03	69.3	NA	NA	NA	NA	None	Rotosonic soil coring
	20-22	Soil	20-22	02/05/03	55.8	NA	NA	NA	NA	None	Rotosonic soil coring
	22-24	Soil	22-24	02/05/03	86.1	NA	NA	NA	NA	VOCs / SPLP VOCs	SB-114 (22-24 ft), Rotosonic soil coring
	24-26	Soil	24-26	02/05/03	41.1	NA	NA	NA	NA	None	Rotosonic soil coring
	26-28	Soil	26-28	02/05/03	43.1	NA	NA	NA	NA	None	Rotosonic soil coring
	28-30	Soil	28-30	02/05/03	17.8	NA	NA	NA	NA	None	Rotosonic soil coring
	30-32	Soil	30-32	02/05/03	40.9	NA	NA	NA	NA	None	Rotosonic soil coring
	32-34	Soil	32-34	02/05/03	39.6	NA	NA	NA	NA	None	Rotosonic soil coring
	34-36	Soil	34-36	02/05/03	28.3	NA	NA	NA	NA	None	Rotosonic soil coring
	36-38	Soil	36-38	02/05/03	34.1	NA	NA	NA	NA	None	Rotosonic soil coring
	38-40	Soil	38-40	02/05/03	24.5	NA	NA	NA	NA	None	Rotosonic soil coring
	40-42	Soil	40-42	02/05/03	45.0	NA	NA	NA	NA	None	Rotosonic soil coring
	42-44	Soil	42-44	02/05/03	39.0	NA	NA	NA	NA	VOCs	SB-114 (42-44 ft), Rotosonic soil coring
	45.0	Soil	45.0	02/05/03	NM	NA	NA	NA	NA	None	Rotosonic soil coring, Soil wet at 45 ft
	45-48	Groundwater	45-48	02/05/03	NA	NM	NM	NM	NM	VOCs	SB-114 (45-48 ft) Uppermost, Rotosonic Isoflow system
	60-65	Groundwater	60-65	02/05/03	NA	NM	NM	NM	NM	VOCs	SB-114 (60-65 ft) Twiggs, Rotosonic Isoflow system, Boring terminated 78.5 ft
SB-115	0-2	Soil	0-2	03/13/03	29.4	NA	NA	NA	NA	VOCs	SB-115 (0 -2), DPT
	4-8	Soil	4-8	03/13/03	9.6/1.1	NA	NA	NA	NA	None	DPT
	8-11.5	Soil	8-11.5	03/13/03	9.7/3.4	NA	NA	NA	NA	None	DPT
	11.5-15	Soil	11.5-15	03/13/03	3.4/71.2	NA	NA	NA	NA	VOCs	SB-115 (11-13), DPT
	15-18.5	Soil	15-18.5	03/13/03	359/242	NA	NA	NA	NA	None	DPT
	18.5-22	Soil	18.5-22	03/13/03	1050/550	NA	NA	NA	NA	VOCs	SB-115 (18-20), DPT
	22-25.5	Soil	22-25.5	03/13/03	100	NA	NA	NA	NA	None	DPT
	25.5-27	Soil	25.5-27	03/13/03	NM	NA	NA	NA	NA	None	DPT
	27-30	Soil	27-30	03/13/03	NM	NA	NA	NA	NA	None	DPT
	30-33.5	Soil	30-33.5	03/13/03	NM	NA	NA	NA	NA	None	DPT
	33.5-37	Soil	33.5-37	03/13/03	NM	NA	NA	NA	NA	None	DPT
	24-27	Groundwater	24-27	03/13/03	NA	NM	NM	NM	NM	VOCs	SB-115 (24-27) Uppermost, DPT
	35-37	Groundwater	25-37	03/13/03	NA	NM	NM	NM	NM	VOCs	SB-115 (35-37) Twiggs, DPT, Soil wet at 33 ft, Boring terminated 37 ft
SB-116	0-4	Soil	0-4	03/12/03	2.3/0.8	NA	NA	NA	NA	VOCs	SB-116 (0-2), DPT
	4-8	Soil	4-8	03/12/03	0.9/0.8	NA	NA	NA	NA	None	DPT
	8-12	Soil	8-12	03/12/03	0.0	NA	NA	NA	NA	None	DPT
	12-15.5	Soil	12-15.5	03/12/03	1.7/0.3	NA	NA	NA	NA	None	DPT
	15.5-19	Soil	15.5-19	03/12/03	0.0	NA	NA	NA	NA	None	DPT
	19-22.5	Soil	19-22.5	03/12/03	73.5	NA	NA	NA	NA	None	DPT
	22.5-26	Soil	22.5-26	03/12/03	44.9/12.9	NA	NA	NA	NA	None	DPT
	26-29.5	Soil	26-29.5	03/12/03	0.0/92.3	NA	NA	NA	NA	None	DPT
	29.5-33	Soil	29.5-33	03/12/03	11.9	NA	NA	NA	NA	None	DPT
	33-36.5	Soil	33-36.5	03/12/03	124.0	NA	NA	NA	NA	None	DPT
	36.5-40.0	Soil	36.5-40.0	03/12/03	NM	NA	NA	NA	NA	None	DPT
	40.0-43.5	Soil	40.0-43.5	03/12/03	NM	NA	NA	NA	NA	None	DPT, Boring terminated 43.5 ft
SB-117	0.0-4.0	Soil	0.0-4.0	03/12/03	0.0	NA	NA	NA	NA	VOCs	SB-117 (0-2), DPT
	4.0-8.0	Soil	4.0-8.0	03/12/03	2.4/1.3	NA	NA	NA	NA	None	DPT
	8.0-11.5	Soil	8.0-11.5	03/12/03	0.0	NA	NA	NA	NA	None	DPT
	11.5-15.0	Soil	11.5-15.0	03/12/03	17.3	NA	NA	NA	NA	VOCs	SB-117 (12-14), DPT
	15.0-18.5	Soil	15.0-18.5	03/12/03	2.1/0.0	NA	NA	NA	NA	None	DPT
	18.5-22.0	Soil	18.5-22.0	03/12/03	0.8/0.0	NA	NA	NA	NA	None	DPT
	22.0-25.5	Soil	22.0-25.5	03/12/03	2.1/1.3	NA	NA	NA	NA	None	DPT
	25.5-29.0	Soil	25.5-29.0	03/12/03	1.8	NA	NA	NA	NA	None	DPT
	29.0-32.5	Soil	29.0-32.5	03/12/03	0.0/0.8	NA	NA	NA	NA	None	DPT
	32.5-36.0	Soil	32.5-36.0	03/12/03	2.1/2.4	NA	NA	NA	NA	None	DPT
	36.0-39.5	Soil	36.0-39.5	03/12/03	2.1/5.0	NA	NA	NA	NA	None	DPT
	39.5-43.0	Soil	39.5-43.0	03/12/03	0.0	NA	NA	NA	NA	None	DPT
	43.0-46.5	Soil	43.0-46.5	03/12/03	0.0/4.9	NA	NA	NA	NA	VOCs	SB-117 (44-46), DPT
	46.5-50.0	Soil	46.5-50.0	03/12/03	NM	NA	NA	NA	NA	None	DPT, Soil wet at 48 ft, Boring terminated 50 ft
SB-118	0.0-4.0	Soil	0.0-4.0	03/26/03	0.8/3.7	NA	NA	NA	NA	VOCs	SB-118 (0-2), DPT
	4.0-8.0	Soil	4.0-8.0	03/26/03	1.5	NA	NA	NA	NA	VOCs	SB-118 (4-5), DPT, Soil wet at 6 ft
	8.0-10.0	Soil	8.0-10.0	03/26/03	NM	NA	NA	NA	NA	None	DPT
	10.0-14.0	Soil	10.0-14.0	03/26/03	NM	NA	NA	NA	NA	None	DPT
	14.0-17.0	Soil	14.0-17.0	03/26/03	NM	NA	NA	NA	NA	None	DPT
	17.0-19.0	Soil	17.0-19.0	03/26/03	NM	NA	NA	NA	NA	None	DPT
	19.0-21.0	Soil	19.0-21.0	03/26/03	NM	NA	NA	NA	NA	None	DPT
	6-10	Groundwater	6-10	03/26/03	NA	NM	NM	NM	NM	VOCs	SB-118 (6-10) Uppermost, DPT
	17-21	Groundwater	17-21	03/26/03	NA	NM	NM	NM	NM	VOCs	SB-118 (17-21) Twiggs, DPT, Boring terminated 21 ft
HA-1	0.4-2.1	Soil	0.4-2.1	03/27/03	5.8	NA	NA	NA	NA	VOCs	HA-1 0.4-2.1, Handauger
HA-2	0.35-2.1	Soil	0.35-2.1	03/27/03	80.1	NA	NA	NA	NA	VOCs	HA-2 0.35-2.1, Handauger
HA-3	0.35-2.1	Soil	0.35-2.1	03/27/03	1.4	NA	NA	NA	NA	VOCs	HA-3 0.35-2.05, Handauger
HA-4	0.42-1.9	Soil	0.42-1.9	03/27/03	4.9	NA	NA	NA	NA	VOCs	HA-4 0.42-1.95, Handauger
HA-5	0.4-2.2	Soil	0.4-2.2	03/27/03	12.7	NA	NA	NA	NA	VOCs	HA-5 0.4-2.2, Handauger
HA-6	1.2-2	Soil	1.2-2	03/27/03	NM	NA	NA	NA	NA	VOCs	HA-6 1.2-2, Handauger
HA-7	3-5	Soil	3-5	03/27/03	3.0/5.1	NA	NA	NA	NA	VOCs	HA-7 3-5, Handauger
HA-8	0-0.5	Soil	0-0.5	03/27/03	255.0	NA	NA	NA	NA	VOCs	HA-8 0-0.5, Handauger
SPLP AOC-1 HA-2	0.35-2.1	Soil	0.4-2.1	03/27/03	NM	NA	NA	NA	NA	SPLP VOCs	SPLP AOC-1 HA-2, Handauger
SPLP AOC-3 HA-6	1.2-2	Soil	1.2-2	03/27/03	NM	NA	NA	NA	NA	SPLP VOCs	SPLP AOC-3 HA-6, Handauger
Kd-1	0-1	Soil	0-1	04/12/05	134	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/12/05	385	NA	NA	NA	NA	VOCs	Kd-1 (2 ft), DPT
	3	Soil	3	04/12/05	72.5	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/12/05	147	NA	NA	NA	NA	VOCs	Kd-1 (4 ft), DPT
	5	Soil	5	04/12/05	NM	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/12/05	35.8	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/12/05	31.2	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/12/05	24.3	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/12/05	8.8	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/12/05	7.2	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/12/05	6.1	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/12/05	11	NA	NA	NA	NA	None	DPT

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
Kd-2	0-1	Soil	0-1	04/12/05	NR	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/12/05	25.6	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/12/05	5.4	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/12/05	31.2	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/12/05	11.6	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/12/05	13.7	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/12/05	9.6	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/12/05	50.6	NA	NA	NA	NA	VOCs	Kd-2 (8 ft), DPT
	9	Soil	9	04/12/05	3.3	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/12/05	4.9	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/12/05	2.8	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/12/05	0.3	NA	NA	NA	NA	None	DPT
Kd-3	0-1	Soil	0-1	04/12/05	34.8	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/12/05	70.2	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/12/05	94.2	NA	NA	NA	NA	VOCs	Kd-3 (3 ft), DPT
	4	Soil	4	04/12/05	146	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-3 (4 ft), DPT
	5	Soil	5	04/12/05	5.7	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/12/05	22.5	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/12/05	7.9	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/12/05	3.8	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/12/05	2.5	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/12/05	6.3	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/12/05	3.5	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/12/05	0.1	NA	NA	NA	NA	None	DPT
Kd-4	0-1	Soil	0-1	04/12/05	355	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/12/05	487	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-4 (2 ft), DPT
	3	Soil	3	04/12/05	322	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/12/05	13.4	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/12/05	3.3	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/12/05	1.3	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/12/05	1.6	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/12/05	6	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/12/05	4.3	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/12/05	2	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/12/05	100	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-4 (11 ft), DPT
	12	Soil	12	04/12/05	6.1	NA	NA	NA	NA	None	DPT
Kd-5	0-1	Soil	0-1	04/12/05	8.4	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/12/05	30.6	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/12/05	60.5	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-5 (3 ft), DPT
	4	Soil	4	04/12/05	6.7	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/12/05	0.9	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/12/05	3	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/12/05	9.3	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/12/05	2.8	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/12/05	9.3	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/12/05	16	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/12/05	17.5	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/12/05	13.6	NA	NA	NA	NA	None	DPT
Kd-6	0-1	Soil	0-1	04/13/05	NR	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	0	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	0.3	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/13/05	0	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/13/05	0	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	0.3	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/13/05	0	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/13/05	NR	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	NR	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/13/05	NR	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/13/05	NR	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	NR	NA	NA	NA	NA	None	DPT
Kd-7	0	Soil	0	04/13/05	68.1	NA	NA	NA	NA	None	DPT
	1	Soil	1	04/13/05	210	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	57	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	16.6	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-7 (3 ft), DPT
	4	Soil	4	04/13/05	9.8	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/13/05	20.9	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	3.8	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/13/05	1.7	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/13/05	1.6	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	1.9	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/13/05	6.3	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/13/05	0.7	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	3.4	NA	NA	NA	NA	None	DPT
Kd-8	0-1	Soil	0-1	04/13/05	NR	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	260	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	10.1	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/13/05	0.3	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/13/05	2.6	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	2.5	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/13/05	1.9	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/13/05	1.7	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	363	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-8 (9 ft), DPT
	10	Soil	10	04/13/05	8.3	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/13/05	6.8	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	20.2	NA	NA	NA	NA	None	DPT
	13	Soil	13	04/13/05	NR	NA	NA	NA	NA	None	DPT
	14	Soil	14	04/13/05	41.9	NA	NA	NA	NA	None	DPT
	15	Soil	15	04/13/05	11.8	NA	NA	NA	NA	None	DPT
	16	Soil	16	04/13/05	17.9	NA	NA	NA	NA	None	DPT
Kd-9	0-1	Soil	0-1	04/13/05	NR	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	NR	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	33.3	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/13/05	8.4	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/13/05	15.9	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	18.6	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/13/05	69.2	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-9 (7 ft), DPT
	8	Soil	8	04/13/05	27.2	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	420	NA	NA	NA	NA	VOCs	Kd-9 (9 ft), DPT
	10	Soil	10	04/13/05	46.9	NA	NA	NA	NA	VOCs	Kd-9 (10 ft), DPT
	11	Soil	11	04/13/05	39.6	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	13.8	NA	NA	NA	NA	None	DPT

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
Kd-10	0-1	Soil	0-1	04/13/05	NR	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	NR	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	438	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-10 (3 ft), DPT
	4	Soil	4	04/13/05	245	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/13/05	193	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	96.1	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/13/05	40	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/13/05	23.7	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	711	NA	NA	NA	NA	VOCs	Kd-10 (9 ft), DPT
	10	Soil	10	04/13/05	474	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/13/05	97.6	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	16	NA	NA	NA	NA	None	DPT
	13	Soil	13	04/13/05	863	NA	NA	NA	NA	VOCs	Kd-10 (13 ft), DPT
	14	Soil	14	04/13/05	243	NA	NA	NA	NA	None	DPT
	15	Soil	15	04/13/05	3006	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-10 (15 ft), DPT
	16	Soil	16	04/13/05	119	NA	NA	NA	NA	None	DPT
	17	Soil	17	04/13/05	2012	NA	NA	NA	NA	VOCs	Kd-10 (17 ft), DPT
	18	Soil	18	04/13/05	1375	NA	NA	NA	NA	None	DPT
	19	Soil	19	04/13/05	511	NA	NA	NA	NA	None	DPT
	20	Soil	20	04/13/05	126	NA	NA	NA	NA	None	DPT
Kd-11	0-1	Soil	0-1	04/13/05	0	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	2.7	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	25.7	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/13/05	60.1	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-11 (4 ft), DPT
	5	Soil	5	04/13/05	19.3	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	54.8	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-11 (6 ft), DPT
	7	Soil	7	04/13/05	25.4	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/13/05	38.3	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	NR	NA	NA	NA	NA	None	DPT
	10	Soil	10	04/13/05	2334	NA	NA	NA	NA	None	DPT
	11	Soil	11	04/13/05	29.4	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	20.8	NA	NA	NA	NA	None	DPT
Kd-12	0-1	Soil	0-1	04/13/05	NR	NA	NA	NA	NA	None	DPT
	2	Soil	2	04/13/05	NR	NA	NA	NA	NA	None	DPT
	3	Soil	3	04/13/05	17.1	NA	NA	NA	NA	None	DPT
	4	Soil	4	04/13/05	15.9	NA	NA	NA	NA	None	DPT
	5	Soil	5	04/13/05	6.5	NA	NA	NA	NA	None	DPT
	6	Soil	6	04/13/05	30.9	NA	NA	NA	NA	None	DPT
	7	Soil	7	04/13/05	9.7	NA	NA	NA	NA	None	DPT
	8	Soil	8	04/13/05	18.5	NA	NA	NA	NA	None	DPT
	9	Soil	9	04/13/05	667	NA	NA	NA	NA	VOCs	Kd-12 (9 ft), DPT
	10	Soil	10	04/13/05	466	NA	NA	NA	NA	VOCs, SPLP VOCs	Kd-12 (10 ft), DPT
	11	Soil	11	04/13/05	NR	NA	NA	NA	NA	None	DPT
	12	Soil	12	04/13/05	NR	NA	NA	NA	NA	None	DPT
MW-1	MW-1	Groundwater	69.4-74.4	02/25/00	NA	6.99	0.482	15.8	10	VOCs	Purged and sampled with bailer
	MW-1	Groundwater	69.4-74.4	10/02/00	NA	6.72	0.231	18.4	10	VOCs	Purged and sampled with bailer
	MW-1	Groundwater	69.4-74.4	02/19/03	NA	6.28	0.127	20.1	NM	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-1(MW-1A)	Groundwater	72.2-73.7*	05/05/04	NA	6.10	0.124	21.3	4.72	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-1(MW-1A)	Groundwater	72.2-73.7*	10/12-13/04	NA	5.68	0.110	22.5	9.6	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-1(MW-1A)	Groundwater	72.2-73.7*	04/07/08	NA	3.76	0.00	18.5	NM	VOCs	VOCs sampled with PDB.
	MW-1	Groundwater	72.2-73.7	06/01/10	NA	3.89	0.01	25.0	0.4	VOCs	VOCs sampled with PDB.
MW-2	MW-2	Groundwater	53-58	02/25/00	NA	NM	NM	NM	NM	VOCs	Purged and sampled with bailer
	MW-2	Groundwater	53-58	10/03/00	NA	7.12	0.219	22.3	100	VOCs	Purged and sampled with bailer
	MW-2	Groundwater	53-58	02/19/03	NA	7.20	0.210	21.1	1	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-2(MW-2A)	Groundwater	55.4-56.9*	05/05/04	NA	NM	NM	NM	0.05	VOCs	VOCs sampled with PDB.
	MW-2(MW-2A)	Groundwater	55.4-56.9*	10/12/04	NA	5.10	0.01	24.4	0.28	VOCs	VOCs sampled with PDB.
	MW-2(MW-2A)	Groundwater	55.4-56.9*	04/07/08	NA	4.0	0.00	20.3	NM	VOCs	VOCs sampled with PDB.
	MW-2(MW-2A)	Groundwater	55.4-56.9*	06/01/10	NS	4.3	0.03	27.7	1.45	VOCs	VOCs sampled with PDB.
MW-3	MW-3	Groundwater	55-60	02/25/00	NA	NM	NM	NM	NM	VOCs	Purged and sampled with bailer
	MW-3	Groundwater	55-60	10/03/00	NA	6.15	0.155	25.9	6	VOCs	Purged and sampled with bailer
	MW-3	Groundwater	55-60	02/18/03	NA	5.42	0.103	24.6	4	VOCs	Purged with submersible pump, sampled with bailer
	MW-3(MW-3A)	Groundwater	57.5-59*	05/06/04	NA	5.70	0.122	25.1	1.79	VOCs, Site Total and Dissolved metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-3(MW-3A)	Groundwater	57.5-59*	10/12-13/04	NA	5.50	0.100	27.0	0.5	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-3(MW-3A)	Groundwater	57.5-59*	04/08/08	NA	3.76	0.00	19.5	NM	VOCs	VOCs sampled with PDB.
	MW-3(MW-3A)	Groundwater	57.5-59*	06/02/10	NA	4.39	0.01	24.9	0.48	VOCs	VOCs sampled with PDB.
	MW-3	Groundwater	57.5-59*	06/03/10	NA	5.31	0.08	23.4	0.13	VOCs	VOCs LFLS with bladder pump
MW-4	MW-4	Groundwater	53-58	02/25/00	NA	NM	NM	NM	NM	VOCs	Purged and sampled with bailer
	MW-4	Groundwater	53-58	10/03/00	NA	7.31	0.306	25.9	102	VOCs	Purged and sampled with bailer
	MW-4	Groundwater	53-58	02/18/03	NA	7.03	0.262	25.2	3	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-4(MW-4A)	Groundwater	'55.5-57*	05/06/04	NA	7.05	0.273	26.8	2.93	VOCs, Site Total and Dissolved metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-4(MW-4A)	Groundwater	'55.5-57*	10/12-13/04	NA	7.15	0.260	26.1	11.1	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-4(MW-4A)	Groundwater	'55.5-57*	04/08/08	NA	3.87	0.00	19.8	NM	VOCs	VOCs sampled with PDB.
	MW-4(MW-4A)	Groundwater	'55.5-57*	06/02/10	NA	4.33	0.00	26.4	0.86	VOCs	VOCs sampled with PDB.
MW-5	MW-5	Groundwater	49-54	02/25/00	NA	7.44	0.285	18.1	10	VOCs	Purged and sampled with bailer
	MW-5	Groundwater	49-54	10/03/00	NA	6.68	0.227	23.7	13	VOCs	Purged and sampled with bailer
	MW-5	Groundwater	49-54	02/18/03	NA	6.33	0.161	22.2	0	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-5	Groundwater	49-54	06/12/03	NA	7.10	0.161	23.1	329	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-5	Groundwater	49-54	07/08/03	NA	7.18	0.457	22.7	13	Ca Mg Na K Chloride Sulfate and Alkalinity	Purged with submersible pump LFLS, sampled with bailer
	MW-5(MW-5A)	Groundwater	51.4-52.9	05/07/04	NA	6.17	0.155	22	1.9	VOCs, Site Total and Dissolved metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-5(MW-5A)	Groundwater	51.4-52.9	10/12-13/04	NA	5.78	0.120	24.6	0	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-5(MW-5A)	Groundwater	51.4-52.9	04/07/08	NA	4.10	0.00	20.1	NM	VOCs	VOCs sampled with PDB.
	MW-5(MW-5A)	Groundwater	51.4-52.9	06/01/10	NA	3.88	0.00	26.5	2.23	VOCs	VOCs sampled with PDB.
	MW-5	Groundwater	51.4-52.9	06/02/10	NA	5.64	0.10	21.8	1.11	VOCs	VOCs LFLS with bladder pump

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
MW-6	MW-6	Groundwater	43-48	02/25/00	NA	NM	NM	NM	NM	VOCs	Purged and sampled with bailer
	MW-6	Groundwater	43-48	10/03/00	NA	6.70	0.214	21.4	13	VOCs	Purged and sampled with bailer
	MW-6	Groundwater	43-48	02/18/03	NA	6.79	0.253	24.9	2	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-6	Groundwater	43-48	04/08/08	NA	3.70	0.00	19.6	NM	VOCs	VOCs sampled with PDB.
	MW-6	Groundwater	43-48	06/01/10	NA	4.67	0.01	28.7	1.28	VOCs	VOCs sampled with PDB.
MW-7	MW-7	Groundwater	46-56	02/25/03	NA	6.65	0.353	23.1	2	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-7	Groundwater	46-56	04/08/08	NA	3.32	0.03	17.3	NM	VOCs	VOCs sampled with PDB.
	MW-7	Groundwater	46-56	06/01/10	NA	4.11	0.01	27.6	0.82	VOCs	VOCs sampled with PDB.
MW-8	MW-8	Groundwater	60-70	02/24/03	NA	7.25	0.249	23.4	4	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-8 (MW-8A)	Groundwater	'60.6-62.1	05/07/04	NA	4.73	0.045	22.2	0.18	VOCs	VOCs sampled with PDB.
	MW-8 (MW-8B)	Groundwater	65.6-67.1	05/07/04	NA	5.04	0.018	21.3	0.01	VOCs	VOCs sampled with PDB.
	MW-8 (MW-8A)	Groundwater	'60.6-62.1	10/12/04	NA	4.86	0.0	23.9	0.29	VOCs	VOCs sampled with PDB.
	MW-8 (MW-8A)	Groundwater	60.6-62.1	04/07/08	NA	4.15	0.0	19.2	NM	VOCs	VOCs sampled with PDB.
	MW-8 (MW-8A)	Groundwater	60.6-62.2	06/01/10	NA	4.46	0.0	25.6	1.38	VOCs	VOCs sampled with PDB.
MW-9	MW-9	Groundwater	55-65	02/24/03	NA	7.23	0.264	23.8	1	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-9	Groundwater	55-65	04/07/08	NA	3.81	0.00	18.8	NM	VOCs	VOCs sampled with PDB.
	MW-9	Groundwater	55-65	06/01/10	NA	4.06	0.03	26.0	0.92	VOCs	VOCs sampled with PDB.
MW-10	MW-10	Groundwater	35-45	02/25/03	NA	6.98	0.254	24.5	3	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-10 (MW-10A)	Groundwater	38.6-40.1	05/06/04	NA	6.50	0.089	25.0	0.25	VOCs, Total and Dissolved Metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-10 (MW-10B)	Groundwater	43.6-45.1	05/06/04	NA	5.59	0.018	23.1	0.56	VOCs	VOCs sampled with PDB.
	MW-10 (MW-10A)	Groundwater	38.6-40.1	10/12-13/04	NA	6.26	0.130	24.3	0	VOCs, Total and Dissolved Metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-10 (MW-10A)	Groundwater	38.6-40.1	04/08/08	NA	3.80	0.00	1.0	NM	VOCs	VOCs sampled with PDB.
	MW-10 (MW-10A)	Groundwater	38.6-40.1	06/02/10	NA	4.49	0.00	24.2	0.82	VOCs	VOCs sampled with PDB.
	MW-10	Groundwater	38.6-40.1	06/03/10	NA	5.62	0.06	20.5	0.54	VOCs	VOCs LFLS with bladder pump
MW-11	MW-11	Groundwater	66-76	02/25/03	NA	7.34	0.212	23.4	4	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-11	Groundwater	66-76	04/07/08	NA	4.29	0.00	18.5	NM	VOCs	VOCs sampled with PDB.
	MW-11	Groundwater	66-76	06/02/10	NA	4.77	0.00	26.2	1.04	VOCs	VOCs sampled with PDB.
MW-12	MW-12	Groundwater	60.5-70.5	02/25/03	NA	7.62	0.184	21.8	1	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-12	Groundwater	60.5-70.5	04/07/08	NA	3.67	0.01	19.5	NM	VOCs	VOCs sampled with PDB.
	MW-12	Groundwater	60.5-70.5	06/02/10	NA	4.64	0.00	25.6	0.92	VOCs	VOCs sampled with PDB.
MW-13	MW-13	Groundwater	12-22	02/26/03	NA	5.93	0.123	16.7	1	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-13	Groundwater	40534.0	04/07/08	NA	3.87	0.00	18.4	NM	VOCs	VOCs sampled with PDB.
	MW-13	Groundwater	40534.0	06/02/10	NA	4.13	0.00	25.9	1.18	VOCs	VOCs sampled with PDB.
MW-14	MW-14	Groundwater	71.2-81.2	04/03/03	NA	6.91	0.343	22.3	721	VOCs	Purged with submersible pump LFLS, sampled with bailer
	DUP-400/MW-14	Groundwater	71.2-81.2	04/03/03	NA	6.91	0.343	22.3	721	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14 PRE	Groundwater	71.2-81.2	04/21/03	NA	6.29	0.334	20.4	7	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14 POST	Groundwater	71.2-81.2	04/21/03	NA	7.57	0.339	22.2	156	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14 LONG	Groundwater	71.2-81.2	04/21/03	NA	7.59	0.359	21.5	5	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14 7:10	Groundwater	71.2-81.2	06/13/03	NA	7.42	0.298	21.3	71	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14 9:30	Groundwater	71.2-81.2	06/13/03	NA	7.56	0.291	21.0	12	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14 12:15	Groundwater	71.2-81.2	06/13/03	NA	7.39	0.290	21.8	17	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-14	Groundwater	71.2-81.2	07/08/03	NA	7.23	0.408	20.6	168	Ca Mg Na K Chloride Sulfate and Alkalinity	Purged with submersible pump LFLS, sampled with bailer
	MW-14 (MW-14A)	Groundwater	74.5-76	5/5/2004	NA	NM	NM	NM	7.35	VOCs	VOCs sampled with PDB.
	MW-14 (MW-14B)	Groundwater	79.5-81	5/5/2004	NA	NM	NM	NM	0.43	VOCs	VOCs sampled with PDB.
	MW-14 (MW-14C)	Groundwater	84.5-86	5/5/2004	NA	7.40	0.034	21.1	0.54	VOCs	VOCs sampled with PDB.
	MW-14 (MW-14A)	Groundwater	74.5-76	10/12/2004	NA	4.55	0.00	26.2	0	VOCs	VOCs sampled with PDB.
	MW-14 (MW-14A)	Groundwater	74.5-76	4/7/2008	NA	3.97	0.00	18.7	NM	VOCs	VOCs sampled with PDB.
	MW-14 (MW-14A)	Groundwater	74.5-76	6/2/2010	NA	4.79	0.00	23.5	0.92	VOCs	VOCs sampled with PDB.
	MW-14	Groundwater	74.5-76	6/3/2010	NA	7.17	0.46	20.2	0	VOCs	VOCs LFLS with bladder pump
MW-15	MW-15	Groundwater	6.7-11.7	04/03/03	NA	6.46	0.390	17.3	2	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-15	Groundwater	6.7-11.7	04/07/08	NA	3.85	0.00	19.4	NM	VOCs	VOCs sampled with PDB.
	MW-15	Groundwater	6.7-11.7	06/02/10	NA	4.40	0.00	26.8	1.66	VOCs	VOCs sampled with PDB.
MW-16	MW-16	Groundwater	6.7-11.7	04/04/03	NA	5.50	0.062	16.8	0	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-16	Groundwater	6.7-11.7	04/07/08	NA	3.87	0.0	20.3	NM	VOCs	VOCs sampled with PDB.
	MW-16	Groundwater	6.7-11.7	06/02/10	NA	4.22	0.0	21.8	1.11	VOCs	VOCs sampled with PDB.
MW-17	MW-17	Groundwater	33-47.5	05/14/03	NA	6.99	4.550	69.1	2.06	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-17	Groundwater	33-47.5	07/08/03	NA	7.00	0.537	18.8	36	Ca Mg Na K Chloride Sulfate and Alkalinity	Purged with submersible pump LFLS, sampled with bailer
	MW-17 (MW-17A)	Groundwater	36.4-37.9	05/04/04	NA	4.67	0.046	19.7	1.1	VOCs	VOCs sampled with PDB.
	MW-17 (MW-17B)	Groundwater	41.4-42.9	05/04/04	NA	4.66	0.250	20.3	1.4	VOCs	VOCs sampled with PDB.
	MW-17 (MW-17C)	Groundwater	46.4-47.9	05/04/04	NA	4.57	0.08	19.2	0.65	VOCs	VOCs sampled with PDB.
	MW-17 (MW-17A)	Groundwater	36.4-37.9	10/12/04	NA	4.46	0.00	23.4	0	VOCs	VOCs sampled with PDB.
	MW-17 (MW-17A)	Groundwater	36.4-37.9	04/07/08	NA	3.89	0.00	20.3	NM	VOCs	VOCs sampled with PDB.
	MW-17 (MW-17A)	Groundwater	36.4-37.9	06/02/10	NA	4.43	0.00	25.5	1.58	VOCs	VOCs sampled with PDB.
MW-18	MW-18	Groundwater	27-42	05/14/03	NA	6.99	396.0	64.3	8.83	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-18	Groundwater	27-42	07/08/03	NA	6.62	0.497	17.3	45	Ca Mg Na K Chloride Sulfate and Alkalinity	Purged with submersible pump LFLS, sampled with bailer
	MW-18 (MW-18A)	Groundwater	31.1-32.6	05/04/04	NA	4.65	0.004	18.1	1.1	VOCs	VOCs sampled with PDB.
	MW-18 (MW-18B)	Groundwater	36.1-37.6	05/04/04	NA	4.68	0.002	19.0	0.06	VOCs	VOCs sampled with PDB.
	MW-18 (MW-18C)	Groundwater	41.1-42.6	05/04/04	NA	NM	NM	NM	0.5	VOCs	VOCs sampled with PDB.
	MW-18 (MW-18A)	Groundwater	31.1-32.6	10/12/04	NA	4.53	0.00	24.1	0	VOCs	VOCs sampled with PDB.
	MW-18 (MW-18A)	Groundwater	31.1-32.6	04/07/08	NA	3.81	0.00	21.6	NM	VOCs	VOCs sampled with PDB.
	MW-18 (MW-18A)	Groundwater	31.1-32.7	06/02/10	NA	4.33	0.01	22.8	1.11	VOCs	VOCs sampled with PDB.

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
MW-19	MW-19	Groundwater	36.2-46.2	05/28/03	NA	7.81	4.910	28.2	0.43	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-19	Groundwater	36.2-46.2	06/13/03	NA	8.44	0.159	20.7	999	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-19	Groundwater	36.2-46.2	07/08/03	NA	7.29	0.243	20.8	207	Ca Mg Na K Chloride Sulfate and Alkalinity	Purged with submersible pump LFLS, sampled with bailer
	MW-19 (MW-19A)	Groundwater	39.9-41.4	05/05/04	NA	7.10	0.240	21.4	3.55	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer. No dissolved metals; preserved in field prior to filtering.
	MW-19 (MW-19B)	Groundwater	44.9-46.4	05/05/04	NA	7.10	0.240	21.4	3.55	VOCs	VOCs sampled with PDB.
	MW-19 (MW-19A)	Groundwater	39.9-41.4	10/13/04	NA	6.90	0.240	26.1	1.3	VOCs, Site Total metals	VOCs sampled with PDB. Metals: Purged with submersible pump LFLS, sampled with bailer
	MW-19 (MW-19A)	Groundwater	39.9-41.4	04/08/08	NA	3.33	0.19	18.9	NM	VOCs	VOCs sampled with PDB.
	MW-19 (MW-19A)	Groundwater	39.9-41.4	06/02/10	NA	4.57	0.03	24.3	0.8	VOCs	VOCs sampled with PDB.
	MW-19	Groundwater	39.9-41.4	06/03/10	NA	6.25	0.16	20.4	0.1	VOCs	VOCs LFLS with bladder pump
MW-20	MW-20	Groundwater	91.7-106.7	05/28/03	NA	7.41	7.560	25.2	29.1	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-20 12:10	Groundwater	91.7-106.7	06/12/03	NA	6.77	0.331	24.3	13	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-20 15:00	Groundwater	91.7-106.7	06/12/03	NA	7.16	0.316	23.8	31	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-20 17:30	Groundwater	91.7-106.7	06/12/03	NA	7.09	0.320	23.2	14	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-20	Groundwater	91.7-106.7	07/08/03	NA	7.18	0.457	22.7	13	Ca Mg Na K Chloride Sulfate and Alkalinity	Purged with submersible pump LFLS, sampled with bailer
	MW-20 (MW-20A)	Groundwater	92.6-94.1	05/06/04	NA	4.74	0.063	20.5	0.04	VOCs	VOCs sampled with PDB
	MW-20 (MW-20B)	Groundwater	97.6-99.1	05/06/04	NA	4.60	0.041	20.1	0.04	VOCs	VOCs sampled with PDB
	MW-20 (MW-20C)	Groundwater	102.6-104.1	05/06/04	NA	4.82	0.023	20.0	0.23	VOCs	VOCs sampled with PDB
	MW-20 (MW-20A)	Groundwater	92.6-94.1	10/28/04	NA	7.12	0.330	23.7	1.8	VOCs	Purged with submersible pump LFLS, sampled with bailer (PDB punctured on removal and could not be sampled)
	MW-20 (MW-20A)	Groundwater	92.6-94.1	04/08/08	NA	3.79	0.00	18.0	NM	VOCs	VOCs sampled with PDB.
	MW-20 (MW-20A)	Groundwater	92.6-94.2	06/01/10	NA	4.59	0.03	27.6	1.69	VOCs	VOCs sampled with PDB.
	MW-20	Groundwater	92.6-94.3	06/02/10	NA	6.98	0.47	21.9	1.41	VOCs	VOCs LFLS with bladder pump
MW-21	MW-21	Groundwater	89.7-104.7	09/10/03	NA	7.15	0.356	23.4	3.4	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-21 (MW-21A)	Groundwater	90.7-92.2	05/07/04	NA	5.15	0.039	20.9	0	VOCs	VOCs sampled with PDB
	MW-21 (MW-21B)	Groundwater	95.7-97.2	05/07/04	NA	4.49	0.034	20.7	0	VOCs	VOCs sampled with PDB
	MW-21 (MW-21C)	Groundwater	100.7-102.2	05/07/04	NA	4.65	0.022	20.5	0	VOCs	VOCs sampled with PDB
	MW-21 (MW-21A)	Groundwater	90.7-92.2	10/12/04	NA	4.30	0.00	24.9	0.87	VOCs	VOCs sampled with PDB
	MW-21 (MW-21A)	Groundwater	90.7-92.2	04/08/08	NA	4.47	0.00	17.5	NM	VOCs	VOCs sampled with PDB
	MW-21 (MW-21A)	Groundwater	90.7-92.3	06/01/10	NA	4.28	0.03	25.5	2.0	VOCs	VOCs sampled with PDB
MW-22	MW-22	Groundwater	98.9-113.9	09/10/03	NA	7.23	0.346	21.2	8.5	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-22 (MW-22A)	Groundwater	100-101.5	05/05/04	NA	NM	NM	NM	0.32	VOCs	VOCs sampled with PDB
	MW-22 (MW-22B)	Groundwater	105-106.5	05/05/04	NA	7.90	0.012	20.9	0.21	VOCs	VOCs sampled with PDB
	MW-22 (MW-22C)	Groundwater	110-111.5	05/05/04	NA	6.32	0.012	21.6	0.14	VOCs	VOCs sampled with PDB
	MW-22 (MW-22A)	Groundwater	100-101.5	10/12/04	NA	5.43	0.010	23.5	0.1	VOCs	VOCs sampled with PDB
	MW-22 (MW-22A)	Groundwater	100-101.5	04/08/08	NA	3.85	0.00	19.1	NM	VOCs	VOCs sampled with PDB.
	MW-22 (MW-22A)	Groundwater	100-101.6	06/01/10	NA	5.34	0.01	25.8	0.4	VOCs	VOCs sampled with PDB.
MW-23	MW-23	Groundwater	90-106	09/11/03	NA	6.95	0.379	20.8	6.8	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-23(MW-23A)	Groundwater	92.1-93.6	05/05/04	NA	NM	NM	NM	0.36	VOCs	VOCs sampled with PDB
	MW-23(MW-23B)	Groundwater	97.1-98.6	05/05/04	NA	6.70	0.042	25.0	0.36	VOCs	VOCs sampled with PDB
	MW-23(MW-23C)	Groundwater	102-103.5	05/05/04	NA	NM	NM	NM	0	VOCs	VOCs sampled with PDB
	MW-23(MW-23A)	Groundwater	92.1-93.6	10/12/04	NA	6.18	0.010	23.7	0.22	VOCs	VOCs sampled with PDB
	MW-23(MW-23A)	Groundwater	92.1-93.6	04/07/08	NA	4.74	0.0	19.6	NM	VOCs	VOCs sampled with PDB
	MW-23(MW-23A)	Groundwater	92.1-93.7	06/01/10	NA	4.52	0.03	26.6	1.22	VOCs	VOCs sampled with PDB
MW-24	MW-24	Groundwater	136.9-146.7	10/12/04	NA	NM	NM	NM	NM	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-24	Groundwater	136.9-146.7	10/28/04	NA	7.12	0.300	22.8	0.25	VOCs	Purged with submersible pump LFLS, sampled with bailer
	MW-24	Groundwater	136.9-146.7	04/07/08	NA	4.08	0.00	19.3	NM	VOCs	VOCs sampled with PDB
	MW-24	Groundwater	136.9-146.8	06/01/10	NA	4.32	0.00	26.5	1.33	VOCs	VOCs sampled with PDB
MW-25	MW-25	Groundwater	91.8-106.8'	06/24/10	NA	7.17	0.44	22.7	8.7	VOCs	VOCs LFLS with bladder pump
MW-26	MW-26	Groundwater	1.0-6.0	10/20/10	NA	6.34	0.26	19.1	3.74	VOCs	VOCs LFLS with perstaltic pump
MW-27	MW-27	Groundwater	2.2-7.2	10/20/10	NA	5.44	0.07	19.0	4.8	VOCs	VOCs LFLS with perstaltic pump
MW-28	MW-28	Groundwater	2.1-7.1	10/20/10	NA	5.68	0.10	18.7	3.42	VOCs	VOCs LFLS with perstaltic pump
Manson Branch	Manson Branch #1	Surface Water	surface	05/03/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Seep	Manson Branch #2	Surface Water	surface	05/03/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	11/03/03	NA	4.36	0.089	17.4	3	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	01/15/03	NA	5.40	0.082	10.2	0	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	03/24/04	NA	5.51	0.030	15.2	4.6	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	06/23/04	NA	4.96	0.043	20.2	161	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	08/31/04	NA	3.52	0.060	21.4	12.6	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	11/17/04	NA	4.29	0.040	16.9	3.14	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	02/27/08	NA	5.46	0.00	51.5	5	VOCs	Direct filling of container
	Manson Branch #2	Surface Water	surface	06/02/10	NA	4.57	0.03	21.0	12.8	VOCs	Direct filling of container
Manson Branch	Manson Branch #3	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #4	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #5	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #6	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #7	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #8	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #9	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #10	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #11	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Manson Branch	Manson Branch #12	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Seep #1	Seep West #1	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Seep #2	Seep #2	Surface Water	surface	06/07/00	NA	5.70	0.070	17.0	NM	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	11/03/00	NA	5.46	0.055	15.2	0	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	01/15/03	NA	3.89	0.247	7.4	720	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	03/24/04	NA	7.72	0.000	17.7	39	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	06/23/04	NA	5.76	0.061	24.0	102	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	08/30/04	NA	4.82	0.060	27.3	160	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	11/17/04	NA	5.33	0.010	7.6	199	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	02/27/08	NA	5.57	0.00	46.2	0.23	VOCs	Direct filling of container
	Seep #2	Surface Water	surface	04/21/10	NA	6.15	0.02	17.0	13.5	VOCs	Direct filling of container

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
Seep #3	Seep West #3	Surface Water	surface	06/07/00	NA	NM	NM	NM	NM	VOCs	Direct filling of container
Seep A	Seep A	Surface Water	surface	01/15/03	NA	4.71	0.076	7.9	52	VOCs	Direct filling of container
Seep A	Seep A	Surface Water	surface	03/24/04	NA	NA	NA	NA	NA	NA	Not sampled-seep was dry
	Seep A	Surface Water	surface	06/23/04	NA	6.15	0.030	24.0	170	VOCs	Direct filling of container
	Seep A	Surface Water	surface	08/31/04	NA	4.02	0.010	25.6	31.4	VOCs	Direct filling of container
	Seep A	Surface Water	surface	11/17/04	NA	NA	NA	NA	NA	NA	Not sampled-seep was dry
	Seep A	Surface Water	surface	2/26/208	NA	5.9	0.00	56.9	18.4	VOCs	Direct filling of container
Seep B	Seep B	Surface Water	surface	01/15/03	NA	5.43	0.083	7.1	67	VOCs	Direct filling of container
	Seep B	Surface Water	surface	03/24/04	NA	7.73	0.070	14.9	NM	VOCs	Direct filling of container
	Seep B	Surface Water	surface	06/23/04	NA	5.08	0.085	24.3	107	VOCs	Direct filling of container
	Seep B	Surface Water	surface	08/30/04	NA	4.30	0.070	26.6	12	VOCs	Direct filling of container
	Seep B	Surface Water	surface	11/17/04	NA	5.84	0.040	11.8	5.61	VOCs	Direct filling of container
	Seep B	Surface Water	surface	02/27/08	NA	4.37	0.00	43.2	0.24	VOCs	Direct filling of container
Seep C	Seep C	Surface Water	surface	01/15/03	NA	5.01	0.076	15.8	286	VOCs	Direct filling of container
	Seep C	Surface Water	surface	03/24/04	NA	7.74	0.020	15.6	0.87	VOCs	Direct filling of container
	Seep C	Surface Water	surface	06/23/04	NA	5.31	0.020	23.9	169	VOCs	Direct filling of container
	Seep C	Surface Water	surface	08/31/04	NA	3.35	0.050	20.9	1.13	VOCs	Direct filling of container
	Seep C	Surface Water	surface	11/17/04	NA	4.62	0.040	16.7	0	VOCs	Direct filling of container
	Seep C	Surface Water	surface	02/27/08	NA	4.76	0.040	61.1	0.66	VOCs	Direct filling of container
	Seep C	Surface Water	surface	04/21/10	NA	4.88	0.010	17.1	1.66	VOCs	Direct filling of container
	Seep C	Surface Water	surface	06/02/10	NA	4.20	0.010	18.4	3.94	VOCs	Direct filling of container
Seep D	Seep D	Surface Water	surface	01/15/03	NA	5.35	0.047	8.2	41	VOCs	Direct filling of container
	Seep D	Surface Water	surface	03/24/04	NA	6.42	0.020	15.2	66.4	VOCs	Direct filling of container
	Seep D	Surface Water	surface	06/23/04	NA	5.76	0.038	23.6	5	VOCs	Direct filling of container
	Seep D	Surface Water	surface	08/31/04	NA	4.91	0.040	25.3	21.4	VOCs	Direct filling of container
	Seep D	Surface Water	surface	11/17/04	NA	4.64	0.020	10.6	38.3	VOCs	Direct filling of container
	Seep D	Surface Water	surface	02/28/08	NA	5.71	0.00	51.2	3.14	VOCs	Direct filling of container
	Seep D	Surface Water	surface	04/21/10	NA	5.86	0.04	16.8	4.85	VOCs	Direct filling of container
Seep E	Seep E	Surface Water	surface	01/15/03	NA	5.54	0.043	9.8	6	VOCs	Direct filling of container
Seep F	Seep F	Surface Water	surface	01/15/03	NA	3.89	0.165	8.0	600	VOCs	Direct filling of container
Seep G	Seep G	Surface Water	surface	01/15/03	NA	5.25	0.063	8.1	999	VOCs	Direct filling of container
	Seep G	Surface Water	surface	03/24/04	NA	7.74	0.00	11.6	63.1	VOCs	Direct filling of container
	Seep G	Surface Water	surface	06/23/04	NA	5.08	0.072	24.6	835	VOCs	Direct filling of container
	Seep G	Surface Water	surface	08/31/04	NA	4.19	0.090	25.8	>999	VOCs	Direct filling of container
	Seep G	Surface Water	surface	11/17/04	NA	3.97	0.110	10.1	>999	VOCs	Direct filling of container
	Seep G	Surface Water	surface	02/26/08	NA	5.34	0.0	55.3	3.38	VOCs	Direct filling of container
	Seep G	Surface Water	surface	04/21/10	NA	5.34	0.04	17.3	55.7	VOCs	Direct filling of container
Seep H	Seep H	Surface Water	surface	01/15/03	NA	4.18	0.149	8.8	168	VOCs	Direct filling of container
	Seep H	Surface Water	surface	03/24/04	NA	7.75	0.020	11.6	>999	VOCs	Direct filling of container
	Seep H	Surface Water	surface	06/23/04	NA	5.67	0.041	25.0	15	VOCs	Direct filling of container
	Seep H	Surface Water	surface	08/31/04	NA	4.78	0.040	28.9	90.7	VOCs	Direct filling of container
	Seep H	Surface Water	surface	11/17/04	NA	4.50	0.040	10.8	0.4	VOCs	Direct filling of container
	Seep H	Surface Water	surface	02/26/08	NA	5.31	0.00	55.0	26.3	VOCs	Direct filling of container
	Seep H	Surface Water	surface	04/21/10	NA	5.58	0.06	16.0	24	VOCs	Direct filling of container
	Seep H	Surface Water	surface	06/02/10	NA	4.42	0.01	21.7	17	VOCs	Direct filling of container
Seep I	Seep I	Surface Water	surface	01/15/03	NA	4.87	0.085	7.8	26	VOCs	Direct filling of container
	Seep I	Surface Water	surface	03/24/04	NA	5.10	0.020	12.9	NM	VOCs	Direct filling of container
	Seep I	Surface Water	surface	06/23/04	NA	3.60	0.178	25.3	4	VOCs	Direct filling of container
	Seep I	Surface Water	surface	08/31/04	NA	NA	NA	NA	NA	NA	Not sampled-seep was dry
	Seep I	Surface Water	surface	11/17/04	NA	3.34	0.080	7.3	92.5	VOCs	Direct filling of container
	Seep I	Surface Water	surface	02/27/08	NA	5.01	0.00	45.5	6.44	VOCs	Direct filling of container
	Seep I	Surface Water	surface	04/22/10	NA	5.28	0.04	16.3	6.44	VOCs	Direct filling of container
Seep J	Seep J	Surface Water	surface	05/14/03	NA	NM	NM	NM	NM	VOCs	Direct filling of container
	Seep J	Surface Water	surface	03/24/04	NA	4.83	0.110	18.1	NM	VOCs	Direct filling of container
	Seep J	Surface Water	surface	06/23/04	NA	5.85	0.048	24.6	128	VOCs	Direct filling of container
	Seep J	Surface Water	surface	08/31/04	NA	3.98	0.110	25.9	519	VOCs	Direct filling of container
	Seep J	Surface Water	surface	11/17/04	NA	5.88	0.067	13.5	0	VOCs	Direct filling of container
	Seep J	Surface Water	surface	02/26/08	NA	5.80	0.00	56.9	1.7	VOCs	Direct filling of container
	Seep J	Surface Water	surface	04/22/10	NA	5.58	0.04	15.0	20	VOCs	Direct filling of container
Seep K	Seep K	Surface Water	surface	03/24/04	NA	5.90	0.040	15.9	NM	VOCs	Direct filling of container
	Seep K	Surface Water	surface	06/24/04	NA	4.66	0.080	21.6	10	VOCs	Direct filling of container
	Seep K	Surface Water	surface	08/31/04	NA	4.63	0.090	25.8	694	VOCs	Direct filling of container
	Seep K	Surface Water	surface	11/17/04	NA	3.92	0.130	11.8	179	VOCs	Direct filling of container
	Seep K	Surface Water	surface	02/26/08	NA	5.73	0.020	55.4	2.81	VOCs	Direct filling of container
	Seep K	Surface Water	surface	04/22/10	NA	5.72	0.050	16.5	54.7	VOCs	Direct filling of container
Seep L	Seep L	Surface Water	surface	03/24/04	NA	7.73	0.050	17.9	31.5	VOCs	Direct filling of container
	Seep L	Surface Water	surface	06/24/04	NA	4.65	0.009	21.4	10	VOCs	Direct filling of container
	Seep L	Surface Water	surface	08/31/04	NA	4.52	0.110	25.5	2.44	VOCs	Direct filling of container
	Seep L	Surface Water	surface	11/17/04	NA	5.20	0.090	11.9	0	VOCs	Direct filling of container
	Seep L	Surface Water	surface	02/27/08	NA	5.66	0.020	49.5	3.76	VOCs	Direct filling of container
	Seep L	Surface Water	surface	06/03/10	NA	5.82	0.060	22.5	24.6	VOCs	Direct filling of container
Manson Branch	MB#14	Surface Water	surface	01/15/03	NA	5.33	0.199	6.9	111	VOCs	Direct filling of container
	MB#14	Surface Water	surface	02/26/08	NA	5.88	0.040	56.7	27.7	VOCs	Direct filling of container
	MB#14	Surface Water	surface	04/22/10	NA	6.26	0.040	14.7	11.5	VOCs	Direct filling of container
Manson Branch	MB#15	Surface Water	surface	01/15/03	NA	5.55	0.099	7.3	11	VOCs	Direct filling of container
	MB#15	Surface Water	surface	02/27/08	NA	6.00	0.00	50.0	8.91	VOCs	Direct filling of container
	MB#15	Surface Water	surface	04/21/10	NA	6.51	0.04	23.9	12.5	VOCs	Direct filling of container
Manson Branch	MB#16	Surface Water	surface	01/15/03	NA	5.44	0.116	8.9	96	VOCs	Direct filling of container
	MB#16	Surface Water	surface	02/27/08	NA	5.66	0.090	58.9	7.52	VOCs	Direct filling of container
	MB#16	Surface Water	surface	04/21/10	NA	6.45	0.050	23.1	13.2	VOCs	Direct filling of container
Manson Branch	Manson Br Geochem	Surface Water	surface	07/08/03	NA	6.46	0.076	26.6	26	Ca Mg Na K Chloride Sulfate and Alkalinity	Direct filling of container

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
QA/QC Samples											
Trip Blank		water	NA	10/17/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank		water	NA	10/09/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank		water	NA	10/11/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank		water	NA	10/12/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0I270200-004	water	NA	09/25/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J040215-007	water	NA	10/03/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0I280163-016	water	NA	09/27/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0I290294-005	water	NA	09/28/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J050260 015	water	NA	10/04/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J050260 016	water	NA	10/04/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J060184 009	water	NA	10/05/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J070191 007	water	NA	10/06/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J0110227 007	water	NA	10/09/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	AJ0130152 007	water	NA	10/11/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J140112 007	water	NA	10/12/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J250216 004	water	NA	10/24/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J270167 007	water	NA	10/26/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0K030150 003	water	NA	11/02/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J260183 005	water	NA	10/25/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0K010157	water	NA	10/31/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J180228 005	water	NA	10/17/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J200244 010	water	NA	10/19/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J310185 006	water	NA	10/30/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0K020282 008	water	NA	11/01/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J210135 014	water	NA	10/20/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0J210135 018	water	NA	10/20/00	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A0K030150 003	water	NA	11/02/00	NA	NA	NA	NA	NA	VOCs	
Rinsate Blank Screen	A0I280163-007	water	NA	09/27/00	NA	NA	NA	NA	NA	VOCs	
Rinsate Blank Soil Sample	A0I280163-008	water	NA	09/27/00	NA	NA	NA	NA	NA	VOCs	
EQB		water	NA	10/18/00	NA	NA	NA	NA	NA	VOCs	
EQB	A0K020282-003	water	NA	11/01/00	NA	NA	NA	NA	NA	VOCs	
EQB	A0J050260-007	water	NA	10/03/00	NA	NA	NA	NA	NA	VOCs	
EQB	A0J260183-004	water	NA	10/25/00	NA	NA	NA	NA	NA	VOCs	
EQB	A0J200233-003	water	NA	10/19/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD		water	NA	10/11/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0J050260-001	water	NA	10/02/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0J050260-012	water	NA	10/02/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0J070191 006	water	NA	10/06/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0J130152 001	water	NA	10/11/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0J200233 001	water	NA	10/19/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0J200233 009	water	NA	10/19/00	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A0K020282 007	water	NA	11/01/00	NA	NA	NA	NA	NA	VOCs	
TB 22403	A3B260186-005	water	NA	02/25/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3A170214-016	water	NA	01/15/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3A230159-006	water	NA	01/22/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3A250143-007	water	NA	01/24/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank No. 4	A3B080116-004	water	NA	02/07/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank No. 5	A3B110124-002	water	NA	02/10/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank No. 6	A3B120151-004	water	NA	02/11/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3A240219-006	water	NA	01/23/03	NA	NA	NA	NA	NA	VOCs	
TB-21903	A3B200235-005	water	NA	02/19/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank-1	A3B200235-008	water	NA	02/18/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank-2	A3B200235-012	water	NA	02/18/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank No. 3	A3B070115-006	water	NA	02/06/03	NA	NA	NA	NA	NA	VOCs	
TB-22503	A3B270170-004	water	NA	02/25/03	NA	NA	NA	NA	NA	VOCs	
TB No. 2	A3B060250-006	water	NA	02/05/03	NA	NA	NA	NA	NA	VOCs	
TB No. 1	A3B050153-002	water	NA	02/04/03	NA	NA	NA	NA	NA	VOCs	
TB-22503	A3B270170-004	water	NA	02/25/03	NA	NA	NA	NA	NA	VOCs	
TB-21903	A3B200235-005	water	NA	02/19/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3D220129-004	water	NA	04/21/03	NA	NA	NA	NA	NA	VOCs	
TB-1	A3D050147-006	water	NA	04/03/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	174523-4	water	NA	04/21/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3C290136-011	water	NA	03/28/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3E300288-003	water	NA	05/28/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3F170168-009	water	NA	06/12/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3I110165-003	water	NA	09/10/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A3I120160-002	water	NA	09/11/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank 22608	A8B280189-017	water	NA	02/26/08	NA	NA	NA	NA	NA	VOCs	
Trip Blank 040708	A8D090165-001	water	NA	04/07/08	NA	NA	NA	NA	NA	VOCs	
Trip Blank	AOF260423-002	water	NA	06/24/10	NA	NA	NA	NA	NA	VOCs	
Trip Blank	AOF0435-025	water	NA	06/03/10	NA	NA	NA	NA	NA	VOCs	
Trip Blank	AOD230511-012	water	NA	04/22/10	NA	NA	NA	NA	NA	VOCs	
EQB-1	A3B200235-003	water	NA	02/19/03	NA	NA	NA	NA	NA	VOCs	
EQB-2	A3B200235-004	water	NA	02/19/03	NA	NA	NA	NA	NA	VOCs	
Rinsate No. 1	A3A240219-004	water	NA	01/22/03	NA	NA	NA	NA	NA	VOCs	
Rinsate Blank	A3B050153-003	water	NA	02/04/03	NA	NA	NA	NA	NA	VOCs	
Rinsate	A3C140142-007	water	NA	03/13/03	NA	NA	NA	NA	NA	VOCs	
EQB-1	A3D050147-005	water	NA	04/04/03	NA	NA	NA	NA	NA		
EQ Blank	A3290136	water	NA	03/28/03	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A4E070331 009	water	NA	05/06/04	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A4F250401 009	water	NA	06/23/04	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A4I01 0168 013	water	NA	08/31/04	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A4J130147-3	water	NA	10/12/04	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A4J140208 016	water	NA	10/12/04	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A4J290161 002	water	NA	10/28/04	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A5D140167-003	water	NA	04/12/05	NA	NA	NA	NA	NA	VOCs	
Trip Blank	A5D150281-015	water	NA	04/13/05	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A170214-012	water	NA	01/15/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A220184-001	soil	NA	01/18/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A230159-002	soil	NA	01/21/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A250149-001	water	NA	01/24/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B080119-004	water	NA	02/07/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B100180-005	water	NA	02/08/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B110157-002	water	NA	02/10/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A240219-004	water	NA	01/23/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B200235-007	water	NA	02/18/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B070135-004	water	NA	02/06/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B250228-012	water	NA	02/24/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B060250-004	water	NA	02/05/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B050157-001	water	NA	02/04/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3C150104-005	soil	NA	03/14/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B260106-001	water	NA	02/25/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3C120208-003	water	NA	03/11/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A220106-007	water	NA	01/13/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A290102-011	soil	NA	01/27/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3B070115-001	soil	NA	02/05/03	NA	NA	NA	NA	NA	VOCs	
MS/MSD	A3A240132-004	water	NA	01/23/03	NA	NA	NA	NA	NA	VOCs	
Seep I MS/MSD	A8B280189-010	water	NA	02/27/08	NA	NA	NA	NA	NA	VOCs	
MW-11 MS/MSD	A8D090165-023	water	NA	02/27/08	NA	NA	NA	NA	NA	VOCs	

TABLE 3.0: SUMMARY OF SOIL AND GROUND-WATER SAMPLES COLLECTED

Boring Number	Sample Identification	Media	Sample Depth (ft., bgs)	Date Sampled	Field Screening Results (OVA, ppm)	Water Quality Parameters				Laboratory Analysis	Comments/Sample Method
						pH (S.U.)	SC (mS/ cm)	Temp (°C)	Turbd (NTU)		
MW-3DUP/MW-100	A0J050260-006	water	NA	10/03/00	NA	NA	NA	NA	NA	VOCs	
DUPE	A0K030150 003	water	NA	11/02/00	NA	NA	NA	NA	NA	VOCs	
DUPLICATE	A0J210135 013	water	NA	10/19/00	NA	NA	NA	NA	NA	VOCs	
DUPE	A0K030150 003	water	NA	11/02/00	NA	NA	NA	NA	NA	VOCs	
SO-DUPE	A0K020282-006	Soil	NA	11/01/00	NA	NA	NA	NA	NA	VOCs	
DUP		water	NA	10/19/00	NA	NA	NA	NA	NA	VOCs	
Potable Water	A3A240219-005	water	NA	01/22/03	NA	NA	NA	NA	NA	VOCs	Sample of pot water used for decon
Seep ZZ	Duplicate of Seep A	water	NA	01/15/03	NA	NA	NA	NA	NA	VOCs	
Seep Z04	Duplicate of Seep C	water	NA	03/24/04	NA	NA	NA	NA	NA	VOCs	
Seep Z604	Duplicate of Seep C	water	NA	06/24/04	NA	NA	NA	NA	NA	VOCs	
Seep Z804	Duplicate of Seep C	water	NA	08/31/04	NA	NA	NA	NA	NA	VOCs	
SB-200	Duplicate of SB-112 (18-20)	soil	NA	01/23/03	NA	NA	NA	NA	NA	VOCs	SB-200 (10-11)
MW-300	Duplicate of MW-3	Groundwater	55'-60'	02/18/03	NA	NA	NA	NA	NA	VOCs	
MW-400	Duplicate of MW-14	Groundwater	71.2'-86.2'	04/03/03	NA	NA	NA	NA	NA		
DUP-300	Duplicate of MW-3	Groundwater	55-60	02/18/03	NA	5.42	0.103	24.6	4	VOCs	Purged with submersible pump LFLS, sampled with bailer
DUP-1	Duplicate of MW-22	Groundwater	98.9-113.9	09/10/03	NA	7.23	0.346	21.2	8.5	VOCs	Purged with submersible pump LFLS, sampled with bailer
MT-504	Duplicate of MW-5	Groundwater	49-54	05/07/04	NA					Site Total and Dissolved Metals	Purged with submersible pump LFLS, sampled with bailer
DUP-V504-A	Duplicate of MW-5	Groundwater	51.4-52.9	05/05/04	NA					VOCs	PDBs
DUP-V504-B	Duplicate of MW-5	Groundwater	51.4-52.9	05/05/04	NA					VOCs	PDBs
Dup 1012	Duplicate of MW-24	Groundwater	136.9-146.7	10/12/04	NA					VOCs	Purged with submersible pump LFLS, sampled with bailer
DUPGW1004	Duplicate of MW-5	Groundwater	51.4-52.9	10/13/04	NA					VOCs and Site Total Metals	Purged with submersible pump LFLW, sampled with bailer
Dup-01	Duplicate of Seep L	water	NA	02/27/08	NA	5.66	0.020	49.5	3.76	VOCs	
Dup-1	Duplicate of MW-20	Groundwater	92.6-94.1	04/07/08	NA	3.79	0.0	18.0	NM	VOCs	
Dup-01	Duplicate of Seep I	water	NA	04/22/10	NA	5.28	0.04	16.3	6.44	VOCs	

Notes:

°C= Degrees Celcius
Ca= Calcium analyzed by USEPA Method 6010B
Chloride and Sulfate analyzed by MCAWW 300.0A
K = Potassium analyzed by USEPA Method 6010B
NA = Not Applicable
Mg = Magnesium analyzed by USEPA Method 6010B
Na = Sodium analyzed by USEPA Method 6010B
NM = Not Measured
NTU - Nephelometric Turbidity Units
SC = Specific Conductance in MiliSiemens per Centimeter
LFLS = purge method low flow/low stress
PDB = passive diffusion bag sampler
NR = No soil recovery
Site Metals = Cadmium, Chromium, Copper, Nickel, Lead, Silver, and Zinc analyzed by USEPA method 6010B
* sample interval for passive diffusion bags are given in feet below top of well casing

SU = Standard Units
OVA = Organic Vapor Analyzer
ppm = parts per million
TOC = Total Organic Carbon Analyzed by Walker-Blaken Method
Total Alkalinity Analyzed by MCAWW 310.1
VOCs = Volatile Organic Compounds Analyzed by USEPA Method 8260B
Grain Size Analysis by ASTM D422
Water Retention Analysis by ASTM D2325
Permeability Analysis by COE EM 1110-2-1906
Specific Gravity Analysis by ASTM D 854

PREPARED BY/DATE: DJH 8/11/10
CHECKED BY/DATE: RNQ 12/2/10

TABLE 3.2: SUMMARY OF MONITORING WELL CONSTRUCTION DATA

Well Number	Date Installed	Installed By	Well Type	Total Boring Depth (ft, bgs)	Total Well Depth (ft, bgs)	Ground Elevation (ft, NAVD)	Top of Casing Elevation (ft, NAVD)	Screened Interval				Unit Screened	Depth to Top of Sand (ft, bgs)	Depth to Top of Bentonite (ft, bgs)
								Elevation (ft, NAVD)		Depth (ft, bgs)				
MW-1	1/31/2000	ESC/Alliance Environmental	single cased	78.0	75.0	333.9	333.69	264.5	259.5	69.4	74.4	uppermost	67.0	62.2
MW-2	2/1/2000	ESC/Alliance Environmental	single cased	68.0	58.0	322.6	322.38	269.6	264.6	53.0	58.0	uppermost	51.0	48.6
MW-3	2/2/2000	ESC/Alliance Environmental	single cased	63.4	60.0	325.6	325.45	270.6	265.6	55.0	60.0	uppermost	52.5	47.5
MW-4	2/3/2000	ESC/Alliance Environmental	single cased	68.0	58.0	323.9	323.78	270.9	265.9	53.0	58.0	uppermost	50.5	46.2
MW-5	2/1/2000	ESC/Alliance Environmental	single cased	58.0	54.0	321.3	321.10	272.3	267.3	49.0	54.0	uppermost	45.5	40.5
MW-6	2/2/2000	ESC/Alliance Environmental	single cased	58.0	48.0	314.5	314.37	271.5	266.5	43.0	48.0	uppermost	40.5	36.5
MW-7	2/6/2003	Prosonic/ MACTEC	single cased	58.0	56.2	320.6	320.23	274.6	264.6	46.0	56.0	uppermost	43.0	40.0
MW-8	2/6/2003	Prosonic/ MACTEC	single cased	72.0	70.2	330.1	329.70	270.1	260.1	60.0	70.0	uppermost	57.1	54.5
MW-9	2/10/2003	Prosonic/ MACTEC	single cased	69.0	65.2	323.5	323.09	268.5	258.5	55.0	65.0	uppermost	52.2	48.3
MW-10	2/10/2003	Prosonic/ MACTEC	single cased	49.5	45.2	307.7	310.05	272.7	262.7	35.0	45.0	uppermost	31.9	28.8
MW-11	2/11/2003	Prosonic/ MACTEC	single cased	79.0	76.2	331.3	333.77	265.3	255.3	66.0	76.0	uppermost	62.9	60.0
MW-12	2/11/2003	Prosonic/ MACTEC	single cased	73.0	70.7	326.0	328.34	265.5	255.5	60.5	70.5	uppermost	57.5	54.2
MW-13	2/12/2003	Prosonic/ MACTEC	single cased	25.0	22.3	281.2	283.71	269.2	259.2	12.0	22.0	uppermost	10.0	6.0
MW-14	3/26-27/2003	Prosonic/ MACTEC	double cased	88.0	86.5	309.4	311.62	238.2	223.2	71.2	86.2	intermediate	69.0	66.7
MW-15	3/27/2003	Prosonic/ MACTEC	single cased	12.0	12.0	257.6	260.17	250.9	245.9	6.7	11.7	alluvium	5.0	3.0
MW-16	3/27/2003	Prosonic/ MACTEC	single cased	12.0	12.5	251.3	253.81	244.6	239.6	6.7	11.7	alluvium	5.0	3.0
MW-17	5/8/2003	MACTEC	single cased	50.3	48.0	258.0	260.48	225.0	210.5	33.0	47.5	intermediate	31.3	29.3
MW-18	5/9/2003	MACTEC	single cased	48.0	42.5	251.5	254.18	224.5	209.5	27.0	42.0	intermediate	22.5	19.1
MW-19	5/20/2003	Prosonic/ MACTEC	single cased	47.0	46.5	309.4	311.89	273.2	263.2	36.2	46.2	uppermost	33.5	31.3
MW-20	5/21/2003	Prosonic/ MACTEC	double cased	107.0	107.0	326.0	325.75	234.3	219.3	91.7	106.7	intermediate	88.7	85.8
MW-21	9/3/2003	Prosonic/ MACTEC	double cased	105.2	105.2	320.8	320.49	231.1	216.1	89.7	104.7	intermediate	83.5	80.0
MW-22	9/6/2003	Prosonic/ MACTEC	double cased	116.0	114.4	334.3	334.05	235.4	220.4	98.9	113.9	intermediate	95.0	92.0
MW-23	9/3/2003	Prosonic/ MACTEC	double cased	106.5	106.5	324.0	323.77	233.0	218.0	91.0	106.0	intermediate	87.0	83.0
MW-24	10/11/2004	Prosonic/ MACTEC	triple cased	147.0	147.0	321.4	321.23	184.5	174.7	136.9	146.7	lower	133.7	129.0
MW-25	6/1-2/2010	Boart Longyear/ MACTEC	double cased	107.0	107.0	321.5	321.18	229.7	214.7	91.8	106.8	intermediate	89.0	86.0
MW-26	10/19/2010	MACTEC	single cased	6.1	6.1	251.44	255.29	250.4	245.4	1.0	6.0	alluvium	1.0	0.0
MW-27	10/19/2010	MACTEC	single cased	7.3	7.3	254.70	257.50	252.5	247.5	2.2	7.2	alluvium	2.2	0.0
MW-28	10/19/2010	MACTEC	single cased	7.2	7.2	251.08	251.73	249.0	244.0	2.1	7.1	alluvium	2.1	0.0

Notes:

ft	feet
bgs	below ground surface
NAVD	North American Vertical Datum 1988
ESC	Environmental Strategies Corporation

PREPARED BY/DATE: DJH 8/11/10
CHECKED BY/DATE: RNQ 12/2/10

TABLE 4.0: SUMMARY OF GROUND-WATER ELEVATIONS

Monitoring Well	Water-Bearing Zone Screened	Top of Casing Elevation (ft, NAVD)	Depth to Water from Top of Casing (ft) September 11, 2003	Ground-Water Elevation (ft, NAVD) September 11, 2003	Depth to Water from Top of Casing (ft) June 24, 2004	Ground-Water Elevation (ft, NAVD) June 24, 2004	Depth to Water from Top of Casing (ft) October 12, 2004	Ground-Water Elevation (ft, NAVD) October 12, 2004	Depth to Water from Top of Casing (ft) February 25, 2008	Ground-Water Elevation (ft, NAVD) February 25, 2008	Depth to Water from Top of Casing (ft) June 1-3, 2010	Ground-Water Elevation (ft, NAVD) June 1-3, 2010	Depth to Water from Top of Casing (ft) June 24, 2010	Ground-Water Elevation (ft, NAVD) June 24, 2010	Depth to Water from Top of Casing (ft) October 21, 2010	Ground-Water Elevation (ft, NAVD) October 21, 2010
MW-1	Uppermost	333.69	46.79	286.90	47.33	286.36	47.88	285.81	49.47	284.22	46.22	287.47			46.73	286.96
MW-2	Uppermost	322.38	37.80	284.58	38.41	283.97	38.77	283.61	40.16	282.22	37.60	284.78			38.03	284.35
MW-3	Uppermost	325.45	40.86	284.59	41.42	284.03	41.82	283.63	43.00	282.45	40.70	284.75			41.06	284.39
MW-4	Uppermost	323.78	39.52	284.26	40.12	283.66	40.17	283.61	41.42	282.36	39.29	284.49			39.52	284.26
MW-5	Uppermost	321.10	39.45	281.65	39.96	281.14	40.06	281.04	40.73	280.37	39.18	281.92	39.27	281.83	39.52	281.58
MW-6	Uppermost	314.37	31.36	283.01	31.02	283.35	31.53	282.84	32.10	282.27	30.74	283.63			31.03	283.34
MW-7	Uppermost	320.23	34.33	285.90	35.04	285.19	35.32	284.91	36.41	283.82	34.31	285.92			34.69	285.54
MW-8	Uppermost	329.70	42.00	287.70	42.60	287.10	42.97	286.73	44.39	285.31	41.63	288.07			42.14	287.56
MW-9	Uppermost	323.09	36.71	286.38	37.78	285.31	38.47	284.62	40.16	282.93	37.21	285.88			36.36	286.73
MW-10	Uppermost	310.05	28.30	281.75	27.99	282.06	29.04	281.01	29.22	280.83	27.96	282.09			28.64	281.41
MW-11	Uppermost	333.77	51.08	282.69	50.55	283.22	50.98	282.79	52.71	281.06	49.66	284.11			50.27	283.50
MW-12	Uppermost	328.34	47.31	281.03	48.18	280.16	48.67	279.67	50.18	278.16	47.29	281.05			48.23	280.11
MW-13	Uppermost	283.71	5.40	278.31	5.66	278.05	9.42	274.29	9.21	274.50	8.25	275.46			9.50	274.21
MW-14	Intermediate	311.62	64.64	246.98	64.42	247.20	64.17	247.45	64.41	247.21	64.66	246.96	65.20	246.42	65.74	245.88
MW-15	Alluvium	260.18	5.36	254.82	4.69	255.49	5.05	255.13	3.68	256.50	4.71	255.47			7.43	252.75
MW-16	Alluvium	253.81	4.55	249.26	3.99	249.82	4.40	249.41	3.47	250.34	4.30	249.51			6.45	247.36
MW-17	Intermediate	260.48	11.70	248.78	11.51	248.97	11.81	248.67	11.79	248.69	11.90	248.58			13.41	247.07
MW-18	Intermediate	254.18	5.61	248.57	5.45	248.73	5.70	248.48	5.62	248.56	5.80	248.38			7.18	247.00
MW-19	Uppermost	311.89	31.90	279.99	32.11	279.78	32.34	279.55	32.61	279.28	31.37	280.52	31.57	280.32	31.77	280.12
MW-20	Intermediate	325.75	79.79	245.96	79.89	245.86	79.67	246.08	79.86	245.89	79.97	245.78			80.88	244.87
MW-21	Intermediate	320.49	75.05	245.44	75.12	245.37	75.19	245.30	75.64	244.85	75.52	244.97			76.41	244.08
MW-22	Intermediate	334.05	89.16	244.89	89.23	244.82	89.33	244.72	89.65	244.40	89.64	244.41			90.48	243.57
MW-23	Intermediate	323.77	78.69	245.08	78.77	245.00	78.80	244.97	79.00	244.77	79.11	244.66			80	243.77
MW-24	Lower	321.23	not installed				86.67	234.56	87.04	234.19	85.33	235.90	86.38	234.85	88.88	232.35
MW-25	Intermediate	321.18	not installed										75.27	245.91	75.91	245.27
MW-26	Alluvium	255.29	not installed												7.00	248.29
MW-27	Alluvium	257.50	not installed												6.84	250.66
MW-28	Alluvium	251.73*	not installed												5.59	246.14
Staff Gauge near MW-16	Surface Water	249.80	0.60	249.20	0.88	248.92	0.60	249.20	0.60	249.20	nm				1.42	248.38
Hwy 24 Bridge over Manson Branch	Surface Water	257.08	8.80	248.28	5.79	251.29	5.80	251.28	6.64	250.44	nm				6.79	250.29

Notes:
ft, NAVD Feet above North American Vertical Datum of 1988
Monitoring wells MW-1 to MW-13, MW-15, MW-16 and MW-19 screened above the uppermost tan and blue-gray clays of the Twiggs Clay (Uppermost Water-bearing Zone)
Monitoring wells MW-14, MW-17, MW-18, and MW-20 to MW-23 screened below the uppermost tan and blue-gray clays of the Twiggs Clay (Intermediate Water-bearing Zone)
nm = not measured
* The elevations for well MW-28 are being re-surveyed and the groundwater elevation is in question.
249.80 new elevation of Staff Gauge near MW-16 as of 11/2/2010

PREPARED BY/DATE RNQ 11/8/2010

CHECKED BY/DATE: DLH 11/11/10

Table 4.1: SUMMARY OF HYDRAULIC CONDUCTIVITY TESTING

Well Number	Date of Test	Screened Interval (ft, NAVD)	Lithology Screened	Hydraulic Conductivity		Average Hydraulic Conductivity	
				Slug In (ft/min)	Slug Out (ft/min)	(ft/min)	(cm/sec)
MW-1	10/4/2000	264.5 - 259.5	Brown coarse grained Sand, some clay [Uppermost zone]	0.0011	0.0012	0.0012	0.0006
MW-4	10/4/2000	270.9 - 265.9	Brown medium to coarse grained Sand, some clay [Uppermost zone]	0.00067	0.00073	0.0007	0.0004
MW-10	4/3/2003	272.7 - 262.7	Orange and gray slightly clayey silty fine to medium Sand [Uppermost zone]	0.00057	0.00046	0.0005	0.0003
MW-14	4/3/2003	238.2 - 223.2	Blue-gray clayey silty fine to medium Sand [Intermediate zone]	0.021	0.021	0.021	0.01067
MW-15	4/3/2003	250.9 - 245.9	Blue-gray sandy, silty Clay [Alluvium Deposits]	0.0066	0.0071	0.0069	0.003
MW-17	6/2/2010	225.0 - 210.5	Greenish-gray silty medium to very coarse Sand with gravel and clay zones [Intermediate zone]	0.00085	0.00073	0.0008	0.0004

Table 4.1: SUMMARY OF HYDRAULIC CONDUCTIVITY TESTING

Well Number	Date of Test	Screened Interval (ft, NAVD)	Lithology Screened	Hydraulic Conductivity		Average Hydraulic Conductivity	
				Slug In (ft/min)	Slug Out (ft/min)	(ft/min)	(cm/sec)
MW-20	6/2/2010	234.3 - 219.3	Blue-gray silty clayey fine to coarse Sand with gravel and clay layers grading to a sandy Clay [Intermediate zone]	0.00214	0.00203	0.0021	0.00106
MW-22	6/2/2010	235.4 - 220.4	Blue-gray silty clayey fine Sand with some medium Sand grading to a silty Clay [Intermediate zone]	0.00421	0.00420	0.0042	0.00214
MW-23	6/2/2010	233.0 - 218.0	Blue-gray clayey silty fine Sand with some medium Sand grading to a sandy silty Clay [Intermediate zone]	0.00466	0.00568	0.0052	0.003
MW-25	6/4/2010	229.7 - 214.7	Gray to Blue-gray silty fine to coarse Sand with clay lenses and limestone fragments grading to stiff Clay [Intermediate zone]	0.00105	0.00056	0.0008	0.0004

Notes:

NAVD North American Vertical Datum 1988
cm/sec centimeters per second
ft/day feet per day

PREPARED BY/DATE: JCB 1/17/07 Updated RNQ 8/4/10
CHECKED BY/DATE: RNQ 2/13/07 Update checked JMQ 11/19/10

Table 4.2: SUMMARY OF REGULATED SUBSTANCES DETECTED IN SURFACE SOIL

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) Site Background Concentrations	Highest RRSs (µg/kg)	GW-E-1 SO-E-1 0'-2' 9/25/2000	GW-E-4 SO-E-4 0'-2' 9/27/2000	GW-E-13 SO-E-13 0'-4' 10/9/2000	GW-AOC 1-1 SO-AOC 1-1 0'-2' 10/31/2000	GW-AOC 2-1 SO-AOC 2-1 0'-2' 10/17/2000	GW-AOC 3-1 SO-AOC 3-1 0'-2' 10/30/2000	GW-AOC 3-2 SO-AOC 3-2 0'-2' 10/30/2000	GW-AOC 8-1 SO-AOC-8-1 0'-2' 10/11/2000	GW-AOC 8-2 SO-AOC 8-2 0'-2' 10/12/2000	GW-AOC 9-1 SO-AOC 9-1 0'-2' 10/19/2000	GW-AOC 9-2 SO-AOC 9-2 0'-2' 10/20/2000	GW-AOC 10-1 SO-AOC 10-1 0'-2' 10/12/2000	HA-1 HA-1 0.4'-2.1' 3/27/2003	HA-2 HA-2 0.35'-2.1' 3/27/2003
Volatile Organic Compounds SW8260B - (µg/kg)																	
1,1,2-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	500	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9	<1800
1,1,1-Trichloroethane			170,000	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	24	<1800
1,1-Dichloroethene			6,800	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9	<1800
1,4-Dioxane			500	<240	<210	<340	250,000	<230	12,000	<11000	<230	<200	<290	<230	<230	<290	1,500,000
cis-1,2-Dichloroethene			7,000	<2.4	<2.1	<3.4	<100	<2.3	<120	600	<2.3	<2.0	<2.9	<2.3	<2.3	<5.9	<1800
Ethylbenzene			70,000	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9	<1800
Isopropylbenzene			62,000	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9	<1800
m+p-Xylene			1,000,000	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	NA	NA
Tetrachloroethene			500	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9	<1800
Trichloroethene			1,800	<4.9	<4.2	<6.8	<210	<4.6	<230	4100	49	12	<5.8	<4.6	<4.6	22	<1800
Total Xylenes			1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.9	<1800
Volatile Organic Compounds SW8260B - (µg/L)																	
1,4-Dioxane - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	120000
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
Tetrachloroethene - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0

Table 4.2: SUMMARY OF REGULATED SUBSTANCES DETECTED IN SURFACE SOIL

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	HA-3 HA-3 0.35'-2.05' 3/27/2003	HA-4 HA-4 0.42'-1.95' 3/27/2003	HA-5 HA-5 0.4'-2.2' 3/27/2003	HA-6 HA-6 1.2'-2.0' 3/27/2003	HA-7 HA-7 3.0'-5.0' 3/27/2003	HA-8 HA-8 0.0'-0.5' 3/27/2003	SB-2 SB-2 1.5'-3.5' 2/3/2000	SB-101 SB-101 0'-2' 2/6/2003	SB-102 SB-102 0'-2' 1/21/2003	SB-103 SB-103 0'-2' 2/6/2003
Volatile Organic Compounds SW8260B - (µg/kg)													
1,1,2-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	500	26	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8
1,1,1-Trichloroethane			170,000	180	46	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8
1,1-Dichloroethene			6,800	23	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8
1,4-Dioxane			500	14,000 E	1,900	<200	<11000	<14000	<290	NA	<240	<240	<240
cis-1,2-Dichloroethene			7,000	<6.8	<5.2	6	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8
Ethylbenzene			70,000	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8
Isopropylbenzene			62,000	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8
m+p-Xylene			1,000,000	NA	NA	NA	NA	NA	NA	<5.7	NA	NA	NA
Tetrachloroethene			500	<6.8	<5.2	<4.0	<230	<290	<5.9	13	<4.8	<4.7	<4.8
Trichloroethene			1,800	120	47	110	660	800	<5.9	15	<4.8	<4.7	<4.8
Total Xylenes			1,000,000	<6.8	<5.2	<4.0	<230	<290	<5.9	NA	<4.8	<4.7	<4.8
Volatile Organic Compounds SW8260B - (µg/L)													
1,4-Dioxane - SPLP				NA	NA	NA	<200	NA	NA	NA	NA	NA	NA
Methylene Chloride - SPLP				NA	NA	NA	7.1 B	NA	NA	NA	NA	NA	NA
Tetrachloroethene - SPLP				NA	NA	NA	1.5	NA	NA	NA	NA	NA	NA

Table 4.2: SUMMARY OF REGULATED SUBSTANCES DETECTED IN SURFACE SOIL

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) Site Background Concentrations	Highest RRSs (µg/kg)	SB-104 SB-104 0'-2' 1/21/2003	SB-105 SB-105 0'-2' 1/22/2003	SB-106 SB-106 0'-2' 1/23/2003	SB-107 SB-107 0'-2' 2/7/2003	SB-108 SB-108 0'-2' 1/24/2003	SB-109 SB-109 0'-2' 1/23/2003	SB-110 SB-110 0'-2' 2/10/2003	SB-111 SB-111 0'-2' 1/22/2003	SB-112 SB-112 0'-2' 1/23/2003	SB-113 SB-113 0'-2' 2/3/2003	SB-113 SPLP SB-11 0'-2' 2/5/2003 µg/L	SB-114 SB-114 0'-2' 2/5/2003	SB-115 SB-115 0'-2' 3/13/2003	SB-116 SB-116 0'-2' 3/12/2003	SB-117 SB-117 0'-2' 3/12/2003	SB-118 SB-118 0'-2' 3/26/2003
Volatile Organic Compounds SW8260B - (µg/kg)																			
1,1,2-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	500	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
1,1,1-Trichloroethane			170,000	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
1,1-Dichloroethene			6,800	<4.5	9.4	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
1,4-Dioxane			500	<220	<260	<240	<220	<240	<260	<230	<450	<260	<240	NA	<240	<260	<220	<220	<260
cis-1,2-Dichloroethene			7,000	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
Ethylbenzene			70,000	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
Isopropylbenzene			62,000	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	16	<4.4	<4.4	<5.1
m+p-Xylene			1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene			500	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
Trichloroethene			1,800	<4.5	10	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	23	<4.8	NA	130	<5.2	<4.4	<4.4	<5.1
Total Xylenes			1,000,000	<4.5	<5.2	<4.8	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	<5.2	<4.4	<4.4	<5.1
Volatile Organic Compounds SW8260B - (µg/L)																			
1,4-Dioxane - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<400	NA	NA	NA	NA	NA
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.6 B	NA	NA	NA	NA	NA
Tetrachloroethene - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	NA	NA	NA	NA	NA

Notes:

AOC	Area of Concern
B	Constituent was detected in QA/QC blank
E	Estimated Concentration; result exceeds the calibration range
GW	Ground Water
NA	Not analyzed for this constituent.
µg/kg	micrograms per kilogram
µg/L	microgram per liter
ft. bgs	feet below ground surface
SPLP	Synthetic Precipitation Leaching Procedure US EPA Method 1312
a)	Borings GW-E-1 to GW-AOC 10-1 (9/25/00 to 11/01/00) sampled by LAW and analyzed by STL North Canton using USEPA method 5035/8260B
b)	Borings SB-1 to SB-10 (02/03/00) sampled by ESC
c)	Borings SB-101 to SB-118, HA-1 to HA-8 sampled by MACTEC and analyzed by STL North Canton using USEPA method 5035/8260B
RRS	Risk Reduction Standards
	Concentration exceeds Types 1-4 RRSs

PREPARED BY/DATE: RNQ 2/22/07
CHECKED BY/DATE: JAH 2/23/07

DELINEATION CRITERIA

The delineation of regulated substances released at the site was provided in the Revised CSR. Volatile organic compounds in surface (0 to 2 feet) have been delineated under HSRA Rules (391-3-19-.06(3)(b)2) on the basis of non-detection of these regulated substances above laboratory quantitation limits. Background for anthropogenic organic constituents is non-detect. This delineation is equivalent to VRP delineation criteria 12-8-108(1)(A), background concentrations.

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	SB-1 SB-1 10'-11' 2/3/2000	SB-3 SB-3 5'-6' 2/3/2000	SB-4 SB-4 8'-9' 2/3/2000	SB-5 SB-5 8'-9' 2/3/2000	SB-6 SB-6 0'-10' 2/3/2000	SB-7 SB-7 7'-8' 2/3/2000	SB-8 SB-8 7'-8' 2/3/2000	SB-9 SB-9 8'-9' 2/3/2000	SB-10 SB-10 5'-6' 2/3/2000	GW-E-1 SO-E-1 32'-34' 9/25/2000	GW-E-4 SO-E-4 40'-42' 9/27/2000
Volatile Organic Compounds - SW8260B - (µg/kg)														
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0	<9.6
1,1-Dichloroethene			6,800	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0	<9.6
cis-1,2-Dichloroethene			7,000	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<2.0	<4.8
Ethylbenzene			70,000	<5.9	360	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0	<9.6
m+p-Xylene			1,000,000	<5.9	1400	9.6	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0	<9.6
Tetrachloroethene			500	11	<300	<6.2	10	8.4	10	8.2	9.3	9.4	<4.0	<9.6
Trichloroethene			1,800	160 E	<300	<6.2	12	9.7	14	9.3	11	11	<4.0	<9.6
Volatile Organic Compounds - SW8260B - (µg/L)														
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	GW-E-13		GW-AOC 1-1		GW-AOC 2-1		GW-AOC 3-1		GW-AOC 3-2	
				SO-E-13 14'-16' 10/9/2000	SO-E-13 38'-40' 10/9/2000	SO-AOC 1-1 29'-31' 10/31/2000	SO-AOC 1-1 38'-40' 10/31/2000	SO-AOC 2-1 18'-20' 10/17/2000	SO-AOC 2-1 38'-40' 10/17/2000	SO-AOC 3-1 29'-31' 11/1/2000	SO-AOC 3-1 38'-40' 11/1/2000	SO-AOC 3-2 8'-10' 10/30/2000	SO-AOC 3-2 38'-40' 10/30/2000
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	<5.1	<9.2	86	85	<4.4	<5.5	<5.3	<5.2	<200	<5.2
1,1-Dichloroethene			6,800	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2	<200	<5.2
cis-1,2-Dichloroethene			7,000	<2.6	<4.6	<3.6	<2.6	<2.2	<2.8	<2.6	<2.6	190	<2.6
Ethylbenzene			70,000	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2	<200	<5.2
m+p-Xylene			1,000,000	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2	<200	<5.2
Tetrachloroethene			500	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2	<200	<5.2
Trichloroethene			1,800	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2	980	<5.2
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	GW-AOC 8-1		GW-AOC 8-2		GW-AOC 9-1		GW-AOC 9-2	
				SO-AOC-8-1 14'-16' 10/11/2000	SO-AOC-8-1 38'-40' 10/11/2000	SO-AOC 8-2 18'-20' 10/12/2000	SO-AOC 8-2 38'-40' 10/12/2000	SO-AOC 9-1 4'-6' 10/19/2000	SO-AOC 9-1 34'-36' 10/19/2000	SO-AOC 9-2 4'-6' 10/20/2000	SO-AOC 9-2 32'-34' 10/20/2000
Volatile Organic Compounds - SW8260B - (µg/kg)											
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	5.4	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7	<5.1
1,1-Dichloroethene			6,800	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7	<5.1
cis-1,2-Dichloroethene			7,000	5.6	<3.3	4	<2.8	<3.3	<2.4	<3.4	<2.6
Ethylbenzene			70,000	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7	<5.1
m+p-Xylene			1,000,000	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7	<5.1
Tetrachloroethene			500	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7	<5.1
Trichloroethene			1,800	78	<6.6	31	<5.7	<6.6	<4.8	<6.7	<5.1
Volatile Organic Compounds - SW8260B - (µg/L)											
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	GW-AOC 10-1		SB-101		SB-102		SB-103		SB-104	
				SO-AOC 10-1 18'-20' 10/12/2000	SO-AOC 10-1 38'-40' 10/12/2000	SB-101 12'-14' 2/6/2003	SB-101 36'-38' 2/6/2003	SB-102 5'-6' 1/21/2003	SB-102 35'-36 1/21/2003	SB-103 26'-28' 2/6/2003	SB-103 46'-48' 2/6/2003	SB-104 21'-22' 1/21/2003	SB-104 40'-42' 1/21/2003
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7	<5.7	<5.4
1,1-Dichloroethene			6,800	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7	<5.7	<5.4
cis-1,2-Dichloroethene			7,000	<2.2	<3.9	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7	<5.7	<5.4
Ethylbenzene			70,000	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7	<5.7	<5.4
m+p-Xylene			1,000,000	<4.4	<7.8	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene			500	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7	<5.7	<5.4
Trichloroethene			1,800	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7	<5.7	<5.4
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	SB-105		SB-106		SB-107		SB-108	
				SB-105 11'-12' 1/22/2003	SB-105 37'-38' 1/22/2003	SB-106 29'-30' 1/23/2003	SB-106 42'-43' 1/23/2003	SB-107 14'-16' 2/7/2003	SB-107 38'-40' 2/10/2003	SB-108 29'-30' 1/24/2003	SB-108 45'-46' 1/24/2003
Volatile Organic Compounds - SW8260B - (µg/kg)											
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	43	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8	<5.8
1,1-Dichloroethene			6,800	31	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8	<5.8
cis-1,2-Dichloroethene			7,000	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8	<5.8
Ethylbenzene			70,000	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8	<5.8
m+p-Xylene			1,000,000	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene			500	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8	<5.8
Trichloroethene			1,800	53	<5.8	<4.6	<5.4	<4.7	<4.7	9.0	7.0
Volatile Organic Compounds - SW8260B - (µg/L)											
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	SB-109		SB-110		SB-111		SB-112	
				SB-109 11'-12' 1/23/2003	SB-109 27'-28' 1/23/2003	SB-110 4'-6' 2/10/2003	SB-110 32'-34' 2/10/2003	SB-111 21'-22' 1/22/2003	SB-111 32'-33' 1/22/2003	SB-112 18'-19' 1/23/2003	SB-112 38'-39' 1/23/2003
Volatile Organic Compounds - SW8260B - (µg/kg)											
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
1,1-Dichloroethene			6,800	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
cis-1,2-Dichloroethene			7,000	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
Ethylbenzene			70,000	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
m+p-Xylene			1,000,000	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene			500	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
Trichloroethene			1,800	19	<4.8	<4.8	<5.2	<5.0	<5.3	560	17
Volatile Organic Compounds - SW8260B - (µg/L)											
Methylene Chloride - SPLP				NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	SB-113		SB-114		SB-115	
				SB-113 4'-6' 2/5/2003	SB-113 40'-42' 2/5/2003	SB-114 22'-24' 2/5/2003	SB-114 42'-44' 2/5/2003	SB-115 11'-13' 3/13/2003	SB-115 18'-20' 3/13/2003
Volatile Organic Compounds - SW8260B - (µg/kg)									
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5
1,1-Dichloroethene			6,800	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5
cis-1,2-Dichloroethene			7,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5
Ethylbenzene			70,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5
m+p-Xylene			1,000,000	NA	NA	NA	NA	NA	NA
Tetrachloroethene			500	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5
Trichloroethene			1,800	9.4	<5.7	<4.9	<5.2	<4.9	<5.5
Volatile Organic Compounds - SW8260B - (µg/L)									
Methylene Chloride - SPLP				NA	NA	3.4 B	NA	NA	NA

TABLE 4.3:SUMMARY OF REGULATED SUBSTANCES DETECTED IN SUBSURFACE SOIL SAMPLES

Constituent	Boring Number Sample ID Sample Depth (ft. bgs) Date Sampled	**VRP Delineation Criteria 12-8-108(1)(A)** **Site Background Concentrations**	Highest RRSs (µg/kg)	SB-117		SB-118
				SB-117 12'-14' 3/12/2003	SB-117 44'-46' 3/12/2003	SB-118 4'-5' 3/26/2003
Volatile Organic Compounds - SW8260B - (µg/kg)						
1,1,1-Trichloroethane		Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	170,000	<4.7	<5.9	<5.1
1,1-Dichloroethene			6,800	<4.7	<5.9	<5.1
cis-1,2-Dichloroethene			7,000	<4.7	<5.9	<5.1
Ethylbenzene			70,000	<4.7	<5.9	<5.1
m+p-Xylene			1,000,000	NA	NA	NA
Tetrachloroethene			500	<4.7	<5.9	<5.1
Trichloroethene			1,800	<4.7	<5.9	<5.1
Volatile Organic Compounds - SW8260B - (µg/L)						
Methylene Chloride - SPLP				NA	NA	NA

Notes:

AOC	Area of Concern
B	Constituent was detected in QA/QC blank
E	Estimated concentration; result exceeds the calibration range
GW	Ground Water
NA	Not analyzed for this constituent
µg/kg	micrograms per kilogram
ft. bgs	feet below ground surface
SPLP	Synthetic Precipitation Leaching Procedure USEPA Method 1312
RRS	Risk Reduction Standard (2003 CSR values)
a)	Borings SO-E-1 to GW-AOC 10-1 (9/25/00 to 11/01/00) sampled by LAW and analyzed by STL North Canton using USEPA method 5035/8360B
b)	Borings SB-1 to SB-10 (02/03/00) sampled by ESC
c)	Boring SB-101 to SB-118 sampled by MACTEC (1/2/03 to 3/26/03) and analyzed by STL North Canton using USEPA method 5035/8260B
	Concentration exceeds Types 1-4 RRSs

DELINEATION CRITERIA

The delineation of regulated substances released at the site was provided in the Revised CSR. Volatile organic compounds in subsurface (Greater than 2 feet) have been delineated under HSRA Rules (391-3-19-.06(3)(b)2) on the basis of non-detection of these regulated substances

PREPARED BY/DATE: RNQ 2/22/07
CHECKED BY/DATE: JAH 2/23/07

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-1						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
Sample Depth (well screen interval) (ft. bgs)			69.4'-74.4'	69.4'-74.4'	69.4'-74.4'	69.4'-74.4'	69.4'-74.4'	69.4'-74.4'	69.4'-74.4'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		69.2-74.2	69.2-74.2	69.2-74.2	69.2-74.2	69.2-74.2	69.2-74.2	69.2-74.2
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*				72.2-73.7	72.2-73.7	72.2-73.7	72.2-73.7
Date Sampled			2/25/2000	10/2/2000	2/19/2003	5/5/2004	10/12-13/2004	4/7/2008	6/1/2010
Laboratory		(µg/L)	STL Tampa	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton
Purge Method/Sample Method			Bailer/Bailer	Bailer/Bailer	PumpLFLS/Bailer	PumpLFLS/Bailer/ PDB	PumpLFLS/Bailer/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform		80	**1.7**	<5.0	<5.0	<5.0	<5.0	<5.0	**4.9**
cis-1,2-Dichloroethene		1,000	<1.0	<2.5	<2.5	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	**1.3**	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<1.0	<2.0	<5.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver			Metals were not sampled and analyzed			<0.1	<0.1	Metals were not sampled and analyzed	
Dissolved Silver						na	na		
Total Cadmium						<0.005	<0.005		
Dissolved Cadmium						na	na		
Total Chromium						<0.1	<0.1		
Dissolved Chromium						na	na		
Total Lead						<0.015	<0.015		
Dissolved Lead						na	na		
Total Copper						<1.0	<1.0		
Dissolved Copper						na	na		
Total Nickel						<0.1	<0.1		
Dissolved Nickel						na	na		
Total Zinc						<2.0	<2.0		
Dissolved Zinc						na	na		

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-2						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
Sample Depth (well screen interval) (ft. bgs)			53'-58'	53'-58'	53'-58'	53'-58'	53'-58'	53'-58'	53'-58'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		52.8-57.8	52.8-57.8	52.8-57.8	52.8-57.8	52.8-57.8	52.8-57.8	52.8-57.8
Passive Diffusion Bag Sample Depth (ft. btoc)						55.4-56.9	55.4-56.9	55.4-56.9	55.4-56.9
Date Sampled		*Highest RRS*	2/25/2000	10/3/2000	2/19/2003	5/5/2004	10/12/2004	4/7/2008	6/1/2010
Laboratory		(µg/L)	STL Tampa	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			Bailer/Bailer	Bailer/Bailer	PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane		25,100	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	**2.1**
cis-1,2-Dichloroethene		1,000	<1.0	<2.5	<2.5	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	**5**	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	**240**	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<1.0	<2.0	<5.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver									
Dissolved Silver									
Total Cadmium									
Dissolved Cadmium									
Total Chromium									
Dissolved Chromium									
Total Lead									
Dissolved Lead									
Total Copper									
Dissolved Copper									
Total Nickel									
Dissolved Nickel									
Total Zinc									
Dissolved Zinc									

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-3							
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
Sample Depth (well screen interval) (ft. bgs)			55'-60'	55'-60'	55'-60'	55'-60'	55'-60'	55'-60'	55'-60'	55'-60'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		54.8-59.8	54.8-59.8	54.8-59.8	54.8-59.8	54.8-59.8	54.8-59.8	54.8-59.8	54.8-59.8
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*				57.5-59	57.5-59	57.5-59	57.5-59	
Date Sampled			2/25/2000	10/3/2000	2/18/2003	5/6/2004	10/12-13/2004	4/8/2008	6/2/2010	6/3/2010
Laboratory		(µg/L)	STL Tampa	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			Bailer/Bailer	Bailer/Bailer	PumpLFLS/Bailer	PumpLFLS/Bailer/ PDB	PumpLFLS/Bailer/ PDB	no purge/ PDB	no purge/ PDB	Pump-LFLS
Constituent										
Volatile Organic Compounds - SW8260B - (µg/L)										
1,1,1-Trichloroethane		25,100	<150	<5.0	**57**	**6.7**	**13**	<5.0	<1.0	<1.0
1,1-Dichloroethene		950	<150	<5.0	**13**	**5.1**	**12**	<5.0	<1.0	**1.7**
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<150	<5.0	<10	**7.3**	**7.7**	<5.0	**2.3**	**2.3**
cis-1,2-Dichloroethene		1,000	<150	<2.5	<5.0	<5.0	<5.0	<2.5	<1.0	<1.0
Methylene chloride		180	<300	<5.0	<10	<5.0	<5.0	<5.0	<1.0	<1.0
Toluene		6,400	<150	<5.0	<10	<5.0	<5.0	<5.0	<1.0	<1.0
Trichloroethene		70	**2900**	<5.0	**69**	**8.1**	**15**	<5.0	**1.6**	**2.4**
Vinyl Chloride		4.0	<150	<2.0	<10	<2.0	<2.0	<2.0	<1.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	<2.0	<2.0
Site-Specific Metals - SW6010B - (mg/L)										
Total Silver						<0.1	<0.1			
Dissolved Silver						<0.1	na			
Total Cadmium						<0.005	<0.005			
Dissolved Cadmium						<0.005	na			
Total Chromium						<0.1	<0.1			
Dissolved Chromium						<0.1	na			
Total Lead			Metals were not sampled and analyzed			<0.015	<0.015	Metals were not sampled and analyzed		
Dissolved Lead						<0.015	na			
Total Copper						<1.0	<1.0			
Dissolved Copper						<1.0	na			
Total Nickel						<0.1	<0.1			
Dissolved Nickel						<0.1	na			
Total Zinc						<2.0	<2.0			
Dissolved Zinc						<2.0	na			

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-4						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**	*Highest RRS*	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
Sample Depth (well screen interval) (ft. bgs)			53'-58'	53'-58'	53'-58'	53'-58'	53'-58'	53'-58'	53'-58'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		52.9-57.9	52.9-57.9	52.9-57.9	52.9-57.9	52.9-57.9	52.9-57.9	52.9-57.9
Passive Diffusion Bag Sample Depth (ft. btoc)						'55.5-57	'55.5-57	'55.5-57	'55.5-57
Date Sampled			2/25/2000	10/3/2000	2/18/2003	5/6/2004	10/12-13/2004	4/8/2008	6/2/2010
Laboratory		(µg/L)	STL Tampa	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			Bailer/Bailer	Bailer/Bailer	PumpLFLS/Bailer	PumpLFLS/Bailer/ PDB	PumpLFLS/Bailer/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane		25,100	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<1.0	<2.5	<2.5	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	**16**	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<1.0	<2.0	<5.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver						<0.1	<0.1		
Dissolved Silver						<0.1	na		
Total Cadmium						<0.005	<0.005		
Dissolved Cadmium						<0.005	na		
Total Chromium						<0.1	<0.1		
Dissolved Chromium						<0.1	na		
Total Lead			Metals were not sampled and analyzed			<0.015	<0.015	Metals were not sampled and analyzed	
Dissolved Lead						<0.015	na		
Total Copper						<1.0	<1.0		
Dissolved Copper						<1.0	na		
Total Nickel						<0.1	<0.1		
Dissolved Nickel						<0.1	na		
Total Zinc						<2.0	<2.0		
Dissolved Zinc						<2.0	na		

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-5								
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
Sample Depth (well screen interval) (ft. bgs)			49'-54'	49'-54'	49'-54'	49'-54'	49'-54'	49'-54'	49'-54'	49'-54'	49'-54'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		48.8-53.8	48.8-53.8	48.8-53.8	48.8-53.8	48.8-53.8 51.4-52.9	48.8-53.8 51.4-52.9	48.8-53.8 51.4-52.9	48.8-53.8 51.4-52.9	48.8-53.8
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*									
Date Sampled			2/25/2000	10/3/2000	2/18/2003	6/12/2003	5/7/2004	10/12-13/2004	4/7/2008	6/1/2010	6/2/2010
Laboratory		(µg/L)	STL Tampa	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			Bailer/Bailer	Bailer/Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer/PDB	PumpLFSL/Bailer/PDB	no purge/ PDB	no purge/ PDB	Pump-LFLS
Constituent											
Volatile Organic Compounds - SW8260B - (µg/L)											
1,1,1-Trichloroethane		25,100	<400	<500	**45**	**53**	<45	<42	<12	<8	<8
1,1-Dichloroethene		950	<400	<500	**44**	**65**	<45	<42	<12	**8.9**	**22**
Chloroform		80	<400	<500	<25	<33	<45	<42	<12	<8	<8
cis-1,2-Dichloroethene		1,000	<400	<250	**15**	**19**	<45	<42	<6.2	<8	<8
Methylene chloride		180	<800	<500	<25	<33	<45	<42	<12	<8	<8
Toluene		6,400	<400	<500	<25	<33	<45	<42	<12	<8	<8
Trichloroethene		70	**7400**	**15000**	**730**	**1200**	**310**	**320**	**180**	**210**	**250**
Vinyl Chloride		4.0	<400	<200	<25	<33	<18	<17	<5	<8	<8
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	<2.0	<2.0
Site-Specific Metals - SW6010B - (mg/L)											
Total Silver							<0.1	<0.1			
Dissolved Silver							<0.1	na			
Total Cadmium							<0.005	<0.005			
Dissolved Cadmium							<0.005	na			
Total Chromium							<0.1	<0.1			
Dissolved Chromium							<0.1	na			
Total Lead							<0.015	<0.015			
Dissolved Lead			Metals were not sampled and analyzed				<0.015	na	Metals were not sampled and analyzed		
Total Copper							<1.0	<1.0			
Dissolved Copper							<1.0	na			
Total Nickel							<0.1	<0.1			
Dissolved Nickel							<0.1	na			
Total Zinc							<2.0	<2.0			
Dissolved Zinc							<2.0	na			

Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-6					MW-7		
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-6	MW-6	MW-6	MW-6	MW-6	MW-7	MW-7	MW-7
Sample Depth (well screen interval) (ft. bgs)			43'-48'	43'-48'	43'-48'	43'-48'	43'-48'	46'-56'	46'-56'	
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**	*Highest RRS*	42.9'-47.9'	42.9'-47.9'	42.9'-47.9'	42.9'-47.9'	42.9'-47.9'	45.6'-55.6'	45.6'-55.6'	45.6'-55.6'
Passive Diffusion Bag Sample Depth (ft. btoc)						45.9'-47.4'	45.9'-47.4'		53.7'-55.2'	53.7'-55.2'
Date Sampled			2/25/2000	10/3/2000	2/18/2003	4/8/2008	6/1/2010	2/25/2003	4/8/2008	6/1/2010
Laboratory		(µg/L)	STL Tampa	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			Bailer/Bailer	Bailer/Bailer	PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB
Constituent										
Volatile Organic Compounds - SW8260B - (µg/L)										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<1.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<1.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Chloroform		80	<1.0	<5.0	<5.0	<5.0	**1.2**	<5.0	**6.0**	**4.1**
cis-1,2-Dichloroethene		1,000	<1.0	<2.5	<2.5	<2.5	<1.0	<2.5	<2.5	<1.0
Methylene chloride		180	<2.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Toluene		6,400	<1.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Trichloroethene		70	**9.6**	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<1.0	<2.0	<5.0	<2.0	<1.0	<5.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)										
Total Silver			Metals were not sampled and analyzed					Metals were not sampled and analyzed		
Dissolved Silver										
Total Cadmium										
Dissolved Cadmium										
Total Chromium										
Dissolved Chromium										
Total Lead										
Dissolved Lead										
Total Copper										
Dissolved Copper										
Total Nickel										
Dissolved Nickel										
Total Zinc										
Dissolved Zinc										

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-8						MW-9		
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-8	MW-8A	MW-8B	MW-8	MW-8	MW-8	MW-9	MW-9	MW-9
Sample Depth (well screen interval) (ft. bgs)			60'-70'	60'-70'	60'-70'	60'-70'	60'-70'	60'-70'	55'-65'	55'-65'	55'-65'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**			59.6-69.6	59.6-69.6	59.6-69.6	59.6-69.6	59.6-69.6	54.6'-64.6'	54.6'-64.6'	54.6'-64.6'
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*		'60.6-62.1	65.6-67.1	'60.6-62.1	'60.6-62.1	'60.6-62.1		62.7'-64.2'	62.7'-64.2'
Date Sampled			2/24/2003	5/7/2004	5/7/2004	10/12/2004	4/7/2008	6/1/2010	2/24/2003	4/7/2008	6/1/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB
Constituent											
Volatile Organic Compounds - SW8260B - (µg/L)											
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Chloroform		80	<5.0	<5.0	<5.0	<5.0	<5.0	**1.0**	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<2.5	<1.0	<2.5	<2.5	<1.0
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<5.0	<2.0	<2.0	<2.0	<2.0	<1.0	<5.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)											
Total Silver			Metals were not sampled and analyzed						Metals were not sampled and analyzed		
Dissolved Silver											
Total Cadmium											
Dissolved Cadmium											
Total Chromium											
Dissolved Chromium											
Total Lead											
Dissolved Lead											
Total Copper											
Dissolved Copper											
Total Nickel											
Dissolved Nickel											
Total Zinc											
Dissolved Zinc											

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-10						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-10	MW-10A	MW-10B	MW-10	MW-10	MW-10	MW-10
Sample Depth (well screen interval) (ft. bgs)			35'-45'	35'-45'	35'-45'	35'-45'	35'-45'	35'-45'	35'-45'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		37.4-47.4	37.4-47.4	37.4-47.4	37.4-47.4	37.4-47.4	37.4-47.4	37.4-47.4
Passive Diffusion Bag Sample Depth (ft. btoc)				38.6-40.1	43.6-45.1	38.6-40.1	38.6-40.1	38.6-40.1	
Date Sampled		*Highest RRS*	2/25/2003	5/6/2004	5/6/2004	10/12-13/2004	4/8/2008	6/2/2010	6/3/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/Bailer	PumpLFLS/Bailer/ PDB	PumpLFLS/Bailer/ PDB	PumpLFLS/Bailer/ PDB	no purge/ PDB	no purge/ PDB	Pump-LFLS
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
Chloroform		80	<5.0	<5.0	<5.0	<5.0	**6.4**	**1.8**	**1.9**
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<2.5	<1.0	<1.0
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
Trichloroethene		70	<5.0	**8.5**	**5.8**	**6.1**	<5.0	**3.4**	**2.8**
Vinyl Chloride		4.0	<5.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	<2.0	<2.0
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver			Metals were not sampled and analyzed	<0.1		<0.1	Metals were not sampled and analyzed		
Dissolved Silver				<0.1		na			
Total Cadmium				<0.005		<0.005			
Dissolved Cadmium				<0.005		na			
Total Chromium				<0.1		<0.1			
Dissolved Chromium				<0.1		na			
Total Lead				<0.015		<0.015			
Dissolved Lead				<0.015		na			
Total Copper				<1.0		<1.0			
Dissolved Copper				<1.0		na			
Total Nickel				<0.1		<0.1			
Dissolved Nickel				<0.1		na			
Total Zinc				<2.0		<2.0			
Dissolved Zinc				<2.0		na			

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-11			MW-12			MW-13			
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-11	MW-11	MW-11	MW-12	MW-12	MW-12	MW-13	MW-13	MW-13	MW-13
Sample Depth (well screen interval) (ft. bgs)			66'-76'	66'-76'	66'-76'	60.5'-70.5'	60.5'-70.5'	60.5'-70.5'	12'-22'	12'-22'	12'-22'	12'-22'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		68.5'-78.5'	68.5'-78.5'	68.5'-78.5'	62.9'-72.9'	62.9'-72.9'	62.9'-72.9'	14.5'-24.5'	14.5'-24.5'	14.5'-24.5'	14.5'-24.5'
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*		76.6'-78.1'	76.6'-78.1'		71.0'-72.5'	71.0'-72.5'		22.6'-24.1'	22.6'-24.1'	22.6'-24.1'
Date Sampled			2/25/2003	4/7/2008	6/2/2010	2/25/2003	4/7/2008	6/2/2010	2/26/2003	4/7/2008	6/2/2008	6/2/2010
Laboratory		(µg/L)	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent												
Volatile Organic Compounds - SW8260B - (µg/L)												
1,1,1-Trichloroethane		25,100	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<1.0
Chloroform		80	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<1.0
cis-1,2-Dichloroethene		1,000	<2.5	<2.5	<1.0	<2.5	<2.5	<1.0	<2.5	<2.5	<1.0	<1.0
Methylene chloride		180	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<1.0
Toluene		6,400	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<1.0
Trichloroethene		70	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<1.0
Vinyl Chloride		4.0	<5.0	<2.0	<1.0	<5.0	<2.0	<1.0	<5.0	<2.0	<1.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)												
Total Silver												
Dissolved Silver												
Total Cadmium												
Dissolved Cadmium												
Total Chromium												
Dissolved Chromium												
Total Lead												
Dissolved Lead												
Total Copper												
Dissolved Copper												
Total Nickel												
Dissolved Nickel												
Total Zinc												
Dissolved Zinc												

Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits

Metals were not sampled and analyzed

Metals were not sampled and analyzed

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-14							MW-14					
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-14	MW-14 PRE	MW-14 POST	MW-14 LONG	MW-14 PRE	MW-14 POST	MW-14 LONG	MW-14 (7:10)	MW-14 (9:30)	MW-14 (12:15)	MW-14A	MW-14B	MW-14C
Sample Depth (well screen interval) (ft. bgs)			71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*											74.5-76	79.5-81	84.5-86
Date Sampled			4/3/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	6/13/2003	6/13/2003	6/13/2003	5/5/2004	5/5/2004	5/5/2004
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	ASI	ASI	ASI	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton
Purge Method/Sample Method			PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent															
Volatile Organic Compounds - SW8260B - (µg/L)															
1,1,1-Trichloroethane		25,100	<100	<6.2	<25	<25	<25	<100	<100	<250	<250	<250	<200	<250	<200
1,1-Dichloroethene		950	<100	<6.2	<25	<25	<25	<100	<100	<250	<250	<250	<200	<250	<200
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<100	<6.2	<25	<25	<25	<100	<100	<250	<250	<250	<200	<250	<200
cis-1,2-Dichloroethene		1,000	**230**	**180**	**350**	**440**	**190**	**410**	**510**	**470**	**530**	**520**	**500**	**450**	**450**
Methylene chloride		180	<100	<6.2	<25	<25	<25	<100	<100	<250	<250	<250	<200	<250	<200
Toluene		6,400	<100	<6.2	<25	<25	**29**	<100	<100	<250	<250	<250	<200	<250	<200
Trichloroethene		70	**3000**	**2200**	**6300**	**8200**	**2400**	**8200**	**8800**	**7000**	**7700**	**7300**	**6800**	**6600**	**6100**
Vinyl Chloride		4.0	<40	<6.2	<25	<25	<10	<40	<40	<250	<250	<250	<200	<250	<200
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)															
Total Silver															
Dissolved Silver															
Total Cadmium															
Dissolved Cadmium															
Total Chromium															
Dissolved Chromium															
Total Lead															
Dissolved Lead															
Total Copper															
Dissolved Copper															
Total Nickel															
Dissolved Nickel															
Total Zinc															
Dissolved Zinc															

Metals were not sampled and analyzed.

Metals were not sampled and analyzed.

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-14						MW-15			MW-16		
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-14	MW-14	MW-14	Re-analysis MW-14	MW-14	Re-analysis MW-14	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16
Sample Depth (well screen interval) (ft. bgs)			71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	71.2'-86.2'	6.7'-11.7'	6.7'-11.7'	6.7'-11.7'	6.7'-11.7'	6.7'-11.7'	6.7'-11.7'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	73.4-88.4	9.3'-14.3'	9.3'-14.3'	9.3'-14.3'	9.2'-14.2'	9.2'-14.2'	9.2'-14.2'
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*	74.5-76	74.5-76	74.5-76	74.5-76				12.3'-13.8'	12.3'-13.8'		12.2'-13.7'	12.2'-13.7'
Date Sampled			10/12/2004	4/7/2008	6/2/2010	6/2/2010	6/3/2010	6/3/2010	4/3/2003	4/7/2008	6/2/2010	4/4/2003	4/7/2008	6/2/2010
Laboratory		(µg/L)	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	Pump-LFLS	Pump-LFLS	PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB
Constituent														
Volatile Organic Compounds - SW8260B - (µg/L)														
1,1,1-Trichloroethane		25,100	<310	<330	<120	<25	<140	<29	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<310	<330	<120	**57**	<140	**58**	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Chloroform		80	<310	<330	<120	<25	<140	<29	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<310	**410**	**370**	**320**	**380**	**330**	<2.5	<2.5	<1.0	<2.5	<2.5	<1.0
Methylene chloride		180	<310	<330	<120	<25	<140	<29	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Toluene		6,400	<310	<330	<120	<25	<140	<29	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Trichloroethene		70	**1900**	**4800**	**3500**	**3000 E**	**3600**	**3200 E**	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<120	<130	<120	<25	<140	<29	<2.0	<2.0	<1.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	<25	na	na	<29	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)														
Total Silver														
Dissolved Silver														
Total Cadmium														
Dissolved Cadmium														
Total Chromium														
Dissolved Chromium														
Total Lead														
Dissolved Lead														
Total Copper														
Dissolved Copper														
Total Nickel														
Dissolved Nickel														
Total Zinc														
Dissolved Zinc														

Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits

Metals were not sampled and analyzed.

Metals were not sampled and analyzed

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-17						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-17	MW-17A	MW-17B	MW-17C	MW-17	MW-17	MW-17
Sample Depth (well screen interval) (ft. bgs)			33'-47.5'	33'-47.5'	33'-47.5'	33'-47.5'	33'-47.5'	33'-47.5'	33'-47.5'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		35.5-50	35.5-50	35.5-50	35.5-50	35.5-50	35.5-50	35.5-50
Passive Diffusion Bag Sample Depth (ft. btoc)			36.4-37.9	36.4-37.9	41.4-42.9	46.4-47.9	36.4-37.9	36.4-37.9	36.4-37.9
Date Sampled		*Highest RRS*	5/14/2003	5/4/2004	5/4/2004	5/4/2004	10/12/2004	4/7/2008	6/2/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton
Purge Method/Sample Method			PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane		25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver									
Dissolved Silver									
Total Cadmium									
Dissolved Cadmium									
Total Chromium									
Dissolved Chromium									
Total Lead									
Dissolved Lead									
Total Copper									
Dissolved Copper									
Total Nickel									
Dissolved Nickel									
Total Zinc									
Dissolved Zinc									

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-18						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-18	MW-18A	MW-18B	MW-18C	MW-18	MW-18	MW-18
Sample Depth (well screen interval) (ft. bgs)			27'-42'	27'-42'	27'-42'	27'-42'	27'-42'	27'-42'	27'-42'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		29.7'-44.7'	29.7'-44.7'	29.7'-44.7'	29.7'-44.7'	29.6-44.6	29.6-44.6	29.7'-44.7'
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*		31.1-32.6	36.1-37.6	41.1-42.6	31.1-32.6	31.1-32.6	31.1-32.6
Date Sampled			5/14/2003	5/4/2004	5/4/2004	5/4/2004	10/12/2004	4/7/2008	6/2/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform		80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)	Metals were not sampled and analyzed								
Total Silver									
Dissolved Silver									
Total Cadmium									
Dissolved Cadmium									
Total Chromium									
Dissolved Chromium									
Total Lead									
Dissolved Lead									
Total Copper									
Dissolved Copper									
Total Nickel									
Dissolved Nickel									
Total Zinc									
Dissolved Zinc									

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-19									
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-19	MW-19	MW-19A	MW-19B	MW-19	MW-19	MW-19	Re-analyzed MW-19	MW-19	Re-analyzed MW-19
Sample Depth (well screen interval) (ft. bgs)			36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'	36.2'-46.2'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7	38.7-48.7
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*			39.9-41.4	44.9-46.4	39.9-41.4	39.9-41.4	39.9-41.4	39.9-41.4		
Date Sampled			5/28/2003	6/13/2003	5/5/2004	5/5/2004	10/12/2004	4/7/2008	6/2/2010	6/2/2010	6/3/2010	6/3/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/Bailer	PumpLFLS/Bailer	PumpLFSL/Bailer/ PDB	PumpLFSL/Bailer/ PDB	PumpLFSL/Bailer/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	Pump-LFSL	Pump-LFSL
Constituent												
Volatile Organic Compounds - SW8260B - (µg/L)												
1,1,1-Trichloroethane		25,100	<250	<500	<1200	<1200	<1700	<100	<56	<56	<200	<40
1,1-Dichloroethene		950	<250	<500	<1200	<1200	<1700	<100	**82**	**100**	<200	**72**
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<250	<500	<1200	<1200	<1700	<100	<56	<56	<200	<40
cis-1,2-Dichloroethene		1,000	<120	<250	<1200	<1200	<1700	<50	<56	<56	<200	<40
Methylene chloride		180	380 B	<500	<1200	<1200	<1700	<100	<56	<56	<200	<40
Toluene		6,400	<250	<500	<1200	<1200	<1700	<100	<56	<56	<200	<40
Trichloroethene		70	**8000**	**12000**	**20000**	**19000**	**14000**	**1500**	**1700**	**1900**	**5800**	**5800 E**
Vinyl Chloride		4.0	<250	<500	<1200	<1200	<670	<40	<56	<56	<200	<40
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	<11	na	na	<40
Site-Specific Metals - SW6010B - (mg/L)												
Total Silver			Metals were not sampled and analyzed		<0.1		<0.1	Metals were not sampled and analyzed				
Dissolved Silver					NA		na					
Total Cadmium					<0.005		<0.005					
Dissolved Cadmium					NA		na					
Total Chromium					<0.1		<0.1					
Dissolved Chromium					NA		na					
Total Lead					<0.015		<0.015					
Dissolved Lead					NA		na					
Total Copper					<1.0		<1.0					
Dissolved Copper					NA		na					
Total Nickel					<0.1		<0.1					
Dissolved Nickel					NA		na					
Total Zinc					<2.0		<2.0					
Dissolved Zinc					NA		na					

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-20										
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-20	MW-20 (12:10)	MW-20 (15:00)	MW-20 (17:30)	MW-20A	MW-20B	MW-20C	MW-20	MW-20	MW-20	MW-20
Sample Depth (well screen interval) (ft. bgs)			91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'	91.7'-106.7'
Sample Depth (well screen interval) (ft. btoc)			91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5	91.5-106.5
Passive Diffusion Bag Sample Depth (ft. btoc)							92.6-94.1	97.6-99.1	102.6-104.1		92.6-94.1	92.6-94.1	
Date Sampled	**Site Background Concentrations**	*Highest RRS*	5/28/2003	6/12/2003	6/12/2003	6/12/2003	5/6/2004	5/6/2004	5/6/2004	10/28/2004	4/8/2008	6/1/2010	6/2/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	Pump-LFLS
Constituent													
Volatile Organic Compounds - SW8260B - (µg/L)													
1,1,1-Trichloroethane		25,100	<5.0	<5.0	<5.0	<5.0	<7.2	<7.2	<5.0	<10.0	<10.0	<5.0	<5.7
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<7.2	<7.2	<5.0	<10.0	<10.0	<5.0	<5.7
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<5.0	<5.0	<5.0	<5.0	<7.2	<7.2	<5.0	<10.0	<10.0	<5.0	<5.7
cis-1,2-Dichloroethene		1,000	**14**	**12**	**15**	**20**	**40**	**40**	**33**	**52**	**120**	**150**	**170**
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<7.2	<7.2	<5.0	<10.0	<10.0	<5.0	<5.7
Toluene		6,400	<5.0	**5.7**	<5.0	<5.0	<7.2	<7.2	<5.0	<10.0	<10.0	<5.0	<5.7
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<7.2	<7.2	<5.0	<10.0	<10.0	<5.0	<5.7
Vinyl Chloride		4.0	<5.0	<5.0	<5.0	<5.0	<2.9	<2.9	<2.0	<4.0	<4.0	**15**	<5.7
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	na	na	<2.0	<2.0
Site-Specific Metals - SW6010B - (mg/L)													
Total Silver													
Dissolved Silver													
Total Cadmium													
Dissolved Cadmium													
Total Chromium													
Dissolved Chromium													
Total Lead													
Dissolved Lead													
Total Copper													
Dissolved Copper													
Total Nickel													
Dissolved Nickel													
Total Zinc													
Dissolved Zinc													

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-21						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-21	MW-21A	MW-21B	MW-21C	MW-21	MW-21	MW-21
Sample Depth (well screen interval) (ft. bgs)			89.7'-104.7'	89.7'-104.7'	89.7'-104.7'	89.7'-104.7'	89.7'-104.7'	89.7'-104.7'	89.7'-104.7'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		89.4-104.4	89.4-104.4	89.4-104.4	89.4-104.4	89.4-104.4	89.4-104.4	89.4-104.4
Passive Diffusion Bag Sample Depth (ft. btoc)				90.7-92.2	95.7-97.2	100.7-102.2	90.7-92.2	90.7-92.2	90.7-92.2
Date Sampled		*Highest RRS*	9/10/2003	5/7/2004	5/7/2004	5/7/2004	10/12/2004	4/8/2008	6/1/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane		25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform		80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver									
Dissolved Silver									
Total Cadmium									
Dissolved Cadmium									
Total Chromium									
Dissolved Chromium									
Total Lead									
Dissolved Lead									
Total Copper									
Dissolved Copper									
Total Nickel									
Dissolved Nickel									
Total Zinc									
Dissolved Zinc									

Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-22						
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-22	MW-22A	MW-22B	MW-22C	MW-22	MW-22	MW-22
Sample Depth (well screen interval) (ft. bgs)			98.9'-113.9'	98.9'-113.9'	98.9'-113.9'	98.9'-113.9'	98.9'-113.9'	98.9'-113.9'	98.9'-113.9'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		98.7-113.7	98.7-113.7	98.7-113.7	98.7-113.7	98.7-113.7	98.7-113.7	98.7-113.7
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*		100-101.5	105-106.5	110-111.5	100-101.5	100-101.5	100-101.5
Date Sampled			9/10/2003	5/5/2004	5/5/2004	5/5/2004	10/12/2004	4/7/2008	6/1/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton
Purge Method/Sample Method			PumpLFLS/Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB
Constituent									
Volatile Organic Compounds - SW8260B - (µg/L)									
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Chloroform		80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<5.0	<2.5	<1.0
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0
Vinyl Chloride		4.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na
Site-Specific Metals - SW6010B - (mg/L)									
Total Silver									
Dissolved Silver									
Total Cadmium									
Dissolved Cadmium									
Total Chromium									
Dissolved Chromium									
Total Lead									
Dissolved Lead									
Total Copper									
Dissolved Copper									
Total Nickel									
Dissolved Nickel									
Total Zinc									
Dissolved Zinc									

Metals were not sampled and analyzed

TABLE 4.5: SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number			MW-23							MW-24				MW-25	MW-26	MW-27	MW-28
Sample ID	**VRP Delineation Criteria 12-8-108(1)(A)**		MW-23	MW-23A	MW-23B	MW-23C	MW-23	MW-23	MW-23	MW-24	MW-24	MW-24	MW-24	MW-25	MW-26	MW-27	MW-28
Sample Depth (well screen interval) (ft. bgs)			91'-106'	91'-106'	91'-106'	91'-106'	91'-106'	91'-106'	91'-106'	136.9'-146.7'	136.9'-146.7'	136.9'-146.7'	136.9'-146.7'	91.8-106.8'	1.0-6.0'	2.2-7.2'	2.1-7.1'
Sample Depth (well screen interval) (ft. btoc)	**Site Background Concentrations**		90.8'-105.8'	90.8'-105.8'	90.8'-105.8'	90.8'-105.8'	90.8'-105.8'	90.8'-105.8'	90.8'-105.8'	136.7'-146.5'	136.7'-146.5'	136.7'-146.5'	136.7'-146.5'	91.5-106.5'	4.9-9.9'	5.0-10.0'	5.0-10.0'
Passive Diffusion Bag Sample Depth (ft. btoc)		*Highest RRS*	92.1-93.6	92.1-93.6	97.1-98.6	102.1-103.5	92.1-93.6	92.1-93.6	92.1-93.6			143.3'-144.8'	143.3'-144.8'				
Date Sampled			9/11/2003	5/5/2004	5/5/2004	5/5/2004	10/12/2004	4/7/2008	6/1/2010	10/12/2004	10/28/2004	4/7/2008	6/1/2010	6/24/2010	10/20/2010	10/20/2010	10/20/2010
Laboratory		(µg/L)	STL North Canton	STL North Canton	STL North Canton	STL North Canton	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL Savannah	STL North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	AES	AES	AES
Purge Method/Sample Method			PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	no purge/ PDB	PumpLFLS/ Bailer	PumpLFLS/ Bailer	no purge/ PDB	no purge/ PDB	PumpLFLS	PumpLFLS	PumpLFLS	PumpLFLS
Constituent																	
Volatile Organic Compounds - SW8260B - (µg/L)																	
1,1,1-Trichloroethane		25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<83	<5.0	<5.0	<5.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<83	<5.0	<5.0	<5.0
Chloroform	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<83	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	<2.5	<5.0	<5.0	<5.0	<5.0	<2.5	<1.0	<1.0	<5.0	<2.5	<1.0	**820**	<5.0	**5.2**	**9.4**
Methylene chloride		180	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<83	<5.0	<5.0	<5.0
Toluene		6,400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	<83	<5.0	<5.0	<5.0
Trichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<5.0	<5.0	<1.0	**2800**	<5.0	**10**	<5.0
Vinyl Chloride		4.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<2.0	<2.0	<1.0	<83	<2.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)		12	na	na	na	na	na	na	na	na	na	na	na	<17	na	na	na
Site-Specific Metals - SW6010B - (mg/L)																	
Total Silver																	
Dissolved Silver																	
Total Cadmium																	
Dissolved Cadmium																	
Total Chromium																	
Dissolved Chromium																	
Total Lead																	
Dissolved Lead																	
Total Copper																	
Dissolved Copper																	
Total Nickel																	
Dissolved Nickel																	
Total Zinc																	
Dissolved Zinc																	

Metals were not sampled and analyzed

Metals were not sampled and analyzed

Notes:

na	Constituent not analyzed
bgs	Below ground surface
ft. bgs	Feet below ground surface
B	Result may be a false positive or biased high based upon blank data.
E	Estimated concentration
btoc	Below top of well casing
mg/L	Milligrams per liter
ug/L	Micrograms per liter
PumpLFLS	Well was purged using the low flow/low stress method with a submersible Grundfos pump and clean dedicated tubing and the groundwater sample was collected using a disposable teflon bailer and rope.
Bailer/Bailer	Well was purged and sampled with a bailer.
RRS	Risk Reduction Standard
no purge/PD	Well was not purged, groundwater sample collected with Passive Diffusion Bag Sampler
	2010 Sample Concentration exceeds Types 1-4 RRSs

Prepared By: CLC 7/1/10, DLH 11/12/10
Checked By: DJH 8/3/10

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-E-1		GW-E-2	GW-E-3			GW-E-4		
Sample ID	**Criteria**	*RRS*	GW-E-1	GW-E-1	GW-E-2	GW-E-3	GW-E-3	GW-E-3	GW-E-4	GW-E-4	GW-E-4
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	34'	48'	55'	44'-48'	52'-56'	56'-60'	44'-48'	48'-52'	60'-61'
Date Sampled	**Site**		9/25/2000	9/26/2000	9/26/2000	10/2/2000	10/2/2000	10/2/2000	9/27/2000	9/27/2000	9/27/2000
Constituent	**Background**										
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	**2800**	**13**	**8.2**	<5.0	<5.0	<5.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	**440**	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform		80	<5.0	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	<2.5	<2.5	<2.5	<62	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride		180	<5.0	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene		6400	<5.0	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene		70	<5.0	<5.0	**7.7**	1800	**35**	**41**	**16**	<5.0	**5.8**

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-E-5			GW-E-6			GW-E-7		
Sample ID	**Criteria**	*RRS*	GW-E-5	GW-E-5	GW-E-5	GW-E-6	GW-E-6	GW-E-6	GW-E-7	GW-E-7	GW-E-7
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	40'-44'	44'-48'	54'-58'	40'-44'	52'-56'	56'-60'	31'-35'	35'-39'	48'-52'
Date Sampled	**Site**		9/28/2000	9/28/2000	10/10/2000	10/3/2000	10/3/2000	10/4/2000	10/3/2000	10/3/2000	10/3/2000
Constituent	**Background**										
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform		80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride		180	<5.0	<5.0	14 B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene		6400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene		70	**20**	<5.0	<5.0	<5.0	<5.0	<5.0	**8.4**	<5.0	<5.0

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-E-8			GW-E-9			GW-E-10		GW-E-11		
Sample ID	**Criteria**	*RRS*	GW-E-8	GW-E-8	GW-E-8	GW-E-9	GW-E-9	GW-E-9	GW-E-10	GW-E-10	GW-E-11	GW-E-11	GW-E-11
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	40'-44'	44'-48'	50'-54'	38'-42'	44'-48'	50'-54'	44'-48'	48'-52'	44'-48'	50'-54'	54'-58'
Date Sampled	**Site**		10/4/2000	10/4/2000	10/4/2000	10/4/2000	10/4/2000	10/4/2000	10/4/2000	10/4/2000	10/5/2000	10/5/2000	10/5/2000
Constituent	**Background**												
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**												
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0	<5.0	**34**	<5.0	<5.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0	<5.0	**23**	<5.0	<5.0
Chloroform		80	<5.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0	<5.0	<17	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	<2.5	<2.5	<2.5	<3.6	<2.5	<2.5	<2.5	<2.5	**12**	<2.5	<2.5
Methylene chloride		180	<5.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0	<5.0	<17	<5.0	<5.0
Toluene		6400	<5.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0	<5.0	<17	<5.0	<5.0
Trichloroethene		70	**21**	<5.0	**13**	**170**	**38**	**10**	**38**	<5.0	**520**	**26**	**150**

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-E-12			GW-E-13			GW-E-14			GW-E-15		
Sample ID	**Criteria**	*RRS*	GW-E-12	GW-E-12	GW-E-12	GW-E-13	GW-E-13	GW-E-13	GW-E-14	GW-E-14	GW-E-14	GW-E-15	GW-E-15	GW-E-15
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	40'-44'	44'-48'	50'-54'	44'-48'	48'-52'	56'-60'	48'-52'	52'-56'	56'-60'	48'-52'	54'-58'	61'-65'
Date Sampled	**Site**		10/5/2000	10/5/2000	10/6/2000	10/9/2000	10/9/2000	10/9/2000	10/6/2000	10/6/2000	10/6/2000	10/11/2000	10/11/2000	10/11/2000
Constituent	**Background**													
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**													
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	**180**	**24**	<170	**500**	**50**	**12**	**1400**	**1300**	**34**	**53**	<5.0	<5.0
1,1-Dichloroethene		950	<120	<17	<170	**210**	**17**	<5.0	**260**	**310**	**7.9**	<25	<5.0	<5.0
Chloroform		80	<120	<17	<170	<100	<10	<5.0	<50	<42	<5.0	<25	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	<62	<8.3	<83	**110**	**9.2**	<2.5	**69**	**68**	<2.5	**13**	<2.5	<2.5
Methylene chloride		180	<120	<17	<170	<100	12 B	12 B	<50	<42	<5.0	39 B	13 B	9.9 B
Toluene		6400	<120	<17	<170	<100	<10	<5.0	<50	<42	<5.0	<25	<5.0	<5.0
Trichloroethene		70	**3900**	**460**	**4200**	**3300**	**280**	**140**	**1500**	**1500**	**67**	610	87	**10**

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-E-16			GW-E-17			GW-E-18		
Sample ID	**Criteria**	*RRS*	GW-E-16	GW-E-16	GW-E-16	GW-E-17	GW-E-17	GW-E-17	GW-E-18	GW-E-18	GW-E-18
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	40'-44'	50'-54'	57'-61'	48'-52'	55'-59'	62'-66'	51'-55'	60'-64'	68'-72'
Date Sampled	**Site**		10/13/2000	10/13/2000	10/13/2000	10/26/2000	10/26/2000	10/26/2000	10/25/2000	10/25/2000	10/25/2000
Constituent	**Background**										
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene		950	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform		80	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	**25**	<2.5	<62	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride		180	14 B	15 B	<120	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene		6400	<5.0	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene		70	**7.9**	<5.0	<120	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-E-19			GW-AOC 1-1			GW-AOC 2-1		
Sample ID	**Criteria**	*RRS*	GW-E-19	GW-E-19	GW-E-19	GW-AOC 1-1	GW-AOC 1-1	GW-AOC 1-1	GW-AOC 2-1	GW-AOC 2-1	GW-AOC 2-1
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	51'-55'	59'-63'	70'-74'	40'-44'	52'-56'	59'-63'	42'-46'	52'-56'	62'-66'
Date Sampled	**Site**		10/25/2000	10/25/2000	10/25/2000	10/31/2000	10/31/2000	10/31/2000	10/17/2000	10/17/2000	10/17/2000
Constituent	**Background**										
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	<5.0	<5.0	<5.0	**83000**	**37000**	**1100**	**14**	<5.0	<5.0
1,1-Dichloroethene		950	<5.0	<5.0	<5.0	<4200	**2000**	<50	**9.4**	<5.0	<5.0
Chloroform		80	<5.0	<5.0	<5.0	<4200	<1000	<50	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	<2.5	<2.5	<2.5	<2100	<500	<25	<2.5	<2.5	<2.5
Methylene chloride		180	17 B	26 B	18 B	<4200	<1000	<50	6.3 B	<5.0	12 B
Toluene		6400	<5.0	<5.0	<5.0	<4200	<1000	<50	<5.0	<5.0	<5.0
Trichloroethene		70	<5.0	<5.0	<5.0	**10000**	**4100**	**120**	**41**	**5.0**	**23**

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-AOC 3-1			GW-AOC 3-2			GW-AOC 8-1		
Sample ID	**Criteria**	*RRS*	GW-AOC 3-1	GW-AOC 3-1	GW-AOC 3-1	GW-AOC 3-2	GW-AOC 3-2	GW-AOC 3-2	GW-AOC 8-1	GW-AOC 8-1	GW-AOC 8-1
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	40'-44'	50'-54'	55'-59'	40'-44'	48'-52'	60'-64'	40'-44'	49'-53'	58'-62'
Date Sampled	**Site**		11/1/2000	11/1/2000	11/1/2000	10/30/2000	10/30/2000	10/30/2000	10/18/2000	10/19/2000	10/19/2000
Constituent	**Background**										
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	**2700**	**1500**	**550**	**5600**	**39**	**9.9**	**3800**	**6.4**	**8.6**
1,1-Dichloroethene		950	**860**	**530**	**200**	**1200**	**13**	<5.0	**790**	<5.0	<5.0
Chloroform		80	<250	<170	<100	<500	<10	<5.0	<500	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	**190**	**100**	**32 J**	**270**	**8.3**	<2.5	**300**	<2.5	<2.5
Methylene chloride		180	<250	<170	<100	<500	<10	<5.0	<500	<5.0	11 B
Toluene		6400	<250	<170	<100	<500	<10	<5.0	<500	<5.0	<5.0
Trichloroethene		70	**7900**	**6300**	2200	**7200**	**230**	**19**	**8600**	**23**	**28**

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-AOC 8-2			GW-AOC 9-1			GW-AOC 9-2		
Sample ID	**Criteria**	*RRS*	GW-AOC 8-2	GW-AOC 8-2	GW-AOC 8-2	GW-AOC 9-1	GW-AOC 9-1	GW-AOC 9-1	GW-AOC 9-2	GW-AOC 9-2	GW-AOC 9-2
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	42'-46'	50'-54'	56'-60'	40'-44'	50'-54'	58'-62'	44'-48'	50'-54'	58'-62'
Date Sampled	**Site**		10/19/2000	10/19/2000	10/19/2000	10/19/2000	10/20/2000	10/20/2000	10/20/2000	10/20/2000	10/20/2000
Constituent	**Background**										
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**										
1,1,1-Trichloroethane	Site Background is defined as the non-detection of regulated substances above laboratory quantitation limits	25,100	**8000**	**55**	**94**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene		950	**1300**	**9.2**	**29**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform		80	<250	<5.0	<17	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene		1,000	**230**	**9.9**	**20**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Methylene chloride		180	840 B	<5.0	<17	13 B	15 B	15 B	<5.0	<5.0	11 B
Toluene		6400	<250	<5.0	<17	<5.0	<5.0	**6.8**	<5.0	**5.9**	<5.0
Trichloroethene		70	**6000**	**170**	**420**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

TABLE 4.5 SUMMARY OF REGULATED SUBSTANCES
DETECTED IN GROUND-WATER SAMPLES

Boring Number	**VRP Delineation**	*Highest*	GW-AOC 10-1			SB-113		SB-114		SB-115		SB-118	
Sample ID	**Criteria**	*RRS*	GW-AOC 10-1	GW-AOC 10-1	GW-AOC 10-1	SB-113	SB-113	SB-114	SB-114	SB-115	SB-115	SB-118	SB-118
Sample Depth (ft. bgs)	**12-8-108(1)(A)**	(µg/L)	44'-48'	52'-56'	60'-64'	43.5'-47.5'	57'-62'	45'-48'	60'-65'	24'-27'	33'-37'	6'-10'	17'-21'
Date Sampled	**Site**		10/18/2000	10/18/2000	10/18/2000	2/5/2003	2/5/2003	2/5/2003	2/6/2003	3/13/2003	3/13/2003	3/26/2003	3/26/2003
Constituent	**Background**												
Volatile Organic Compounds - SW8260B - (µg/L)	**Concentrations**												
1,1,1-Trichloroethane		25,100	**2700**	**9.4**	**77**	<3.3	<1.0	**270**	**2.7**	<42	<5.0	<17	<5.0
1,1-Dichloroethene		950	**430**	<5.0	**19**	<3.3	<1.0	**72**	<1.0	<42	<5.0	<17	<5.0
Chloroform	Site Background is	80	<170	<5.0	<10	<3.3	**1.2**	<25	**1**	<42	<5.0	<17	<5.0
cis-1,2-Dichloroethene	defined as the non-	1,000	<83	<2.5	**11**	<1.7	<0.5	**27**	<0.5	<21	<2.5	**9.6**	<2.5
Methylene chloride	detection of regulated	180	<170	<5.0	<10	<3.3	<1.0	<25	<1.0	<42	<5.0	<17	<5.0
Toluene	substances above	6400	<170	<5.0	<10	<3.3	<1.0	<25	<1.0	<42	<5.0	<17	<5.0
Trichloroethene	laboratory quantitation limits	70	**2000**	**27**	**260**	**93**	**20**	700	**13**	**780**	<5.0	**560**	**32**

Notes:

na	Constituent not analyzed
bgs	Below ground surface
ft. bgs	Feet below ground surface
B	Result may be a false positive or biased high based upon blank data.
btoc	Below top of well casing
mg/L	Milligrams per liter
µg/L	Micrograms per liter
GW	Designates that groundwater sample was collected from a direct push technology (DPT) boring.
SB	Designates that groundwater sample was collected from a DPT boring or via rotosonic soil coring.
RRS	Risk Reduction Standard
J	Estimated; result detected below the reporting limit but above the method detection limit or result is estimated based on the QC data.
	Concentration exceeds Types 1-4 RRSs

Prepared By: RNQ 2/22/07
Checked By: JAH 2/23/07

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Manson Branch #1**			**Manson Branch #2**											
Sample Location		**Surface water in Manson Branch south side of Hwy 24 Bridge**			**Seep in a Draw Down Slope of Thermo King plant building**											
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**5/3/2000**			**5/3/2000**			**11/2/2000**	**1/15/2003**	**3/24/2004**	**6/23/2004**	**8/31/2004**	**11/17/2004**	**2/27/2008**	**4/21/2010**	**6/2/2010**
Laboratory		**Lancaster Labs**	**STL-North Canton**	**Savannah Labs**	**Lancaster Labs**	**STL-North Canton**	**Savannah Labs**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**
CONSTITUENT (µg/L)																
1,1,1-Trichloroethane	not established	<5.0	<5.0	<5.0	**200**	**160**	**170**	**290**	**15**	**39**	**300**	**1900**	**320**	**8.4**		**61**
1,1-Dichloroethene	7100	<5.0	<5.0	<5.0	**69**	**50**	**52**	**97**	**12**	**24**	<250	**1000**	**210**	**11**		**160**
cis-1,2-Dichloroethene	not established	<5.0	<2.5	<5.0	**36**	**30**	**27**	**59**	**36**	**61**	<250	<620	<190	**89**	DRY	**180**
Toluene	5,980	<5.0	<5.0	<5.0	<5.0	<17.0	<5.0	<25.0	<4.0	<6.7	<250	<620	<190	<5.0	Not Sampled	<50
trans-1,2-Dichloroethene	10,000	<5.0	<2.5	<5.0	<5.0	<8.3	<5.0	<25.0	<2.0	<6.7	<250	<620	<190	<2.5		<50
Trichloroethene	30	<5.0	<5.0	<5.0	**490**	**460**	**440**	**720**	**120**	**210**	**1300**	**4400**	**930**	**310**		**1700**
Vinyl Chloride	2.4	<2.0	<5.0	<5.0	<2.0	<6.7	<2.0	<10.0	<4.0	<6.7	<100	<250	<77	<4.0		<50
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established				na	na	na	na	na	na	na	na	na	na		na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Manson Branch #3**	**Manson Branch #4**	**Manson Branch #5**	**Manson Branch #6**	**Manson Branch #7**	**Manson Branch #8**	**Manson Branch #9**	**Manson Branch #10**	**Manson Branch #11**	**Manson Branch #12**
Sample Location		**Surface water in Manson Branch located 500 ft downstream of Hwy 24**	**Surface water in Manson Branch located 700 ft downstream of Hwy 24**	**Surface water in Manson Branch located 900 ft downstream of Hwy 24**	**Surface water in Manson Branch located 1100 ft downstream of Hwy 24**	**Surface water in Manson Branch located 1300 ft downstream of Hwy 24**	**Surface water in Manson Branch located 1575 ft downstream of Hwy 24**	**Surface water in Manson Branch located 2900 ft upstream of Hwy 17**	**Surface water in Manson Branch located 2100 ft upstream of Hwy 17**	**Surface water in Manson Branch located 1200 ft upstream of Hwy 17**	**Surface water in Manson Branch located at Hwy 17 bridge**
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**6/7/2000**	**6/7/2000**	**6/7/2000**	**6/7/2000**	**6/7/2000**	**6/7/2000**	**6/6/2000**	**6/6/2000**	**6/6/2000**	**6/6/2000**
Laboratory		**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**
CONSTITUENT (µg/L)											
1,1,1-Trichloroethane	not established	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	7100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Toluene	5,980	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Trichloroethene	30	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	2.4	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na	na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Manson Branch #14**			**Manson Branch #15**			**Manson Branch #16**		
Sample Location		**Surface water in Manson Branch located at Hwy 24 bridge**			**Surface water in Manson Branch located about 450 ft downstream of Hwy 24 bridge**			**Surface water in Manson Branch located about 700 ft downstream of Hwy 24 bridge**		
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**1/15/2003**	**2/26/2008**	**4/22/2010**	**1/15/2003**	**2/27/2008**	**4/21/2010**	**1/15/2003**	**2/27/2008**	**4/21/2010**
Laboratory		**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**
CONSTITUENT (µg/L)										
1,1,1-Trichloroethane	not established	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0
1,1-Dichloroethene	7100	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	<0.50	<2.5	<2.5	<0.50	<2.5	<2.5	<0.50	<2.5	<2.5
Toluene	5,980	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	<0.50	<2.5	<2.5	<0.50	<2.5	<2.5	<0.50	<2.5	<2.5
Trichloroethene	30	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<5.0
Vinyl Chloride	2.4	<1.0	<2.0	<2.0	<1.0	<2.0	<2.0	<1.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Manson Branch Seep West #2 (Seep #2)**								
Sample Location		**Seep Located 350 ft downstream of Hwy 24 on the west bank**								
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**6/7/2000**	**11/2/2000**	**1/15/2003**	**3/24/2004**	**6/23/2004**	**8/30/2004**	**11/17/2004**	**2/27/2008**	**4/21/2010**
Laboratory		**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**
CONSTITUENT (µg/L)										
1,1,1-Trichloroethane	not established	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	7100	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	**3.8**	**7.9**	<0.50	<5.0	<5.0	<5.0	<5.0	<2.5	<2.5
Toluene	5,980	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	<2.5	<2.5	<0.50	<5.0	<5.0	<5.0	<5.0	<2.5	<2.5
Trichloroethene	30	<5.0	**5.4**	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	2.4	<2.0	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		Seep A							Seep B							
Sample Location		Northeast CornerThermo King Eastern Parcel							Thermo King Eastern Parcel							
Sample Date	Georgia Instream Water Quality Criter (µg/L)	1/15/2003	3/24/2004	6/23/2004	8/31/2004	11/17/2004	2/26/2008	4/21/2010	1/15/2003	3/24/2004	6/23/2004	8/30/2004	11/17/2004	2/27/2008	4/21/2010	6/3/2010
Laboratory		STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton
CONSTITUENT (µg/L)																
1,1,1-Trichloroethane	not established	<1.0		<5.0	<5.0		<5.0		<1.0	<5.0	<5.0	<5.0	**10**	<5.0		
1,1-Dichloroethene	7100	<1.0		<5.0	<5.0		<5.0		<1.0	<5.0	<5.0	<5.0	<8.4	<5.0		
cis-1,2-Dichloroethene	not established	<0.50	DRY	<5.0	<5.0	DRY	<2.5	DRY	<0.50	<5.0	<5.0	<5.0	**16**	<2.5	DRY	DRY
Toluene	5,980	<1.0	Not Sampled	<5.0	<5.0	Not Sampled	<5.0	Not Sampled	<1.0	<5.0	<5.0	<5.0	<8.4	<5.0	Not Sampled	Not Sampled
trans-1,2-Dichloroethene	10,000	<0.50		<5.0	<5.0		<2.5		<0.50	<5.0	<5.0	<5.0	<8.4	<2.5		
Trichloroethene	30	<1.0		<5.0	<5.0		<5.0		<1.0	<5.0	<5.0	<5.0	**41**	<5.0		
Vinyl Chloride	2.4	<1.0		<2.0	<2.0		<2.0		<1.0	<2.0	<2.0	<2.0	<3.3	<2.0		
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na		na	na		na		na	na	na	na	na	na		

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		Seep C								Seep D						
Sample Location		Thermo King Eastern Parcel								Thermo King Eastern Parcel						
Sample Date	Georgia Instream Water Quality Criter (µg/L)	1/15/2003	3/24/2004	6/23/2004	8/31/2004	11/17/2004	2/27/2008	4/21/2010	6/2/2010	1/15/2003	3/24/2004	6/23/2004	8/31/2004	11/17/2004	2/27/2008	4/21/2010
Laboratory		STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	TestAmerica - North Canton	TestAmerica - North Canton
CONSTITUENT (µg/L)																
1,1,1-Trichloroethane	not established	**120**	<140	<5.0	**380**	**380**	**49**	**28**	na	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	7100	**110**	<140	<5.0	<310	**240**	**99**	**64**	na	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	**13**	<140	<5.0	<310	<190	**11**	**12**	na	<0.50	<5.0	<5.0	<5.0	<5.0	<2.5	<2.5
Toluene	5,980	<25	<140	<5.0	<310	<190	<10	<12	na	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	<12	<140	<5.0	<310	<190	<5.0	<12	na	<0.50	<5.0	<5.0	<5.0	<5.0	<2.5	<2.5
Trichloroethene	30	**840**	**720**	<5.0	**1300**	**1000**	**670**	**500**	na	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	2.4	<25	<57	<2.0	<120	<77	<2.0	<12	na	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na	<5.0	na	na	na	na	na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Seep G**						
Sample Location		**Thermo King Eastern Parcel**						
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**1/15/2003**	**3/24/2004**	**6/23/2004**	**8/31/2004**	**11/17/2004**	**2/26/2008**	**4/21/2010**
Laboratory		**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**
CONSTITUENT (µg/L)								
1,1,1-Trichloroethane	not established	<1.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0
1,1-Dichloroethene	7100	<1.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	**0.73**	**13**	**9.3**	<7.2	<5.0	<2.5	**7.7**
Toluene	5,980	<1.0	<5.0	<5.0	<7.2	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	<0.50	<5.0	<5.0	<7.2	<5.0	<2.5	<2.5
Trichloroethene	30	<1.0	<5.0	<5.0	<7.2	<5.0	<5.0	**7.8**
Vinyl Chloride	2.4	<1.0	<2.0	<2.0	<2.9	<2.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		Seep H								Seep I						
Sample Location		Thermo King Eastern Parcel								Thermo King Eastern Parcel						
Sample Date	Georgia Instream Water Quality Criter (µg/L)	1/15/2003	3/24/2004	6/23/2004	8/31/2004	11/17/2004	2/26/2008	4/21/2010	6/3/2010	1/15/2003	3/24/2004	6/23/2004	8/30-31/2004	11/17/2004	2/27/2008	4/22/2010
Laboratory		STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	TestAmerica - North Canton	TestAmerica - North Canton	TestAmerica - North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	STL- North Canton	TestAmerica - North Canton	TestAmerica - North Canton
CONSTITUENT (µg/L)																
1,1,1-Trichloroethane	not established	<1.0	<5.0	<8.4	<5.0	<5.0	<5.0	<5.0	<2.0	<1.0	<5.0	<5.0		<5.0	<5.0	<5.0
1,1-Dichloroethene	7100	<1.0	<5.0	<8.4	<5.0	<5.0	<5.0	**6.0**	**12**	<1.0	<5.0	<5.0		<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	**6.9**	**12**	**30**	**13**	**27**	<2.5	**26**	**63**	<0.50	<5.0	<5.0	DRY	<5.0	<2.5	<2.5
Toluene	5,980	<1.0	<5.0	<8.4	<5.0	<5.0	<5.0	<5.0	<2.0	<1.0	<5.0	<5.0	not sampled	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	<0.50	<5.0	<8.4	<5.0	<5.0	<2.5	<2.5	<2.0	<0.50	<5.0	<5.0		<5.0	<2.5	<2.5
Trichloroethene	30	**24**	**15**	<8.4	<5.0	**7.1**	**5.1**	**38**	**41**	<1.0	<5.0	<5.0		<5.0	<5.0	<5.0
Vinyl Chloride	2.4	<1.0	<2.0	<3.3	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<2.0		<2.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na	na	na	na	na		na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Seep J**							**Seep K**					
Sample Location		**Thermo King Eastern Parcel**							**Northeast CornerThermo King Eastern Parcel**					
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**5/14/2003**	**3/24/2004**	**6/23/2004**	**8/31/2004**	**11/17/2004**	**2/26/2008**	**4/22/2010**	**3/24/2004**	**6/24/2004**	**8/31/2004**	**11/17/2004**	**2/26/2008**	**4/22/2010**
Laboratory		**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**
CONSTITUENT (µg/L)														
1,1,1-Trichloroethane	not established	<25	<5.0	<12.0	<33	<25	<5.0	<5.0	<5.0	<5.0	<20	<5.0	<5.0	<5.0
1,1-Dichloroethene	7100	<25	<5.0	<12.0	<33	<25	<5.0	<5.0	<5.0	<5.0	<20	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	not established	**910**	**84**	**66**	**190**	**110**	<2.5	<2.5	**10**	<5.0	**85**	<5.0	**12**	**5.3**
Toluene	5,980	**280**	<5.0	<12.0	<33	<25	<5.0	<5.0	<5.0	<5.0	<20	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	10,000	**13**	<5.0	<12.0	<33	<25	<2.5	<2.5	<5.0	<5.0	<20	<5.0	<2.5	<2.5
Trichloroethene	30	<25	<5.0	<12.0	<33	<25	<5.0	<5.0	<5.0	<5.0	<20	<5.0	**13**	**5.8**
Vinyl Chloride	2.4	<25	**26**	<5.0	<13	**11**	<2.0	<2.0	<2.0	<2.0	<8	<2.0	<2.0	<2.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na	na	na	na	na	na	na	na	na

TABLE 4.6: SUMMARY OF DETECTED CONSTITUENTS IN SEEPS AND SURFACE WATER

Sample Identification		**Seep L**						
Sample Location		**Northeast CornerThermo King Eastern Parcel**						
Sample Date	**Georgia Instream Water Quality Criter (µg/L)**	**3/24/2004**	**6/24/2004**	**8/31/2004**	**11/17/2004**	**2/27/2008**	**4/21/2010**	**6/3/2010**
Laboratory		**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**STL- North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**	**TestAmerica - North Canton**
CONSTITUENT (µg/L)								
1,1,1-Trichloroethane	not established	<5.0	<5.0	<5.0	<5.0	<5.0		<1.0
1,1-Dichloroethene	7100	<5.0	<5.0	<5.0	<5.0	<5.0		<1.0
cis-1,2-Dichloroethene	not established	**5.4**	<5.0	<5.0	<5.0	<2.5	DRY	<1.0
Toluene	5,980	<5.0	<5.0	<5.0	<5.0	<5.0	Not Sampled	<1.0
trans-1,2-Dichloroethene	10,000	<5.0	<5.0	<5.0	<5.0	<2.5		<1.0
Trichloroethene	30	<5.0	<5.0	<5.0	<5.0	<5.0		<1.0
Vinyl Chloride	2.4	<2.0	<2.0	<2.0	<2.0	<2.0		<1.0
1,4-Dioxane - Selective Ion Monitoring SW8260B	not established	na	na	na	na	na		na

Notes:

µg/L	micrograms per liter
Hwy	Highway
na	Sample not analyzed for this constituent
E	Estimated; result exceeds calibration range
(a)	Georgia Instream Surface Water GADNR February 2009 Rules and Regulations for Water Quality Control (ISWQC)
	Exceeds Georgia ISWQC
BOLD	**Detected Concentration**

PREPARED BY/DATE: CLC 5/14/08 updated RNQ 6/16/2010
CHECKED BY/DATE: DJH 8/3/10

TABLE 5.1
COMPARISON OF 2010 SEEP WATER CONCENTRATIONS TO AQUATIC WILDLIFE SCREENING VALUES

Parameter	Frequency of Detection (a)	Minimum Seep Concentration (ug/L)	Maximum Seep Concentration (ug/L)	Region IV Ecological Freshwater Surface Water Screening Values (ug/L)	Georgia Instream Surface Water (b) (ug/L)	Ecological ORNL Freshwater Surface Water Screening Values (ug/L) (c)	Exceedance Yes/No	Exposure Point Concentration (ug/L) (d)
Volatile Organic Compounds (ug/L):								
1,1-Dichloroethene*	4/14	6.0	160	303	7100	25	Yes	160
cis-1,2-Dichloroethene	6/14	5.3	180	NA	NA	590	No	NA
1,1,1-Trichloroethane*	2/14	28	61	528	NA	11	Yes	61
Trichloroethene*	6/14	5.8	1,700	NA	30	47	Yes	1,700

Notes:

* Indicates constituent selected as a chemical of potential concern (ECOPC), based on Ecological Screening Values.

NA = Not available

(a) Number of samples in which chemical was positively detected / number of samples available for 2010.
Screening criteria is surface water screening values collected from:

(b) Ga DNR, 2009. Georgia Department of Natural Resources, Rules and Regulations for Water Quality Control, Chapter 391-3-6, February, 2004.

(c) Suter, G.W. II, and C.L. Tsao. 1996. Toxicological Benchmarks for screening of Potential Contaminants of Concern for Effects on Aquatic Biota on Oak Ridge Reservation: 1996 Revision. Oak Ridge National Laboratory, Oak Ridge, TN. 104 pp. ES/ER/RM-96/R2.
Value listed for cis-1,2-dichlorothene from ORNL is for total 1,2-dichloroethene.

(d) Maximum detected concentration

[ ] Indicates maximum constituent concentration exceeds the screening criteria.

Exposure point concentrations are the maximum concentration for COPCs.

Prepared By: CMB 9/18/10
Checked By: MKB 9/27/10

TABLE 5.2
SUMMARY OF ECOLOGICAL RISKS IN SURFACE SOIL (0 - 1 ft.)

Parameter	Frequency of Detection (a)	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Dutch Ministry 2000 Values mg/kg (b)	Exposure Point Concentration (mg/kg) (c)
Volatile Organic Compounds:					
Isopropylbenzene*	1/39	0.016	0.016	NA	0.016
Tetrachloroethene*	1/39	0.013	0.013	0.002	0.013
Trichloroethene **	2/39	0.015	0.023	0.1	0.023

* Indicates constituent selected as chemical of potential concern (ECOPC), based on Ecological Screening Values.

** Indicates constituent selected as chemical of potential concern (ECOPC), based on the selection of this chemical as an ECOPC in seep water.

NA Not Applicable

Indicates maximum constituent concentration exceeds the screening criteria.

(a) Number of samples in which chemical was positively detected / number of samples available.
(surface soil samples collected from non-paved areas and from areas not covered by a building)

(b) Dutch Ministry Values, 2000. Annexes Circular on target values and intervention values for soil remediation, Ministerie van Volkshulsvesting, February 4, 2000. Updates values used by the Region 4 Bulletins.

(c) Exposure point concentration is the maximum concentration for the ECOPC.

Prepared By: EJS 1/22/10
Checked By: EFC 1/22/10

TABLE 5.3
SHORT TAILED SHREW TOXICITY REFERENCE VALUES

ANALYTE	NOAEL (mg/kg-BW-day)	TEST SPECIES	EFFECT	BODY WEIGHT OF TEST SPECIES (kg)	SHORT-TAILED SHREW TRV (mg/kg-BW-day)	REFERENCE
1,1-Dichloroethene	30	rat	Chronic NOAEL	0.35	66	Sample et al., 1996
1,1,1-Trichloroethane	1,000	mouse	Chronic NOAEL	0.035	1,216	Sample et al., 1996
Isopropylbenzene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1.4	mouse	Subchronic NOAEL	0.03	1.64	Sample et al., 1996
Trichloroethene	0.7	mouse	Subchronic NOAEL	0.03	0.82	Sample et al., 1996

Notes:
mg/kg-BW-day = milligrams per kilogram body weight per day
kg = kilogram
NOAEL = No Observed Adverse Effects Level
TRV = Toxicity Reference Value
NA = Not available

Prepared By: EJS 1/22/10
Checked By: EFC 1/22/10

TABLE 5.4
RACCOON TOXICITY REFERENCE VALUES

ANALYTE	NOAEL (mg/kg-BW-day)	TEST SPECIES	EFFECT	BODY WEIGHT OF TEST SPECIES (kg)	RACCOON TRV (mg/kg-BW-day)	REFERENCE
1,1-Dichloroethene	30	Rat	Chronic NOAEL	0.35	16.3	Sample et al., 1996
1,1,1-Trichloroethane	1000	Mouse	Chronic NOAEL	0.035	310	Sample et al., 1996
Isopropylbenzene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1.4	Mouse	Subchronic NOAEL	0.03	0.41	Sample et al., 1996
Trichloroethene	0.7	Mouse	Subchronic LOAEL	0.03	0.21	Sample et al., 1996

Notes:
mg/kg-BW-day = milligrams per kilogram body weight per day
kg = kilogram
NOAEL = No Observed Adverse Effects Level
TRV = Toxicity Reference Value
NA = Not available

Prepared By: EJS 1/22/10
Checked By: EFC 1/22/10

TABLE 5.5
NORTHERN BOBWHITE TOXICITY REFERENCE VALUES

ANALYTE	NOAEL (mg/kg-BW-day)	TEST SPECIES	EFFECT	BODY WEIGHT OF TEST SPECIES (kg)	NORTHERN BOBWHITE TRV (mg/kg-BW-day)	REFERENCE
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	NA	NA
Trichloroethene	NA	NA	NA	NA	NA	NA

Notes:
mg/kg-BW-day = milligrams per kilogram body weight per day
kg = kilogram
NOAEL = No Observed Adverse Effects Level
TRV = Toxicity Reference Value
NA = Not available

Prepared By: EJS 1/22/10
Checked By: EFC 1/22/10

TABLE 5.6
SHORT-TAILED SHREW EXPOSURE PARAMETERS

EXPOSURE PARAMETER (a)	DESCRIPTION (a)	VALUES SELECTED FOR EXPOSURE/RISK CALCULATIONS (a)
Short-Tailed Shrew	Order: *Insectivora* Family: *Soricidae* Genus: *Blarina* Species*: blevicauda*	
Body Weight (BW)(kg)	The average body weight for males and females in a summer study (Pennsylvania).	0.015 kg
Dietary Makeup	The short-tailed shrew is primarily carnivorous. Diet consists primarily of invertebrates. Small mammals are consumed when invertebrates become less available (New York).	Invertebrates – 70% Vegetation – 13% Small mammals – 8% Soil – 9%
Ingestion Rate for Food (IR_F) (kg/day)	Food ingestion rate of the short-tailed shrew (Ohio/lab).	0.009 kg/day
Ingestion Rate for Water (IR_W) (L/day)	Water ingestion rate of the short-tailed shrew (Illinois/lab) using an average adult BW of 18 grams and an average water ingestion rate of 0.223 g water/g BW/day. (0.223 g water/g BW/day x 18 g BW x 1.04E-03 L/day)	0.0033 L/day
Home Range	The average female home range in a Manitoba tamarack bog or in Michigan bluegrass is approximately 1 acre. The maximum male home range in Michigan bluegrass is approximately 4.5 acres.	1 acre (43,560 ft^2)
Site Foraging Frequency (SFF) (unitless)	The SFF is the ratio of the site area to home range, not to exceed a maximum value of 1.0. As a conservative assumption, the river segment evaluated is considered representative of the shrew's entire home range.	1 (Maximum exposure scenario)
Exposure Frequency (unitless) (EF)	Shrews are active all year round and do not hibernate.	1

TABLE 5.6
SHORT-TAILED SHREW EXPOSURE PARAMETERS

(a) Wildlife Exposure Factors Handbook (USEPA, 1993)

$$\text{Estimated ingestion (mg/kg-day)} = \frac{SFF \times IR_F \times EF \times [(C_{SOIL} \times BCF_{INV} \times P_{INV}) + (C_{SOIL} \times BCF_V \times P_V) + (C_{SOIL} \times BCF_M \times P_M) + (C_{SOIL} \times P_{SOIL})]}{BW} + \frac{(C_W \times IR_W \times EF)}{BW}$$

Where:	P_{INV}	=	Proportion of the diet comprised of invertebrates (unitless)
	P_{SOIL}	=	Proportion of the diet comprised of soil (unitless)
	P_V	=	Proportion of the diet comprised of vegetation (unitless)
	P_M	=	Proportion of the diet comprised of mammals (unitless)
	C_{SOIL}	=	Chemical concentration in soil (mg/kg)
	C_W	=	Chemical concentration in water (mg/L)
	IR_F	=	Ingestion rate of food (kg/day)
	IR_W	=	Ingestion rate of water (L/day)
	SFF	=	Site foraging frequency (unitless)
	EF	=	Exposure frequency (unitless)
	BW	=	Body weight (kg)
	BCF_{INV}	=	Bioconcentration factor for invertebrates (unitless)
	BCF_V	=	Bioconcentration factor for vegetation (unitless)
	BCF_M	=	Bioconcentration factor for mammals (unitless)

mg/L = milligrams per liter
kg = kilograms
% = percent
kg/day = kilograms per day
L/day = liters per day
mg/kg = milligrams per kilogram
ft^2 = square feet
g water/g BW/day = gram water per gram body weight per day
mg/kg-day = milligrams per kilogram per day

Prepared By: JCB 2/21/07
Checked By: EFC 2/23/07

TABLE 5.7
RACCOON EXPOSURE PARAMETERS

EXPOSURE PARAMETER (a)	DESCRIPTION (a)	VALUES SELECTED FOR EXPOSURE/RISK CALCULATIONS (a)
Raccoon	Order: *Carnivora* Family: *Procyonidae* Genus: *Procyon* Species*: lotor*	
Body Weight (BW)(kg)	Adult males are typically larger than adult females. The average body weight for adults is 3.99 kg, but ranges up to 8.8 kg (Alabama).	3.99 kg
Dietary Makeup	Raccoons are omnivorous and opportunistic feeders. The proportion of different foods in their diet depends on the location and season (annual average for Tennessee were used). Averaging and totaling each dietary item in the WEFH totals to 98%. The remaining 2% of dietary intake was added to vegetation. For the purposes of the risk calculation and due to the lack of crayfish and amphibians at the site, the proportion for the diet for crayfish, amphibians, and insects are assumed to be soil invertebrates.	Soil Invertebrates – 11% Birds – 3% Vegetation –82% Soil – 4%
Ingestion Rate for Food (IR_F) (kg/day)	The average BW of 3.99 kg was used to estimate the Ingestion Rate for Food using: IR_F(kg/day) = 0.0687 x $BW^{0.822}$ (kg).	0.21 kg/day
Ingestion Rate for Water (IR_W) (L/day)	The Ingestion Rate for Water was estimated using the average BW of 3.99 kg and a mean water ingestion rate of 0.0825 g/g-day. (0.0825 g water/g BW/day x 3,990 g BW x 1.0E-03 L/g = 0.33 L/day)	0.33 L/day
Home Range	Average for males and females, May to December from riparian habitat (Michigan).	386 acres
Site Foraging Frequency (SFF) (unitless)	The SFF is the ratio of the site area to home range, not to exceed a maximum value of 1.0. As a conservative assumption, the site evaluated is considered representative of the raccoon's home range.	SFF=1 (Maximum exposure scenario)
Exposure Frequency (EF) (unitless)	Raccoons are active all year round and do not hibernate.	1

TABLE 5.7
RACCOON EXPOSURE PARAMETERS

(a) Wildlife Exposure Factors Handbook (USEPA, 1993)

$$\text{Estimated ingestion (mg/kg-day)} = \frac{SFF \times IR_F \times EF \times [(C_{SOIL} \times P_{SOIL}) + (C_{SOIL} \times BCF_{SI} \times P_{SI}) + (C_{SOIL} \times BCF_V \times P_V) + (C_{SOIL} \times BCF_B \times P_B)]}{BW} + \frac{(C_W \times IR_W \times EF)}{BW}$$

Where:

P_{SOIL}	=	Proportion of the diet comprised of surface soil (unitless)
P_{SI}	=	Proportion of the diet comprised of soil invertebrates (unitless)
P_V	=	Proportion of the diet comprised of vegetation (unitless)
P_B	=	Proportion of the diet comprised of birds (unitless)
C_{SI}	=	Chemical concentration in soil invertebrates (mg/kg)
C_{SOIL}	=	Chemical concentration in surface soil (mg/kg)
C_W	=	Chemical concentration in water (mg/L)
IR_F	=	Ingestion rate of food (kg/day)
IR_W	=	Ingestion rate of water (L/day)
SFF	=	Site foraging frequency (unitless)
EF	=	Exposure frequency (unitless)
BW	=	Body weight (kg)
BCF_{SI}	=	Bioconcentration factor for soil invertebrates (unitless)
BCF_B	=	Bioconcentration factor for birds (unitless)
BCF_V	=	Bioconcentration factor for vegetation (unitless)

kg = kilograms
% = percent
kg/day = kilograms per day
L/day = liters per day
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
WEFH = Wildlife Exposure Factors Handbook
mg/kg –day = milligrams per kilogram per day

Prepared By: JCB 2/22/07
Checked By: EFC 2/23/07

TABLE 5.8
NORTHERN BOBWHITE EXPOSURE PARAMETERS

EXPOSURE PARAMETER (a)	DESCRIPTION (a)	VALUES SELECTED FOR EXPOSURE/RISK CALCULATIONS (a)
Northern Bobwhite	Order: *Galliformes* Family: *Phasiadinae* Genus: *Colinus* Species*: virginianus*	
Body Weight (BW)(kg)	Average adult weight is 0.16 kg, but ranges from 0.154 to 0.161 kg (Texas).	0.16 kg
Dietary Makeup	Northern bobwhites feed primarily on vegetation found in idle farms, woods, and brush. Some insects may also be consumed depending on availability. Dietary percentages are based on measurements in the southeastern United States.	Vegetation – 84% Invertebrates – 14% Soil – 2%
Ingestion Rate for Food (IR_F) (kg/day)	Food ingestion rate based on a mixed study of males and consisting of an earthworm diet (Texas). The mean food ingestion rate (0.078 g food/g BW/day) and average adult BW of 0.16 kg were used to estimate the Food Ingestion Rate. (0.078 g food/g BW/day x 160 g BW = 120 g/day)	0.012 kg/day
Ingestion Rate for Water (IR_W) (L/day)	Water ingestion rate is calculated using the average adult BW of 0.16 kg and an estimated mean ingestion rate of 0.12 g water/g BW/day). (0.12 g water/g BW/day x 160 g BW x 1.0E-03 L/g = 0.019 L/day)	0.019 L/day
Home Range	The average home range for male and female, adults and juveniles is 6.8 acres (Tennessee).	6.8 acres
Site Foraging Frequency (SFF) (unitless)	The SFF is the ratio of the site area to home range, not to exceed a maximum value of 1.0.	SFF = 1 (Maximum exposure scenario)
Exposure Frequency (unitless) (EF)	The northern bobwhite is a year-round resident.	1

TABLE 5.8
NORTHERN BOBWHITE EXPOSURE PARAMETERS

(a) Wildlife Exposure Factors Handbook (USEPA, 1993)

$$\text{Estimated ingestion (mg/kg-day)} = \frac{SFF \times IR_F \times EF \times [(C_{SOIL} \times BCF_{INV} \times P_{INV}) + (C_{SOIL} \times BCF_V \times P_V) + (C_{SOIL} \times P_{SOIL})]}{BW} + \frac{(C_W \times IR_W \times EF)}{BW}$$

Where:

P_{INV}	=	Proportion of the diet comprised of invertebrates (unitless)
P_{SOIL}	=	Proportion of the diet comprised of soil (unitless)
P_V	=	Proportion of the diet comprised of vegetation (unitless)
C_W	=	Chemical concentration in water (mg/L)
C_{SOIL}	=	Chemical concentration in soil (mg/kg)
IR_F	=	Ingestion rate of food (kg/day)
IR_W	=	Ingestion rate of water (L/day)
SFF	=	Site foraging frequency (unitless)
EF	=	Exposure frequency (unitless)
BW	=	Body weight (kg)
BCF_{INV}	=	Bioconcentration factor for invertebrates (unitless)
BCF_V	=	Bioconcentration factor for vegetation (unitless)

kg = kilograms
% = percent
kg/day = kilograms per day
L/day = liters per day
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
mg/kg-day = milligrams per kilograms per day

Prepared By: JCB 2/20/07
Checked By: EFC 2/23/07

TABLE 5.9
NOAEL RISK CALCULATION FOR THE SHORT-TAILED SHREW

Analyte	Soil Exposure Point Concentration (mg/kg)	Water Exposure Point Concentration (mg/L)	Exposure Value Type	BCF_{INV}	BCF_V	BCF_M	Intake (mg/kg-day)	NOAEL TRVs (mg/kg-day)	Hazard Quotient
1,1-Dichloroethene	0.001	0.160	max	3.97E+00	2.27E+00	5.06E-10	3.7E-02	6.6E+01	0.00056
1,1,1-Trichloroethane	0.001	0.061	max	7.68E+00	1.43E+00	5.06E-10	1.7E-02	1.2E+03	0.000014
Isopropylbenzene	0.016	0.0005	max	5.35E+01	3.60E-01	5.06E-10	3.6E-01	NA	NA
Tetrachloroethene	0.013	0.0025	max	1.10E+01	1.11E+00	5.06E-10	6.2E-02	1.6E+00	0.038
Trichloroethene	0.023	1.70	max	1.18E+01	1.05E+00	5.06E-10	4.9E-01	8.20E-01	0.60
								Hazard Index:	0.64

BCF_M = Bioconcentration factor for mammals based on vinyl chloride (USEPA, 1999)
BCF_{INV} = Bioconcentration factor for invertebrates based on vinyl chloride (USEPA, 1999)
BCF_V = Bioconcentration factor for vegetation
NA = Not available
NOAEL = No Observed Adverse Effects Level
TRV = Toxicity Reference Values (Sample et al, 1996)
mg/kg = milligrams per kilograms
mg/L = milligrams per liter
max = maximum concentration of seeps
mg/kg-day = milligrams per kilogram per day
Equations:
HQ = Intake / NOAEL TRV
HI = Sum of HIs

PREPARED/DATE: EJS 1/22/10
CHECKED/DATE: EFC 1/22/10
REVISED BY/DATE: CMB 9/15/10
CHECKED BY/DATE: MKB 9/27/10

NOTES: 1,1-DCE, 1,1,1-TCE - soil concentration is 1/2 lowest detection limit
Tetrachloroethene water concentration is 1/2 lowest detection limit

TABLE 5.10
NOAEL RISK CALCULATION FOR THE RACCOON

Analyte	Soil Exposure Point Concentration (mg/kg)	Water Exposure Point Concentration (mg/L)	Exposure Value Type	BCF_V	BCF_{Inv}	BCF_B	Intake (mg/kg-day)	NOAEL TRVs (mg/kg-day)	Hazard Quotient
1,1-Dichloroethene	0.001	0.160	max	2.27E+00	3.97E+00	3.32E-09	1.4E-02	1.6E+01	0.00086
1,1,1-Trichloroethane	0.001	0.061	max	1.43E+00	7.68E+00	3.32E-09	5.3E-03	3.1E+02	0.000017
Isopropylbenzene	0.016	0.0005	max	3.60E-01	5.35E+01	3.32E-09	1.6E-01	NA	NA
Tetrachloroethene	0.013	0.0025	max	1.11E+00	1.10E+01	3.32E-09	1.7E-03	4.1E-01	0.0041
Trichloroethene	0.023	1.70	max	1.05E+00	1.18E+01	3.32E-09	1.5E-01	2.1E-01	0.70
								Hazard Index:	0.71

BCF_M = Bioconcentration factor for mammals based on vinyl chloride (USEPA, 1999)
BCF_{INV} = Bioconcentration factor for invertebrates based on vinyl chloride (USEPA, 1999)
BCF_B = Bioconcentration factor for birds (see Section 8.9.2)
BCF_V = Bioconcentration factor for vegetation
NA = Not available
NOAEL = No Observed Adverse Effects Level
TRV = Toxicity Reference Values
mg/kg = milligrams per kilograms
mg/L = milligrams per liter
max = maximum concentration of seeps
mg/kg-day = milligrams per kilogram per day

PREPARED/DATE: EJS 1/22/10
CHECKED/DATE: EFC 1/22/10
REVISED BY/DATE: CMB 9/15/10
CHECKED BY/DATE: MKB 9/27/10

Equations:
HQ = Intake / NOAEL TRV
HI = Sum of HQs

NOTES: 1,1-DCE, 1,1,1-TCE - soil concentration is 1/2 lowest detection limit
Tetrachloroethene water concentration is 1/2 lowest detection limit

TABLE 5.11
NOAEL RISK CALCULATION FOR THE NORTHERN BOBWHITE

Analyte	Soil Exposure Point Concentration (mg/kg)	Water Exposure Point Concentration (mg/L)	Exposure Value Type	BCF_V	BCF_{Inv}	Intake (mg/kg-day)	NOAEL TRVs (mg/kg-day)	Hazard Quotient
1,1-Dichloroethene	0.001	0.160	max	2.27E+00	3.97E+00	1.2E-01	NA	NA
1,1,1-Trichloroethane	0.001	0.061	max	1.43E+00	7.68E+00	2.4E-01	NA	NA
Isopropylbenzene	0.016	0.0005	max	3.60E-01	5.35E+01	2.4E-01	NA	NA
Tetrachloroethene	0.013	0.0025	max	1.11E+00	1.10E+01	2.7E-03	NA	NA
Trichloroethene	0.023	1.70	max	1.05E+00	1.18E+01	5.5E-01	NA	NA
							Hazard Index:	NA

BCF_{INV} = Bioconcentration factor for invertebrates based on vinyl chloride (USEPA, 1999)
BCF_B = Bioconcentration factor for birds based on vinyl chloride (USEPA, 1999)
BCF_V = Bioconcentration factor for vegetation
NA = Not applicable
NOAEL = No Observed Adverse Effects Level
TRV = Toxicity Reference Values
mg/kg = milligrams per kilograms
mg/L = milligrams per liter
max = maximum concentration of seeps
mg/kg-day = milligrams per kilogram per day

PREPARED/DATE: EJS 1/22/10
CHECKED/DATE: EFC 1/22/10
REVISED BY/DATE: CMB 9/15/10
CHECKED BY/DATE: MKB 9/27/10

Equations:
HQ = Intake / NOAEL TRV
HI = Sum of HQs

NOTES: 1,1-DCE, 1,1,1-TCE - soil concentration is 1/2 lowest detection limit
Tetrachloroethene water concentration is 1/2 lowest detection limit

TABLE 5.12
TCE SEEP EXPOSURE POINT CONCENTRATION FOR 2010

Location	Seep Water TCE Concentration (mg/L)	
Manson Branch #2	1.7	
Manson Branch Seep West #2	0.0025	(a)
Manson Branch #14	0.0025	(a)
Manson Branch #15	0.0025	(a)
Manson Branch #16	0.0025	(a)
Seep A	Dry	
Seep B	Dry	
Seep C	0.5	
Seep D	0.0025	(a)
Seep G	0.0078	
Seep H	0.041	
Seep I	0.0025	(a)
Seep J	0.0025	(a)
Seep K	0.0058	
Seep L	0.0005	(a)
TCE Maximum Concentration for All Seeps	**1.7**	
TCE Mean Concentrations for All Seeps	**0.175**	
TCE 95% UCL Concentration for All Seeps	**0.427**	

(a) Footnoted TCE concentrations are non-detect and the listed concentration is 1/2 the detection limit.

PREPARED BY/DATE: EJS 1/22/10
CHECKED BY/DATE: EFC 1/22/10
REVISED BY/DATE: CMB 9/15/10
CHECKED BY/DATE: MKB 9/27/10

TABLE 5.13
SUMMARY OF NOAEL HAZARD INDICES

Ecological Receptor	**NOAEL Hazard Index**
Species:	**Using Maximum Detected Seep Concentration for 2010**
Short-Tailed Shrew	0.64
Raccoon	0.71
Northern Bobwhite	NA

NA = Not available
NOAEL = No Observed Adverse Effects Level

Prepared By: EJS 1/22/10
Checked By: EFC 1/22/10
REVISED BY/DATE: CMB 9/15/10
CHECKED BY/DATE: MKB 9/27/10

TABLE 6.0: RISK REDUCTION STANDARDS FOR GROUND WATER

HSRA-Regulated Substance	2010 Maximum Detected Concentrations (mg/L)	Location	Historical Maximum Detected Concentrations (mg/L)	Location	Risk Reduction Standards (RRS) (mg/L)					
					Types 1 and 3		Type 2		Type 4	
					RRS	Status	RRS	Status	RRS	Status
Volatile Organic Compounds - SW8260B										
1,1,1-Trichloroethane	ND		83	GW-AOC1-1	0.2	E	2.7	E	25.1	**E**
1,1-Dichloroethene	0.1	MW-19 (6/2/2010)	2	GW-AOC1-1	0.007	E	0.1	E	0.95	**E**
cis-1,2-Dichloroethene	0.82	MW-25 (6/24/2010)	0.53	MW-14 (6/13/2003)	0.07	E	0.16	E	1.0	C
Chloroform	0.0049	MW-1 (6/1/2010)	0.0077	MW-3 (10/12/2004)	0.08	C	0.0020	***	0.0066	***
Toluene	ND		0.029	MW-14 (4/21/2003)	1.0	C	0.88	***	6.4	***
Trichloroethene	5.8	MW-19 (6/3/2010)	20	MW-19 (5/5/2004)	0.005	E	0.021	E	0.07	**E**
Vinyl chloride	0.015	MW-20 (6/1/2010)	ND		0.002	E	0.0011	E	0.004	**E**

Notes:
mg/l = milligram per liter
Reference = Reference for the RRS
*** Substance concentrations complies with a lower RRS
C = Substance concentration meets the respective RRS
E = Substance concentration exceeds the respective RRS
ND = Substance Not Detected
Bold Substance concentrations exceeds Types 1/3, 2, and 4 RRS

PREPARED BY: RPR 12/03/10
REVISED BY: RNQ 12/03/10

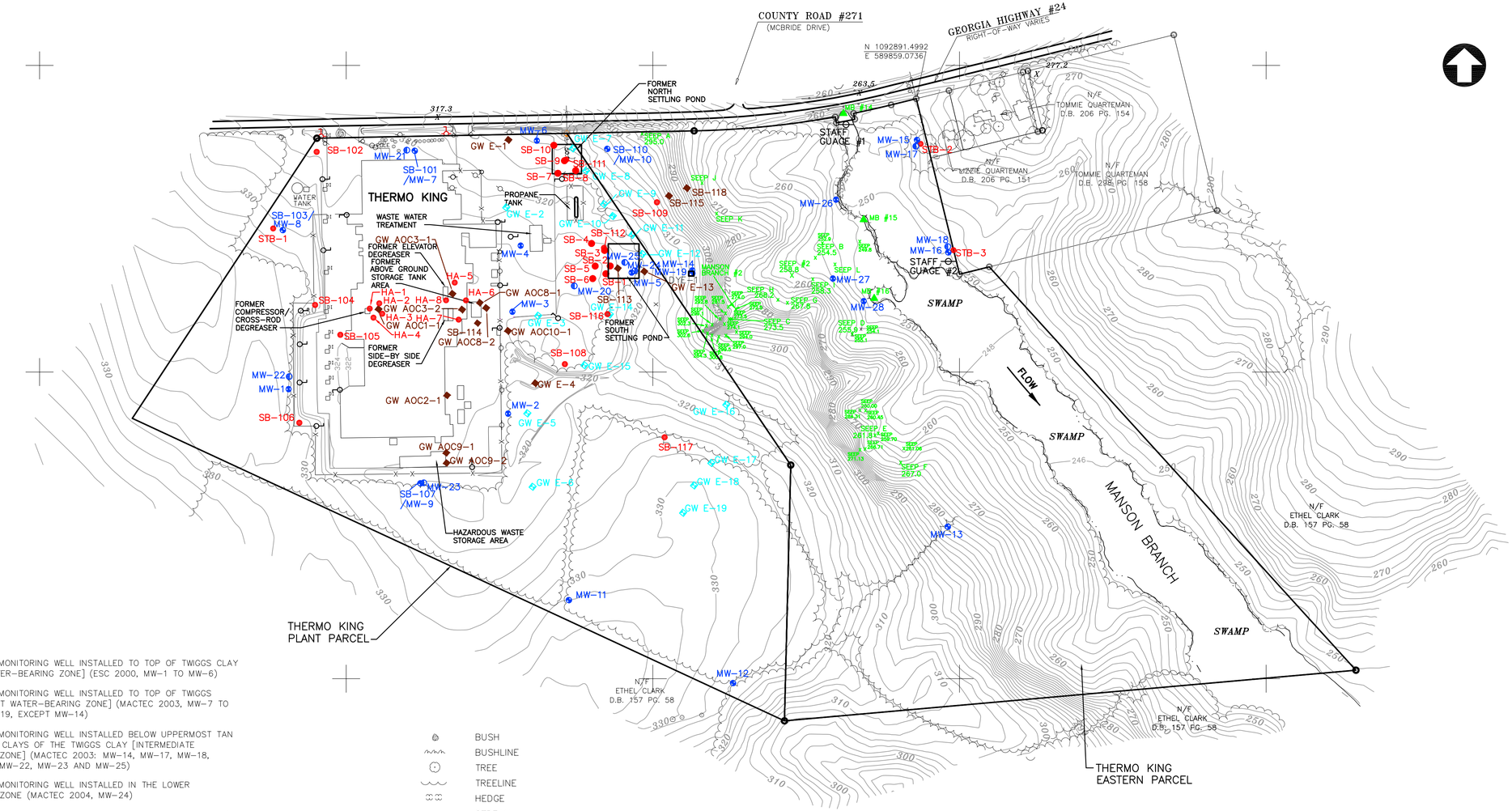
TABLE 6.1: RISK REDUCTION STANDARDS FOR SOILS - TYPES 1 through 4

			Risk Reduction Standards (RRS) (mg/kg)														
	Maximum Detected Concentrations (mg/kg)		Type 1			Type 2			Type 3 Surface			Type 3 Subsurface			Type 4		
HSRA-Regulated Substance	Surface (a)	Subsurface (b)	RRS	Reference	Status	RRS	Reference	Status	RRS	Reference	Status	RRS	Reference	Status	RRS	Reference	Status
Volatile Organic Compounds - SW8260B																	
1,1,1-Trichloroethane	0.18	2.3	20	GW x 100	C	19	Leaching	***	20	GW x 100	***	20	GW x 100	***	170	G	***
1,1,2-Trichloroethane	0.026	0.015	0.5	GW x 100	C	0.032	Leaching	***	0.5	GW x 100	***	0.5	GW x 100	***	0.055	G	***
1,1-Dichloroethene	0.023	0.051	0.7	GW x 100	C	0.72	Leaching	***	0.7	GW x 100	***	0.7	GW x 100	***	6.8	G	***
1,4-Dioxane	3600	2800	0.5	GW x 100	**E**	0.015	Leaching	**E**	0.5	GW x 100	**E**	0.5	GW x 100	**E**	0.049	G	**E**
cis-1,2-Dichloroethene	0.6	0.38	7	GW x 100	C	0.44	Leaching	***	7	GW x 100	***	7	GW x 100	***	0.44	G	***
Ethylbenzene	ND	0.36	70	GW x 100	C	16	Leaching	***	70	GW x 100	***	70	GW x 100	***	16	G	***
Isopropylbenzene	0.016	ND	22	Appendix I	C	6.9	Leaching	***	22	Appendix I	***	22	Appendix I	***	62	G	***
Napthalene	ND	0.31	100	Appendix I	C	1.3	Leaching	***	100	Appendix I	***	100	Appendix I	***	1.3	G	***
m+p Xylene	ND	1.4	1000	GW x 100	C	200	Leaching	***	1000	GW x 100	***	1000	GW x 100	***	200	G	***
Tetrachloroethene	0.013	0.013	0.5	GW x 100	C	0.045	Leaching	***	0.5	GW x 100	***	0.5	GW x 100	***	0.045	G	***
Trichloroethene	4.1	2.6	0.5	GW x 100	**E**	1.8	Leaching (c)	**E**	0.5	GW x 100	**E**	0.5	GW x 100	**E**	1.8	Leaching (c)	**E**
Chloroform	ND	0.011	3.8	GW x 100	C	0.94	Leaching	***	4.9	GW x 100	***	8	GW x 100	***	4.9	G	***

Notes:
mg/kg = milligram per kilogram
Reference = Reference for the RRS
ND = Substance not detected
(a) Surface soil is defined under HSRA as 0 to 2 feet below ground surface
(b) Subsurface soil is defined under HSRA as any point above the upper most groundwater zone; used here to mean other than surface soil.
*** Substance concentrations complies with a lower RRS
C = Substance concentration meets the respective RRS
E = Substance concentration exceeds the respective RRS
GW x 100 = HSRA ground water criteria standard times a factor of 100
Appendix I = HSRA Rules Appendix I: Regulated Substances and Soil Concentrations that Trigger Notification
G = Lower value of direct soil contact and non-residential soil-to-ground water leaching values
Leaching = RRS based on soil-to-groundwater transport equation from the Soil Screening Guidance background document (USEPA, 1996).
(c) 1.8 mg/kg is the EPD-approved leaching criteria. Soil concentrations exceeding the direct contact value of 1.3 mg/kg are all located beneath the existing building floor slab, so direct contact is not possible.
Bold Substance concentrations exceeds Types 1, 2, 3 and 4 RRS

PREPARED BY: RPR 12/03/10
REVISED BY: RNQ 12/03/10

FIGURES



LEGEND

MW–1	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (ESC 2000, MW–1 TO MW–6)
MW–7	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (MACTEC 2003, MW–7 TO MW–16 AND MW–19, EXCEPT MW–14)
MW–14	GROUND–WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE–GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER–BEARING ZONE] (MACTEC 2003: MW–14, MW–17, MW–18, MW–20, MW–21, MW–22, MW–23 AND MW–25)
MW–24	GROUND–WATER MONITORING WELL INSTALLED IN THE LOWER WATER–BEARING ZONE (MACTEC 2004, MW–24)
GW E–2	DIRECT–PUSH TECHNOLOGY BORING FOR GROUND–WATER SAMPLING (LAW 2000: GW E–1 TO GW E–19, UPPERMOST WATER–BEARING ZONE)
GW E–1	SOIL BORING FOR SOIL AND GROUND–WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E–1, GW E–4, GW E–13, GW AOC1–1, GW AOC2–1, GW AOC3–1, GW AOC3–2, GW AOC8–1, GW AOC8–2, GW AOC9–1, GW AOC9–2, GW AOC10–1, SB–113, SB–114, SB–115, AND SB–118, UPPERMOST WATER–BEARING ZONE)
SB–7	SOIL BORING FOR SOIL SAMPLING (ESC 2000 AND MACTEC 2003: SB–1 TO SB–10, SB–101 TO SB–112, SB–116 AND SB–117 AND HA–1 TO HA–8) (SOIL BORINGS FOR SOIL SAMPLING SB–101, SB–103, SB–107, SB–110 WERE COMPLETED AS MONITORING WELLS MW–7, MW–8, MW–9, AND MW–10 RESPECTIVELY) BORINGS STB–1, STB–2 AND STB–3 ARE STRATIGRAPHIC BORINGS
SEEP A 299.0	WATER SEEP WITH ELEVATION SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: Seeps A through L, Manson Branch #2, and Seep #2)
SEEP 252.9	WATER SEEP WITH ELEVATION
MB #14	MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MACTEC 2003: MB#14, MB#15, MB#16)
	STAFF GUAGE FOR MEASURING SURFACE WATER ELEVATION
	DYE INJECTION WELL
	BUSH
	BUSHLINE
	TREE
	TREELINE
	HEDGE
	STREAM
X	FENCE
300	TOPOGRAPHIC CONTOUR
DI	DROP INLET
	LIGHT POLE
	PROPERTY BOUNDARY

SOURCE: TOPOGRAPHIC AND PROPERTY BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC., JULY 2002 AND HOFFMAN & COMPANY INC., USING FEBRUARY 2002 AERIAL PHOTOGRAPH AND GROUND SURVEYING. 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000. 2003 AND 2004 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING, INC. IN SEPTEMBER 2003 AND DECEMBER 2004. LOCATIONS OF FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED M. BARTENFIELD
DRAWN T. GLADSTONE, J. THREADGILL
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 12/16/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

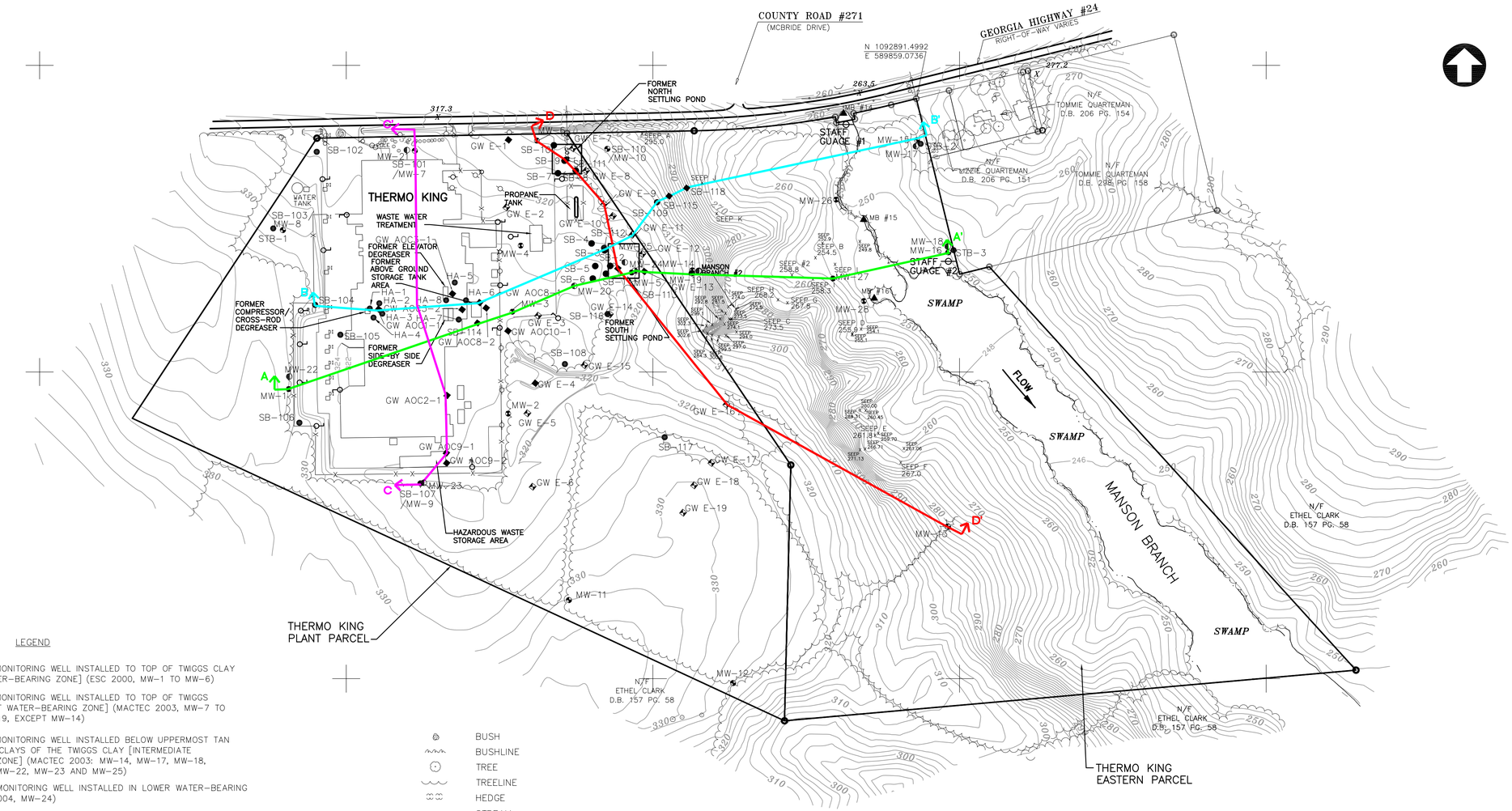
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421–3400

SITE SAMPLING LOCATIONS MAP

FIGURE 3.0

SCALE: AS SHOWN
CONTRACT: 6122–09–0322
DWG. NO.
REV
PAGE NO 2

J:\Thermo King\JULY 2010\SITE SAMPLE LOCATION MAP.dwg – Layout1 12/21/2010 9:57am lkropchuk



LEGEND

MW–1	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (ESC 2000, MW–1 TO MW–6)
MW–7	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (MACTEC 2003, MW–7 TO MW–16 AND MW–19, EXCEPT MW–14)
MW–14	GROUND–WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE–GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER–BEARING ZONE] (MACTEC 2003: MW–14, MW–17, MW–18, MW–20, MW–21, MW–22, MW–23 AND MW–25)
MW–24	GROUND–WATER MONITORING WELL INSTALLED IN LOWER WATER–BEARING ZONE (MACTEC 2004, MW–24)
GW E–2	DIRECT–PUSH TECHNOLOGY BORING FOR GROUND–WATER SAMPLING (LAW 2000: GW E–1 TO GW E–19, UPPERMOST WATER–BEARING ZONE)
GW E–1	SOIL BORING FOR SOIL AND GROUND–WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E–1, GW E–4, GW E–13, GW AOC1–1, GW AOC2–1, GW AOC3–1, GW AOC3–2, GW AOC8–1, GW AOC8–2, GW AOC9–1, GW AOC9–2, GW AOC10–1, SB–113, SB–114, SB–115, AND SB–118, UPPERMOST WATER–BEARING ZONE)
SB–7	SOIL BORING FOR SOIL SAMPLING (ESC 2000 AND MACTEC 2003: SB–1 TO SB–10, SB–101 TO SB–112, SB–116 AND SB–117 AND HA–1 TO HA–8) (SOIL BORINGS FOR SOIL SAMPLING SB–101, SB–103, SB–107, SB–110 WERE COMPLETED AS MONITORING WELLS MW–7, MW–8, MW–9, AND MW–10 RESPECTIVELY) BORINGS STB–1, STB–2 AND STB–3 ARE STRATIGRAPHIC BORINGS
SEEP A 299.0	WATER SEEP WITH ELEVATION SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: Seeps A through L, Manson Branch #2, and Seep #2)
SEEP 252.9	WATER SEEP WITH ELEVATION
MB #14	MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MACTEC 2003: MB#14, MB#15, MB#16)
	STAFF GUAGE FOR MEASURING SURFACE WATER ELEVATION
	BUSH
	BUSHLINE
	TREE
	TREELINE
	HEDGE
	STREAM
X	FENCE
300	TOPOGRAPHIC CONTOUR
DI	DROP INLET
	LIGHT POLE
	PROPERTY BOUNDARY
A A'	HYDROGEOLOGIC PROFILE LOCATION

SOURCE: TOPOGRAPHIC AND PROPERTY BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC., JULY 2002 AND HOFFMAN & COMPANY INC., USING FEBRUARY 2002 AERIAL PHOTOGRAPH AND GROUND SURVEYING. 2003 AND 2004 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING, INC: OCTOBER 2003 AND DECEMBER 2004. LOCATIONS OF FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED C. KRAMBIS
M. BARTENFIELD
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/12/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421–3400

HYDROGEOLOGIC PROFILE LOCATION MAP

FIGURE 4.0

SCALE: AS SHOWN
CONTRACT: 6122–09–0322
DWG. NO.
REV 2
PAGE NO

J:\Thermo King\OCT 2010\HYDROGEOLOGIC PROFILE.dwg – Layout1 12/21/2010 10:14am lkravchuk

A
WEST

A'
EAST

ELEVATION IN FEET (NAVD)

FORMER ABOVEGROUND STORAGE TANK
FORMER SOUTH SETTLING POND (OFFSET)
MANUFACTURING BUILDING

(OFFSET) STB-1
MW-1 (POD)
MW-22
SB-114
MW-3
MW-20
MW-25
SB-113
MW-5
MW-24
MW-19
MW-14
MW-27
MW-18
MW-16

SB-114 (0-2') TCE 130 ug/kg
SB-113 (0-2') VOCs ND
SB-113 (4-6') TCE 9.4 ug/kg
SB-114 (22-24') VOCs ND
SB-113 (40-42') VOCs ND
SB-114 (42-44') VOCs ND
SB-113 (42-44') TCE 93 ug/L
SB-114 (44-48') 111TCA 270 ug/L; 11DCE 72 ug/L; C 12 DCE 27 ug/L; TCE 700 ug/L
MW-5 (50-65') 111TCA 1.0 ug/L; 11DCE 1.2 ug/L; TCE 2.4 ug/L; CHLFM 2.9 ug/L
MW-5 (40-54') TCE 250 ug/L; 111TCA <8 ug/L; 11DCE 22 ug/L; C 12 DCE <8 ug/L
MW-5 (68.4-74.4) CHLFM 220
SB-114 (60-65') 111TCA 2.7 ug/L; TCE 1.1 ug/L; CHLFM 1.0 ug/L
SB-113 (57-62') CHLFM 1.2 ug/L; TCE 20 ug/L
SEEP B (12/27/10) VOCs ND
SEEP C (4/21/10) C 12 DCE 12 ug/L; 11DCE 64 ug/L; 111TCA 28 ug/L; TCE 500 ug/L
SEEP #2 (4/21/10) VOCs ND
MW-19 (56.2-66.2) TCE 5800 ug/L; C 12 DCE 640 ug/L; 11 DCE 180 ug/L
MASON BRANCH #2 (6/2/10) C 12 DCE 180 ug/L; 11DCE 160 ug/L; 61 ug/L; 111TCA 1700 ug/L
SEEP H (6/3/10) C 12 DCE 63 ug/L; TCE 41 ug/L; 11 DCE 12 ug/L
MW-27 (2.2-7.2) C 12 DCE 5.2 ug/L; TCE 10 ug/L
MW-16 (6.7-11.7) VOCs ND
MW-20 (91.7-106.7) C 12 DCE 370 ug/L; VC 15 ug/L
MW-22 (98.9-113.9) VOCs ND
MW-14 (71.2-86.2) C 12 DCE 380 ug/L; TCE 3600 ug/L; 11 DCE 58 ug/L
MW-25 (91.9-106.8) C 12 DCE 820 ug/L; TCE 2800 ug/L
MW-18 (6.5-11.7) VOCs ND
MW-24 (136.9-146.7) VOCs ND
MW-18 (70-80') VOCs ND

SEEP C (OFFSET)
MANSON BRANCH #2 (OFFSET)
SEEP H (OFFSET)
SEEP 2
SEEP B
MANSON BRANCH
THERMO KING PROPERTY LINE

B.T. 78'
B.T. 63.5'
B.T. 58'
B.T. 78.5'
B.T. 78.5'
B.T. 47.0'
B.T. 7.3'
B.T. 12.0' REFUSAL
B.T. 107.0'
B.T. 116'
B.T. 88.0'
B.T. 48.0' REFUSAL
B.T. 147.0'
B.T. 177'

REDDISH-BROWN TO ORANGE SILTY CLAYEY FINE TO MEDIUM SAND TO SANDY CLAY
BROWNISH-RED AND ORANGE, SILTY, FINE TO MEDIUM SAND
ORANGE TO WHITE TO YELLOWISH-BROWN MEDIUM SAND
ORANGE TO WHITE TO YELLOWISH-BROWN MEDIUM SAND
CLAY STONE
BROWN CLAY
YELLOW SAND
YELLOWISH TO GRAYISH BROWN CLAY
WHITE TO GRAY TO BROWN FINE TO COARSE SAND
TAN AND WHITE AND LIGHT GRAY CLAY
BLUE-GRAY CLAY TO SANDY SILTY CLAY
BROWN POORLY GRADED FINE SAND (ALLUVIAL DEPOSITS)
DARK BROWNISH-GRAY SILTY FINE SAND (ALLUVIAL DEPOSITS)
GRAY-BROWN TO BLUE-GREEN SILTY SANDY CLAY TO CLAYEY FINE SAND TO BLUE-GRAY SAND
BLUE-GRAY SILTY CLAYEY FINE TO MEDIUM SAND
BLUE-GRAY TO GREENISH- GRAY SANDY SILTY CLAY
BLUE-GRAY TO GREENISH-GRAY SILTY TO CLAYEY FINE TO VERY COARSE SAND WITH SOME SHELL FRAGMENTS
BLUE-GRAY CLAY
DARK GRAY SILT WITH FOSSILS
DARK GRAY CLAYEY SILT WITH SAND SEAMS
BLUE-GRAY SANDY SILTY CLAY
BLUE-GRAY SANDY SILTY CLAY
DARK GRAY SILTY CLAY WITH FOSSILS
GREENISH GRAY VERY FINE SANDY SILT
GREENISH-GRAY CLAYEY SILTY FINE TO MEDIUM SAND
DARK GRAY CLAYEY SILT WITH FOSSILS
GREENISH-GRAY FINE SANDY SILTY CLAY WITH SOME FOSSILS
GREEN TO DARK GRAY SILT WITH CLAY WITH FOSSILS AND SOME SAND
DARK GRAY MICRITIC LIMESTONE
GREENISH-GRAY SANDY CLAYEY SILT TO SILTY CLAY WITH SOME FOSSILS
DARK GREENISH-GRAY SILTY CLAY WITH SAND AND FOSSILS
GRAY LIMESTONE
DARK GREENISH-GRAY CLAYEY SILTY FINE TO COARSE SAND
GRAY LIMESTONE
CLAYEY SANDY SILT WITH FOSSILS AND THIN LIMESTONE LENSES
GREENISH-GRAY FINE SANDY SILT
SANDY CLAYEY SILT WITH FOSSILS
GRAY CLAYEY SILT WITH LIMESTONE FRAGMENTS
GREENISH-GRAY SILTY CLAY
DARK GRAY SAND WITH FOSSILS

UPPERMOST WATER BEARING ZONE
PERCHING AND CONFINING LAYER
INTERMEDIATE WATER BEARING ZONE
TWIGGS CLAY FORMATION MEMBER
LOWER WATER-BEARING ZONE

LEGEND

- MONITORING WELL SCREEN INTERVAL
- B.T. — BORING TERMINATION AND DEPTH
- WATER LEVEL MEASURED IN MONITORING WELL ON OCTOBER 12, 2004
- GROUND SURFACE
- ESTIMATED CONTACT BETWEEN LITHOLOGIES
- INTERPRETED CONTACT BETWEEN LITHOLOGIES
- POTENTIOMETRIC SURFACE IN UPPERMOST WATER-BEARING ZONE
- (10) / 5 — INTERPRETED ISOCONCENTRATIONS OF TOTAL VOCs IN SOIL IN ug/kg
- (POD) — POINT OF DEMONSTRATION WELL
- POTENTIOMETRIC SURFACE IN INTERMEDIATE WATER-BEARING ZONE
- ND — NOT DETECTED
- TCE — TRICHLOROETHENE
- 111 TCA — 111-TRICHLOROETHANE
- 11 DCE — 11-DICHLOROETHENE
- C 12 DCE — CIS-12-DICHLOROETHENE
- CHLFM — CHLOROFORM
- VC — VINYL CHLORIDE
- TCE 130 ug/kg (0-2') — CONSTITUENT CONCENTRATION IN SOIL IN ug/kg AND DEPTH OF SAMPLE IN FEET
- TCE 93 ug/L — CONSTITUENT CONCENTRATION IN GROUND WATER OR SEEP WATER IN ug/L (MOST RECENT RESULTS FOR EACH SAMPLE LOCATION WAS USED) AND INTERVAL OF WELL SCREEN IN FEET
- ug/kg= MICROGRAMS PER KILOGRAM
- ug/L= MICROGRAMS PER LITER
- NAVD — NORTH AMERICAN VERTICAL DATUM 1988
- DIRECTION OF GROUNDWATER FLOW
- UPPERMOST WATER-BEARING ZONE
- INTERMEDIATE WATER-BEARING ZONE
- VERTICAL EXTENT OF VOCS IN GROUND WATER

VOCS IN GROUND WATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.

LEGEND

1. THE ISOCONCENTRATION CONTOURS OF TOTAL VOLATILE ORGANIC COMPOUNDS (VOCS) INDICATE THE VERTICAL EXTENT OF VOCS IN SOIL ABOVE GROUNDWATER
2. VOCS IN SOIL ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.
3. IN SOME LOCATIONS, VOCS CONCENTRATIONS IN SOIL THAT ARE ABOVE SITE BACKGROUND CONCENTRATIONS EXTEND DOWN TO GROUNDWATER

SCALE IN FEET
10
0
200

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED D.HUNT
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/12/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

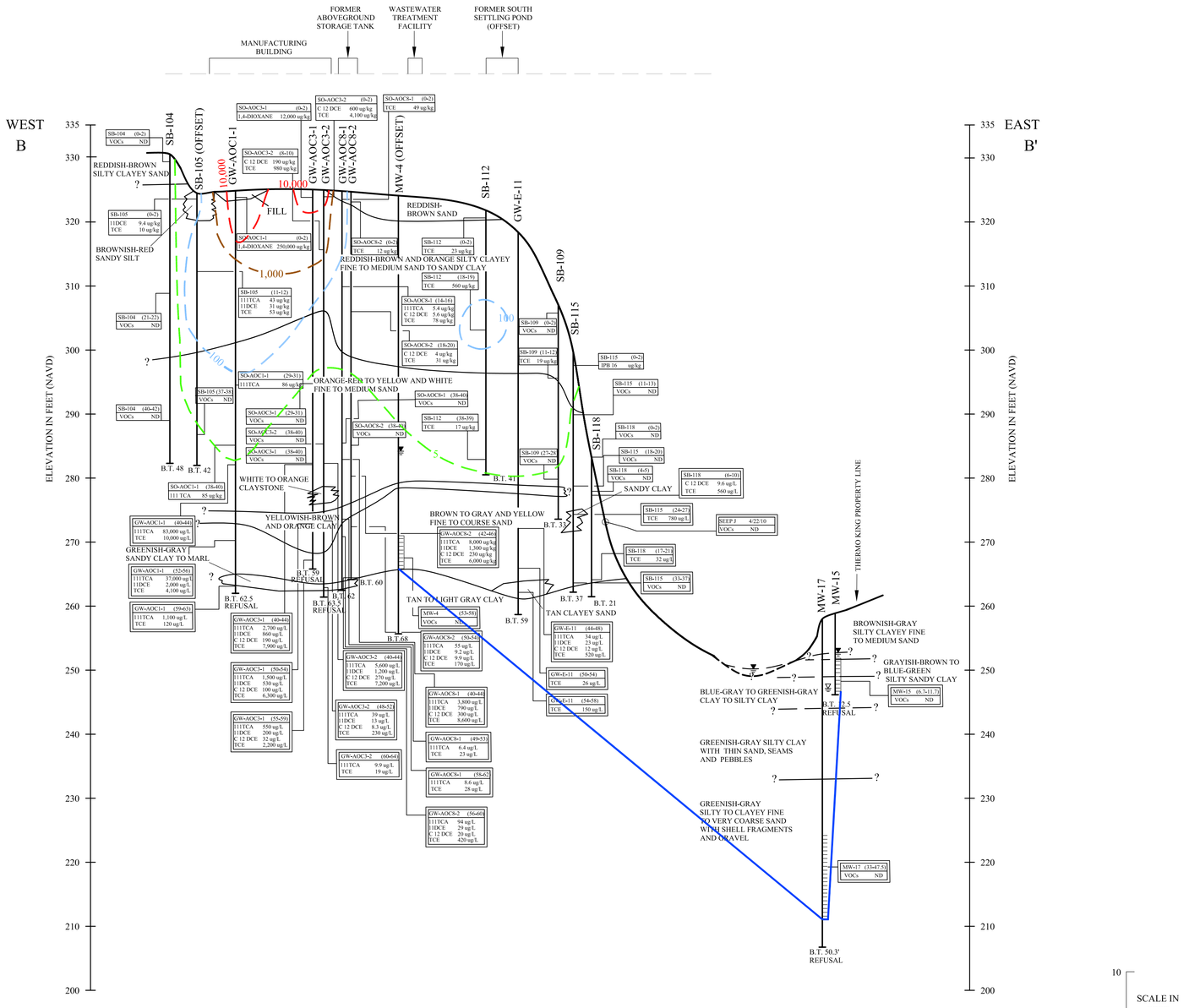
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

HYDROGEOLOGIC PROFILE A–A'

FIGURE 4.1

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO. 3
REV PAGE NO

J:\Thermo King\OCT 2010\XSECT-AA.dwg — Layout1 12/22/2010 10:09am ikravchuk



NOTES:

1. THE ISOCONCENTRATION CONTOURS OF TOTAL VOLATILE ORGANIC COMPOUNDS (VOCS) INDICATE THE VERTICAL EXTENT OF VOCS IN SOIL ABOVE GROUNDWATER
2. VOCS IN SOIL ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.
3. IN SOME LOCATIONS, VOCS CONCENTRATIONS IN SOIL THAT ARE ABOVE SITE BACKGROUND CONCENTRATIONS EXTEND DOWN TO GROUNDWATER

© COPYRIGHT 2010 MACTEC

J:\Thermo King\CCT 2010\CSECT BB.dwg - Layout1 12/22/2010 10:51am ikravchuk

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. ROGERO
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/15/2010

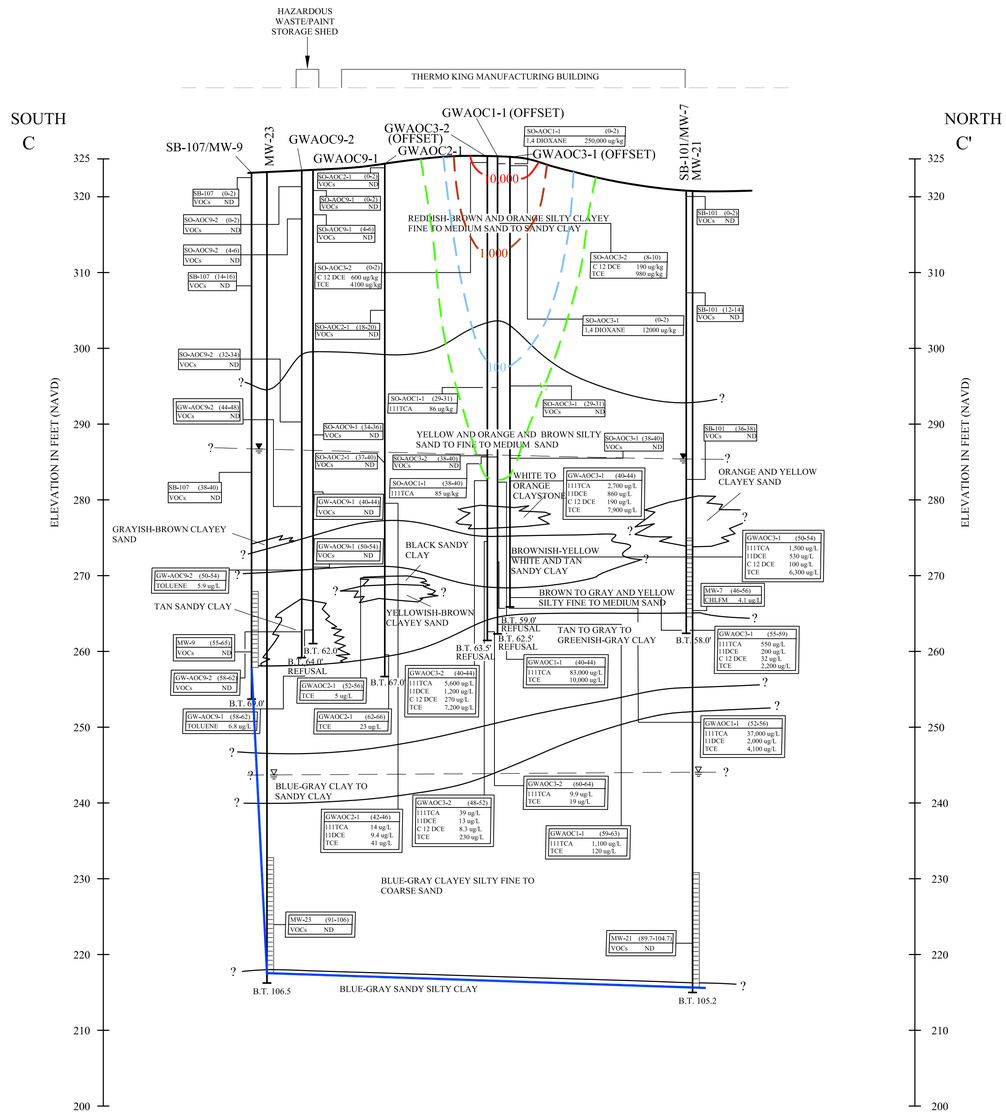
THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

HYDROGEOLOGIC PROFILE B–B'

FIGURE 4.2

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO.
REV 2
PAGE NO



LEGEND

- MONITORING WELL SCREEN INTERVAL
- B.T. — BORING TERMINATION AND DEPTH
- WATER LEVEL MEASURED IN MONITORING WELL ON OCTOBER 21, 2010
- 10,000 / 1000 / 100 / 5 — INTERPRETED ISOCONCENTRATIONS OF TOTAL VOCs IN SOIL IN ug/kg
- GROUND SURFACE
- ESTIMATED CONTACT BETWEEN LITHOLOGIES
- INTERPRETED CONTACT BETWEEN LITHOLOGIES
- POTENTIOMETRIC SURFACE IN UPPERMOST WATER-BEARING ZONE
- POTENTIOMETRIC SURFACE IN INTERMEDIATE WATER-BEARING ZONE
- ND — NOT DETECTED
- TCE — TRICHLOROETHENE
- 111 TCA — 111-TRICHLOROETHANE
- 11 DCE — 11-DICHLOROETHENE
- C 12 DCE — CIS-12-DICHLOROETHENE
- CHLFM — CHLOROFORM
- TCE 130 ug/kg — CONSTITUENT CONCENTRATION IN SOIL IN ug/kg AND DEPTH OF SAMPLE IN FEET
- TCE 93 ug/L — CONSTITUENT CONCENTRATION IN GROUND WATER OR SEEP WATER IN ug/L (MOST RECENT RESULTS FOR EACH SAMPLE LOCATION WAS USED) AND INTERVAL OF WELL SCREEN
- ug/kg= — MICROGRAMS PER KILLOGRAMS
- ug/L= — MICROGRAMS PER LITER
- NAVD — NORTH AMERICAN VERTICAL DATUM 1988
- POD — POINT OF DEMONSTRATION WELL
- VERTICAL EXTENT OF VOCS IN GROUND WATER

VOCS IN GROUND WATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.

NOTES:

1. THE ISOCONCENTRATION CONTOURS OF TOTAL VOLATILE ORGANIC COMPOUNDS (VOC'S) INDICATE THE VERTICAL EXTENT OF VOCS IN SOIL ABOVE GROUNDWATER
2. VOCS IN SOIL ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.
3. IN SOME LOCATIONS, VOCS CONCENTRATIONS IN SOIL THAT ARE ABOVE SITE BACKGROUND CONCENTRATIONS EXTEND DOWN TO GROUNDWATER

10 — SCALE IN FEET — 0 200

© COPYRIGHT 2010 MACTEC

J:\Thermo King\OCT 2010\XSECT CC.dwg — Layout1 12/22/2010 10:53am lkrovchuk

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. ROGERO
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/15/2010

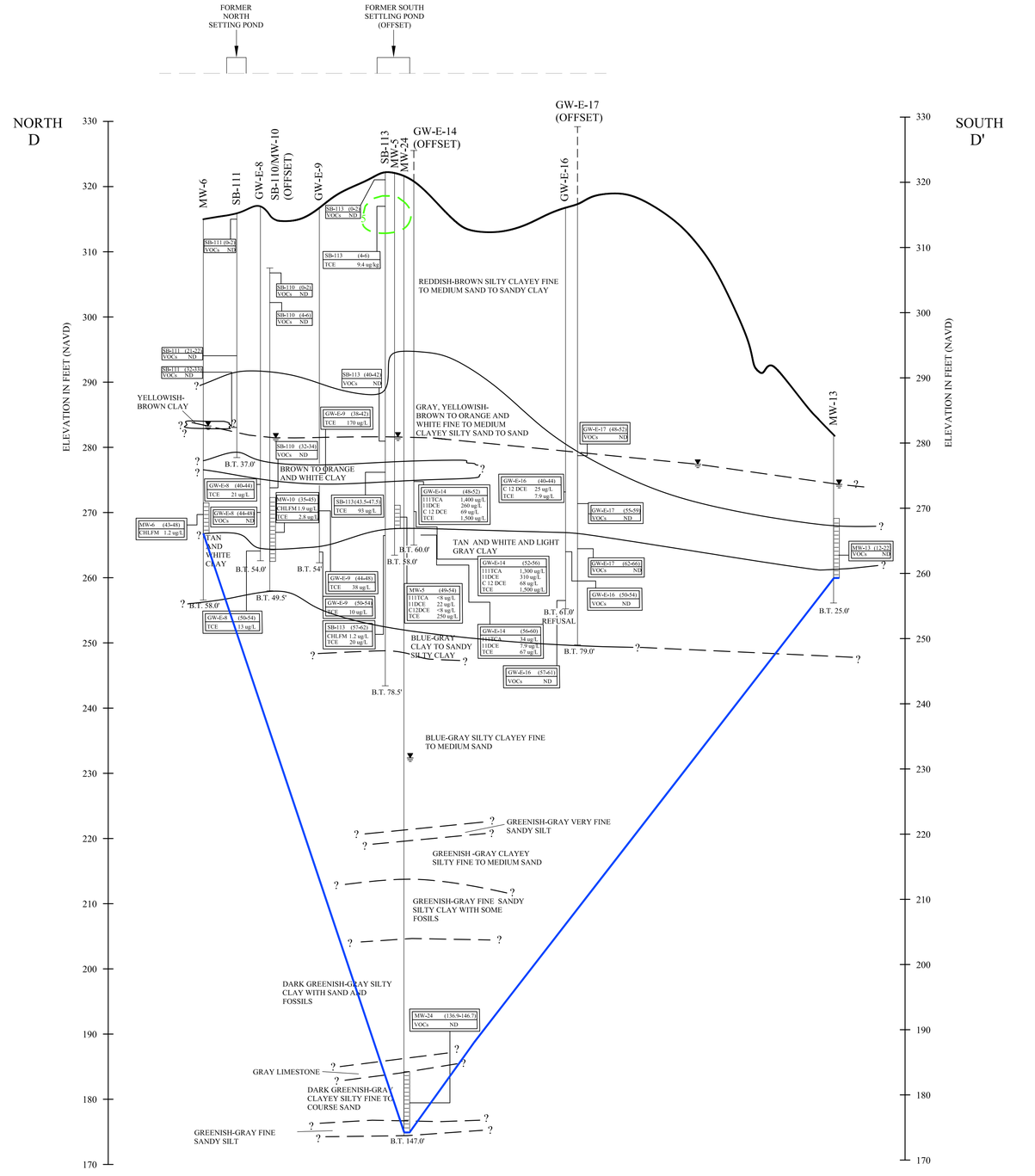
THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

HYDROGEOLOGIC PROFILE C–C'

FIGURE 4.3

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO. 3 REV PAGE NO



LEGEND

- MONITORING WELL SCREEN INTERVAL
- B.T. — BORING TERMINATION AND DEPTH
- WATER LEVEL MEASURED IN MONITORING WELL ON OCTOBER 21, 2010
- 10,000 / 1000 / 100 / 5 — INTERPRETED ISOCONCENTRATIONS OF TOTAL VOCs IN SOIL IN ug/kg
- GROUND SURFACE
- INTERPRETED CONTACT BETWEEN LITHOLOGIES
- ESTIMATED CONTACT BETWEEN LITHOLOGIES
- POTENTIOMETRIC SURFACE IN UPPERMOST WATER-BEARING ZONE
- ND — NOT DETECTED
- TCE — TRICHLOROETHENE
- 111 TCA — 111-TRICHLOROETHANE
- 11 DCE — 11-DICHLOROETHENE
- C 12 DCE — CIS-12-DICHLOROETHENE
- CHLFM — CHLOROFORM
- TCE 130 ug/kg — CONSTITUENT CONCENTRATION IN SOIL IN ug/kg AND DEPTH OF SAMPLE IN FEET
- TCE 93 ug/L — CONSTITUENT CONCENTRATION IN GROUND WATER OR SEEP WATER IN ug/L (MOST RECENT RESULTS FOR EACH SAMPLE LOCATION WAS USED AND INTERVAL WELL SCREEN IN FEET
- ug/kg= — MICROGRAMS PER KILLOGRAMS
- ug/L= — MICROGRAMS PER LITER
- NAVD — NORTH AMERICAN VERTICAL DATUM 1988
- VERTICAL EXTENT OF VOCS IN GROUND WATER

VOCS IN GROUND WATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.

NOTES:

1. THE ISOCONCENTRATION CONTOURS OF TOTAL VOLATILE ORGANIC COMPOUNDS (VOCS) INDICATE THE VERTICAL EXTENT OF VOCS IN SOIL ABOVE GROUNDWATER
2. VOCS IN SOIL ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.
3. IN SOME LOCATIONS, VOCS CONCENTRATIONS IN SOIL THAT ARE ABOVE SITE BACKGROUND CONCENTRATIONS EXTEND DOWN TO GROUNDWATER

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. ROGERO
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/1'5/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

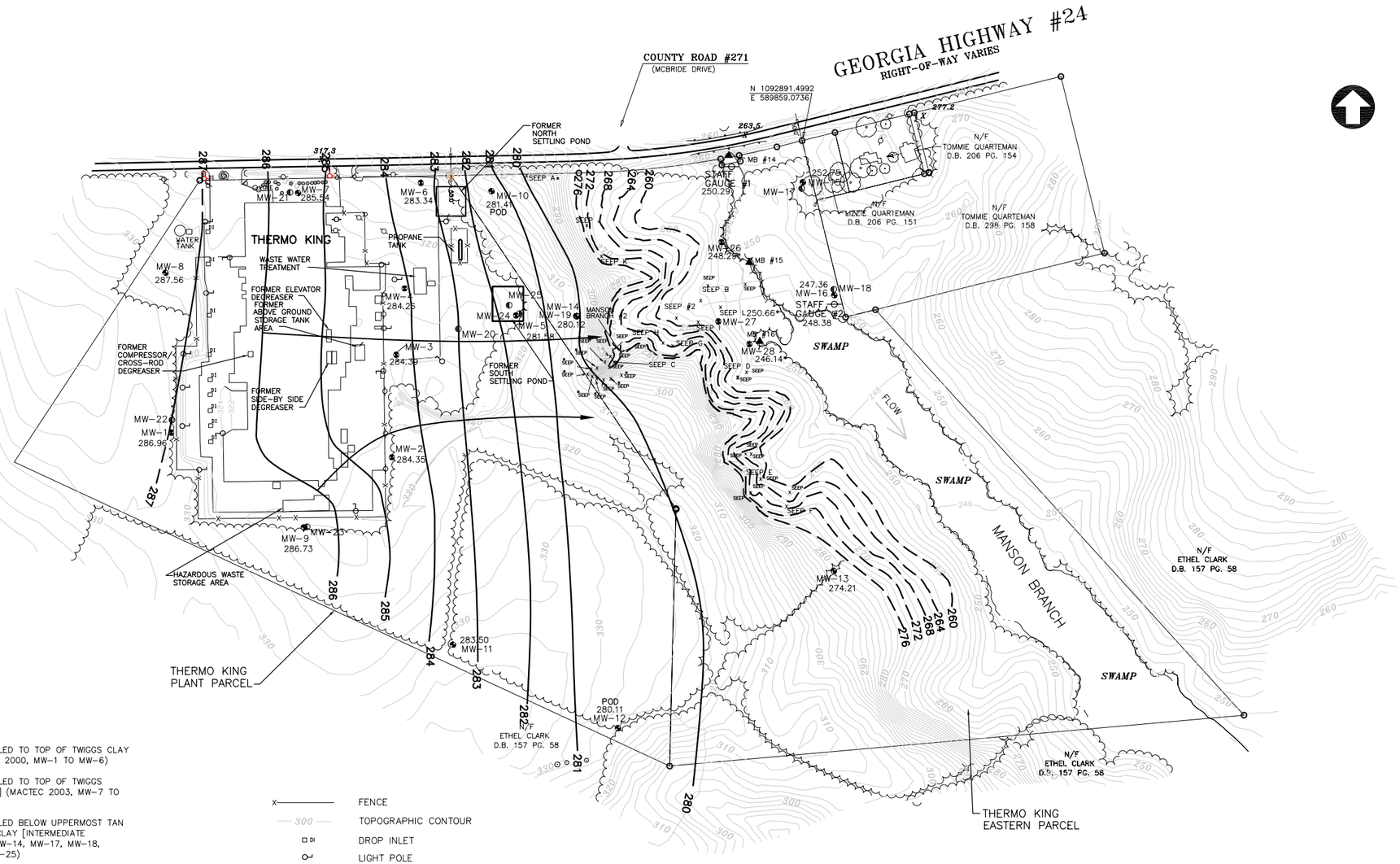
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

HYDROGEOLOGIC PROFILE D–D'

FIGURE 4.4

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO.
REV 2
PAGE NO

J:\Thermo King\OCT 2010\XSECT DD.dwg — Layout1 12/17/2010 1:40pm lkravchuk



LEGEND

MW–1	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (ESC 2000, MW–1 TO MW–6)
MW–7	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (MACTEC 2003, MW–7 TO MW–16 AND MW–19, EXCEPT MW–14)
MW–14	GROUND–WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE–GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER–BEARING ZONE] (MACTEC 2003: MW–14, MW–17, MW–18, MW–20, MW–21, MW–22, MW–23 AND MW–25)
MW–24	GROUND–WATER MONITORING WELL INSTALLED IN LOWER WATER BEARING ZONE.
SEEP A 299.0	WATER SEEP WITH ELEVATION SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: Seeps A through Manson Branch #2, and Seep #2)
SEEP 252.9	WATER SEEP WITH ELEVATION
MB #14	MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MACTEC 2003: MB#14, MB#15, MB#16)
	STAFF GAUGE FOR MEASURING SURFACE WATER ELEVATION
	BUSH
	BUSHLINE
	TREE
	TREELINE
	HEDGE
	STREAM
x	FENCE
300	TOPOGRAPHIC CONTOUR
DI	DROP INLET
	LIGHT POLE
	PROPERTY BOUNDARY
286.90	GROUND–WATER ELEVATION IN FEET, NAVD 1988 (OCTOBER 19, 2010)
284	POTENTIOMETRIC SURFACE CONTOUR IN FEET, NAVD 1988 IN UPPERMOST WATER–BEARING ZONE
	INTERPRETED DIRECTION OF GROUND–WATER FLOW IN UPPERMOST WATER–BEARING ZONE
X	SEEPS NOT USED IN CONTORING
NM	NOT MEASURED
*	GROUNDWATER ELEVATIONS NOT USED IN CONTOURING WELLS MW–26, MW–27, AND MW–28 ARE SCREENED IN ALLUVIAL MATERIAL ALONG MANSON BRANCH AND NOT THE UPPERMOST WATER BEARING ZONE.

SOURCE: TOPOGRAPHIC AND PROPERTY BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC., JULY 2002 AND HOFFMAN & COMPANY INC., USING FEBRUARY 2002 AERIAL PHOTOGRAPH. AND GROUND SURVEYING. 2000 CSR SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING, INC. SEPTEMBER 2003 AND DECEMBER 2004. LOCATIONS OF FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. ROGERO
DRAWN T. GLADSTONE
CHECKED J. QUINN/R. QUINN
IN CHARGE D. ALCOTT
DATE 11/15/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

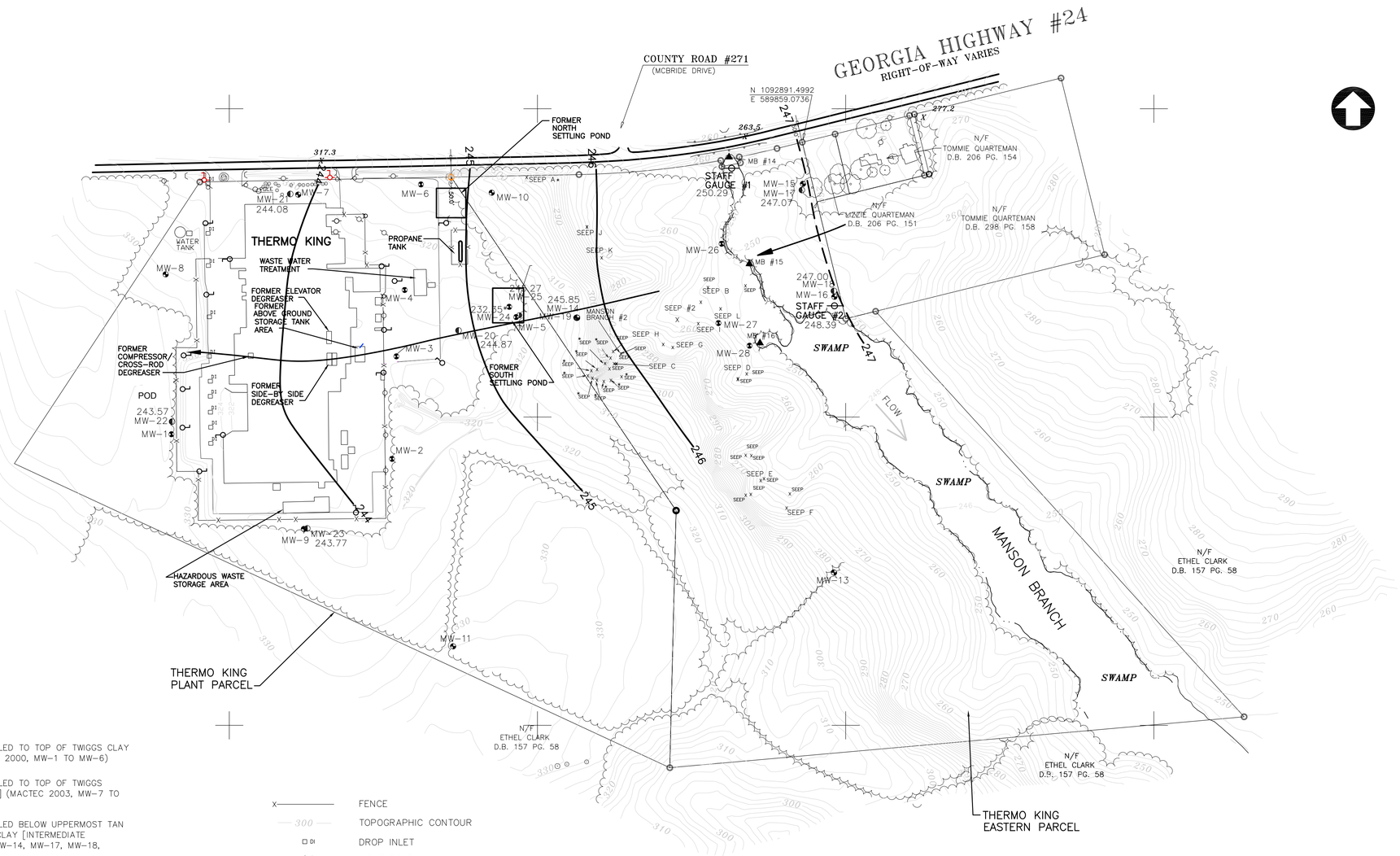
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421–3400

POTENTIOMETRIC SURFACE MAP FOR UPPERMOST WATER–BEARING ZONE OCTOBER 2010

FIGURE: 4.5

SCALE: AS SHOWN
CONTRACT: 6122–09–0322
DWG. NO. | REV | PAGE NO

J:\Thermo King\OCT 2010\POT-UPPERMOST OCT2010.dwg - Layout1 12/21/2010 11:09am lkrzychuk



LEGEND

MW–1	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (ESC 2000, MW–1 TO MW–6)
MW–7	GROUND–WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER–BEARING ZONE] (MACTEC 2003, MW–7 TO MW–16 AND MW–19, EXCEPT MW–14)
MW–14	GROUND–WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE–GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER–BEARING ZONE] (MACTEC 2003: MW–14, MW–17, MW–18, MW–20, MW–21, MW–22 AND MW–23)
MW–24	GROUND–WATER MONITORING WELL INSTALLED IN LOWER WATER BEARING ZONE.
SEEP A 295.0	WATER SEEP WITH ELEVATION SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: Seeps A through J, Manson Branch #2, and Seep #2)
SEEP 274.0	WATER SEEP WITH ELEVATION
MB #14	MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MACTEC 2003: MB#14, MB#15, MB#16)
	STAFF GAUGE FOR MEASURING SURFACE WATER ELEVATION
	BUSH
	BUSHLINE
	TREE
	TREELINE
	HEDGE
	STREAM
x	FENCE
300	TOPOGRAPHIC CONTOUR
DI	DROP INLET
	LIGHT POLE
	PROPERTY BOUNDARY
245.96	GROUND–WATER ELEVATION IN FEET, NAVD 1988 (JUNE 1–3, 2010)
284	POTENTIOMETRIC SURFACE CONTOUR IN FEET, NAVD 1988 IN INTERMEDIATE WATER–BEARING ZONE
	INTERPRETED DIRECTION OF GROUND–WATER FLOW IN INTERMEDIATE WATER–BEARING ZONE
x	SEEPS NOT USED IN CONTORING
POD	POINT OF DEMONSTRATION WELL

NOTE: MW–24 NOT USED IN CONTOURING.

SOURCE: TOPOGRAPHIC AND PROPERTY BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC., JULY 2002 AND HOFFMAN & COMPANY INC., USING FEBRUARY 2002 AERIAL PHOTOGRAPH, AND GROUND SURVEYING. 2000 CSR SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING, INC. SEPTEMBER 2003. DECEMBER 2004 LOCATIONS OF FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. ROGERO
DRAWN T. GLADSTONE
CHECKED J QUINN/R. QUINN
IN CHARGE D. ALCOTT
DATE 11/14/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

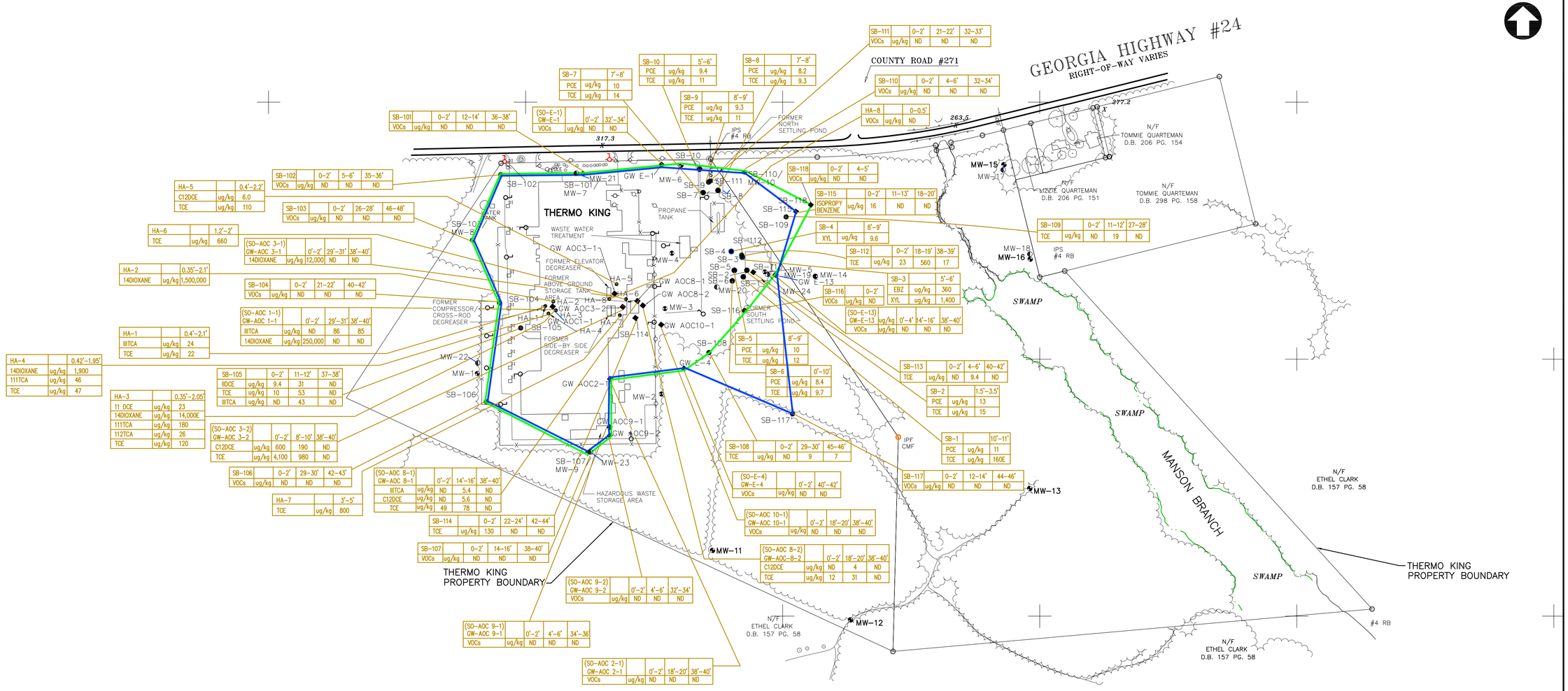
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421–3400

POTENTIOMETRIC SURFACE MAP FOR INTERMEDIATE WATER–BEARING ZONE OCTOBER 2010

FIGURE: 4.6

SCALE: AS SHOWN
CONTRACT: 6122–09–0322
DWG. NO. | REV | PAGE NO

J:\Thermo King\OCT 2010\POT-OCT2010.dwg — Layout1 12/09/2010 3:59pm kravchuk



LEGEND

MW-1 ●	GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (ESC 2000, MW-1 TO MW-6)
MW-7 ◔	GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (MACTEC 2003, MW-7 TO MW-16 AND MW-19, EXCEPT MW-14)
MW-14 ◐	GROUND-WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE-GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER-BEARING ZONE] (MACTEC 2003: MW-14, MW-17, MW-18, MW-20, MW-21, MW-22 AND MW-23)
MW-24 ◑	GROUND-WATER MONITORING WELL INSTALLED IN THE LOWER WATER-BEARING ZONE (MACTEC 2004, MW-24)
GW E-1 ◆	SOIL BORING FOR SOIL AND GROUND-WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E-1, GW E-4, GW E-13, GW AOC1-1, GW AOC2-1, GW AOC3-1, GW AOC3-2, GW AOC8-1, GW AOC8-2, GW AOC9-1, GW AOC9-2, GW AOC10-1, SB-113, SB-114, SB-115, AND SB-118, [UPPERMOST WATER-BEARING ZONE]
SB-7 ●	SOIL BORING FOR SOIL SAMPLING (ESC 2000 AND MACTEC 2003 AND 2005 SB-1 TO SB-10, SB-101 TO SB-112, SB-116 AND SB-117 AND HA-1 TO HA-8, Kd-1 TO Kd-12) (Soil borings for soil sampling SB-101, SB-103, SB-107, and SB-110 were completed as monitoring wells MW-7, MW-8, MW-9, and MW-10)

VOCs	VOLATILE ORGANIC COMPOUNDS
ug/kg	MICROGRAMS PER KILOGRAMS
IIITCA	1,1,1-TRICHLOROETHANE
TCE	TRICHLOROETHENE
IIDCE	1,1-DICHLOROETHENE
CI2DCE	CIS-1,2-DICHLOROETHENE
PCE	TETRACHLOROETHENE
XYL	XYLENES
EBZ	ETHYLBENZENE
ND	NOT DETECTED
NS	NOT SAMPLED
II2TCA	1,1,2-TRICHLOROETHANE
0'-2'	SAMPLE DEPTH IN FEET BELOW GROUND SURFACE
110	CONSTITUENT CONCENTRATION
E	ESTIMATED CONCENTRATION; RESULT EXCEEDS THE CALIBRATION RANGE

BUSH
BUSHLINE
TREE
TREELINE
HEDGE
STREAM
FENCE
DROP INLET
LIGHT POLE
PROPERTY BOUNDARY

EXTENT OF VOCs IN SURFACE SOILS (0-2 FEET)

EXTENT OF VOCs IN SUBSURFACE SOILS (>2 FEET)

VOCS IN SOIL ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.

NOTE: SEE FIGURE 3.1 FOR Kd BORING LOCATIONS

SOURCE: TOPOGRAPHIC AND PROPERTY BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC., JULY 2002 AND HOFFMAN & COMPANY INC., USING FEBRUARY 2002 AERIAL PHOTOGRAPH AND GROUND SURVEYING 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000. 2003 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING INC., LOCATIONS OF FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. QUINN
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 3/9/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

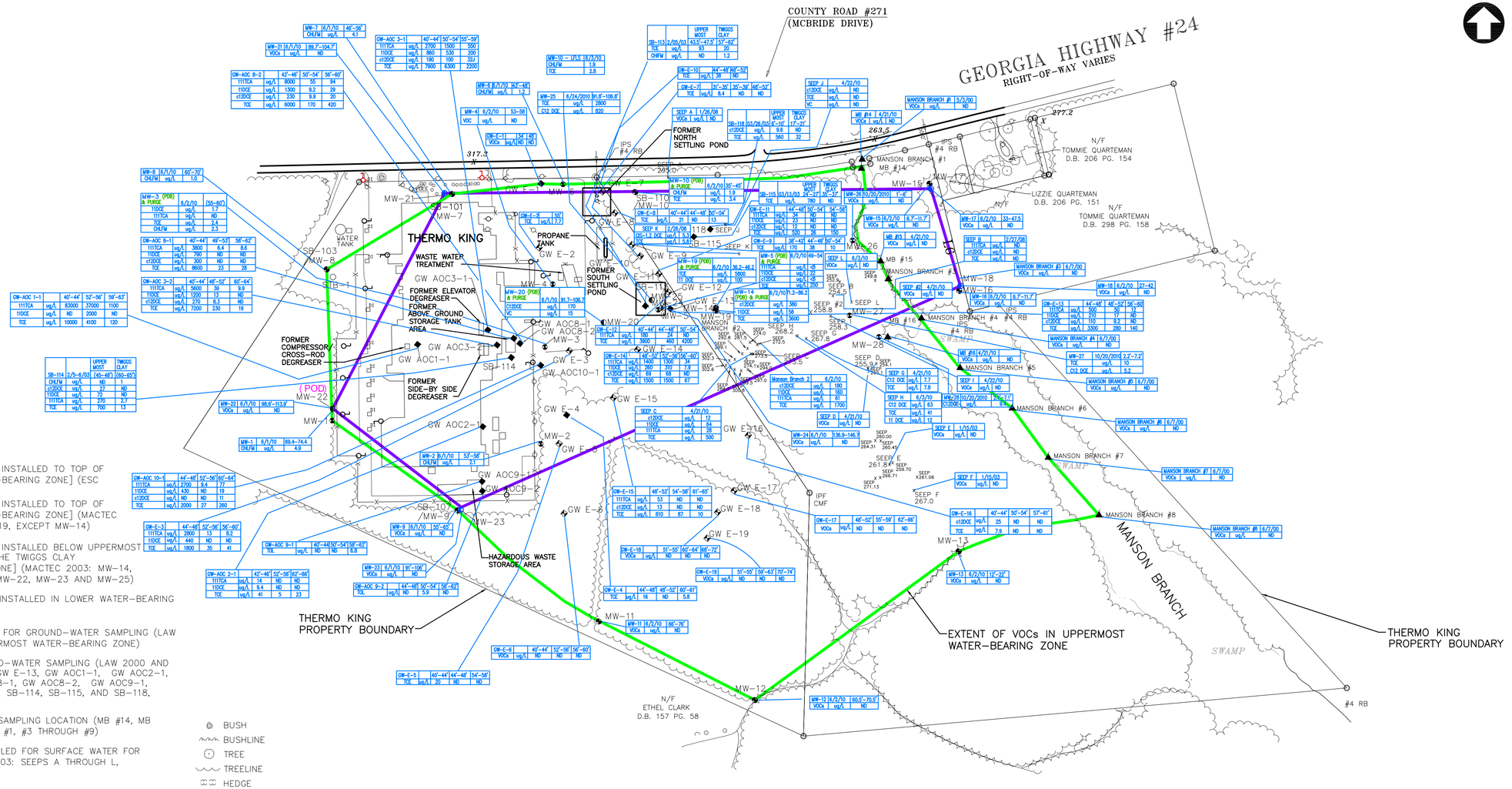
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421-3400

DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN SOIL

FIGURE 4.7

SCALE: AS SHOWN
CONTRACT: 6122-09-0322
DWG. NO.
REV: 2
PAGE NO

J:\Thermo King\JANUARY - 2010\SITE-MAP-N3.dwg - Layout1 12/17/2010 11:50am lkravchuk



LEGEND

- ● MW-1 — GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (ESC 2000, MW-1 TO MW-6)
- ◒ MW-7 — GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (MACTEC 2003, MW-7 TO MW-16 AND MW-19, EXCEPT MW-14)
- ◐ MW-14 — GROUND-WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE-GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER-BEARING ZONE] (MACTEC 2003: MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23 AND MW-25)
- ◑ MW-24 — GROUND-WATER MONITORING WELL INSTALLED IN LOWER WATER-BEARING ZONE (MACTEC 2004: MW-24)
- GW-E-2 — DIRECT-PUSH TECHNOLOGY BORING FOR GROUND-WATER SAMPLING (LAW 2000: GW E-1 TO GW E-19, UPPERMOST WATER-BEARING ZONE)
- ◆ GW-E-1 — SOIL BORING FOR SOIL AND GROUND-WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E-1, GW E-4, GW E-13, GW AOC1-1, GW AOC2-1, GW AOC3-1, GW AOC3-2, GW AOC8-1, GW AOC8-2, GW AOC9-1, GW AOC9-2, GW AOC10-1, SB-113, SB-114, SB-115, AND SB-118, UPPERMOST WATER-BEARING ZONE)
- ▲ MB #14 — MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MB #14, MB #15 AND MB #16, MANSON BRANCH #1, #3 THROUGH #9)
- X SEEP A 299.0 — WATER SEEP WITH ELEVATION, SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: SEEPS A THROUGH L, MANSON BRANCH #2, SEEP #2)

ND	NOT DETECTED
VOC	VOLATILE ORGANIC COMPOUNDS
TCE	TRICHLOROETHENE
111TCA	1,1,1-TRICHLOROETHANE
11DCE	1,1-DICHLOROETHENE
c12DCE	CIS-1,2-DICHLOROETHENE
t12DCE	TRANS-1,2-DICHLOROETHENE
TOL	TOLUENE
CHLFM	CHLOROFORM
VC	VINYL CHLORIDE
ug/L	MICROGRAMS PER LITER
40'-44'	SAMPLE DEPTH IN FEET BELOW GROUND SURFACE
27	CONSTITUENT CONCENTRATION
(POD)	POINT OF DEMONSTRATION WELL
(PDB)	PASSIVE DIFFUSION BAG

- BUSH
- BUSHLINE
- TREE
- TREELINE
- HEDGE
- WATER
- FENCE
- DI DROP INLET
- X SEEP 299.5 WATER SEEP WITH ELEVATION
- PROPERTY BOUNDARY
- EXTENT OF VOCs IN UPPERMOST WATER-BEARING ZONE
- EXTENT OF VOCs IN INTERMEDIATE WATER-BEARING ZONE

VOCS IN GROUND WATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.

NOTE: MOST CURRENT ANALYTICAL RESULTS ARE SHOWN IN (ug/L) MICROGRAMS PER LITER.

SOURCE: HOFFMAN & COMPANY INC. AERIAL PHOTOGRAPH FEBRUARY 2002 AND TOPOGRAPHIC AND BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC. JULY 2002, 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000, 2003 AND 2004 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING SEPTEMBER 2003 AND DECEMBER 2004. FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED D HUNT
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/14/2010

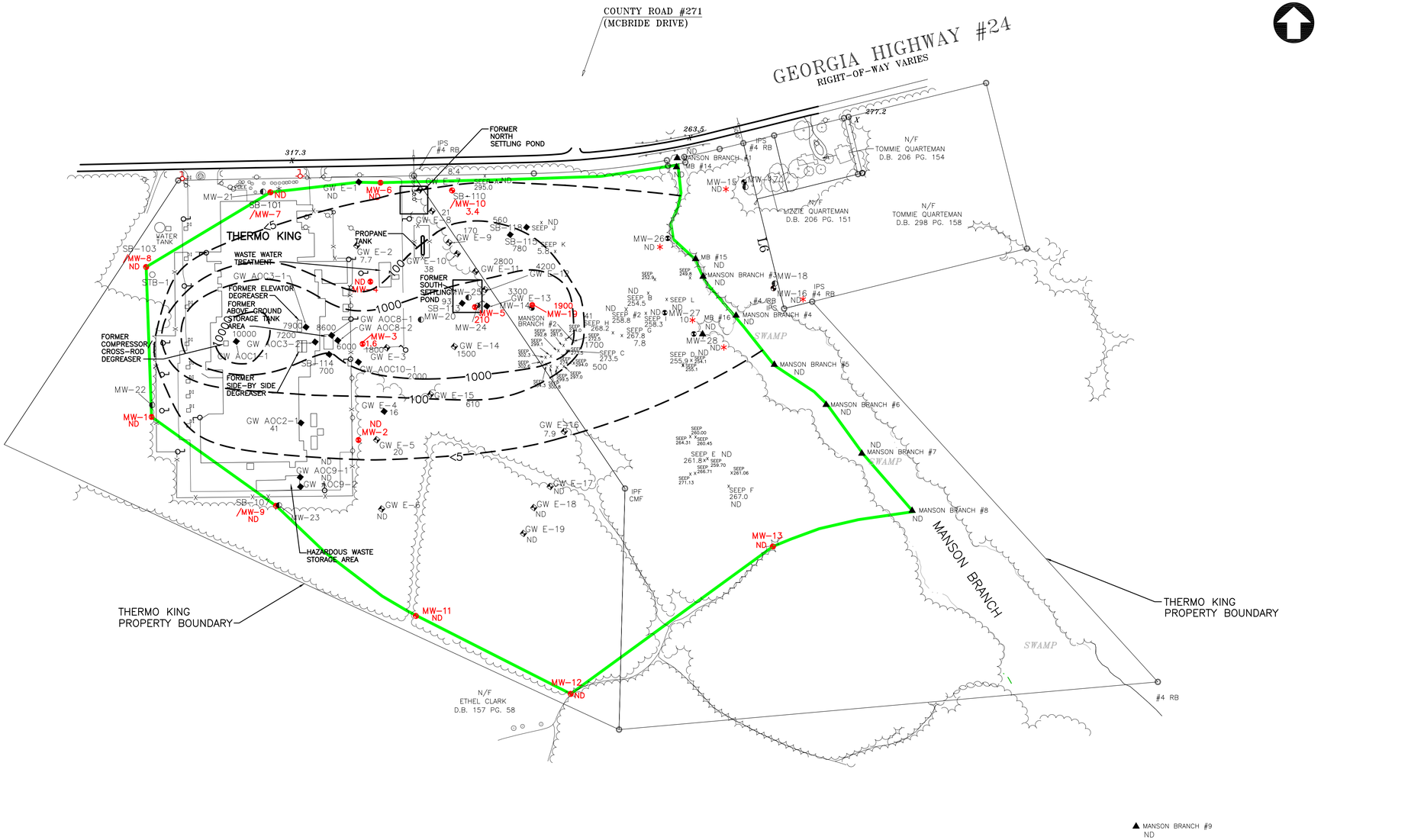
THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421-3400

DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN GROUND WATER

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO. FIG 4.8
REV
PAGE NO

J:\Thermo King\OCT 2010\SITE-MAP-N1.dwg - Layout1 12/21/2010 10:19am lkravchuk



LEGEND

MW-1	GROUND-WATER MONITORING WELL INSTALLED IN UPPERMOST WATER-BEARING ZONE (ESC 2000, MW-1 TO MW-6)
MW-7	GROUND-WATER MONITORING WELL INSTALLED IN UPPERMOST WATER-BEARING ZONE (MACTEC 2003, MW-7 TO MW-13 AND MW-19) (MW-15 AND MW-16 INSTALLED IN ALLUVIUM DEPOSITS ON EAST SIDE OF MANSON BRANCH)
MW-14	GROUND-WATER MONITORING WELL INSTALLED IN INTERMEDIATE WATER-BEARING ZONE (MACTEC 2003: MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23 AND MW-25)
MW-24	GROUND-WATER MONITORING WELL INSTALLED IN LOWER WATER-BEARING ZONE (MACTEC 2004, MW-24)
GW-E-2	DIRECT-PUSH TECHNOLOGY BORING FOR GROUND-WATER SAMPLING (LAW 2000: GW E-1 TO GW E-19, UPPERMOST WATER-BEARING ZONE)
GW-E-1	SOIL BORING FOR SOIL AND GROUND-WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E-1, GW E-4, GW E-13, GW AOC1-1, GW AOC2-1, GW AOC3-1, GW AOC3-2, GW AOC8-1, GW AOC8-2, GW AOC9-1, GW AOC9-2, GW AOC10-1, SB-113, SB-114, SB-115, AND SB-118, UPPERMOST WATER-BEARING ZONE)
MB #14	MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MB #14, MB #15 AND MB #16 MANSON BRANCH #1, #3 THROUGH #9)
X SEEP A 299.0	WATER SEEP WITH ELEVATION, SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC NOV. 2004: SEEPS A THROUGH L, MANSON BRANCH #2, SEEP #2)
69	TRICHLOROETHENE CONCENTRATION IN ug/L IN GROUND WATER
100	ISO-CONCENTRATION CONTOUR FOR TRICHLOROETHENE CONCENTRATION IN ug/L BASED ON DATA COLLECTED FROM 2000 THROUGH 2010
ND	NOT DETECTED
	BUSH
	BUSHLINE
	TREE
	TREELINE
	HEDGE
	WATER
	FENCE
DI	DROP INLET
SEEP 299.5	WATER SEEP WITH ELEVATION
	PROPERTY BOUNDARY
	HORIZONTAL EXTENT OF TRICHLOROETHENE IN UPPERMOST WATER-BEARING ZONE (ND LINE)
*	CONSTITUENT CONCENTRATION IN GROUNDWATER IN WELLS SCREENING THE ALLUVIAL MATERIAL ALONG MANSON BRANCH

NOTE: MOST CURRENT GROUND-WATER ANALYTICAL RESULTS ARE SHOWN IN (ug/L) MICROGRAMS PER LITER.

SOURCE: HOFFMAN & COMPANY INC. AERIAL PHOTOGRAPH FEBRUARY 2002 AND TOPOGRAPHIC AND BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC. JULY 2002, 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000. 2003 AND 2004 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING SEPTEMBER 2003 AND DECEMBER 2004. FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. QUINN
DRAWN T. GLADSTONE
CHECKED J. HARTNESS
IN CHARGE D. ALCOTT
DATE 12/14/2010

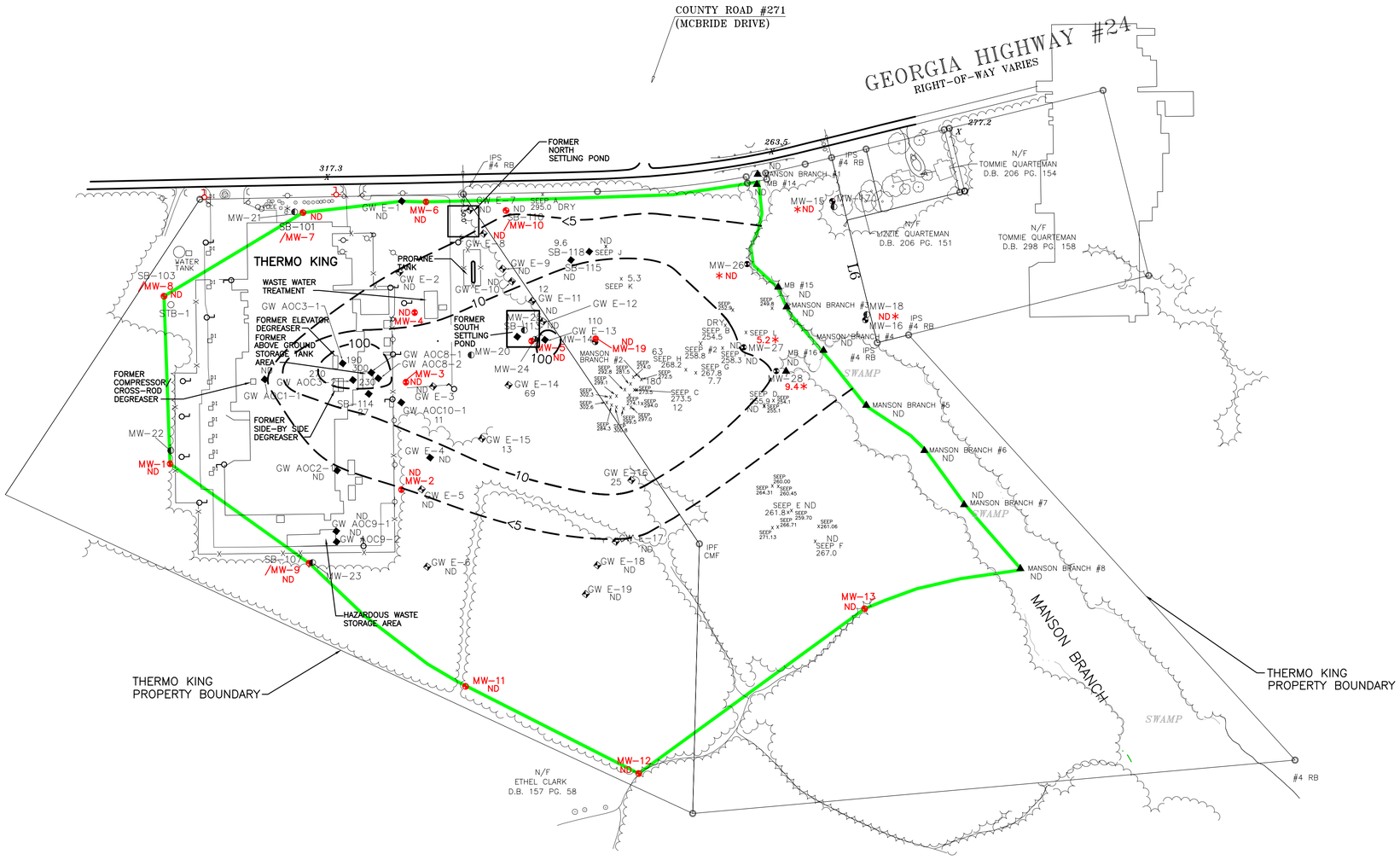
THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421-3400

ISO-CONCENTRATION MAP OF TRICHLOROETHENE IN GROUND WATER IN THE UPPERMOST WATER-BEARING ZONE

SCALE: AS SHOWN
CONTRACT: 6122-09-0322
DWG. NO.: 4.9
REV:
PAGE NO:

J:\Thermo King\OCT 2010\TRICHLOROETHENE IN GW-UPPER-11805.dwg - Layout1 12/21/2010 10:35am tkravchuk



LEGEND

MW-1	GROUND-WATER MONITORING WELL INSTALLED IN UPPERMOST WATER-BEARING ZONE (ESC 2000, MW-1 TO MW-6)
MW-7	GROUND-WATER MONITORING WELL INSTALLED IN UPPERMOST WATER-BEARING ZONE (MACTEC 2003, MW-7 TO MW-13 AND MW-19) (MW-15 AND MW-16 INSTALLED IN ALLUVIUM DEPOSITS ON EAST SIDE OF MANSON BRANCH)
MW-14	GROUND-WATER MONITORING WELL INSTALLED IN INTERMEDIATE WATER-BEARING ZONE (MACTEC 2003: MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23 AND MW-25)
MW-24	GROUND-WATER MONITORING WELL INSTALLED IN LOWER WATER-BEARING ZONE (MACTEC 2004, MW-24)
GW-E-2	DIRECT-PUSH TECHNOLOGY BORING FOR GROUND-WATER SAMPLING (LAW 2000: GW E-1 TO GW E-19, UPPERMOST WATER-BEARING ZONE)
GW-E-1	SOIL BORING FOR SOIL AND GROUND-WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E-1, GW E-4, GW E-13, GW AOC1-1, GW AOC2-1, GW AOC3-1, GW AOC3-2, GW AOC8-1, GW AOC8-2, GW AOC9-1, GW AOC9-2, GW AOC10-1, SB-113, SB-114, SB-115, AND SB-118, UPPERMOST WATER-BEARING ZONE)
MB #14	MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MB #14, MB #15 AND MB #16) (MANSON BRANCH #1, #3 THROUGH #9)
X SEEP A 299.0	WATER SEEP WITH ELEVATION, SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC NOV. 2004: SEEPS A THROUGH J, MANSON BRANCH #2, SEEP #2)
27	CIS-1,2-DICHLOROETHENE CONCENTRATION IN ug/L IN GROUND WATER
100	ISO CONCENTRATION CONTOUR FOR CIS-1,2-DICHLOROETHENE CONCENTRATION IN ug/L BASED ON DATA COLLECTED FROM 2000 THROUGH 2010
ND	NOT DETECTED
	BUSH
	BUSHLINE
	TREE
	TREELINE
	HEDGE
	WATER
	HORIZONTAL EXTENT OF CIS-1,2-DICHLOROETHENE IN UPPERMOST WATER-BEARING ZONE (ND LINE)
	FENCE
DI	DROP INLET
SEEP 299.5	WATER SEEP WITH ELEVATION
	PROPERTY BOUNDARY
*	CONSTITUENT CONCENTRATION IN GROUND WATER IN WELLS SCREENING THE ALLUVIAL MATERIAL ALONG MANSON BRANCH

NOTE: MOST CURRENT GROUND-WATER ANALYTICAL RESULTS ARE SHOWN IN (ug/L) MICROGRAMS PER LITER.

SOURCE: HOFFMAN & COMPANY INC. AERIAL PHOTOGRAPH FEBRUARY 2002 AND TOPOGRAPHIC AND BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC. JULY 2002, 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000, 2003 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING SEPTEMBER 2003 AND DECEMBER 2004. FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. QUINN
DRAWN T. GLADSTONE
CHECKED J. HARTNESS
IN CHARGE D. ALCOTT
DATE 12/14/2010

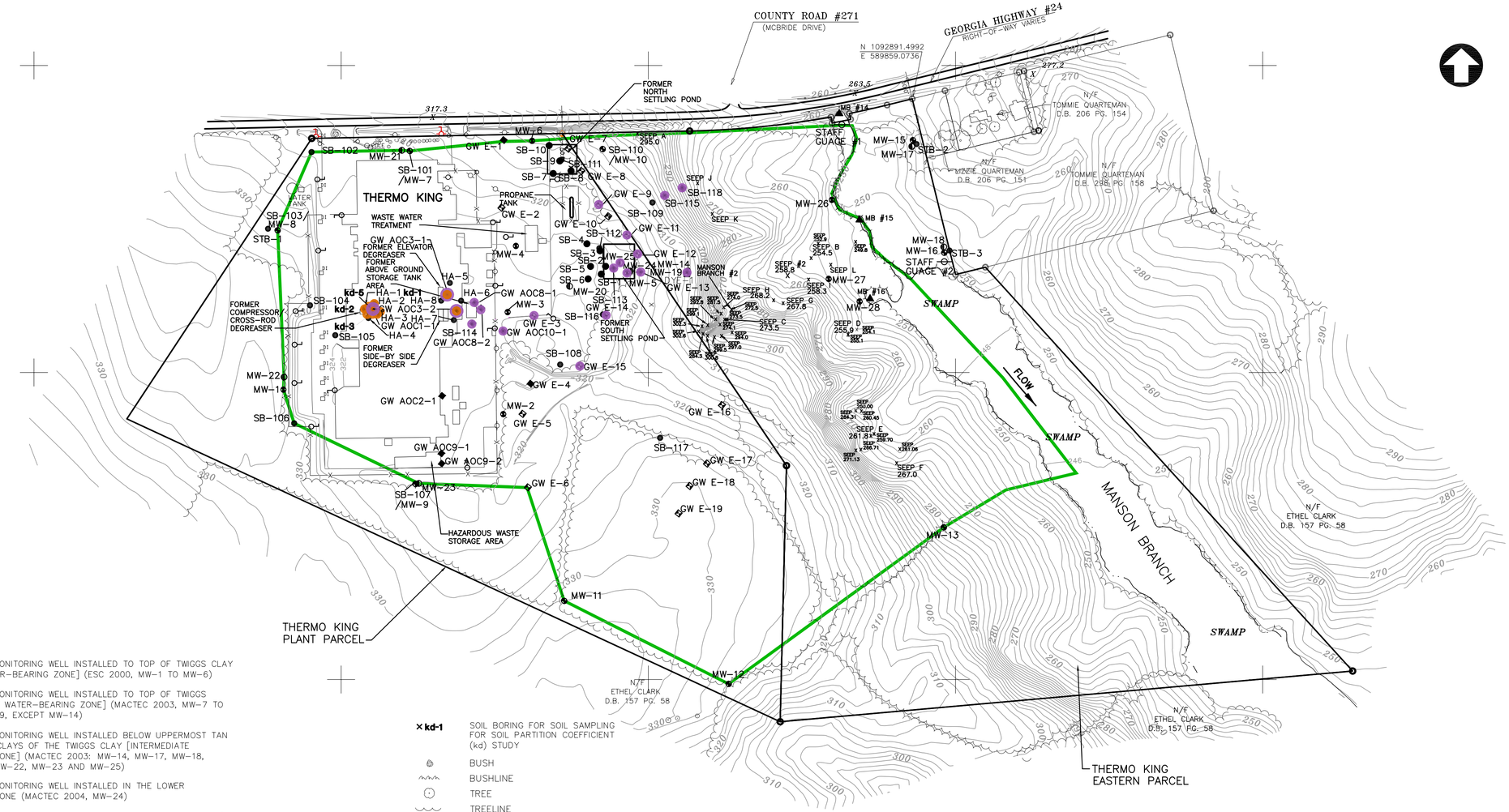
THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421-3400

ISO-CONCENTRATION MAP OF CIS-1,2-DICHLOROETHENE IN GROUND WATER IN THE UPPERMOST WATER-BEARING ZONE

SCALE: AS SHOWN
CONTRACT: 6122-09-0322
DWG. NO.: 4.10
REV
PAGE NO

J:\Thermo King\OCT 2010\GIS-1-2 DICHLOROETHENE IN_GROUND WATER.dwg - Layout1 12/21/2010 10:38am lkravchuk



LEGEND

- MW-1 — GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (ESC 2000, MW-1 TO MW-6)
- MW-7 — GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (MACTEC 2003, MW-7 TO MW-16 AND MW-19, EXCEPT MW-14)
- MW-14 — GROUND-WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE-GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER-BEARING ZONE] (MACTEC 2003: MW-14, MW-17, MW-18, MW-20, MW-21, MW-22, MW-23 AND MW-25)
- MW-24 — GROUND-WATER MONITORING WELL INSTALLED IN THE LOWER WATER-BEARING ZONE (MACTEC 2004, MW-24)
- GW E-2 — DIRECT-PUSH TECHNOLOGY BORING FOR GROUND-WATER SAMPLING (LAW 2000: GW E-1 TO GW E-19, UPPERMOST WATER-BEARING ZONE)
- GW E-1 — SOIL BORING FOR SOIL AND GROUND-WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E-1, GW E-4, GW E-13, GW AOC1-1, GW AOC2-1, GW AOC3-1, GW AOC3-2, GW AOC8-1, GW AOC8-2, GW AOC9-1, GW AOC9-2, GW AOC10-1, SB-113, SB-114, SB-115, AND SB-118, UPPERMOST WATER-BEARING ZONE)
- SB-7 — SOIL BORING FOR SOIL SAMPLING (ESC 2000 AND MACTEC 2003: SB-1 TO SB-10, SB-101 TO SB-112, SB-116 AND SB-117 AND HA-1 TO HA-8) (SOIL BORINGS FOR SOIL SAMPLING SB-101, SB-103, SB-107, SB-110 WERE COMPLETED AS MONITORING WELLS MW-7, MW-8, MW-9, AND MW-10 RESPECTIVELY) BORINGS STB-1, STB-2 AND STB-3 ARE STRATIGRAPHIC BORINGS
- SEEP A 299.0 — WATER SEEP WITH ELEVATION SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: Seeps A through L, Manson Branch #2, and Seep #2)
- SEEP 252.9 — WATER SEEP WITH ELEVATION
- MB #14 — MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MACTEC 2003: MB#14, MB#15, MB#16)
- STAFF GUAGE FOR MEASURING SURFACE WATER ELEVATION
- DYE INJECTION WELL
- kd-1 — SOIL BORING FOR SOIL SAMPLING FOR SOIL PARTITION COEFFICIENT (kd) STUDY
- BUSH
- BUSHLINE
- TREE
- TREELINE
- HEDGE
- STREAM
- FENCE
- 300 — TOPOGRAPHIC CONTOUR
- DI — DROP INLET
- LIGHT POLE
- PROPERTY BOUNDARY
- CONSTITUENT CONCENTRATIONS IN SOIL DO NOT MEET TYPES 1 OR 2 OR 3 OR 4 RISK REDUCTION STANDARDS
- CONSTITUENT CONCENTRATIONS IN GROUND WATER DO NOT MEET TYPES 1/3 OR 2 OR 4 RISK REDUCTION STANDARDS (MOST RECENT GROUND-WATER ANALYTICAL RESULTS PER LOCATION USED)
- EXTENT OF HSRA DEFINED SITE

SOURCE: TOPOGRAPHIC AND PROPERTY BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC., JULY 2002 AND HOFFMAN & COMPANY INC. USING FEBRUARY 2002 AERIAL PHOTOGRAPH AND GROUND SURVEYING. 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000. 2003 AND 2004 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING, INC. IN SEPTEMBER 2003 AND DECEMBER 2004. LOCATIONS OF FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED M. BARTENFIELD
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 12/16/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

RISK REDUCTION STANDARDS COMPLIANCE MAP

FIGURE 6.0

SCALE: AS SHOWN
CONTRACT: 6122-09-0322
DWG. NO.
REV 0
PAGE NO

J:\Thermo King\JULY 2010\RISK REDUCTION STANDARD.dwg - Layout1 12/21/2010 10:40am lkrzychuk

UPDATED RISK REDUCTION STANDARDS CALCULATIONS

Table K-1
Type 1 through Type 4 Ground Water RRS, mg/L

Parameter	Chronic Reference Dose Oral (mg/kg/day)	Chronic Reference Dose Inhalation (mg/kg/day)	Cancer Slope Factor Oral (mg/kg/day)-1	Cancer Slope Factor Inhalation (mg/kg/day)-1	Weight of Evidence	Source for Chronic Rfds and CSFs	Type 1/ Type 3 (mg/L)		Type 2 Standard (mg/L) Adult Noncarcinogenic	Type 2 Standard (mg/L) Adult Carcinogenic	Type 2 Standard (mg/L) Child Noncarcinogenic	Type 2 Standard (mg/L) Child Carcinogenic	Type 2 Overall	Type 4 Site-specific (mg/L) (a) Occupational Noncarcinogenic	Type 4 Site-specific (mg/L) (a) Occupational Carcinogenic	Type 4 Overall
1,1,1-Trichloroethane	2.0E+00	1.4E+00	ND	ND	D	IRIS	0.2		9.0	ND	2.7	ND	**2.7**	25.1	ND	25.1
1,1,2-Trichloroethane	4.0E-03	ND	5.7E-02	5.6E-02	C	IRIS	0.005		0.15	0.0025	0.063	0.0038	**0.0025**	0.41	0.0085	0.0085
1,1-Dichloroethene	5.0E-02	5.7E-02	ND	ND	C	IRIS	0.007		0.34	ND	0.10	ND	**0.10**	0.95	ND	0.95
1,4-Dioxane	3.0E-02	1.0E+00	1.0E-01	2.7E-02	B2	IRIS, Cal EPA, ATSDR	0.002	DL	1.0	0.0036	0.38	0.0060	**0.0036**	2.7	0.012	0.012
Chloroform	1.0E-02	2.8E-02	3.1E-02	8.1E-02	B2	IRIS, Cal EPA, ATSDR	0.08		0.13	0.0020	0.043	0.0029	**0.0020**	0.37	0.0066	**0.0066**
cis-1,2-Dichloroethene	1.0E-02	ND	ND	ND	D	PPRTV	0.07		0.37	ND	0.16	ND	**0.16**	1.0	ND	**1.0**
Ethylbenzene	1.0E-01	2.9E-01	1.1E-02	8.8E-03	D	IRIS, Cal EPA	0.7		1.3	0.015	0.43	0.024	**0.015**	3.7	0.052	**0.052**
Isopropylbenzene (Cumene)	1.0E-01	1.1E-01	ND	ND	D	IRIS	0.005	DL	0.68	ND	0.21	ND	**0.21**	1.9	ND	**1.9**
Methylene chloride	6.0E-02	2.9E-01	7.5E-03	1.7E-03	B2	IRIS, ATSDR	0.005		1.1	0.053	0.37	0.090	**0.053**	3.0	0.18	**0.18**
Naphthalene	2.0E-02	8.6E-04	ND	1.2E-01	C	IRIS, Cal EPA	0.02		0.0062	0.0014	0.0018	0.0020	**0.0014**	0.017	0.0048	**0.0048**
Tetrachloroethene	1.0E-02	7.7E-02	5.4E-01	2.1E-02	B-C2	IRIS, Cal EPA, ATSDR	0.005		0.22	0.0013	0.079	0.0026	**0.0013**	0.62	0.0044	**0.0044**
Toluene	8.0E-02	1.4E+00	ND	ND	D	IRIS	1		2.3	ND	0.88	ND	**0.88**	6.4	ND	**6.4**
Trichloroethene	ND	ND	5.9E-03	7.0E-03	B2	Cal EPA	0.005		ND	0.021	ND	0.031	**0.021**	ND	0.070	**0.070**
Xylenes, mixed	2.0E-01	2.9E-02	ND	ND	NA	IRIS	10		0.20	ND	0.059	ND	**0.059**	0.57	ND	**0.57**
Vinyl Chloride (adult)	3.00E-03	2.90E-02	7.20E-01	1.50E-02	A	IRIS	0.002		0.072	0.0011	0.026	0.0022	**0.0011**	0.20	0.0040	**0.0040**

Source Description: IRIS - Integrated Risk Information System, USEPA.
ATSDR - Agency for Toxic Substances and Disease Registry
NCEA - National Center for Exposure Assessment, USEPA.
PPRTV - Provisional Peer Reviewed Toxicity Value
Cal EPA - California Environmental Protection Agency
Weight of Evidence from IRIS, 2010.
ND Toxicity values not available
NA Not available
(a) Volatilization factor for non-residential reduced by one-half from default because no showering or cooking occurs at the facility. Agreement from EPD on May 4, 2004.

Equation 2 (Noncarcinogens):

$$C = \frac{THI \times BW \times AT \times 365 days/year}{EF \times ED \times [(1/RfDi \times K \times IRa) + (1/RfDo \times IRw)]}$$

Equation 1 (Carcinogens):

$$C = \frac{TR \times BW \times AT \times 365 days/year}{EF \times ED \times [(SFi \times K \times IRa) + (SFo \times IRw)]}$$

Where:

	Type 2 Adult	Type 2 Parameters Child	Type 4 Site-specific Parameters
THI = Target Hazard Index =	1	1	1
BW = Body Weight =	70 kg	15 kg	70 kg
AT = Averaging Time =	30 years (noncarc.); 70 (carc.)	6 years (noncarc.); 70 (carcinogens)	25 years for noncarcinogens; 70 years for carcinogens
EF = Exposure Frequency =	350 days/year	350 days/year	250 day/year
EF = Exposure Frequency (Irrigation) =			
ED = Exposure Duration =	30 years	6 years	25 year
RfDi = Inhalation Reference Dose =	Chemical Specific	Chemical Specific	Chemical Specific
K = Volatilization Factor = 0.0005 x 1000 L/m3 =	0.5 L/m3	0.5 L/m3	0.25 L/m3 (a)
IRa = Inhalation Rate for Air =	20 m3/day	15 m3/day	20 m3/day
RfDo = Oral Reference Dose =	Chemical Specific	Chemical Specific	Chemical Specific
IRw = Ingestion Rate for Water =	2 L/day	1 L/day (EFS)	1 L/day
TR = Target Risk =	0.00001	0.00001	0.00001
CSFo = Oral Cancer Slope Factor =	Chemical Specific	Chemical Specific	Chemical Specific
CSFi = Inhalation Cancer Slope Factor =	Chemical Specific	Chemical Specific	Chemical Specific

Prepared by:EJS 9/9/09
Checked by: LMS 11/22/10

Table K-2
Type 1 and 3 Soil Calculations, mg/kg

SUBSTANCE	RFDO	RFDI	CSFO	CSFI	Source for Chronic Rfd and CSFs	Weight of Evidence	Volatilization Factor (m^3/kg)	Table 2 Appendix III	Appendix I	Type 1 GW x 100	Number 1	Risk-Based Residential Type 1 NC-Type 1	Risk-Based Residential Type 1 C-Type 1	Risk-Based Residential Type 1 Type 1 RRS	Overall Type 1 RRS	Risk-Based Nonresidential Type 3 NC-Type 3	Risk-Based Nonresidential Type 3 C-Type 3	Risk-Based Soil Type 3 RRS	Surface Soil Type 3 RRS	Subsurface Soil Type 3 RRS
1,1,1-Trichloroethane	2.0E+00	1.4E+00	ND	ND	IRIS	D	1.6E+03	ND	5.4E+00	2.0E+01	2.0E+01	1.0E+04	ND	1.0E+04	2.0E+01	1.1E+04	ND	1.1E+04	2.0E+01	2.0E+01
1,1,2-Trichloroethane	4.0E-03	ND	5.7E-02	5.6E-02	IRIS	C	8.8E+03	ND	5.0E-01	5.0E-01	5.0E-01	2.6E+03	1.7E+02	1.7E+02	5.0E-01	8.2E+03	2.2E+01	2.2E+01	5.0E-01	5.0E-01
1,1-Dichloroethene	5.0E-02	5.7E-02	ND	ND	IRIS	C	8.7E+02	ND	3.6E-01	7.0E-01	7.0E-01	2.4E+02	ND	2.4E+02	7.0E-01	2.5E+02	ND	2.5E+02	7.0E-01	7.0E-01
1,4-Dioxane	3.0E-02	1.0E+00	1.0E-01	2.7E-02	IRIS, Cal EPA, ATSDR	B2	2.1E+04	ND	1.3E-01	5.0E-01	5.0E-01	1.6E+04	5.6E+01	5.6E+01	5.0E-01	ND	9.4E+01	9.4E+01	5.0E-01	5.0E-01
Chloroform	1.0E-02	2.8E-02	3.1E-02	8.1E-02	IRIS, Cal EPA, ATSDR	B2	2.8E+03	ND	6.8E-01	8.0E+00	8.0E+00	3.6E+02	3.8E+00	3.8E+00	3.8E+00	3.9E+02	4.9E+00	4.9E+00	4.9E+00	8.0E+00
cis-1,2-Dichloroethylene	1.0E-02	ND	ND	ND	PPRTV	D	2.7E+03	ND	5.3E-01	7.0E+00	7.0E+00	6.4E+03	ND	6.4E+03	7.0E+00	2.0E+04	ND	2.0E+04	7.0E+00	7.0E+00
Ethylbenzene	1.0E-01	2.9E-01	1.1E-02	8.8E-03	IRIS, Cal EPA	D	7.7E+03	ND	2.0E+01	7.0E+01	7.0E+01	9.2E+03	9.2E+01	9.2E+01	7.0E+01	1.1E+04	1.2E+02	1.2E+02	7.0E+01	7.0E+01
Isopropylbenzene	1.0E-01	1.1E-01	ND	ND	IRIS	D	8.5E+03	ND	2.2E+01	5.0E-01	2.2E+01	4.4E+03	ND	4.4E+03	2.2E+01	4.8E+03	ND	4.8E+03	2.2E+01	2.2E+01
Methylene chloride	6.0E-02	2.9E-01	7.5E-03	1.7E-03	IRIS, ATSDR	B2	2.1E+03	ND	8.0E-02	5.0E-01	5.0E-01	2.8E+03	1.3E+02	1.3E+02	5.0E-01	3.1E+03	1.7E+02	1.7E+02	5.0E-01	5.0E-01
Naphthalene	2.0E-02	8.6E-04	ND	1.2E-01	IRIS, Cal EPA	C	6.5E+04	ND	1.0E+02	2.0E+00	1.0E+02	2.6E+02	6.1E+02	2.6E+02	1.0E+02	2.8E+02	7.7E+02	2.8E+02	1.0E+02	1.0E+02
Tetrachloroethene	1.0E-02	7.7E-02	5.4E-01	2.1E-02	IRIS, Cal EPA, ATSDR	B-C2	2.7E+03	ND	1.8E-01	5.0E-01	5.0E-01	8.6E+02	9.5E+00	9.5E+00	5.0E-01	1.0E+03	1.5E+01	1.5E+01	5.0E-01	5.0E-01
Toluene	8.0E-02	1.4E+00	ND	ND	IRIS	D	5.6E+03	ND	1.4E+01	1.0E+02	1.0E+02	2.2E+04	ND	2.2E+04	1.0E+02	3.2E+04	ND	3.2E+04	1.0E+02	1.0E+02
Trichloroethene	ND	ND	5.9E-03	7.0E-03	Cal EPA	B2	2.4E+03	ND	1.3E-01	5.0E-01	5.0E-01	ND	3.9E+01	3.9E+01	5.0E-01	ND	5.0E+01	5.0E+01	5.0E-01	5.0E-01
Xylene (total)	2.0E-01	2.9E-02	ND	ND	IRIS	NA	7.9E+03	ND	2.0E+01	1.0E+03	1.0E+03	1.1E+03	ND	1.1E+03	1.0E+03	1.1E+03	ND	1.1E+03	1.0E+03	1.0E+03

NC Noncarcinogen
C Carcinogen
RRS Risk Reduction Standard
ND No Data for this route

Prepared by: EJS 9/9/09
Checked by: LMS 11/22/10

Table K-3
Type 2 Soil Calculations, mg/kg

SUBSTANCE	Volatilization Factor (m^3/kg)	Residential Leaching Criteria	Residential Child		Residential Adult		Overall Type 2 RRS
			NC-Type 2	C-Type 2	NC-Type 2	C-Type 2	
1,1,1-Trichloroethane	1.6E+03	1.9E+01	2.2E+03	ND	7.9E+03	ND	1.9E+01
1,1,2-Trichloroethane	8.8E+03	3.2E-02	3.1E+02	1.7E+01	3.1E+02	1.3E+01	3.2E-02
1,1-Dichloroethene	8.7E+02	7.2E-01	5.1E+01	ND	1.8E+02	ND	7.2E-01
1,4-Dioxane	2.1E+04	1.5E-02	2.1E+03	4.7E+01	ND	4.8E+01	1.5E-02
Chloroform	2.8E+03	9.4E-01	7.3E+01	4.1E+00	2.7E+02	2.9E+00	9.4E-01
cis-1,2-Dichloroethylene	2.7E+03	4.4E-01	7.8E+02	ND	7.8E+02	ND	4.4E-01
Ethylbenzene	7.7E+03	1.6E+01	1.8E+03	9.4E+01	7.2E+03	7.1E+01	1.6E+01
Isopropylbenzene	8.5E+03	6.9E+00	8.9E+02	ND	3.4E+03	ND	6.9E+00
Methylene chloride	2.1E+03	2.7E-01	5.6E+02	1.3E+02	2.1E+03	1.0E+02	2.7E-01
Naphthalene	6.5E+04	1.3E+00	5.6E+01	6.5E+01	2.0E+02	4.6E+01	1.3E+00
Tetrachloroethene	2.7E+03	4.5E-02	1.7E+02	8.1E+00	6.8E+02	8.0E+00	4.5E-02
Toluene	5.6E+03	1.4E+01	3.6E+03	ND	1.9E+04	ND	1.4E+01
Trichloroethene	2.4E+03	1.8E+00	ND	4.1E+01	ND	2.9E+01	1.8E+00
Xylene (total)	7.9E+03	2.0E+02	2.3E+02	ND	8.1E+02	ND	2.0E+02

NC Noncarcinogen
C Carcinogen
RRS Risk Reduction Standard
ND No Data

Prepared by: EJS 9/9/09
Checked by: LMS 11/22/10

Table K-4
Type 4 Soil Calculations, mg/kg

	Direct Contact Only Construction Worker			Nonresidential Leaching	Industrial Worker		Direct Contact Type 4	Default Ind. Worker Overall (a)	
SUBSTANCE	NC-Type 4	C-Type 4	Type 4 RRS	**Criteria**	**NC-Type 4**	**C-Type 4**	**RRS**	**Type 4 RRS**	
1,1,1-Trichloroethane	2.2E+04	ND	2.2E+04	1.7E+02	1.1E+04	ND	1.1E+04	1.7E+02	
1,1,2-Trichloroethane	2.5E+03	2.0E+03	2.0E+03	5.5E-02	8.2E+03	2.2E+01	2.2E+01	5.5E-02	
1,1-Dichloroethene	5.0E+02	ND	5.0E+02	6.8E+00	2.5E+02	ND	2.5E+02	6.8E+00	
1,4-Dioxane	1.7E+04	4.9E+03	4.9E+03	4.9E-02	3.9E+04	9.4E+01	9.4E+01	4.9E-02	
Chloroform	7.0E+02	4.8E+02	4.8E+02	5.9E+00	3.9E+02	4.9E+00	4.9E+00	4.9E+00	
cis-1,2-Dichloroethene	6.2E+03	ND	6.2E+03	4.4E-01	2.0E+04	ND	2.0E+04	4.4E-01	
Ethylbenzene	1.6E+04	1.1E+04	1.1E+04	1.6E+01	1.1E+04	1.2E+02	1.2E+02	1.6E+01	
Isopropylbenzene	8.5E+03	ND	8.5E+03	6.2E+01	4.8E+03	ND	4.8E+03	6.2E+01	
Methylene chloride	5.4E+03	1.5E+04	5.4E+03	9.2E-01	3.1E+03	1.7E+02	1.7E+02	9.2E-01	
Naphthalene	5.4E+02	7.7E+03	5.4E+02	1.3E+00	2.8E+02	7.7E+01	7.7E+01	1.3E+00	
Tetrachloroethene	1.6E+03	8.5E+02	9.0E+02	4.5E-02	1.0E+03	1.5E+01	1.5E+01	4.5E-02	
Toluene	3.1E+04	ND	3.1E+04	8.8E+01	3.2E+04	ND	3.2E+04	8.8E+01	
Trichloroethene	ND	4.8E+03	4.8E+03	1.8E+00	ND	5.0E+01	5.0E+01	1.8E+00	**(b) 1.8**
Xylene (total)	2.3E+03	ND	2.3E+03	2.0E+02	1.1E+03	ND	1.1E+03	2.0E+02	

(a) Includes comparison to Nonresidential Leaching Criteria. Nonresidential leaching criteria is higher of values based on Type 3 and Type 4 GW RRS.
(b) The approved leaching RRS is applied to areas beneath the building foundation because there is no potential for direct contact and the majority of these sub-foundation soils are greater than 2 feet in depth.
NC Noncarcinogen
C Carcinogen
RRS Risk Reduction Standard
ND No Data

Prepared by: EJS 9/9/09
Checked by: LMS 11/22/10

Table K-5
Exposure Parameters for Soil and Ground Water

Exposure Parameters for Type 4 Soil	Construction Worker	Source	Industrial Worker	Units	Source
Hazard Index	1	HSRA Rule	1		HSRA Rule
Target Risk	1E-05	HSRA Rule	1E-05		HSRA Rule
Body Weight	70	USEPA 2002	70	kg	USEPA 2002
Averaging Time, Carcinogen	70	USEPA 2002	70	years	USEPA 2002
Averaging Time, Noncarcinogen	0.5	Professional Judgment	25	years	USEPA 2002
Exposure Duration	0.5	Professional Judgment	25	years	USEPA 2002
Exposure Frequency	125	Professional Judgment	250	days/yr	USEPA 2002
Soil Ingestion Rate	330	USEPA 2002	50	mg/day	USEPA 2002
Air Inhalation Rate	20	USEPA 2002	20	m^3/day	USEPA 2002
PEF	4.63E+09	HSRA Rule	4.63E+09	m^3/kg	HSRA Rule
CF	1E-06	HSRA Rule	1E-06	kg/mg	HSRA Rule

Exposure Parameters for Type 2 Soil:	Residential Child	Source	Residential Adult	Units	Source
Hazard Index	1	HSRA Rule	1		HSRA Rule
Target Risk	1E-05	HSRA Rule	1E-05		HSRA Rule
Body Weight	15	USEPA 2002	70	kg	USEPA 2002
Averaging Time, Carcinogen	70	USEPA 2002	70	years	USEPA 2002
Averaging Time, Noncarcinogen	6	USEPA 2002	30	years	USEPA 2002
Exposure Duration	6	USEPA 2002	30	years	USEPA 2002
Exposure Frequency	350	USEPA 2002	350	days/yr	USEPA 2002
Soil Ingestion Rate	200	USEPA 2002	100	mg/day	USEPA 2002
Air Inhalation Rate	15	HSRA Rule	20	m^3/day	USEPA 2002
PEF	4.63E+09	HSRA Rule	4.63E+09	m^3/kg	HSRA Rule
CF	1E-06	HSRA Rule	1E-06	kg/mg	HSRA Rule

Exposure Parameters for Type 1 and Type 3 Soils:	Residential Type 1	Source	Nonresidential Type 3	Units	Source
Hazard Index	1	HSRA Rule	1		HSRA Rule
Target Risk (Class A & B)	1.E-05	HSRA Rule	1E-05		HSRA Rule
Target Risk (Class C)	1.E-04	HSRA Rule	1E-04		HSRA Rule
Body Weight	70	HSRA Rule	70	kg	HSRA Rule
Averaging Time, Carcinogen	70	HSRA Rule	70	years	HSRA Rule
Averaging Time, Noncarcinogen	30	HSRA Rule	25	years	HSRA Rule
Exposure Duration	30	HSRA Rule	25	years	HSRA Rule
Exposure Frequency	350	HSRA Rule	250	days/yr	HSRA Rule
Soil Ingestion Rate	114	HSRA Rule	50	mg/day	HSRA Rule
Air Inhalation Rate	15	HSRA Rule	20	m^3/day	HSRA Rule
PEF	4.63E+09	HSRA Rule	4.63E+09	m^3/kg	HSRA Rule
CF	1E-06	HSRA Rule	1E-06	kg/mg	HSRA Rule

Exposure Parameters for Type 4 Ground Water	Industrial Worker	Units	Source
Hazard Index	1		HSRA Rule
Target Risk	1E-05		HSRA Rule
Body Weight	70	kg	USEPA 2002
Averaging Time, Carcinogen	70	years	USEPA 2002
Averaging Time, Noncarcinogen	25	years	USEPA 2002
Exposure Duration	25	years	USEPA 2002
Exposure Frequency	250	day/year	USEPA 2002
Water Ingestion Rate	1	L/day	HSRA Rule Type 3
Air Inhalation Rate	20	m^3/day	USEPA 2002
Volatilization Factor = 0.0005 x 1000 L/m3 =	0.25	L/m3	Site-Specific

Exposure Parameters for Type 2 Ground Water:	Residential Child	Residential Adult	Units	Source
Hazard Index	1	1		HSRA Rule
Target Risk	1E-05	1E-05		HSRA Rule
Body Weight	15	70	kg	USEPA 2002
Averaging Time, Carcinogen	70	70	years	USEPA 2002
Averaging Time, Noncarcinogen	6	30	years	USEPA 2002
Exposure Duration	6	30	years	USEPA 2002
Exposure Frequency	350	350	day/year	USEPA 2002
Water Ingestion Rate	1	2	L/day	HSRA Rule Type 1
Air Inhalation Rate	15	20	m^3/day	HSRA Rule Type 1
Volatilization Factor = 0.0005 x 1000 L/m3 =	0.5	0.5	L/m3	HSRA Rule Type 1

Sources
HSRA Rule July 2003
USEPA 2002 Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, OSWER 9355.4-24, December 2002

Prepared by: EJS 9/9/09
Checked by: LMS 11/22/10

Table K-6a
Area 1
Soil to Ground water Leachability

	K_d (a) (L/kg)	K_{oc} (L/kg)	Source	$Ø_w$	Øa	H' (unitless)	Øw+Øa*H'/$Þ_b$	Groundwater Type 1/3 RRS (C_w, mg/L)	C_w*20 (mg/L)	Pathway Type 1/3 C_s (mg/kg)	Groundwater Type 2 RRS (C_w, mg/L)	C_w*20 (mg/L)	Pathway Type 2 C_s (mg/kg)	Residential Cs (mg/kg)	Groundwater Type 4 RRS (c) (C_w, mg/L)	C_w*20 (mg/L)	Pathway Type 4 C_s (mg/kg)	Overall Cs (mg/kg)	
1,1,1-Trichloroethane	8.78E-02	4.39E+01	RSL	0.3	0.13	7.00E-01	0.2607	2.0E-01	4.0E+00	1.4E+00	2.7E+00	5.4E+01	1.9E+01	1.9E+01	2.5E+01	5.0E+02	1.7E+02	1.7E+02	
1,1,2-Trichloroethane	1.21E-01	6.07E+01	RSL	0.3	0.13	3.40E-02	0.2029	5.0E-03	1.0E-01	3.2E-02	2.5E-03	5.0E-02	1.6E-02	3.2E-02	8.5E-03	1.7E-01	5.5E-02	5.5E-02	
1,1-Dichloroethene	6.36E-02	3.18E+01	RSL	0.3	0.13	1.10E+00	0.2953	7.0E-03	1.4E-01	5.0E-02	1.0E-01	2.0E+00	7.2E-01	7.2E-01	9.5E-01	1.9E+01	6.8E+00	6.8E+00	
1,4-Dioxane	5.26E-03	2.63E+00	RSL	0.3	0.13	2.00E-04	0.2000	2.0E-03	4.0E-02	8.2E-03	3.6E-03	7.2E-02	1.5E-02	1.5E-02	1.2E-02	2.4E-01	4.9E-02	4.9E-02	
cis-1,2-Dichloroethene	7.92E-02	3.96E+01	RSL	0.3	0.13	1.70E-01	0.2147	7.0E-02	1.4E+00	4.1E-01	1.6E-01	3.2E+00	9.4E-01	9.4E-01	1.0E+00	2.0E+01	5.9E+00	5.9E+00	
Chloroform	6.36E-02	3.18E+01	RSL	0.3	0.13	1.50E-01	0.2130	8.0E-02	1.6E+00	4.4E-01	2.0E-03	4.0E-02	1.1E-02	4.4E-01	6.6E-03	1.3E-01	3.7E-02	4.4E-01	(b)
Ethylbenzene	8.92E-01	4.46E+02	RSL	0.3	0.13	3.20E-01	0.2277	7.0E-01	1.4E+01	1.6E+01	1.5E-02	3.0E-01	3.4E-01	1.6E+01	5.2E-02	1.0E+00	1.2E+00	1.6E+01	(b)
Isopropylbenzene (Cumene)	1.40E+00	6.98E+02	RSL	0.3	0.13	4.70E-01	0.2407	5.0E-03	1.0E-01	1.6E-01	2.1E-01	4.2E+00	6.9E+00	6.9E+00	1.9E+00	3.8E+01	6.2E+01	6.2E+01	
Methylene chloride	4.34E-02	2.17E+01	RSL	0.3	0.13	1.30E-01	0.2113	5.0E-03	1.0E-01	2.5E-02	5.3E-02	1.1E+00	2.7E-01	2.7E-01	1.8E-01	3.6E+00	9.2E-01	9.2E-01	
Naphthalene	3.08E+00	1.54E+03	RSL	0.3	0.13	1.80E-02	0.2016	2.0E-02	4.0E-01	1.3E+00	1.4E-03	2.8E-02	9.2E-02	1.3E+00	4.8E-03	9.6E-02	3.2E-01	1.3E+00	(b)
Tetrachloroethene	1.90E-01	9.49E+01	RSL	0.3	0.13	7.20E-01	0.2624	5.0E-03	1.0E-01	4.5E-02	1.3E-03	2.6E-02	1.2E-02	4.5E-02	4.4E-03	8.8E-02	4.0E-02	4.5E-02	(b)
Toluene	4.68E-01	2.34E+02	RSL	0.3	0.13	2.70E-01	0.2234	1.0E+00	2.0E+01	1.4E+01	8.8E-01	1.8E+01	1.2E+01	1.4E+01	6.4E+00	1.3E+02	8.8E+01	8.8E+01	
Trichloroethene		(d)	Site	0.3	0.13	4.00E-01	0.2347			1.8E+00			1.8E+00	1.8E+00			1.8E+00	1.8E+00	(e)
Xylene	7.66E-01	3.83E+02	RSL	0.3	0.13	2.10E-01	0.2182	1.0E+01	2.0E+02	2.0E+02	5.9E-02	1.2E+00	1.2E+00	2.0E+02	5.7E-01	1.1E+01	1.1E+01	2.0E+02	(b)

Site Site-Specific Determination using SPLP data
RSL Regional Screening Level Chemical Parameters Table, May 2010
$Ø_w$ Water-filled soil porosity = 0.3 (L/L)
$Ø_a$ Air-filled soil porosity = 0.13 (L/L)
H' Dimensionless Henry Law Constant (HLC x 41) (unitless)
$Þ_b$ Dry soil bulk density = 1.5 kg/L
RRS Risk Reduction Standard
C_w Target Leachate Concentration (mg/L)
C_s Screening Level in soil (mg/kg)
(a) $K_d = K_{oc} * f_{oc}$ where f_{oc} equal 0.002
(b) C_s based on Type 1 RRS higher than C_s based on Type 4 RRS
(c) Using VF of 0.25 L/m^3
(d) Site -specific information was used
(e) 1.8 mg/kg was approved as the leaching RRS for TCE by EPD on January 19, 2007.

Prepared by : EJS 9/9/09
Checked by: LMS 11/22/10

Table K-6b
Area 2
Soil to Ground water Leachability

	K_d (a) (L/kg)	K_{oc} (L/kg)	Source	$Ø_w$	Øa	H' (unitless)	Øw+Øa*H'/$Þ_b$	Groundwater Type 1/3 RRS (C_w, mg/L)	C_w*20 (mg/L)	Pathway Type 1/3 C_s (mg/kg)	Groundwater Type 2 RRS (C_w, mg/L)	C_w*20 (mg/L)	Pathway Type 2 C_s (mg/kg)	Residential Cs (mg/kg)	Groundwater Type 4 RRS (c) (C_w, mg/L)	C_w*20 (mg/L)	Pathway Type 4 C_s (mg/kg)	Non-Residential Cs (mg/kg)	
1,1,1-Trichloroethane	8.78E-02	4.39E+01	RSL	0.3	0.13	7.00E-01	0.2607	2.0E-01	4.0E+00	1.4E+00	2.7E+00	5.4E+01	1.9E+01	1.9E+01	2.5E+01	5.0E+02	1.7E+02	1.7E+02	
1,1,2-Trichloroethane	1.21E-01	6.07E+01	RSL	0.3	0.13	3.40E-02	0.2029	5.0E-03	1.0E-01	3.2E-02	2.5E-03	5.0E-02	1.6E-02	3.2E-02	8.5E-03	1.7E-01	5.5E-02	5.5E-02	
1,1-Dichloroethene	6.36E-02	3.18E+01	RSL	0.3	0.13	1.10E+00	0.2953	7.0E-03	1.4E-01	5.0E-02	1.0E-01	2.0E+00	7.2E-01	7.2E-01	9.5E-01	1.9E+01	6.8E+00	6.8E+00	
1,4-Dioxane	5.26E-03	2.63E+00	RSL	0.3	0.13	2.00E-04	0.2000	2.0E-03	4.0E-02	8.2E-03	3.6E-03	7.2E-02	1.5E-02	1.5E-02	1.2E-02	2.4E-01	4.9E-02	4.9E-02	
cis-1,2-Dichloroethene	7.92E-02	3.96E+01	RSL	0.3	0.13	1.70E-01	0.2147	7.0E-02	1.4E+00	4.1E-01	1.6E-01	3.2E+00	9.4E-01	9.4E-01	1.0E+00	2.0E+01	5.9E+00	5.9E+00	
Chloroform	6.36E-02	3.18E+01	RSL	0.3	0.13	1.50E-01	0.2130	8.0E-02	1.6E+00	4.4E-01	2.0E-03	4.0E-02	1.1E-02	4.4E-01	6.6E-03	1.3E-01	3.7E-02	4.4E-01	(b)
Ethylbenzene	8.92E-01	4.46E+02	RSL	0.3	0.13	3.20E-01	0.2277	7.0E-01	1.4E+01	1.6E+01	1.5E-02	3.0E-01	3.4E-01	1.6E+01	5.2E-02	1.0E+00	1.2E+00	1.6E+01	(b)
Isopropylbenzene (Cumene)	1.40E+00	6.98E+02	RSL	0.3	0.13	4.70E-01	0.2407	5.0E-03	1.0E-01	1.6E-01	2.1E-01	4.2E+00	6.9E+00	6.9E+00	1.9E+00	3.8E+01	6.2E+01	6.2E+01	
Methylene chloride	4.34E-02	2.17E+01	RSL	0.3	0.13	1.30E-01	0.2113	5.0E-03	1.0E-01	2.5E-02	5.3E-02	1.1E+00	2.7E-01	2.7E-01	1.8E-01	3.6E+00	9.2E-01	9.2E-01	
Naphthalene	3.08E+00	1.54E+03	RSL	0.3	0.13	1.80E-02	0.2016	2.0E-02	4.0E-01	1.3E+00	1.4E-03	2.8E-02	9.2E-02	1.3E+00	4.8E-03	9.6E-02	3.2E-01	1.3E+00	(b)
Tetrachloroethene	1.90E-01	9.49E+01	RSL	0.3	0.13	7.20E-01	0.2624	5.0E-03	1.0E-01	4.5E-02	1.3E-03	2.6E-02	1.2E-02	4.5E-02	4.4E-03	8.8E-02	4.0E-02	4.5E-02	(b)
Toluene	4.68E-01	2.34E+02	RSL	0.3	0.13	2.70E-01	0.2234	1.0E+00	2.0E+01	1.4E+01	8.8E-01	1.8E+01	1.2E+01	1.4E+01	6.4E+00	1.3E+02	8.8E+01	8.8E+01	
Trichloroethene		(d)	RSL	0.3	0.13	4.00E-01	0.2347			1.8E+00			1.8E+00	1.8E+00			1.8E+00	1.8E+00	(e)
Xylene	7.66E-01	3.83E+02	RSL	0.3	0.13	2.10E-01	0.2182	1.0E+01	2.0E+02	2.0E+02	5.9E-02	1.2E+00	1.2E+00	2.0E+02	5.7E-01	1.1E+01	1.1E+01	2.0E+02	(b)

Site Site-Specific Determination using SPLP data
RSL Regional Screening Level Chemical Parameters Table, May 2010
$Ø_w$ Water-filled soil porosity = 0.3 (L/L)
$Ø_a$ Air-filled soil porosity = 0.13 (L/L)
H' Dimensionless Henry Law Constant (HLC x 41) (unitless)
$Þ_b$ Dry soil bulk density = 1.5 kg/L
RRS Risk Reduction Standard
C_w Target Leachate Concentration (mg/L)
C_s Screening Level in soil (mg/kg)
(a) $K_d = K_{oc} * f_{oc}$ where f_{oc} equal 0.002
(b) C_s based on Type 1 RRS higher than C_s based on Type 4 RRS
(c) Using VF of 0.25 L/m^3
(d) Area 2-specific value
(e) 1.8 mg/kg was approved as the leaching RRS for TCE by EPD on January 19, 2007.

Prepared by : EJS 9/9/09
Checked by: LMS 11/22/10

APPENDIX C

REVISED REMEDIATION PLAN

TABLE OF CONTENTS

C 1.0 PROPOSED REMEDIATION PLAN 1
C 2.0 IMPLEMENTATION ACTIVITIES 7

LIST OF TABLES

Table VRP-1 Estimated Cost for VRP Implementation
Table VRP-2 Risk Reduction Standards per Soil Types 1 through 4 and Cleanup Criteria
Table VRP-3 Risk Reduction Standards per Groundwater Types 1 through 4 and Cleanup Criteria

LIST OF FIGURES

Figure VRP-1 Groundwater/Surface Water Usage Map
Figure VRP-2 Lateral Extent of Proposed Rip Rap Blanket
Figure VRP-3 Profile View of Proposed Rip Rap Blanket
Figure VRP-4 Cross-Sectional View of Proposed Rip Rap Blanket
Figure VRP-5 Schedule for Implementation of Voluntary Remediation Plan
Figure VRP-6 Distribution and Extent of Detected Constituents in Groundwater

C 1.0 PROPOSED REMEDIATION PLAN

It is Thermo King's intent to remove the site from the Hazardous Site Inventory (HSI) through implementation of an efficient Voluntary Remediation Plan (VRP) that is protective of human health and the environment. Site features supporting this action include the following:

- The horizontal and vertical extent of contaminants in surface and subsurface soils have been delineated; soil-sampling locations with concentrations of 1,4-dioxane and/or trichloroethene that exceed Type 1 through Type 4 RRS are located beneath the east and west sides of the manufacturing building floor slab, in areas of former degreaser operations (Figure 6.0 of this Application). The floor slab precludes direct exposure of facility personnel to impacted soils, thus rendering potential exposure pathways incomplete. Soils outside of the building comply with Type 1 through Type 4 RRS.

- Workers in the manufacturing plant in areas where vapor degreasers were formerly operated may be subject to vapors emanating from residual constituents, primarily the volatile organic compounds (VOCs) trichloroethene (TCE) and 1,4-dioxane, that remain in soils below the floor slab in these areas. Thermo King evaluated the incidental risks resulting from vapor intrusion in accordance with the February 22, 2004 USEPA "User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings" and concluded that the resulting hazard indices and incremental risk values were within the acceptable range and estimated indoor air concentrations would not exceed OSHA exposure limits for ongoing facility operations (see Appendix B of VRP Application submitted March 18, 2010). Additionally, Thermo King has completed the calculation of risk-based soil and groundwater concentrations protective of occupational receptors exposed to indoor air to further demonstrate that current concentrations in soil and groundwater do not pose an unacceptable risk or hazard to on-site receptors. The resulting risk-based goals are many times greater than the maximum detected soil and groundwater concentrations, further demonstrating that the vapor intrusion pathway poses a very minimal risk (see Responses to Comments 10 and 11 and Appendix B of VRP Application submitted March 18, 2010).

- The horizontal and vertical extent of constituents in groundwater has been delineated. Impacts to groundwater in the Uppermost water-bearing zone emanate from beneath the manufacturing

building and from the area of the former south settling pond. The Uppermost groundwater aquifer at the site is a perched groundwater zone that flows to the east and terminates on the sloping hillside above the west bank of Manson Branch. This groundwater discharges to seeps on the eroded slope above the west bank of Manson Branch to mix with groundwater in the alluvial deposits adjacent to Manson Branch eventually discharging into Manson Branch. Impacts to groundwater in the Intermediate water-bearing zone are located beneath and to the east of the area of the former south settling pond. Intermediate water-bearing zone groundwater flows to the west, towards the interior of the site. No impacted groundwater in either zone flows offsite. No impact to the Lower water-bearing zone has been detected. On-site groundwater is not a current source of potable or industrial use at the facility: i.e., there are no complete pathways for exposure of on-site or off-site receptors to impacted groundwater.

- Groundwater in the Uppermost water-bearing zone is a perched aquifer that discharges to surface seeps on the eroded slope above the west bank of Manson Branch. Along the western slope leading down to Manson Branch, the depth to perched groundwater naturally decreases going down slope to the point where some of the perched groundwater diffusely oozes to the ground surface as small seeps along the slope. Some of these seeps accumulate enough water in associated shallow depressions to allow sampling. Samples from three of these seeps exhibit VOC concentrations that exceed Georgia in-stream water quality criteria (ISWQC). The SLERA submitted in the January 29, 2010 VRP Application incorporating the 2008 seep water data indicated that the risk for ecological receptors from seep water and soil is below the USEPA benchmark value of 1. This finding was confirmed by the results of the 2010 seep water sampling.

- No impacts to surface water in Manson Branch have been detected. Groundwater impacts detected in October 2010 in new monitoring wells MW-27 and MW-28 installed immediately west of Manson Branch, were well below Georgia ISWQC (Table 4.5 in this VRP Application). Modeling of the Uppermost water-bearing zone (Appendix D of this VRP Application) indicates that water quality in Manson Branch will not be impacted above Georgia ISWQC. Modeling was conducted to assess potential impacts to Manson Branch associated with contaminants in the Uppermost zone groundwater discharging to seeps on the sloping hillside west of Manson Branch. Review of historic groundwater data (2000 forward) shows a decreasing trend in constituent (primarily TCE) concentrations. While somewhat more variable, a similar pattern is

observed in data for seeps C and Manson Branch #2. Based on an understanding of former facility operations utilizing these chemicals and on the observed water quality data, it is anticipated that constituent concentrations in the Uppermost groundwater and in the seeps will continue to decrease. Seep water constituents migrate toward Manson Branch through interrupted surface flow and as groundwater flow in the alluvial soil stratum. Current TCE/DCE concentrations in monitoring wells (MW-26, MW-27, and MW-28) installed in this alluvial zone just upgradient of Manson Branch are less than 10 µg/L. Modeling of groundwater flow from these well locations into Manson Branch indicate impacts at orders of magnitude less than ISWQC; similarly, modeling also indicates constituent concentrations in groundwater entering Manson Branch (as monitored in wells MW-27/MW-28) would need to be at levels exceeding those currently in groundwater in the seeps.

- The results of the fate and transport modeling of the Intermediate water-bearing zone (Appendix E of this VRP Application) predicts non-detectable concentrations of constituents TCE, cis-1,2-DCE, and VC) at the Point of Demonstration (POD) Well MW-22 for the simulated future period of 50 years.

- The groundwater and surface water usage map for the site vicinity has been updated (see Figure VRP-1). This map indicates that there are two water supply wells, Manson Branch, and a private fishing pond within a 1000-foot radius of the delineated extent of VOCs in groundwater. The two water supply wells and Manson Branch have been sampled and analyzed for VOCs and no VOCs have been detected. There are no complete pathways for site groundwater to impact either of the two wells or the fishing pond. Manson Branch will not be impacted at concentrations exceeding ISWQC.

Based on these features, specifically, the completed delineation of constituents in soil and groundwater and the absence of complete pathways of exposure above applicable standards for human or ecological receptors to constituents in soil and groundwater and to the limited potential risk to ecological receptors posed by exposure to surface seep waters, Thermo King proposes voluntary remediation activities as follows:

- Incomplete pathways for direct exposure of facility personnel to soils with constituent concentrations exceeding Risk Reduction Standards (Table VRP-2) (located beneath the

manufacturing building floor slab) will be maintained by means of an engineering control such that the floor slab overlying the area of impacted soils will be designated as an exposure barrier and any future facility operations that require penetration of that designated floor slab will be conducted using a health and safety plan prepared specifically for the proposed barrier affecting activity. Any floor slab penetrations will be repaired in a manner consistent with its designation as an exposure barrier. Annual inspections will be conducted to verify the integrity of the floor slab in the areas of impacted soils.

- An incomplete pathway of exposure to impacted groundwater will be maintained by establishing an institutional control to restrict use of site groundwater and execution of a covenant (Attachment A of this Application) restricting such use in conformance with the Georgia Uniform Environmental Covenants Act (Table VRP-3). All environmental sampling and any additional subsurface investigation will continue to be conducted under the direction of site-specific health and safety plans.

- Ecological receptors currently may have a complete exposure pathway to seep waters discharging from the Uppermost water-bearing zone on the slope above the west bank of Manson Branch. However, the concentrations of constituents present in these seep waters do not present an unacceptable risk to ecological receptors. Only three seeps (Seep C, Seep H, and Manson Branch #2), located in and adjacent to an eroded hillside gully, exhibit VOC concentrations that exceed the ISWQC (Figure VRP-6). The remaining seeps are either non-detect for VOCs or have concentrations well below the ISWQS for VOCs. An engineering control will be constructed to establish an incomplete pathway to water from those seeps where VOC concentrations exceed ISWQC. This physical barrier, a rip rap blanket, will be placed to preclude the surface expression of the seep water; e.g., the seep water will flow beneath the rip rap surface. The rip rap blanket will extend laterally such that VOC concentrations in seeps that surface downstream of the rip rap blanket will be below ISWQC. Figures VRP-2 through VRP-4 depicts the lateral extent, profile, and cross-sectional view of the proposed rip rap blanket, respectively.

- Potential impacts to Manson Branch associated with discharges from the Uppermost water bearing zone to seeps on the hillside slope above the west side of Manson Branch indicates it is very unlikely that such impacts would ever be at detectable concentrations, much less at concentrations exceeding ISWQC. Semi-annual sampling will be conducted to:

- Confirm the continued decrease in VOC concentrations in groundwater in the Uppermost water bearing zone and in seep waters,
- Confirm that potential ecological receptors are not exposed to seep water at concentrations that exceed the USEPA benchmark value of 1,
- Confirm that VOC concentrations in seep waters surfacing downgradient of the rip rap blanket do not exceed ISWQC,
- Confirm that Manson Branch is not impacted above ISWQC.

Specifically, samples will be collected from the following locations:

- Monitoring wells MW-5, MW-19, MW-27, and MW-28.
- Seep locations B, G, I, L, and #2.
- Manson Branch surface water locations #3, #5, #15, and #16.

Samples will be analyzed for site-specific VOCs. Water level measurements will be collected in all Uppermost water-bearing zone monitoring wells to evaluate groundwater flow direction. Semi-annual sampling will continue until the data demonstrate that human health and the environment are adequately protected and EPD concurs. For costing purposes, it is assumed that this semi-annual monitoring program will be conducted for a period of five years.

- Semi-annual sampling of selected Intermediate water-bearing zone monitoring wells (MW-14, MW-20, MW-22, and MW-25) will be conducted to further evaluate contaminant migration and degradation, confirm model predictions, and confirm that impacted groundwater will not migrate to the point of demonstration (POD) at levels that exceed applicable regulatory standards. Monitoring well MW-22 will be the POD well for the Intermediate water-bearing zone (Figure VRP-6 and Figure 4.1 in this Application). Samples will be analyzed for site-specific VOCs. Water level measurements will also be collected in all Intermediate monitoring wells to evaluate groundwater flow direction. Semi-annual sampling will continue until the data demonstrate that human health and the environment are adequately protected and EPD concurs. For costing purposes, it is assumed that semi-annual monitoring of the Intermediate water-bearing zone will be conducted for a period of five years.

EPD's February 18, 2010 letter states that their approval of the frequency and duration of monitoring will be based upon site-specific data and the submitted fate and transport model. The VRP Act itself does not specifically address long-term monitoring after the 5-year VRP implementation period is up and the final Compliance Status Report is submitted. If the 5-year monitoring period appears to support the modeling predictions, EPD could allow either cessation of monitoring or a decreased frequency of monitoring. Continued site inspections will likely be required on an annual basis to verify that the exposure barrier (floor slab) remains in place and in good condition. Long-term inspections of the rip-rap blanket may also be required, depending upon what the monitoring data indicates.

C 2.0 IMPLEMENTATION ACTIVITIES

A schedule describing the planned activities and a schedule for their implementation and reporting is included as Figure VRP-5. The estimated cost for implementing the VRP are outlined on Table VRP-1. Financial assurance for implementing the VRP will be submitted to EPD upon issuance of the director's approval of the VRP Application and Remediation Plan.

APPENDIX C TABLES

TABLE VRP-1
ESTIMATED COST FOR VRP IMPLEMENTATION
THERMO KING, LOUISVILLE, GEORGIA

CAPITAL COSTS

	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL	NOTES
1.0	**Design and Permitting**				$25,000	
2.0	**Surface Water Controls**				$100,000	
3.0	**Project Management and Support**				$15,000	
4.0	**Contingency (15%)**				$16,500	
	TOTAL CAPITAL COST				**$156,500**	

ANNUAL COSTS

5.0	**Annual Inspections, Maintenance, Sampling & Reporting**					
	7.1 Semi-Annual Groundwater Sampling					
	Labor	2	event	$3,000	$6,000	Assumes 3 days/event, 2-man crew
	Laboratory Analytical	22	ea	$150	$3,300	VOCs
	Rental Equipment	2	event	$800	$1,600	
	Mobilization/Demobilization/Travel Expenses/Supplies	2	event	$1,200	$2,400	
	7.2 Semi-Annual Seep/Surface Water Sampling					
	Labor	2	event	$2,500	$5,000	Assumes 2 days/event, 2-man crew
	Laboratory Analytical	20	ea	$150	$3,000	VOCs
	Rental Equipment	2	event	$400	$800	
	Mobilization/Demobilization/Travel Expenses/Supplies	2	ea	$800	$1,600	
	7.3 Reporting	2	ea	$8,500	$17,000	
	7.4 Engineering Inspection	1	ea	$2,500	$2,500	
	SUBTOTAL - Annual Costs				**$43,200**	
6.0	**Post-Implementation Compliance Status Report**	1	ea	$35,000	$35,000	

PRESENT VALUE ANALYSIS Discount Rate = 4%

End Year	COST TYPE	TOTAL COST	TOTAL PRESENT VALUE	CUMMULATIVE COST
0	FIRST YEAR CAPITAL COST	$156,500	$156,500	$156,500
1	ANNUAL O&M (Year 1)	$43,200	$43,200	$199,700
2	ANNUAL O&M (Year 2)	$43,200	$51,346	$251,046
3	ANNUAL O&M (Year 3)	$43,200	$39,941	$290,987
4	ANNUAL O&M (Year 4)	$43,200	$38,405	$329,392
5	ANNUAL O&M (Year 5)	$78,200	$66,846	$396,237
	TOTAL PRESENT VALUE OF ALTERNATIVE			**$396,237**

The cost opinion is provided for budgetary purposes. MACTEC anticipates issuing a formal Request for Proposal to obtain actual cost estimates from several contractors after final design is complete. Descriptions and opinions of cost are based on discussions with various contractors and related MACTEC experience. Actual scope of work and costs may vary as additional information and formal cost estimates are obtained.

Prepared By: GJW 12/16/2010
Checked By: ADA 12/16/2010

TABLE VRP-2: RISK REDUCTION STANDARDS PER SOILS TYPES 1 through 4 and CLEANUP CRITERIA

			Risk Reduction Standards (RRS) (mg/kg)															
	Maximum Detected Concentrations (mg/kg)		Type 1			Type 2			Type 3 Surface			Type 3 Subsurface			Type 4			CLEANUP CRITERIA
HSRA-Regulated Substance	Surface (a)	Subsurface (b)	RRS	Reference	Status	RRS	Reference	Status	RRS	Reference	Status	RRS	Reference	Status	RRS	Reference	Status	
Volatile Organic Compounds - SW8260B																		
1,1,1-Trichloroethane	0.18	2.3	20	GW x 100	C	19	Leaching	***	20	GW x 100	***	20	GW x 100	***	170	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
1,1,2-Trichloroethane	0.026	0.015	0.5	GW x 100	C	0.032	Leaching	***	0.5	GW x 100	***	0.5	GW x 100	***	0.055	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
1,1-Dichloroethene	0.023	0.051	0.7	GW x 100	C	0.72	Leaching	***	0.7	GW x 100	***	0.7	GW x 100	***	6.8	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
1,4-Dioxane	3600	2800	0.5	GW x 100	**E**	0.015	Leaching	**E**	0.5	GW x 100	**E**	0.5	GW x 100	**E**	0.049	G	**E**	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
cis-1,2-Dichloroethene	0.6	0.38	7	GW x 100	C	0.44	Leaching	***	7	GW x 100	***	7	GW x 100	***	0.44	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Ethylbenzene	ND	0.36	70	GW x 100	C	16	Leaching	***	70	GW x 100	***	70	GW x 100	***	16	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Isopropylbenzene	0.016	ND	22	Appendix I	C	6.9	Leaching	***	22	Appendix I	***	22	Appendix I	***	62	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Napthalene	ND	0.31	100	Appendix I	C	1.3	Leaching	***	100	Appendix I	***	100	Appendix I	***	1.3	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
m+p Xylene	ND	1.4	1000	GW x 100	C	200	Leaching	***	1000	GW x 100	***	1000	GW x 100	***	200	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Tetrachloroethene	0.013	0.011	0.5	GW x 100	C	0.045	Leaching	***	0.5	GW x 100	***	0.5	GW x 100	***	0.045	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Trichloroethene	4.1	2.6	0.5	GW x 100	**E**	1.8	Leaching (c)	**E**	0.5	GW x 100	**E**	0.5	GW x 100	**E**	1.8	Leaching (c)	**E**	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Chloroform	ND	0.011	3.8	GW x 100	C	0.94	Leaching	***	4.9	GW x 100	***	8	GW x 100	***	4.9	G	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS

Notes:
mg/kg = milligram per kilogram
Reference = Reference for the RRS
ND = Substance not detected
(a) Surface soil is defined under HSRA as 0 to 2 feet below ground surface
(b) Subsurface soil is defined under HSRA as any point above the upper most groundwater zone; used here to mean other than surface soil.
*** Substance concentrations complies with a lower RRS
C = Substance concentration meets the respective RRS
E = Substance concentration exceeds the respective RRS
GW x 100 = HSRA ground water criteria standard times a factor of 100
Appendix I = HSRA Rules Appendix I: Regulated Substances and Soil Concentrations that Trigger Notification
G = Lower value of direct soil contact and non-residential soil-to-ground water leaching values
Leaching = RRS based on soil-to-groundwater transport equation from the Soil Screening Guidance background document (USEPA, 1996).
(c) 1.8 mg/kg is the EPD-approved leaching criteria. Soil concentrations exceeding the direct contact value of 1.3 mg/kg are all located beneath the existing building floor slab, so direct contact is not possible.
Bold Substance concentrations exceeds Types 1, 2, 3 and 4 RRS

Prepared by: RPR 12/03/10
Checked by: RNQ 12/03/10

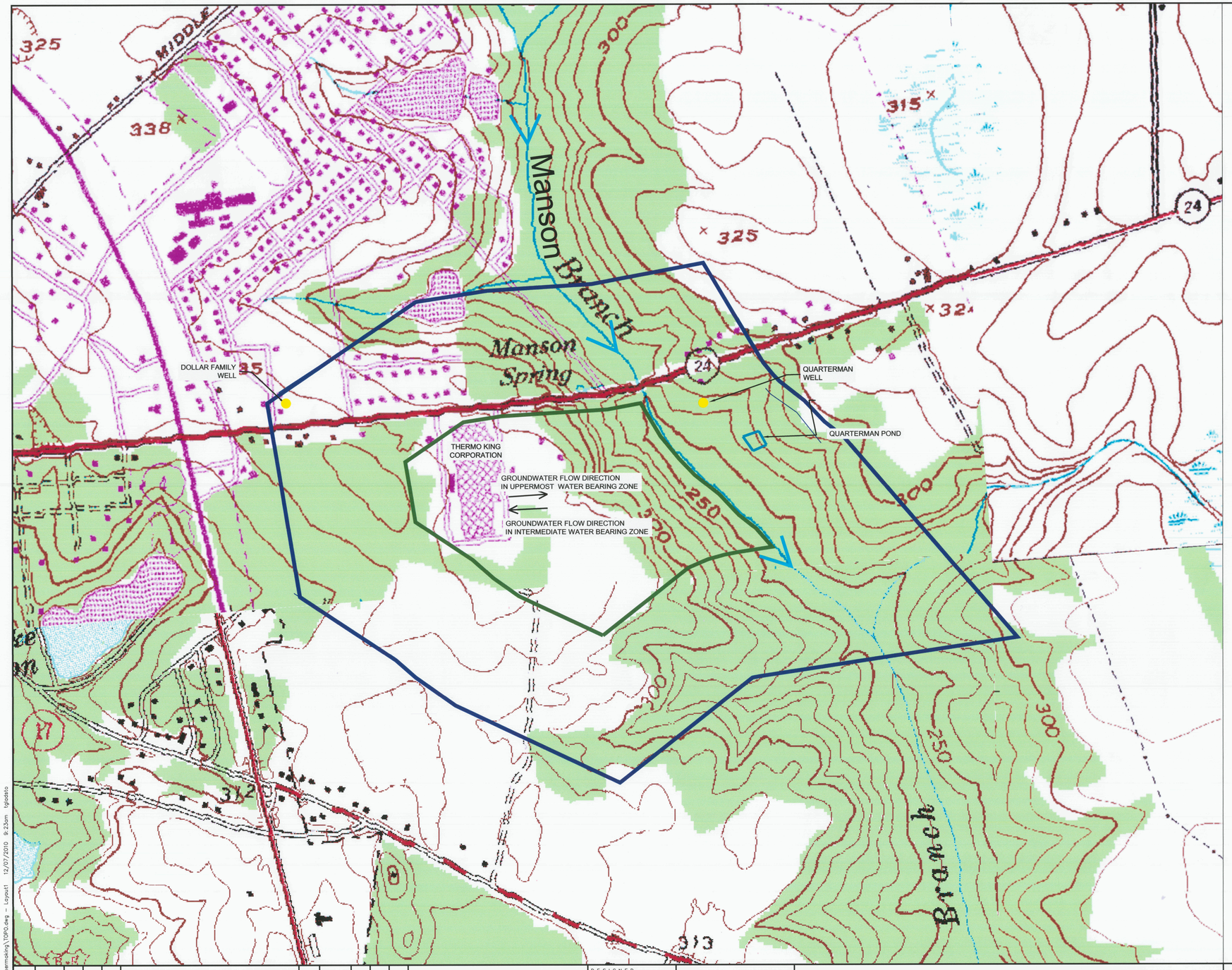
TABLE VRP-3: RISK REDUCTION STANDARDS PER GROUND WATER TYPES 1 through 4 and CLEANUP CRITERIA

HSRA-Regulated Substance	2010 Maximum Detected Concentrations (mg/L)	Location	Historical Maximum Detected Concentrations (mg/L)	Location	Risk Reduction Standards (RRS) (mg/L) Types 1 and 3 RRS	Types 1 and 3 Status	Type 2 RRS	Type 2 Status	Type 4 RRS	Type 4 Status	CLEANUP CRITERIA
Volatile Organic Compounds - SW8260B											
1,1,1-Trichloroethane	ND		83	GW-AOC1-1	0.2	E	2.7	E	25.1	**E**	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
1,1-Dichloroethene	0.1	MW-19 (6/2/2010)	2	GW-AOC1-1	0.007	E	0.1	E	0.95	**E**	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
cis-1,2-Dichloroethene	0.82	MW-25 (6/24/2010)	0.53	MW-14 (6/13/2003)	0.07	E	0.16	E	1.0	C	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Chloroform	0.0049	MW-1 (6/1/2010)	0.0077	MW-3 (10/12/2004)	0.08	C	0.0020	***	0.0066	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Toluene	ND		0.029	MW-14 (4/21/2003)	1.0	C	0.88	***	6.4	***	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Trichloroethene	5.8	MW-19 (6/3/2010)	20	MW-19 (5/5/2004)	0.005	E	0.021	E	0.07	**E**	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS
Vinyl chloride	0.015	MW-20 (6/1/2010)	ND		0.002	E	0.0011	E	0.004	**E**	SITE-SPECIFIC TYPE 4 RRS WITH VRP-ALLOWED CONTROLS

Notes:
mg/l = milligram per liter
Reference = Reference for the RRS
*** Substance concentrations complies with a lower RRS
C = Substance concentration meets the respective RRS
E = Substance concentration exceeds the respective RRS
ND = Substance Not Detected
Bold Substance concentrations exceeds Types 1/3, 2, and 4 RRS

Prepared by: RPR 12/03/10
Checked by: RNQ 12/03/10

APPENDIX C FIGURES



Groundwater/Surface Water Feature Identification	Location	Usage
Dollar Family Water Well	1117 Highway 24 East, Louisville, GA Northwest of Thermo King building	Filling of residential swimming pool. Household water supply is from City of Louisville
Quarterrman Water Well	1786 Highway 24 East, Louisville, GA East of Thermo King building	Filling of private fishing pond. Household water supply is from City of Louisville
Manson Branch	Highway 24 East, Louisville East of Thermo King building Surface water stream flows from north to south and eventually discharges to Ogeechee River	Rural stream with swamp Some recreational fishing
Quarterman Private Pond	1786 Highway 24 East, Louisville, GA East of Thermo King building	Family's private recreational fishing pond. Approximately 0.5 acre in size.
Manson Spring	Near the northeast intersection of Highway 24 East and McBride Street, Louisville, GA	Naturally occurring spring, no known usage

United States Geological Survey 7.5-Minute Topographic Quadrangles:
Louisville, GA, 1948, Photorevised 1980
Louisville South, GA 1973, Photorevised 1981
Old Town, GA 1973
Kellys Pond, GA 1950

Source of Groundwater and Surface Water Data:
April 2000 Thermo King Corporation and LAW Engineering Water Well Survey (Revised Compliance Status Report, March 21, 2007, Appendix D).
2009 Google Aerial Photography

LEGEND

- DELINEATED EXTENT OF VOCs IN GROUNDWATER
- 1000 FEET DOWNGRADIENT OF DELINEATED EXTENT OF VOCs IN GROUNDWATER
- WATER SUPPLY WELLS

SCALE IN FEET
0 400 800

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. QUINN
DRAWN T. GLADSTONE
CHECKED J. QUINN
IN CHARGE D. ALCOTT
DATE 8/17/2010

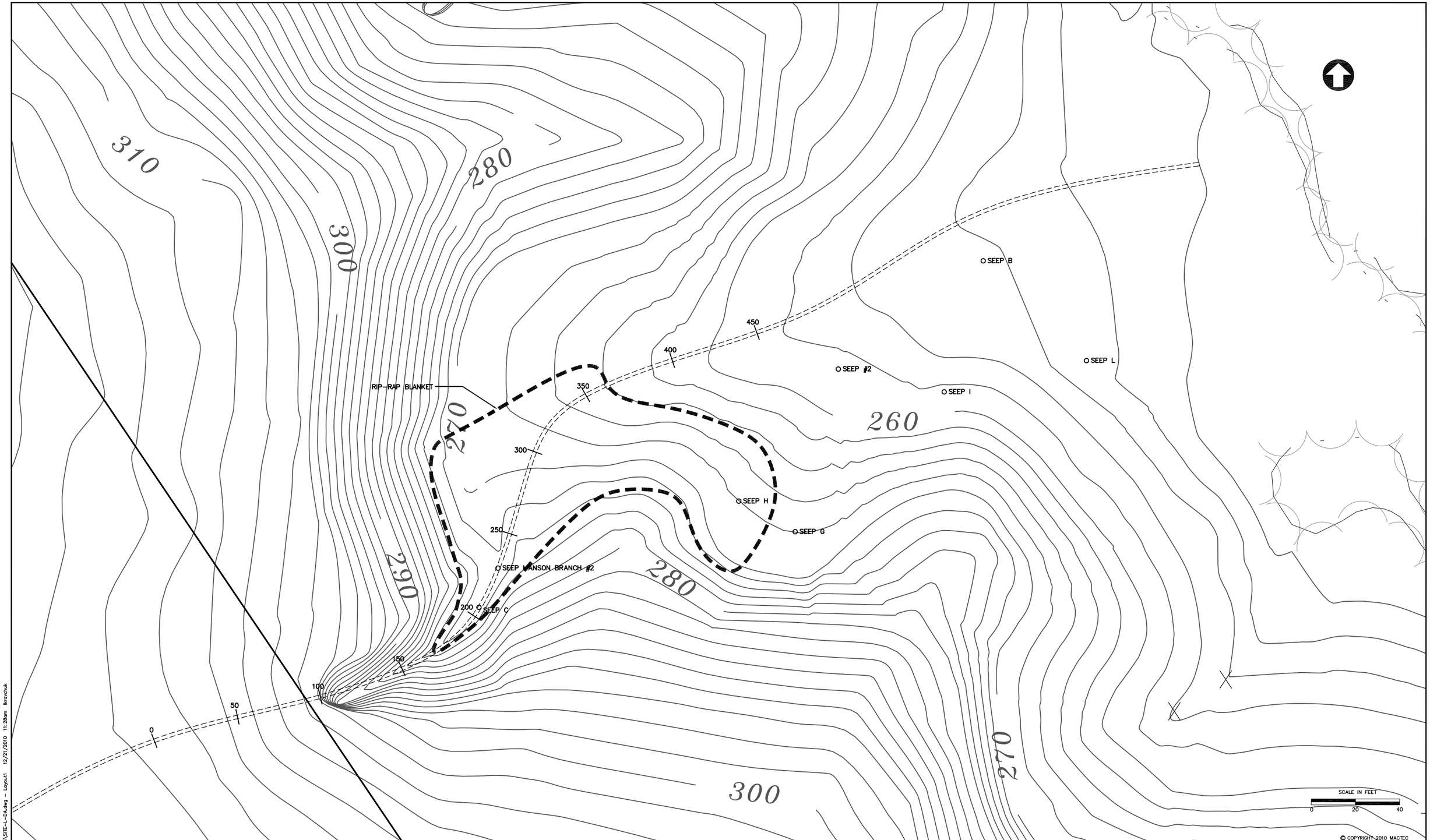
THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

GROUNDWATER AND SURFACE WATER USAGE MAP

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO. VRP-1
REV
PAGE NO

J:\Thermo King\MXD 2010\Thermoking\TOPO.dwg - Layout1 12/07/2010 9:23am tgladsto



© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION	REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED G. WRENN
DRAWN T. GLADSTONE
CHECKED D. ALCOTT
IN CHARGE D. ALCOTT
DATE 12/10/03

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

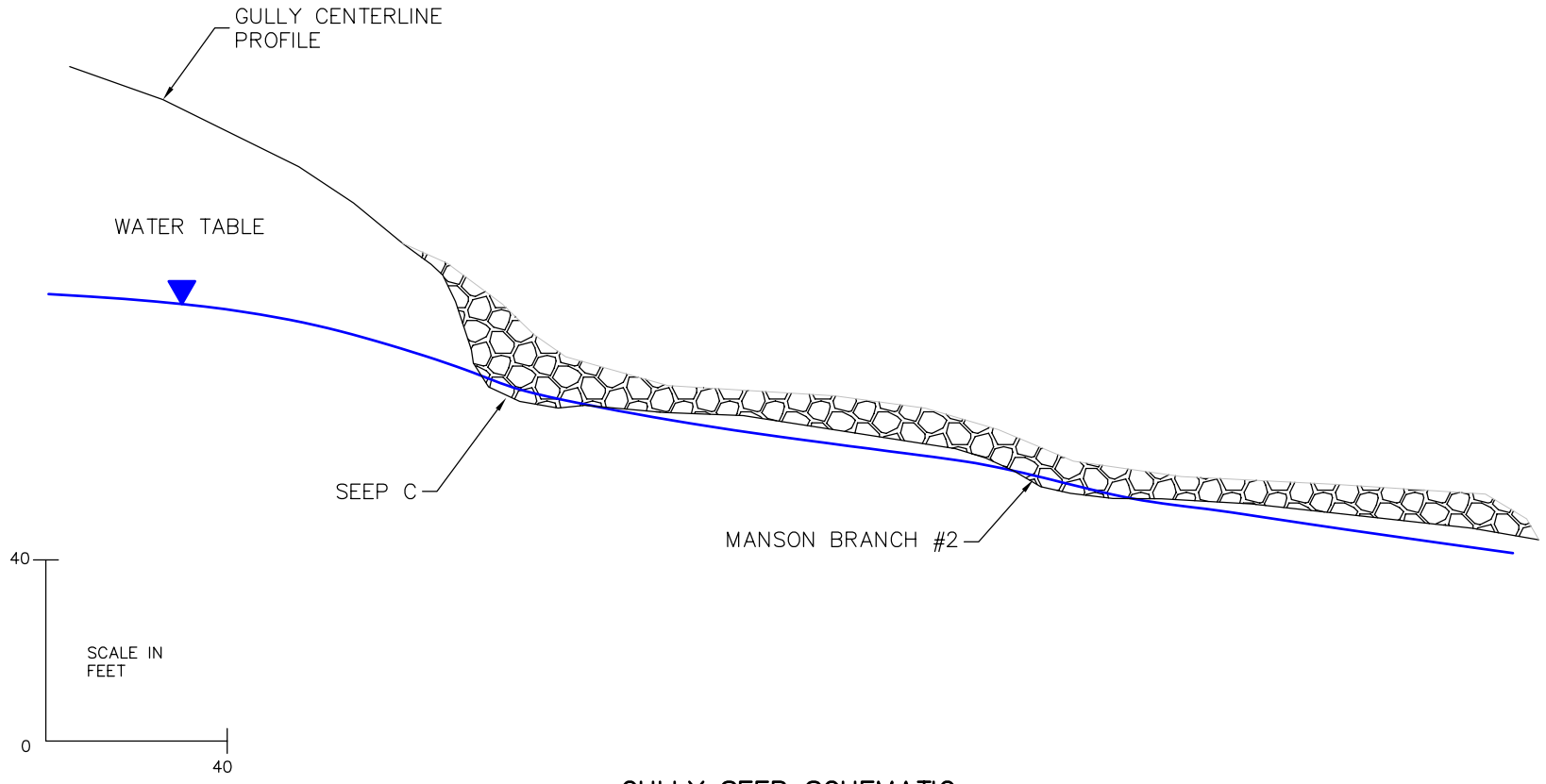
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421-3400

LATERAL EXTENT OF PROPOSED RIP RAP BLANKET

SCALE: AS SHOWN
CONTRACT: 6122-09-0322
DWG. NO.: VRP-2
REV: 1
PAGE NO:

J:\Thermo King\CROSS SECTIONS\SITE-L-DA.dwg - Layout1 12/21/2010 11:28am ikravchuk

J:\Thermo King\CROSS SECTIONS\SEEP SCHEMATIC.dwg – Layout2 12/21/2010 11:18am lkravchuk



GULLY SEEP SCHEMATIC

THERMO KING COPORATION
LOUISVILLE, GA

MACTEC
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421–3400

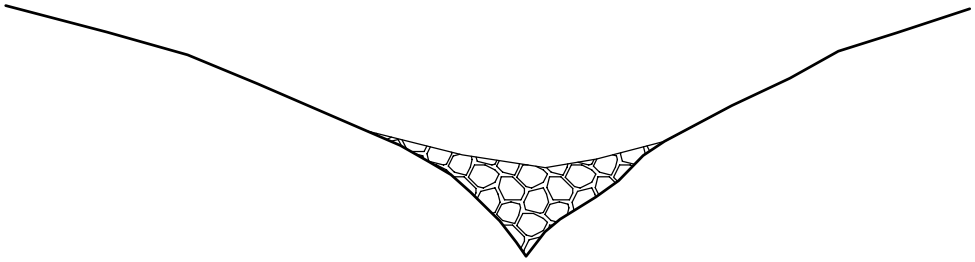
PROFILE VIEW OF PROPOSED
RIP RAP BLANKET

JOB NO. 6122–09–0322 FIGURE VRP–3

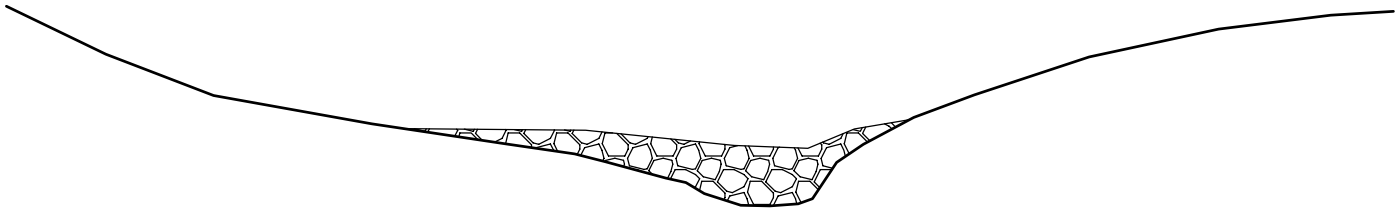
PREPARED BY/DATE

CHECKED BY/DATE

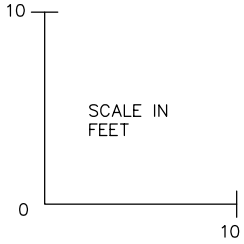
J:\Thermo King\CROSS SECTIONS\CROSS SEC-2.dwg - Layout1 12/09/2010 4:27pm lkravchuk



SEEP C
CROSS-SECTION



MANSON BRANCH #2
CROSS-SECTION



THERMO KING COPORATION
LOUISVILLE, GA

MACTEC
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

CROSS-SECTIONAL VIEW OF PROPOSED
RIP RAP BLANKET

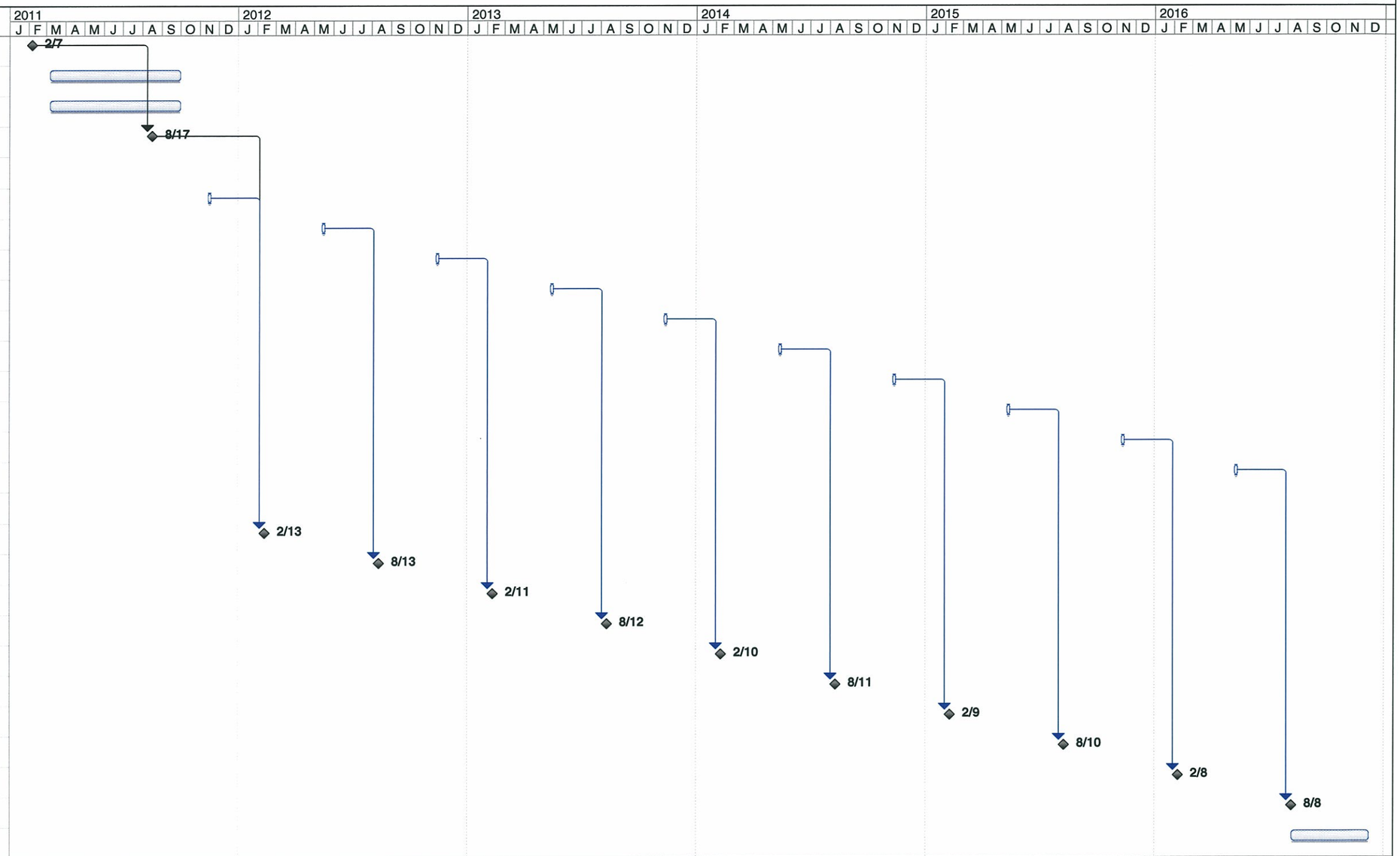
JOB NO. 6122-09-0322 FIGURE VRP-4

PREPARED BY/DATE

CHECKED BY/DATE

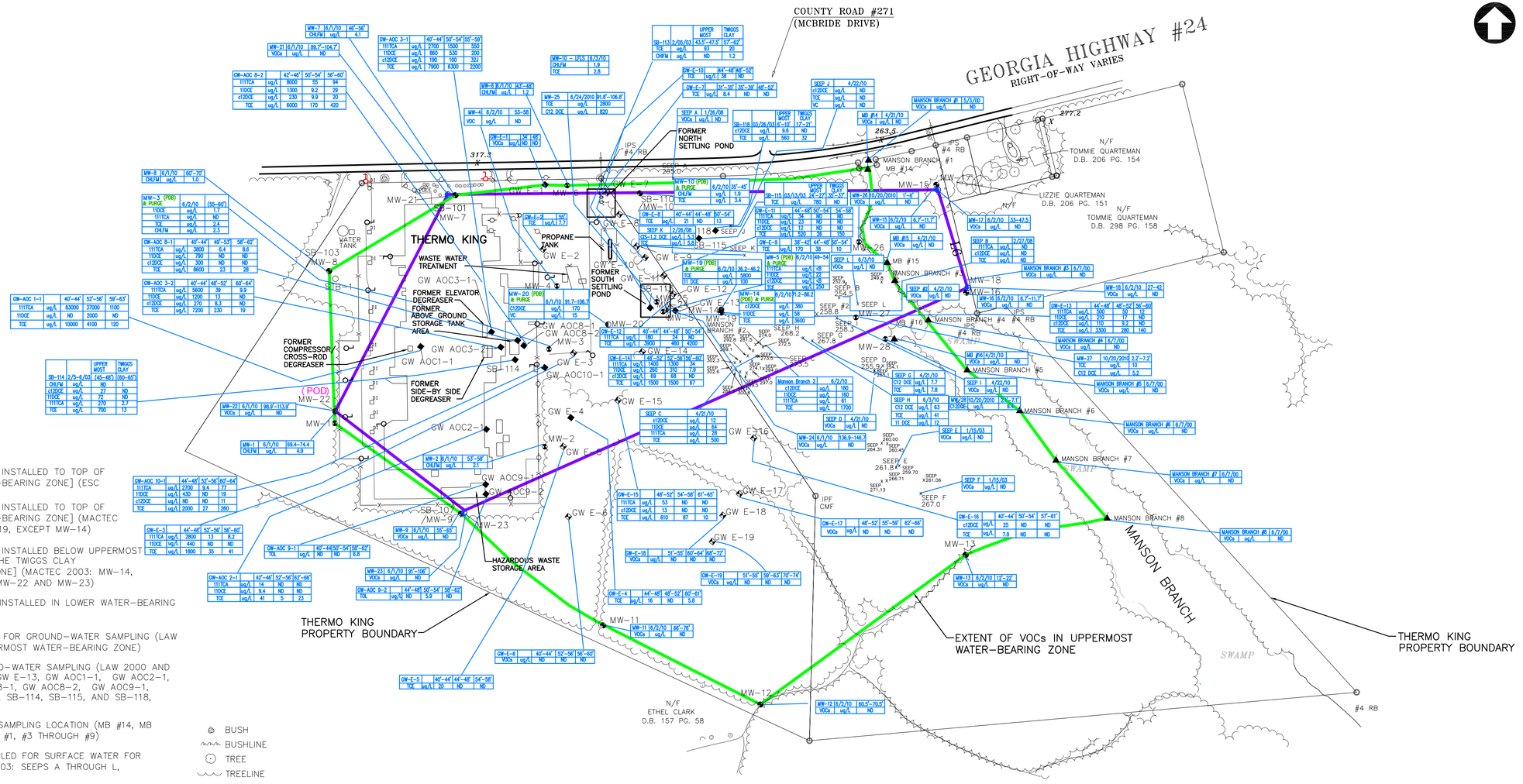
FIGURE VRP-5 - SCHEDULE FOR IMPLEMENTATION OF VOLUNTARY REMEDIATON PLAN

ID	Task Name
1	EPD approves VRP Application and Remediation Plan
2	Design & Installation of Seep Control Measures
3	Installation of Restrictive Covenant Measures
4	Status Report #1 on Implementation of Remediation Plan
5	**Semi-Annual Sampling Event**
6	Semi-Annual Sampling Event 1
7	Semi-Annual Sampling Event 2
8	Semi-Annual Sampling Event 3
9	Semi-Annual Sampling Event 4
10	Semi-Annual Sampling Event 5
11	Semi-Annual Sampling Event 6
12	Semi-Annual Sampling Event 7
13	Semi-Annual Sampling Event 8
14	Semi-Annual Sampling Event 9
15	Semi-Annual Sampling Event 10
16	**Submit Semi-Annual Status Report**
17	Submit Semi-Annual Status Report 2
18	Submit Semi-Annual Status Report 3
19	Submit Semi-Annual Status Report 4
20	Submit Semi-Annual Status Report 5
21	Submit Semi-Annual Status Report 6
22	Submit Semi-Annual Status Report 7
23	Submit Semi-Annual Status Report 8
24	Submit Semi-Annual Status Report 9
25	Submit Semi-Annual Status Report 10
26	Submit Semi-Annual Status Report 11
27	Preparation and Submittal of Post-Remediation CSR



Project: ThermoKing Voluntary Remediation Schedule
Date: 12/20/10

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External MileTask



LEGEND

- MW-1 — GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (ESC 2000, MW-1 TO MW-6)
- MW-7 — GROUND-WATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (MACTEC 2003, MW-7 TO MW-16 AND MW-19, EXCEPT MW-14)
- MW-14 — GROUND-WATER MONITORING WELL INSTALLED BELOW UPPERMOST TAN AND BLUE-GRAY CLAYS OF THE TWIGGS CLAY [INTERMEDIATE WATER-BEARING ZONE] (MACTEC 2003: MW-14, MW-17, MW-18, MW-20, MW-21, MW-22 AND MW-23)
- MW-24 — GROUND-WATER MONITORING WELL INSTALLED IN LOWER WATER-BEARING ZONE (MACTEC 2004: MW-24)
- GW-E-2 — DIRECT-PUSH TECHNOLOGY BORING FOR GROUND-WATER SAMPLING (LAW 2000: GW E-1 TO GW E-19, UPPERMOST WATER-BEARING ZONE)
- GW-E-1 — SOIL BORING FOR SOIL AND GROUND-WATER SAMPLING (LAW 2000 AND MACTEC 2003: GW E-1, GW E-4, GW E-13, GW AOC1-1, GW AOC2-1, GW AOC3-1, GW AOC3-2, GW AOC8-1, GW AOC8-2, GW AOC9-1, GW AOC9-2, GW AOC10-1, SB-113, SB-114, SB-115, AND SB-118, UPPERMOST WATER-BEARING ZONE)
- MB #14 — MANSON BRANCH SURFACE WATER SAMPLING LOCATION (MB #14, MB #15 AND MB #16, MANSON BRANCH #1, #3 THROUGH #9)
- X SEEP A 299.0 — WATER SEEP WITH ELEVATION, SAMPLED FOR SURFACE WATER FOR LABORATORY ANALYSIS (MACTEC 2003: SEEPS A THROUGH L, MANSON BRANCH #2, SEEP #2)

ND	NOT DETECTED
VOC	VOLATILE ORGANIC COMPOUNDS
TCE	TRICHLOROETHENE
111TCA	I,I,I-TRICHLOROETHANE
IIDCE	I,I-DICHLOROETHENE
c12DCE	CIS-1,2-DICHLOROETHENE
t12DCE	TRANS-1,2-DICHLOROETHENE
TOL	TOLUENE
CHLFM	CHLOROFORM
VC	VINYL CHLORIDE
ug/L	MICROGRAMS PER LITER
40'-44'	SAMPLE DEPTH IN FEET BELOW GROUND SURFACE
27	CONSTITUENT CONCENTRATION
(POD)	POINT OF DEMONSTRATION WELL
(PDB)	PASSIVE DIFFUSION BAG

- BUSH
- BUSHLINE
- TREE
- TREELINE
- HEDGE
- WATER
- FENCE
- DI — DROP INLET
- X SEEP 299.5 — WATER SEEP WITH ELEVATION
- PROPERTY BOUNDARY
- EXTENT OF VOCs IN UPPERMOST WATER-BEARING ZONE
- EXTENT OF VOCs IN INTERMEDIATE WATER-BEARING ZONE

VOCS IN GROUND WATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(1)(A) WHICH IS SITE BACKGROUND CONCENTRATIONS. SITE BACKGROUND CONCENTRATIONS FOR VOCS ARE DEFINED AS THE NON-DETECTION OF CONSTITUENTS ABOVE LABORATORY QUANTITATION LIMITS.

NOTE: MOST CURRENT ANALYTICAL RESULTS ARE SHOWN IN (ug/L) MICROGRAMS PER LITER.

SOURCE: HOFFMAN & COMPANY INC. AERIAL PHOTOGRAPH FEBRUARY 2002 AND TOPOGRAPHIC AND BOUNDARY SURVEYS BY SURVEYING SOLUTIONS, INC. JULY 2002, 2000 SAMPLING LOCATIONS SURVEYED BY McGILL & ASSOCIATES OCTOBER 2000, 2003 AND 2004 SAMPLING LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING SEPTEMBER 2003 AND DECEMBER 2004. FORMER NORTH AND SOUTH SETTLING PONDS APPROXIMATED FROM HISTORICAL AERIAL PHOTOGRAPHS.

SCALE IN FEET
0 200 400

© COPYRIGHT 2010 MACTEC

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED D HUNT
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE D. ALCOTT
DATE 11/14/2010

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE
KENNESAW, GEORGIA 30144 (770) 421-3400

DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN GROUND WATER

SCALE AS SHOWN
CONTRACT 6122-09-0322
DWG. NO. VRP-6
REV
PAGE NO.

J:\Thermo King\OCT 2010\SITE-MAP-N1-1.dwg — Layout1 12/09/2010 4:25pm lkravchuk

APPENDIX D:

RESULTS OF THE MODELING OF GROUNDWATER IN THE UPPERMOST WATER-BEARING ZONE AND POTENTIAL IMPACTS TO MANSON BRANCH

APPENDIX D
RESULTS OF THE MODELING OF GROUNDWATER IN THE UPPERMOST WATER-BEARING ZONE AND POTENTIAL IMPACTS TO MANSON BRANCH

In our September 23 meeting, EPD expressed concern regarding: (1) potential future impacts to Manson Branch related to the presence of contaminants in seep waters emanating from the Uppermost water-bearing zone, and (2) to the lack of groundwater monitoring points between the seeps and Manson Branch. To address these concerns, Thermo King has developed a "model" of flow from the seeps and its subsequent movement toward Manson Branch. Three shallow monitoring wells (MW-26, MW-27, and MW-28) have been installed near the west bank of Manson Branch, between the seeps and Manson Branch, to monitor groundwater impacts prior to discharge into Manson Branch.

Supplemental study of the Uppermost water-bearing zone and seeps in the area between MW-19 and Manson Branch show that the Uppermost zone daylights at the base of the hill-side slope, approximately 150 to 200 feet west of Manson Branch, and that the waters from the seeps infiltrate into the relatively thin silty and sandy colluvial/alluvial deposits (the alluvial system) resting on top of the clay formation that separates the Uppermost and Intermediate water-bearing zones. The seep waters move eastward at low gradient to discharge into Manson Branch.

Factors considered in "modeling" the flow of impacted seep waters toward Manson Branch and evaluating the potential subsequent impact to Manson Branch include:

- The past, current, and potential future concentration of constituents in the seeps
- The flow path from the seeps toward Manson Branch
- Current impact to alluvial system groundwater just upgradient of Manson Branch
- Discharge of contaminants into Manson Branch

<u>Past, Current, and Potential Future Concentrations of Constituents in the Seeps</u>

The source of constituents detected in the seeps is groundwater from the Uppermost water-bearing zone. Long-term monitoring (2000 forward) of constituents in the Uppermost zone, primarily TCE, has been conducted in three wells: MW-3, located near downgradient (east) of the central portion of the manufacturing building where solvent-based degreasers were located; MW-5, located in the area of the former south settling pond; and MW-19, located downgradient (east) of the former south settling pond. Figure D-1 illustrates the general decline in detected constituents occurring in this zone. This pattern is

consistent with expected contaminant behavior in a migrating plume as time passes following discontinuation of the release source. Based on this observed trend, it is anticipated that constituent concentrations in the Uppermost zone, the source of constituents in the seeps, will likely continue to decrease over time; Thermo King is not aware of any previously unknown or undetected site- or operational-related activities that would otherwise impact the plume in a manner differing from that observed over the past 10 years.

Figure D-2 illustrates historic TCE concentrations in Seeps C and Manson Branch #2, both located in the erosional gully down gradient from the MW-19 area. The concentrations of constituents in samples collected from these seeps are somewhat more variable than those observed in analyses of the groundwater samples from MW-19 and the other Uppermost zone wells. This variability likely reflects seep water responses to several influences not applicable to upgradient groundwater samples, like atmospheric conditions of humidity, temperature, wind, precipitation, etc., and to the contact of seep samples with organic matter in surficial soils in the seep areas. However, as illustrated on Figure D-3, the patterns of TCE concentrations in well MW-19 and that in Seeps C and Manson Branch #2 are similar in that: 1) both include an apparent "peak" in concentrations observed in 2004, first in MW-19 followed later in the year in the seeps, and 2) overall concentrations of TCE have decreased since 2004. As TCE concentrations continue to decrease in groundwater at MW-19, concentration decreases in the seeps should follow.

The Flow Path from the Seeps to Manson Branch

The area between the seeps and Manson Branch, a distance of about 300 to 400 feet, is characterized by slightly sloping, slightly undulating topography that becomes more marsh-like approaching Manson Branch. The ground surface varies from relatively firm in higher areas to unstable in low-lying areas with thick decaying vegetation. Vegetation is moderate to heavy, consisting primarily of grasses, briers, hedges, saplings and small trees. The flow of water away from the seeps toward Manson Branch occurs as a "mixture" of intermittent/discontinuous paths of surface flow and as subsurface flow in the colluvial/alluvial soils. No continuous surface pathways of flow from seeps to Manson Branch have been observed. Near surface groundwater in the colluvial/alluvial deposits appears to discharge directly into Manson Branch.

Current Impact to Alluvial System Groundwater

Monitoring wells MW-26, MW-27, and MW-28 were installed in the alluvial soils/underlying clays at locations just upgradient of Manson Branch (see attached Figure 3.0 and well logs in Appendix F of this Application). The thickness of the alluvial soils overlying clays at these well locations is about 2 to 3 feet. Wells MW-27 and MW-28 are located east of the gully and seeps C and Manson Branch #2. Well MW-26 is some 300 feet north of the gully, north of the area where constituents at concentrations of potential concern have been detected in seep water. Analysis of a groundwater sample collected from well MW-27 detected the presence of TCE at 10 µg/L. Cis-1,2-DCE was reported in the groundwater samples from wells MW-27 at 5.2 µg/L and MW-28 at 9.4 µg/L. These samples represent the quality of seep-impacted groundwater just prior to its discharge into Manson Branch.

Discharge of Contaminants into Manson Branch

Figure D-4 in this Appendix presents a calculation of the discharge rate of groundwater from well MW-27 into Manson Branch, a distance of approximately 125 feet. It was assumed that contamination of groundwater in the alluvium occurs along a 200-foot wide front (the distance between MW-27 and MW-28 is only 130 to 140 feet.) The calculation for gradient used the measured difference in groundwater elevation in well MW-27 with the nearby surface elevation of Manson Branch (2.28 feet). The calculated groundwater discharge rate along the "discharge front" to Manson Branch is approximately 0.0011 cubic feet per second (cfs).

The calculations then show the quantative impact to Manson Branch associated with discharge of groundwater containing constituents at the concentrations detected in the October 2010 sampling (TCE at 10 ug/L, cis-1,2-DCE at 5.2 ug/L, and vinyl chloride at 1 ug/L). After mixing, considering the 7Q10 of 0.16 cfs for Manson Branch, the constituent concentrations calculated to be present in Manson Branch are shown to be orders of magnitude below the individual constituent ISWQC (e.g., 0.07 µg/L vs. 30 µg/L for TCE).

Finally, Figure D-4 shows the hypothetical concentrations of the constituents of concern that would be required to be present in groundwater at wells MW-27/MW-28, then flowing into Manson Branch, to result in constituent concentrations in Manson Branch that approached the ISWQC. These concentrations (e.g. 4380 µg/L for TCE) exceed those concentrations currently detected in the seeps or anticipated in the

future, much less those concentrations that might be expected in alluvial groundwater approaching Manson Branch (at MW-27/MW-28).

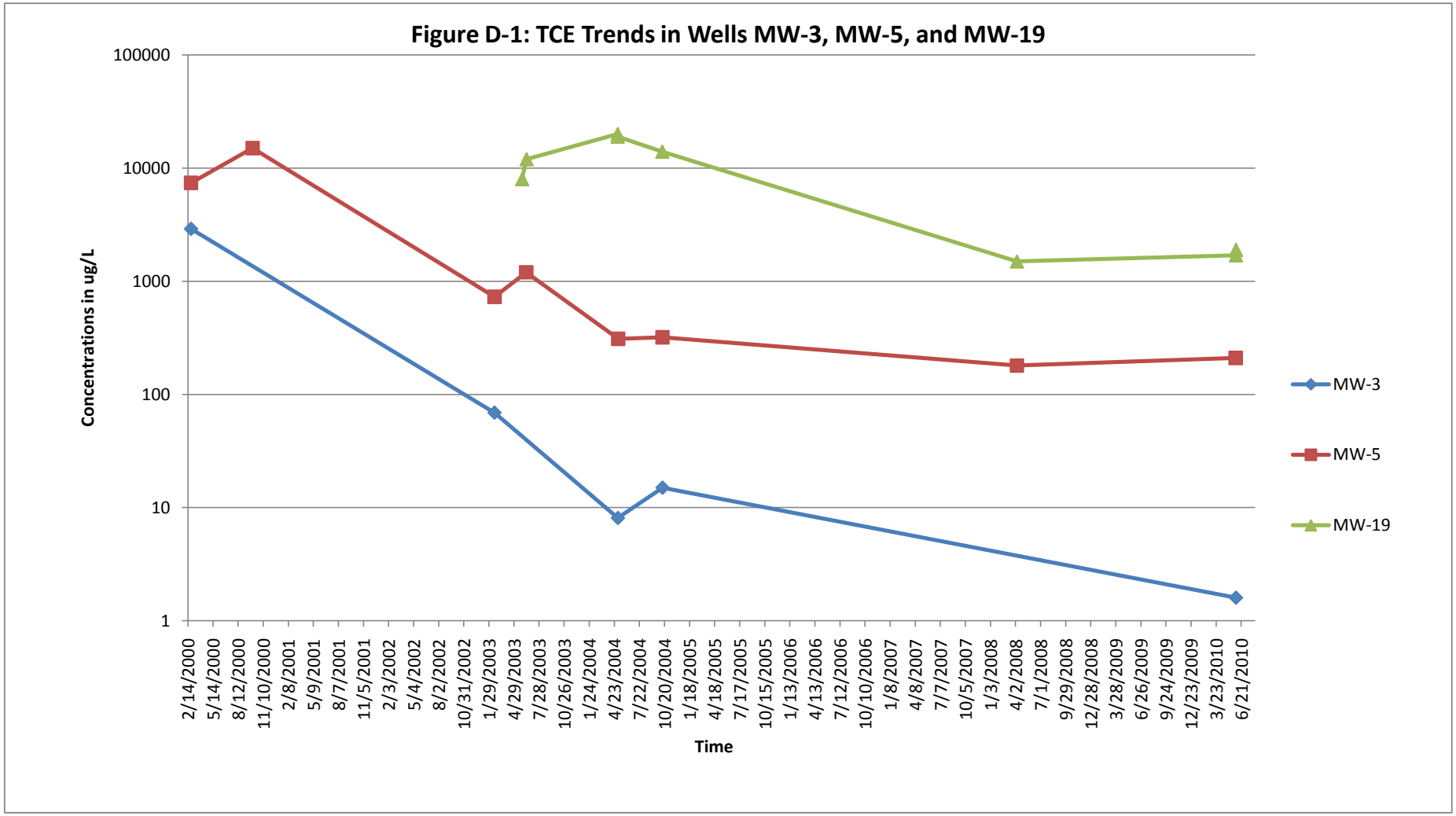
In summary, it appears very unlikely that constituents in the Uppermost zone groundwater, water emanating from the seeps, or in groundwater in the alluvial deposits approaching Manson Branch will impact Manson Branch at concentrations approaching ISWQC. The Proposed Remediation Plan presents a plan for monitoring groundwater and surface water in wells, seeps, and in Manson Branch directly to confirm Manson Branch is not and will not be impacted above ISWQC.

LIST OF FIGURES

Figure D-1: TCE Trends in Wells MW-3, MW-5, and MW-19
Figure D-2: TCE Trends in Seep Manson Branch #2 and Seep C
Figure D-3: TCE Trends in Well MW-19, Seep Manson Branch #2, and Seep C
Figure D-4: Calculation Of Groundwater Discharge Rate at Well MW-27 into Manson Branch

APPENDIX D FIGURES

Figure D-1: TCE Trends in Wells MW-3, MW-5, and MW-19



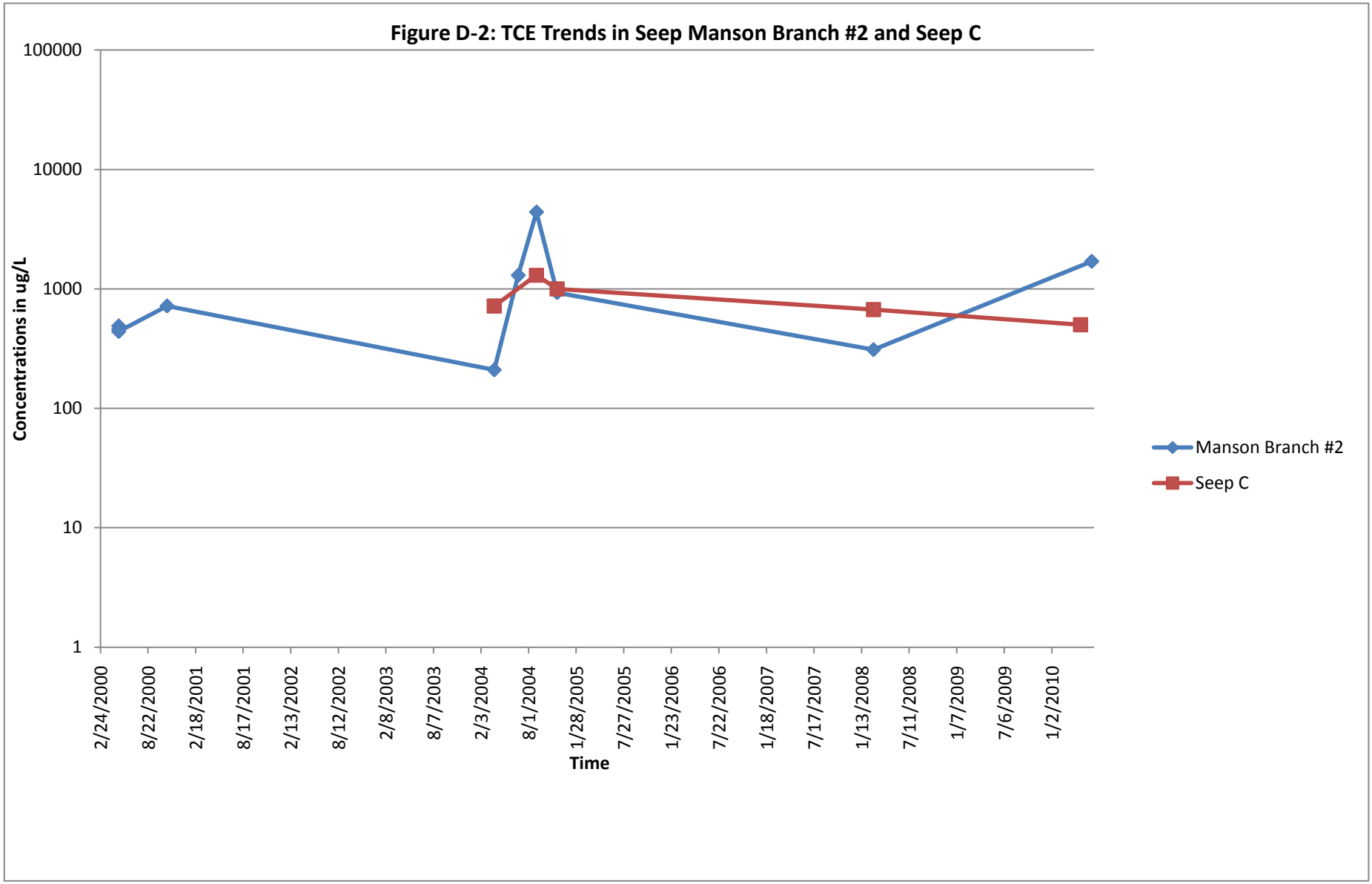


Figure D-2: TCE Trends in Seep Manson Branch #2 and Seep C
100000
10000
1000
100
10
1
Concentrations in ug/L
2/24/2000
8/22/2000
2/18/2001
8/17/2001
2/13/2002
8/12/2002
2/8/2003
8/7/2003
2/3/2004
8/1/2004
1/28/2005
7/27/2005
1/23/2006
7/22/2006
1/18/2007
7/17/2007
1/13/2008
7/11/2008
1/7/2009
7/6/2009
1/2/2010
Time
Manson Branch #2
Seep C

Figure D-3: TCE Trends in Well MW-19, Seep Manson Branch #2, and Seep C

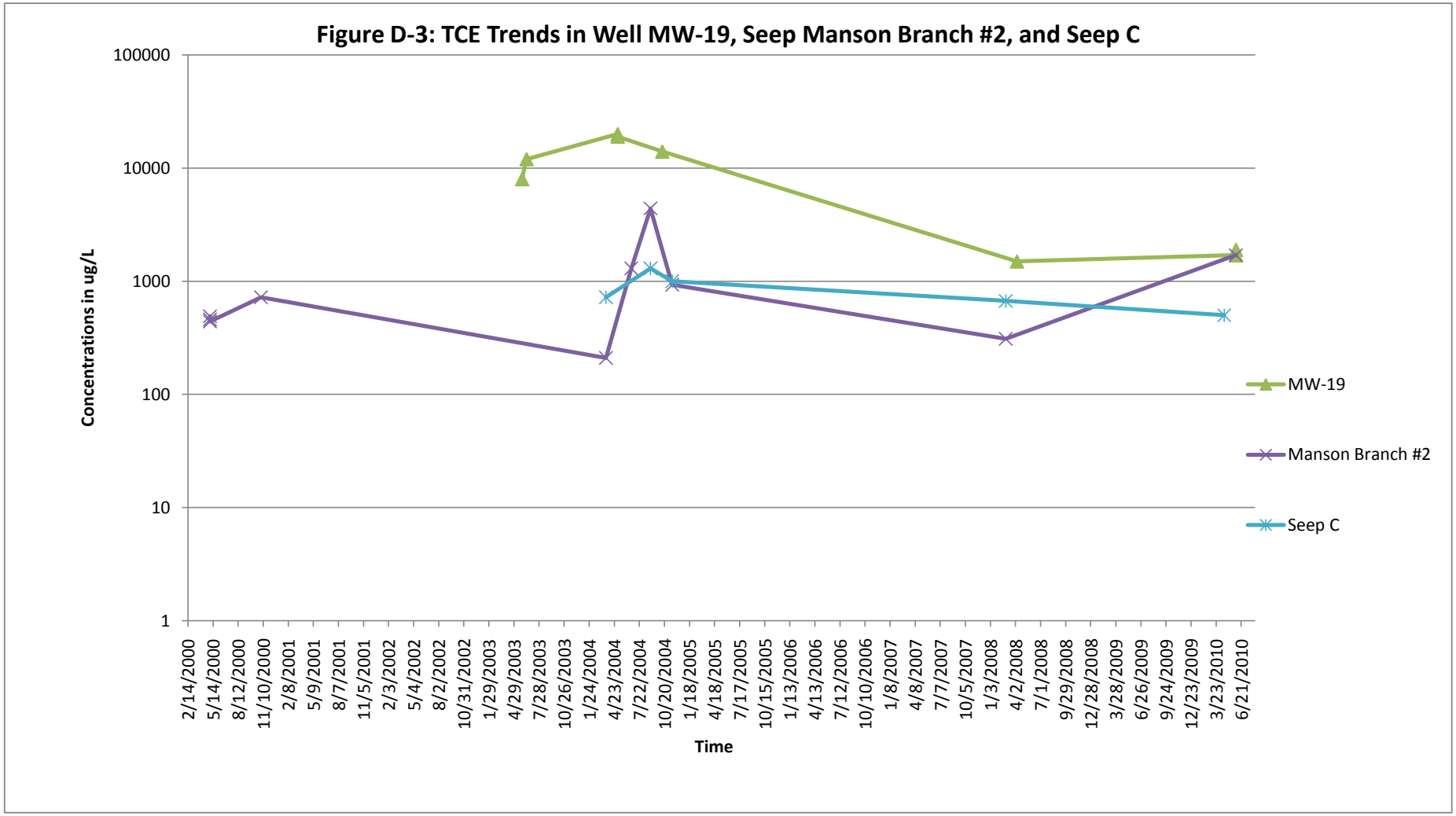


FIGURE D-4: CALCULATION OF GROUNDWATER DISCHARGE RATE AT WELL MW-27 INTO MANSON BRANCH

Input parameters for calculation of the GW discharge rate into the creek

K (ft/s)	i	L (ft)	a (ft)	b (ft)	H (ft)	A (ft^2)	v (ft/s)	Q_1 (cfs)
0.00002	0.01824	75	10.00	0.50	10.01	750.94	3.648E-07	0.000273942
0.00002	0.01824	100	10.00	0.50	10.01	1001.25	3.648E-07	0.000365256
0.00002	0.01824	200	15.00	0.50	15.01	3001.67	3.648E-07	0.001095008

This is a conservative value: Length of the impact is 200 ft, hydraulic conductivity is high, cross-sectional area is large

Hydraulic gradient (i) is measured from well MW-27 to closest approach of the stream to well MW-27 and using the stream elevation at the staff gauge ((250.66-248.38)/125)=0.01824 ft/ft
Hydraulic conductivity is that of the shallow zone well MW-1 which it the highest of three tested wells
(K = 0.0012 ft/min = 0.00002 ft/s)

K: Hydraulic conductivity (in ft/sec)
i: Hydraulic gradient
L: Length of stream segment receiving contaminated GW flow (in feet)
H: Equivalent side-length of rectangle receiving GW flow (SQRT (a^2+b^2); in feet; see schematic)
A: Cross-sectional area receiving GW flow (A = L x H; in ft^2)

v: Groundwater (Darcy's) velocity (v=K x i; in ft/sec)

Q_1: Flow rate of impacted GW entering the stream segment (in ft^3/sec)
a: half-width of the creek water surface
b: depth of water in the creek

Another approach is to use aquifer saturated thickness adjacent to the creek, instead of H shown below

Current concentrations at MW-27 vs. in-stream water quality standard

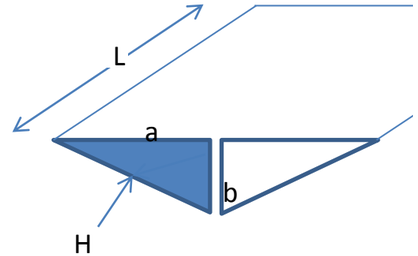
COC	C_1 (ug/L)	Q_1 (cfs)	$Q_2 = Q_3$ = 7Q10 (cfs)	**C_3 (ug/L)**	In-stream Standard (ug/L)
TCE	10	0.00109501	0.16	**0.06843813**	30
DCE*	5.2	0.00109501	0.16	**0.03558783**	10000**
VC	1	0.00109501	0.16	**0.00684381**	2.4

half-detection limit used for VC

*** Total DCE (1,2-Trans-DCE + 1,2-Cis-DCE; Note: no trans is detected)**
** Standard is for 1,2-Trans-Dichloroethylene (no standard for 1,2-Cis-DCE)
The 7Q10 for Manson Branch is estimated to be 0.16 ft3/s and was calculated based on a drainage area of 4.1 sq miles and USGS-measured flow volumes extrapolated from 4 stations on the Upper Ogeechee River in the area.

Q_1: Flow rate of impacted GW entering the stream segment (in ft^3/sec)
Q_2: 7Q10 of the stream immediately upgradient of the Site (in ft^3/sec)
Q_3: Total 7Q10 flow in the stream = Q2 since Q2>>Q1
C_1: dissolved concentration of COC in groundwater (in ug/L)
C_3: resulting concentration of COC in the stream after mixing (in ug/L)
C_2: upgradient concentration in the stream; assumed 0

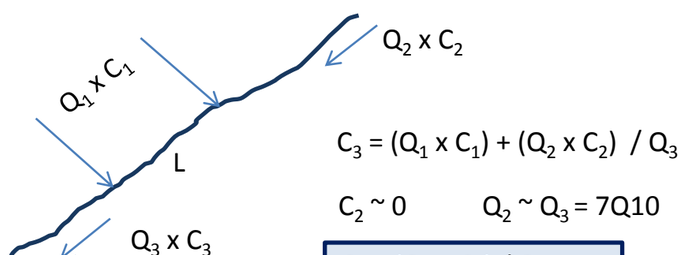
7Q10 is 0.16 cfs



Maximum allowed concentrations, in ppb, at MW-27 to meet in-stream standard

COC	C_1 (ug/L)	Q_1 (cfs)	$Q_2 = Q_3$ = 7Q10 (cfs)	C_3 (ug/L)	In-stream Standard (ug/L)
TCE	**4380**	0.00109501	0.16	29.9758988	30
DCE*	**1,461,000**	0.00109501	0.16	9998.81006	10000**
VC	**350**	0.00109501	0.16	2.39533438	2.4

* Total DCE (1,2-Trans-DCE + 1,2-Cis-DCE)
** Standard is for 1,2-Trans-Dichloroethylene; there is no standard for 1,2-Cis-DCE
All concentrations in ug/L or ppb



$C_3 = (Q_1 \times C_1) + (Q_2 \times C_2) \ / \ Q_3$

$C_2 \sim 0$ $\quad Q_2 \sim Q_3 = 7Q10$

$C_3 = (Q_1 \times C_1) / Q_2$

APPENDIX E:

RESULTS OF THE GROUNDWATER FATE AND TRANSPORT MODELING OF THE INTERMEDIATE WATER-BEARING ZONE

TABLE OF CONTENTS

E1.0 INTRODUCTION E-1

E2.0 MODEL INPUT PARAMETERS E-2

E2.1 GROUNDWATER VELOCITY E-2
E2.2 DISPERSION E-2
E2.3 ADSORPTION E-3
E2.4 BIOTRANSFORMATION RATE CONSTANTS E-4
E2.5 SOURCE DATA E-6
E2.5.1 Source Decay E-6

E2.5.2 Initial Source Concentrations E-8

E2.6 MODEL RESULTS E-8
E2.7 SENSITIVITY ANALYSIS E-9
E2.8 CONCLUSION E-11
E3.0 REFERENCES E-12

LIST OF TABLES – embedded in text

Table E1 Site-Specific Information Used For Model Calibration
Table E2 Biotransformation Rate Constants
Table E3 Model Sensitivity Analysis; Concentrations are Calculated for June 2010 at MW-20

LIST OF FIGURES

Figure E1 Determination of the Source Decay Constant
Figure E2 BIOCHLOR Input Screen
Figure E3 TCE, 2010
Figure E4 cis-1,2-DCE, 2010
Figure E5 VC, 2010
Figure E6 TCE, 2012
Figure E7 cis-1,2-DCE, 2012
Figure E8 VC, 2012
Figure E9 TCE, 2015
Figure E10 cis-1,2-DCE, 2015
Figure E11 VC, 2015

LIST OF FIGURES - continued

Figure E12 TCE, 2020
Figure E13 cis-1,2-DCE, 2020
Figure E14 VC, 2020
Figure E15 TCE, 2060
Figure E16 cis-1,2-DCE, 2060
Figure E17 VC, 2060

APPENDIX E
RESULTS OF THE GROUNDWATER FATE AND TRANSPORT MODELING OF THE INTERMEDIATE WATER-BEARING ZONE

E1.0 INTRODUCTION

The future fate and transport of the constituents of concern (COCs) in the Intermediate aquifer underlying the Thermo King Corporation site in Louisville, Georgia (the Site) was modeled using software program BIOCHLOR. This program, approved by the U.S. Environmental Protection Agency (U.S. EPA) is an analytical model that simulates remediation by natural attenuation of dissolved solvents in groundwater (Aziz et al., 2000; Aziz, Newel and Gonzales, 2002). The software, programmed in the Microsoft© Excel spreadsheet environment and based on the Domenico analytical solute transport model (Domenico, 1987), has the ability to simulate one-dimensional advection, 3-dimensional dispersion, linear adsorption, and biotransformation via reductive dechlorination, the dominant biotransformation process at most chlorinated solvent sites (Sun and Clement, 1999; Sun et al., 1999). The reductive dechlorination of the parent solvent to daughter product is assumed to be a first-order process. The daughter products are produced by the first-order degradation of the preceding parent compound. Therefore, the daughter product can simultaneously undergo both production and degradation in the model area. The COCs at the Site are trichloroethene (TCE) and its degradation products cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC).

The model predicts the maximum extent of dissolved-phase plume migration, which may then be compared to the distance to potential points of exposure (e.g., drinking water wells, groundwater discharge areas, or property boundaries). Analytical groundwater transport models have seen wide application for this purpose for over 15 years now (e.g., ASTM, 1995) and experience has shown such models can produce reliable results when site conditions in the plume area are relatively uniform. As stated by the U.S. EPA, BIOCHLOR allows groundwater remediation managers to identify sites where natural attenuation is most likely to be protective of human health and the environment. It also allows regulators to carry out an independent assessment of treatability studies and remedial investigations that propose the use of natural attenuation (Aziz et al., 2000).

BIOCHLOR is used to simulate the fate and transport of chlorinated solvents at the Site because of the clear evidence of biodegradation, namely a decrease of contaminant concentrations downgradient of the source area and presence of the degradation (daughter) products of TCE, cis-1,2-DCE and VC.

E2.0 MODEL INPUT PARAMETERS

E2.1 GROUNDWATER VELOCITY

The representative seepage velocity of groundwater flow through the interstitial space of the porous media (aquifer matrix) is calculated by multiplying hydraulic conductivity by hydraulic gradient and dividing by effective porosity. As emphasized by the BIOCHLOR manual, it is strongly recommended that actual site data be used for hydraulic conductivity and hydraulic gradient data parameters whereas effective porosity can be estimated based on predominant soil type.

The site-specific hydraulic conductivity is 0.00175 cm/s, the geometric mean of slug test values from the four monitoring wells screened in the Intermediate aquifer, MW-14, MW-25, MW-20 and MW-22: 0.01067 cm/s, 0.00039 cm/s, 0.00106 cm/s, and 0.00214 cm/s, respectively. The geometric mean, rather than the arithmetic mean, is selected as the most probable value knowing that the hydraulic conductivity of an aquifer typically follows a log-normal probability distribution (Kresic, 2006).

The hydraulic gradient is 0.001875, calculated as the change in the hydraulic head between MW-14 and MW-22 in June 2010 divided by the distance between the two wells: (246.96-244.41) / 1360 = 0.001875. Because of the presence of silt and clay, the effective porosity is estimated at 20%, or slightly less than typically used value of 25% for clean sands.

The resulting representative seepage velocity used in the model is 17 ft/year.

E2.2 DISPERSION

Dispersion refers to the process by which a dissolved solvent will be spatially distributed longitudinally (along the direction of groundwater flow), transversely (perpendicular to groundwater flow), and vertically (downward) because of mechanical mixing and chemical diffusion in the aquifer. These processes develop the common plume shape that is the spatial distribution of the dissolved solvent mass in the aquifer. Selection of dispersivity values is a difficult process, given the impracticability of measuring dispersion in the field. However, simple estimation techniques based on the length of the plume are available from a compilation of field test data (Aziz et al., 2000). Based on the 2010 field data, the length of the longest COCs plume (cis-1,2-DCE) is estimated to be approximately 450 feet or some distance downgradient of the last monitoring well with any COC detection (MW-20). The longitudinal

dispersivity (alpha x) of 45 feet is estimated based on the default option in BIOCHLOR which assumes that alpha x is 10% of the estimated plume length. By default, the transverse dispersivity is estimated as alpha y: alpha x = 0.10. To yield a conservative estimate of vertical dispersion, the default value used in BIOCHLOR is set to a very low number (1E-99).

E2.3 ADSORPTION

Adsorption to the soil matrix can reduce the concentration of dissolved contaminants moving through the groundwater. In BIOCHLOR this process is described with the retardation factor (R), the ratio of the groundwater seepage velocity to the rate that organic chemicals migrate in the groundwater. The degree of retardation depends on both aquifer and constituent properties. The model calculates R from the values of distribution (partition) coefficient for the solute (K_d), soil bulk density (ρ_b), effective porosity (n), organic carbon partition coefficients (K_{oc}), and soil fraction organic carbon (f_{oc}) using the following equation:

$$R = 1 + \frac{\rho_b K_d}{n}$$

where $K_d = K_{oc} \times f_{oc}$

Organic carbon partition coefficients (K_{oc}) for TCE, cis-1,2-DCE and VC at 20 ^{o}C are 130 L/kg, 125 L/kg and 29.6 L/kg respectively (BIOCHLOR manual), aquifer matrix (soil) bulk density is estimated to be 1.7 kg/L (default value in BIOCHLOR), and the soil fraction organic carbon is conservatively estimated to be 0.002 (USEPA July 1996). Based on these values, the common R for the three COCs calculated by the model is 3.21.

It should be noted that BIOCHLOR uses one retardation factor for all the constituents, not individual retardation factors for each constituent. It calculates the median retardation factor and uses that value in all calculations. Alternatively, as in our case, the user may select another retardation value that results in a better overall model calibration for all modeled constituents combined. At the Site, the calibrated common value for R (2.07) results in a better model match for VC, the most mobile solute of the three COCs. The sensitivity analysis described in Section 2.7 is conducted to evaluate the effect of the choice of the common retardation factor on the model results.

E2.4 BIOTRANSFORMATION RATE CONSTANTS

The best approach for determining biotransformation rate constants is to calibrate BIOCHLOR to field data for a given sampling event (Aziz et al., 2000; Aziz, Newel and Gonzales, 2002). Rate constants are estimated by changing the rate constant for TCE degradation until the TCE predicted concentrations match the TCE field data. Then, the cis-1,2-DCE rate constant is adjusted until the cis-1,2-DCE predicted concentrations match the field data; the same is repeated for VC. In this way, site-specific rate constants are estimated, and the model is then considered calibrated for the given set of model input parameters including hydraulic conductivity, hydraulic gradient, sorption, and dispersion. Using the site-specific rate constants, predictive simulations can be conducted by increasing the simulation time to estimate future plume behavior (Aziz et al., 2000; Aziz, Newel and Gonzales, 2002).

To speed the calibration process, BIOCHLOR Version 2.2 incorporates the Buschek and Alcantar (1995) rate constant estimation method, which automatically provides an approximate calibration of the model to entered site-specific field data. The Buschek and Alcantar approach uses the following equations which assume 1-D dispersion, steady-state conditions, and biotransformation only in the aqueous phase:

$$C(x) = C_o \exp\left[\left(\frac{x}{2\alpha_x}\right)\left[1-\left(1+\frac{4\lambda\alpha_x}{v_s}\right)^{0.5}\right]\right]$$

$$m = \left(\frac{1}{2\alpha_x}\right)\left[1-\left(1+\frac{4\lambda\alpha_x}{v_s}\right)^{0.5}\right]$$

$$\lambda = \left[\frac{v_s}{4\alpha_x}\right]\left(\left[1-2\alpha_x m\right]^2 - 1\right)$$

where:
λ is the biotransformation rate constant (1/yr)
v_s is the seepage velocity (ft/yr)
α_x is the longitudinal dispersivity (ft)
m is the slope of the Ln concentration vs. distance (1/ft)
x is the distance downgradient (ft)
C_o is the initial concentration (mg/L)
C(x) is the concentration at distance x (mg/L)

Although this method has the potential to overestimate biotransformation rate constants by lumping the effects of lateral and vertical dispersion with biotransformation, it quickly yields a reasonable first approximation of the rate constants. These rate constant estimates can be manually refined subsequently. A minimum of four data points is required for rate constant determination. Table E1 shows the site-specific information used for the model calibration. The four monitoring wells are aligned along the groundwater flowpath, i.e., downgradient from each other. MW-14 is the monitoring well closest to the likely source zone, and MW-22 is the farthest away.

Table E1 Site-specific information used for model calibration; dissolved concentrations of constituents of concern are for the June 2010 sampling event. Where a constituent has been reported of being "less than the detection limit", 1/2 of the constituent's detection limit is used in the model.

Table E1: Site-Specific Information Used For Model Calibration

Well ID	Distance from Source (ft)	Concentration (µg/L)		
		TCE	DCE	VC
MW-14	5	3600	380	<140 (70)
MW-25	150	2800	820	<83 (41.5)
MW-20	350	<5.7 (2.85)	170	15
MW-22	1360	<1.0 (0.5)	<1.0 (0.5)	<1.0 (0.5)

Generally, the more highly chlorinated the compound, the more rapidly it is reduced by reductive dechlorination (Vogel and McCarty, 1985; Vogel and McCarty, 1987). Therefore, it is possible for daughter products to increase in concentration before they decrease (Aziz et al., 2000) as shown with the site-specific example for cis-1,2-DCE.

Table E2 shows the biotransformation rate constants for the three COCs calculated from the field observations together with the final calibrated values. During the model calibration the initial rate constants were slightly adjusted in order to better match the field concentrations observed further downgradient from the source, particularly for VC because it is the most mobile and toxic of the three COCs.

Table E2 Biotransformation rate constants, in 1/yr, calculated from the field data using the Buschek and Alcantar method vs. the final model-calibrated values and their equivalent constituent half-life, in years.

Table E2: Biotransformation Rate Constants

Constituent	Buschek-Alcantar method	Final model-calibrated	Equivalent half-life
TCE	0.135	0.165	4.2
cis-1,2-DCE	0.114	0.087	8.0
VC	0.071	0.073	9.5

The Intermediate aquifer porous media consist primarily of fine to medium sands with spatially varying content of silt and clay. The prevalent geochemical conditions that drive natural biotransformation processes and therefore the estimated rate constants may change spatially as well as the COCs migrate with the groundwater. The same is true with sorption of COCs onto porous media solids. This variability is especially evident in case of TCE at the Site, as seen from Table E1 and discussed in Section 2.7. Namely, it appears that TCE may be degrading faster and/or retarding more than what was simulated between the monitoring wells MW-25 and MW-20.

E2.5 SOURCE DATA

The source of COCs dissolved in groundwater of the Intermediate aquifer underling the Site is assumed to be in close proximity of the monitoring well MW-14 which historically has the highest dissolved concentration of TCE (see Figure E1). The concentrations in excess of 1 to 10% solubility of TCE (which is approximately 1,000 mg/L) are indicative of possible presence of free-phase or residual phase dense non-aqueous phase liquids or DNAPLs (Pankow and Cherry, 1996). The source area in the model is assumed to be a plane 200 feet wide and 25 feet deep (thickness of the Intermediate aquifer at MW-14).

E2.5.1 Source Decay

Free-phase or residual phase DNAPLs, such as TCE, can act as continuing sources of groundwater contamination. The rate at which constituents in the DNAPL or source dissolve into the groundwater ultimately determines the concentration of dissolved contaminants in the plume and the lifetime of a dissolved plume. In BIOCHLOR Version 2.2, the user has the option of modeling a source with constant or decaying concentration over time. Source decay is modeled as a first order process. This approach captures all processes that can lead to depressed aqueous-phase concentrations in the source zone, including decreased dissolution rate from the DNAPL, biotransformation, or any other degradation processes that follow first-order or pseudo first-order rates.

The value of source decay constant is calculated by plotting temporal aqueous concentrations in a source area well on a semi-log plot and determining the slope, as shown on Figure E1 for monitoring well MW-14. As can be seen from the field data over the last seven years, there is a significant decreasing trend in concentrations of TCE indicating a decaying source.

The source decay constant (k_s) is different from the biotransformation constant, λ. The source decay constant describes how the concentration in a source area well decreases as the DNAPL is depleted of the constituent of concern, whereas λ is the biotransformation rate constant for a constituent in the dissolved phase plume downgradient of the source.

To model a decaying source in BIOCHLOR, the Domenico (1987) semi-analytical solution for reactive transport with first order biological decay was modified to incorporate a decaying source (boundary) condition. The revised model assumes that the source decays exponentially via a first order expression [i.e., $C_o \times \exp(-k_s t)$]. The modification of the Domenico solution was accomplished by extending a 1-D solution to the advection-dispersion equation that incorporated a decaying boundary condition to a 3-D solution by analogy (Van Genuchten and Alves, 1982).

The source decay constant (k_s) is first determined by the user using site-specific concentration values for a monitoring well assumed to be representative of (closest to) the source zone, such as MW-14 in this case. However, the user is restricted to k_s values that are less than $1/R*(\lambda+Vs/4\alpha)$ to prevent unstable complex solutions. A safety factor of 20% is also incorporated.

Based on the field data, the source decay constant for TCE is calculated to be between 0.036 and 0.049 (Figure E1). As can be seen, the higher calculated value is obtained when an anomalously low observed concentration at MW-14 in October 2004 is removed from the dataset. The trend line for this case has a significantly higher regression coefficient (better fit). However, because of the model restrictions and the 20% safety factor, the value of 0.049 cannot be used for the given set of input parameters. Therefore, the lower value of 0.036 is selected for all model simulations. This results in an apparent over prediction of the simulated concentration of TCE at MW-14 (see Section 2.6 and Figure E2).

E2.5.2 Initial Source Concentrations

In order to calibrate the model to the field-observed concentrations of COCs in June 2010, the concentrations of three COCs for the source area represented by MW-14 had to be assumed for some time prior to 2010 due to the transient (time-dependent) nature of both the source strength and the fate and transport of dissolved constituents. The initial source concentrations and the model run time were estimated based on the calculated groundwater velocity of 17 ft/year, the attenuating effects of longitudinal dispersion and biodegradation, and the extrapolated trend lines of the TCE concentration at MW-14 (Figure E2).

The trend lines in Figure E1 are derived for the highest recorded concentrations at MW-14 for any of the sampling events (note that there were multiple samples and reported concentrations for some sampling events). The model run time of 14 years prior to June 2010 and the initial source concentrations for TCE, cis-1,2-DCE, and VC of 14,000 µg/L (micrograms per liter or ppb), 790 µg/L, and 40 µg/L, respectively, were ultimately selected during model calibration. Interestingly, the initial TCE concentration is approximately the average of the two values shown in Figure E1 for the two different slopes. Possibly because of the high detection limits for VC, none of the historic samples at MW-14 had detectable concentrations of VC. For the estimating purposes as illustrated with the TCE example, the VC concentrations were represented with 1/2 of the reported detection limit.

E2.6 MODEL RESULTS

Figure E2 shows the BIOCHLOR model input screen and Figures E3 through E5 show the model-calculated concentrations of COCs at the monitoring wells screened in the Intermediate aquifer vs. the field-observed concentrations in June 2010. The predicted future fate and transport of COCs at the Site is shown in Figures E6 through E17 for years 2012, 2015, 2020 and 2050 for all three COCs.

It should be noted that in general, because of the source decay constant restrictions (including the added safety factor of 20%), in most cases BIOCHLOR over predicts by default the dissolved concentrations at monitoring wells closest to source zones. At the Thermo King, Louisville site this is evident when comparing the field-data from June 2010 and the model-calculated concentrations of TCE at MW-14 (see also Figure E2): 3,600 µg/L vs approximately 8,000 µg/L. This also means that the model predictions for the future fate and transport of COCs at the Site are likely conservative since the source decay rate is simulated to be lower than that currently observed.

As mentioned earlier, the prevalent geochemical conditions that drive natural biotransformation processes and therefore the estimated rate constants may change spatially as the COCs migrate with the groundwater. This is especially evident in case of TCE, as seen in Figure E3. Namely, it appears that TCE may be degrading faster in a zone between the monitoring wells MW-25 and MW-20 than what is simulated by the model. Currently, BIOCHLOR does not provide for simulation of spatially variable biotransformation rate constants and a decaying source at the same time. Nevertheless, the calibrated model shows a high degree of accuracy in simulating the overall field-observed distribution of all three COCs.

For comparison, on all figures showing the results of the analytical fate and transport model incorporating the documented sequential degradation of TCE, cis-1,2-DCE and VC, there is also a graph of concentration vs. distance from the source if no degradation was taking place for the entire simulated period. As can be seen, even under this unrealistic assumption, the model predicts non-detectable concentrations of all three COCs at the monitoring well MW-22 for the entire simulated future period of 50 years.

E2.7 SENSITIVITY ANALYSIS

Sensitivity analysis of the following model input parameters was performed by increasing and decreasing their baseline values for the calibrated model: hydraulic conductivity, longitudinal dispersivity, retardation factor, and biotransformation/degradation rates expressed as degradation half-life of individual constituents. The results of the analysis are shown in Table E3 for monitoring well MW-20 which is the farthest downgradient well with detectable concentrations of COCs.

Table E3: Model Sensitivity Analysis; Concentrations are Calculated for June 2010 at MW-20

Hydraulic Conductivity (Baseline = 1.75 E-3 cm/s)				
Constituent	Concentrations (µg/L or ppb)			
	1.5x Baseline	Baseline	0.5xBaseline*	Observed
TCE	519.7	74.0	0.18	<5.7
DCE	479.4	73.6	0.20	120
VC	92.7	15.0	0.04	15

* Requires decrease in source decay constant to <0.019

Longitudinal Dispersivity (Baseline = 45 feet)				
Constituent	Concentrations (µg/L or ppb)			
	1.5x Baseline*	Baseline	0.5xBaseline	Observed
TCE	208.2	74.0	3.9	<5.7
DCE	193.9	73.6	4.2	120
VC	37.8	15.0	0.9	15

* Requires decrease in source decay constant to <0.025

Retardation Factor (Baseline = 2.07)				
Constituent	Concentrations (µg/L or ppb)			
	1.5x Baseline*	Baseline	0.5xBaseline	Observed
TCE	5.2	74.0	572.8	<5.7
DCE	3.5	73.6	1,131.7	120
VC	0.5	15.0	294.6	15

* Requires decrease in source decay constant to <0.025

Biotransformation Half-life in Years (Baseline: TCE = 4.2; DCE=8.0; VC=9.5)				
Constituent	Concentrations (µg/L or ppb)			
	1.5x Baseline	Baseline	0.5xBaseline	Observed
TCE	102.2	74.0	28.5	<5.7
DCE	64.9	73.6	69.3	120
VC	9.0	15.0	29.4	15

As discussed in Section 2 Model Input Parameters, the model has several built-in restrictions including one common retardation factor for all COCs, and lower-than-observed source decay rate. Combined, these restrictions contribute to overall conservative model predictions of constituent concentrations when compared to the field-observed data. This is also one of the reasons why certain parameters have varying degrees of sensitivity for individual COCs. For example, the common baseline value of the calibrated retardation factor, R=2.07, is used by default for all three COCs but it is significantly lower than the more reasonable 3.21 initially calculated by the model for TCE. Table E3 shows that using R 1.5x higher than the baseline value results in a very good match between the calculated and the observed TCE concentration at MW-20. Similarly, when using a shorter half-life for TCE the match is significantly

better although the model still over predicts its concentration at MW-20. At the same time, the degradation half-life is less sensitive parameter for both DCE and VC.

Table E3 demonstrates that the baseline (calibrated) model input parameters provide the best overall match for all three COCs for any of the comparative analyses.

E2.8 CONCLUSION

The results of the fate and transport model for the three COCs at the Thermo King Corporation site in Louisville, Georgia show that the predicted concentration of plume constituents TCE, cis-1,2-DCE, and VC in year 2060 (simulated future period of 50 years) at the point of demonstration well (POD) well MW-22 will be lower than the detection limit.

E3.0 REFERENCES

American Society for Testing and Materials (ASTM), 1995. Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites. ASTM E-1739-95, Philadelphia, PA.

Aziz, C.E., Newell, C.J., Gonzales, J.R., Haas, P., Clement, T.P., and Sun, Y-W., 2000. BIOCHLOR Version 1.0 User's Manual. EPA/600/R-00/008.

Aziz, C.E., Newell, C.J., and Gonzales, J.R., 2002. BIOCHLOR Natural Attenuation Decision Support System, Version 2.2, March 2002, User's Manual Addendum

Buschek, T. E., Alcantar, C.M., 1995. Regression Techniques and Analytical Solutions to Demonstrate Intrinsic Bioremediation. In *Intrinsic Bioremediation*. R.E. Hinchee, J.T. Wilson and D.C. Downey, Ed. Battelle Press. Columbus , OH.

Domenico, P.A., 1987. An Analytical Model for Multidimensional Transport of a Decaying Contaminant Species. *J. Hydrol*. 91:49-58.

Kresic, N., 2006. Hydrogeology and Groundwater Modeling; Second Edition. CRC/Taylor & Francis Group, New York, Boca Raton, 807 p.

Pankow, J.F., and Cherry, J.A., 1996. Dense Chlorinated Solvents and Other DNAPLs in Groundwater. Waterloo Press, Guelph, Ontario, 522 p.

Sun, Y., and Clement, T.P., 1999. A Decomposition Method for Solving Coupled Multi-species Reactive Transport Problems, Transp. in Porous Media, 37:327-346.

Sun, Y., Petersen, J.N., and Clement, T.P., 1999. A New Analytical Solution for Multiple Species Reactive Transport in Multiple Dimensions. *J. Contam. Hydrol*., 35(4): 429-440.

USEPA, 1996. "Soil Screening Guidance: User's Guide; Equation 10: Soil Screening Level Partitioning Equation for Migration to Groundwater," U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, EPA/9355.4-23.

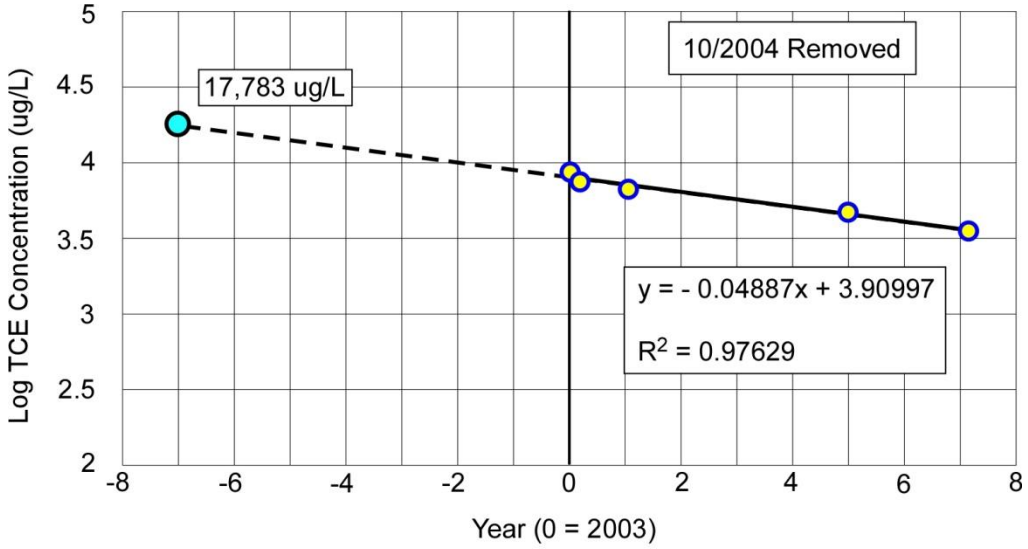
Van Genuchten, M. Th. and Alves, W.J., 1982. Analytical Solutions of the One-Dimensional Convective-Dispersive Solute Transport Equation. U.S. Department of Agriculture, Technical Bulletin No. 1661.

Vogel, T.M. and McCarty, P.L., 1985. Biotransformation of Tetrachloroethylene to Trichloroethylene, Dichloroethylene, Vinyl Chloride, and Carbon Dioxide under Methanogenic Conditions. *Appl. Environ. Microbiol.*, 49(5): 1080-1083.

Vogel, T.M. and P.L. McCarty, 1987, Abiotic and Biotic Transformations of 1,1,1-Trichloroethane under Methanogenic Conditions. *Environ. Sci. Technol*., 21(12): 1208-1213.

Wiedemeier, T.H., Rifai, H.S., Newell, C.J., and Wilson, J.W., 1999. Natural Attenuation of Fuels and Chlorinated Solvents. John Wiley & Sons, New York.

APPENDIX E FIGURES



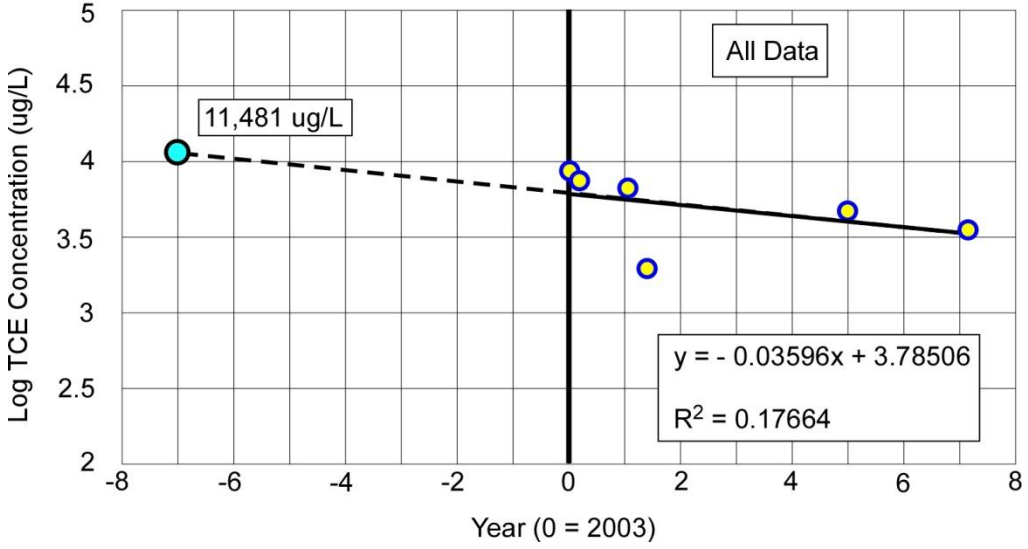


Figure E1 Determination of the Source Decay Constant

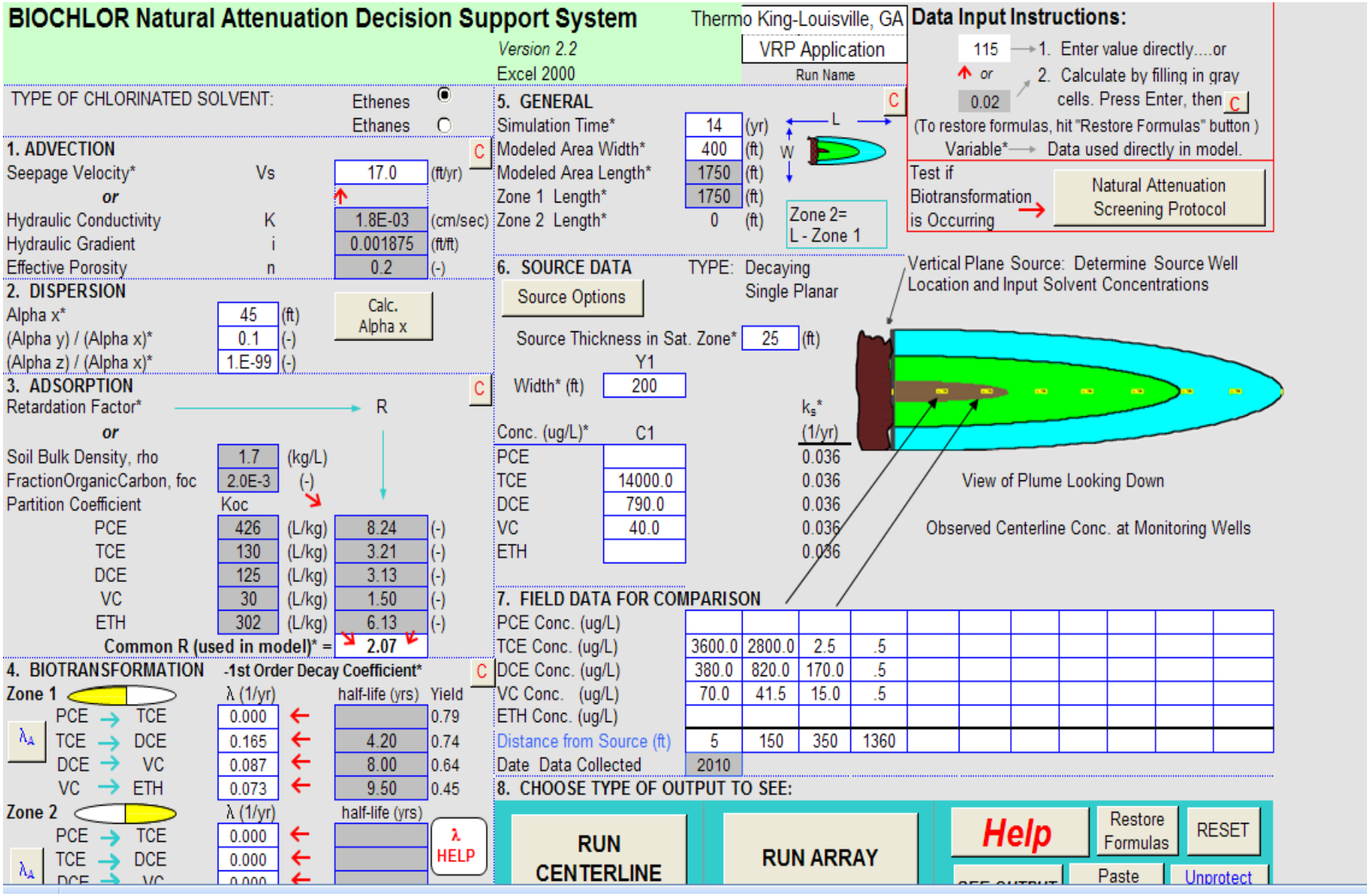
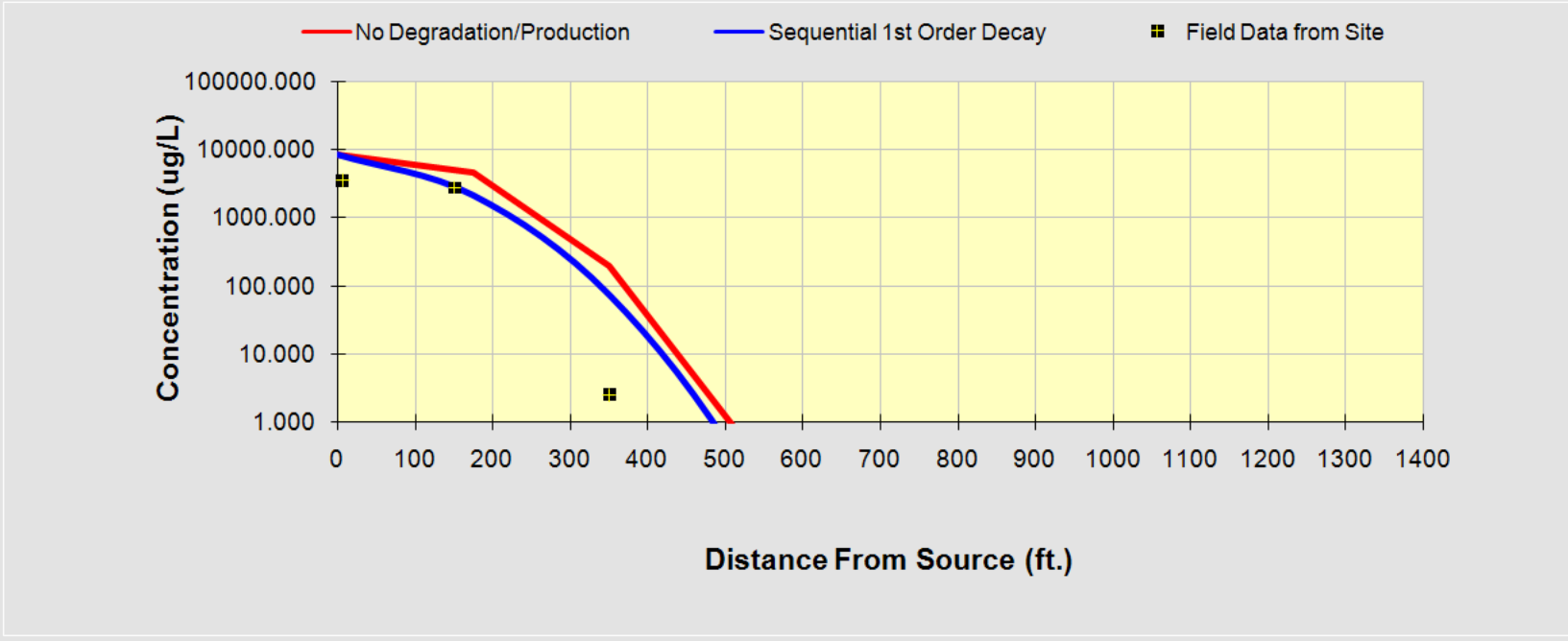


Figure E2 BIOCHLOR Input Screen

Thermo King Louisville GA_Final Draft.xls [Compatibility Mode] - Microsoft Excel

TCE	0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	8457.532	4529.780	195.433	0.524	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biotransformation	8457.5309	2131.450	74.056	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	MW-14	MW-25	MW-20	MW-22	Monitoring Well Locations (ft)						
	5	150	350	1360							
Field Data from Site	3600.000	2800.000	2.500	0.500							



See PCE

See TCE

See DCE

See VC

See ETH

Figure E3 TCE, 2010

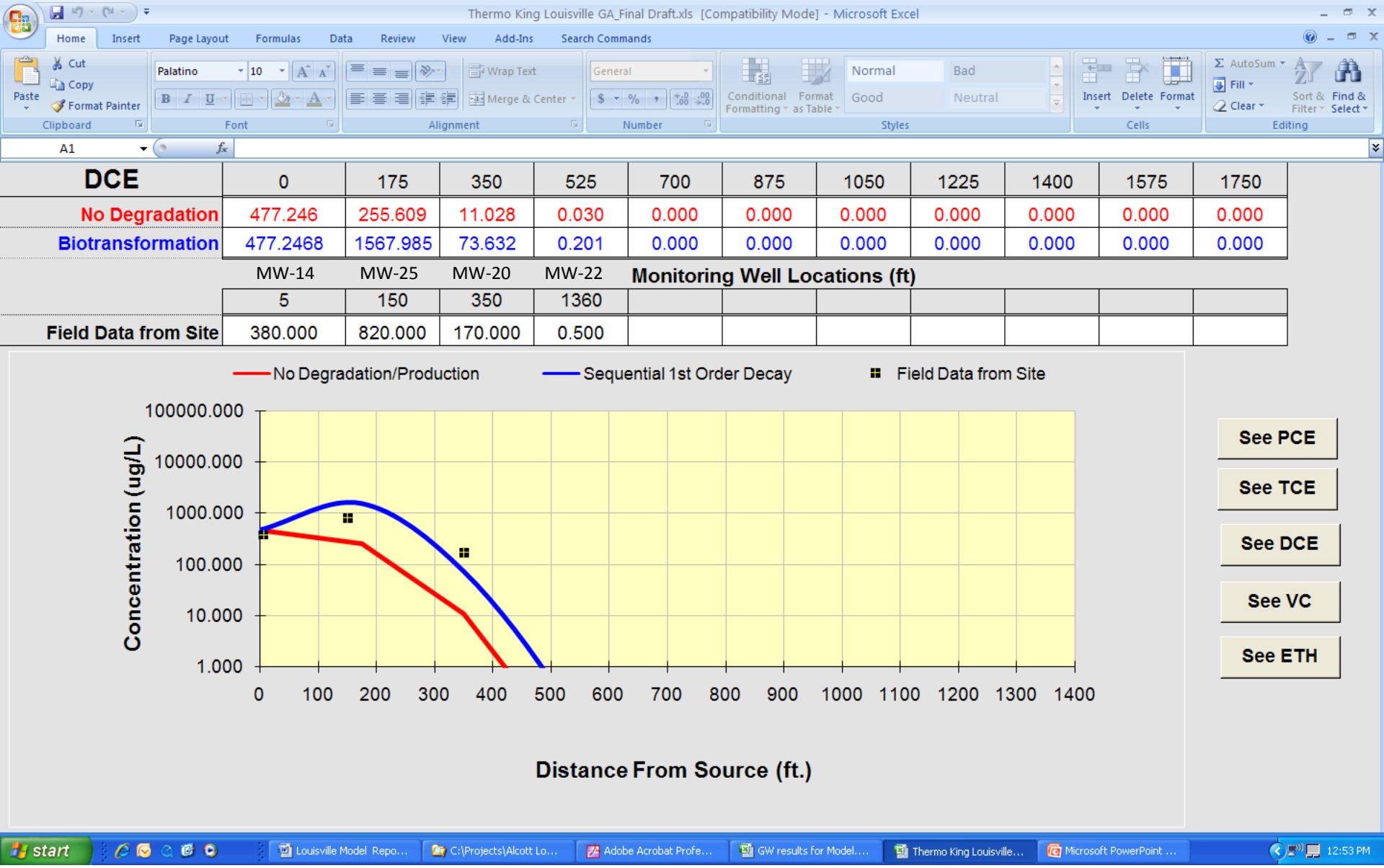


Figure E4 cis-1,2-DCE, 2010

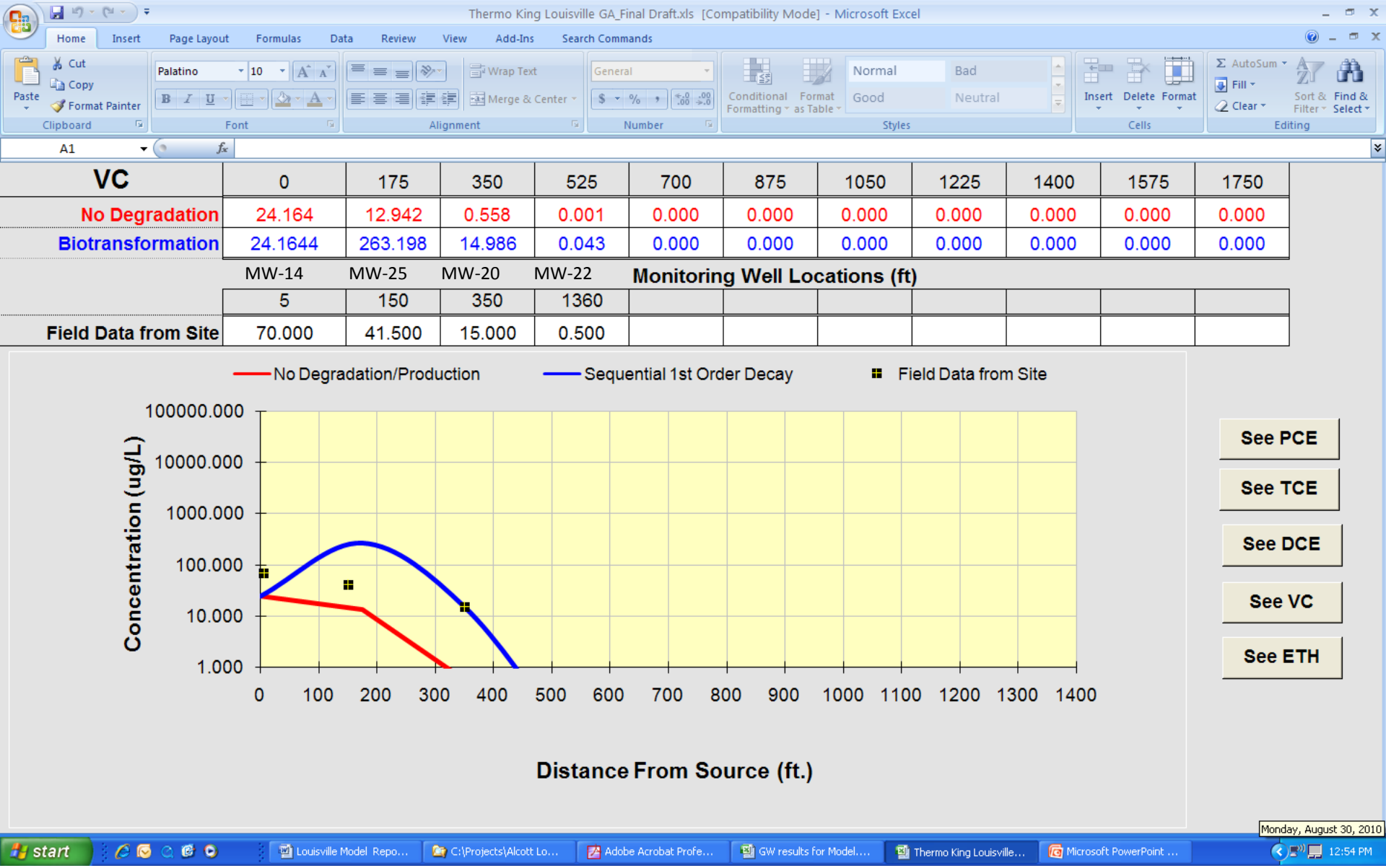


Figure E5 VC, 2010

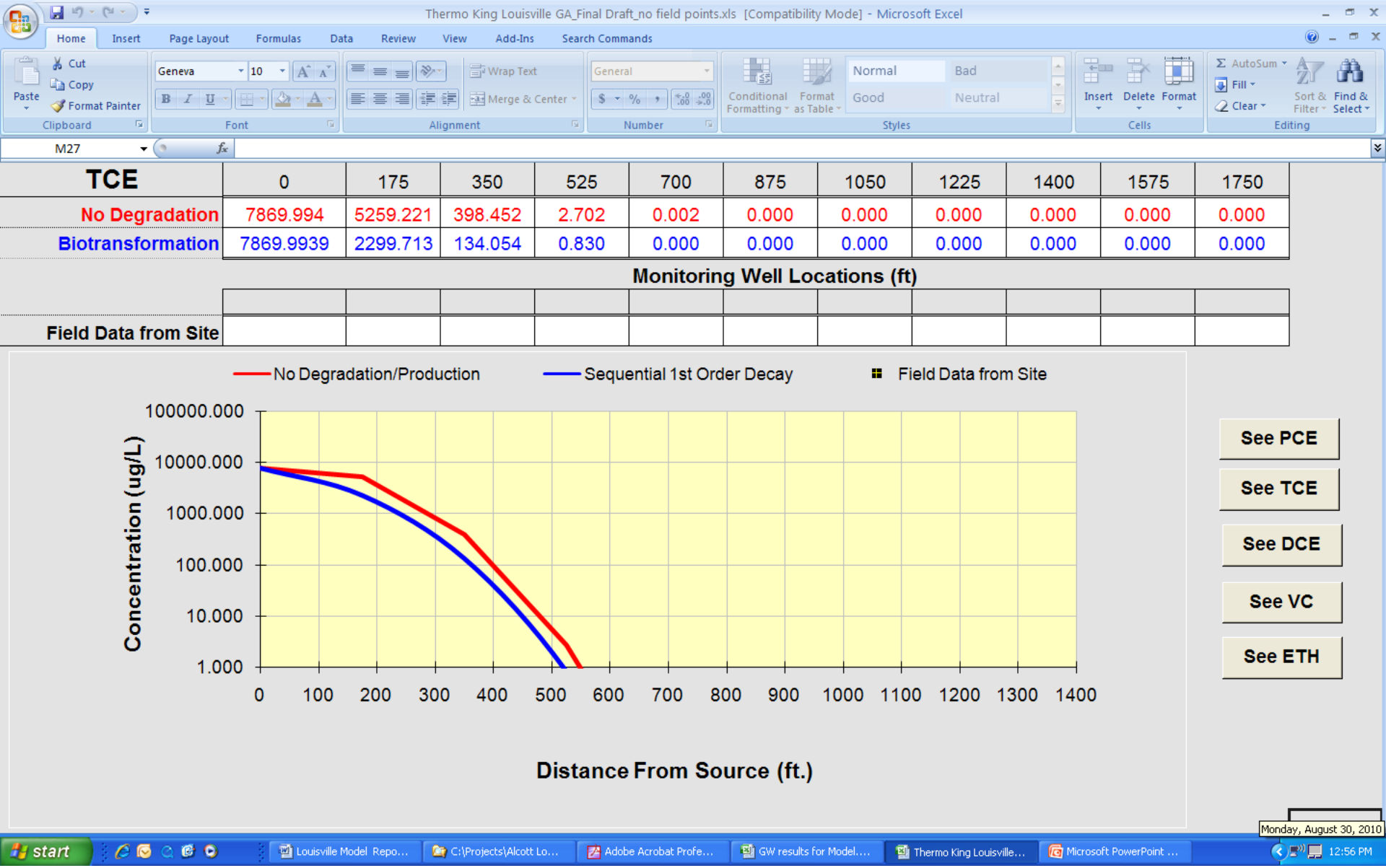


Figure E6 TCE, 2012

Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

DCE	0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	444.093	296.770	22.484	0.152	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biotransformation	444.0929	1865.187	152.795	1.049	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	Monitoring Well Locations (ft)										
Field Data from Site											

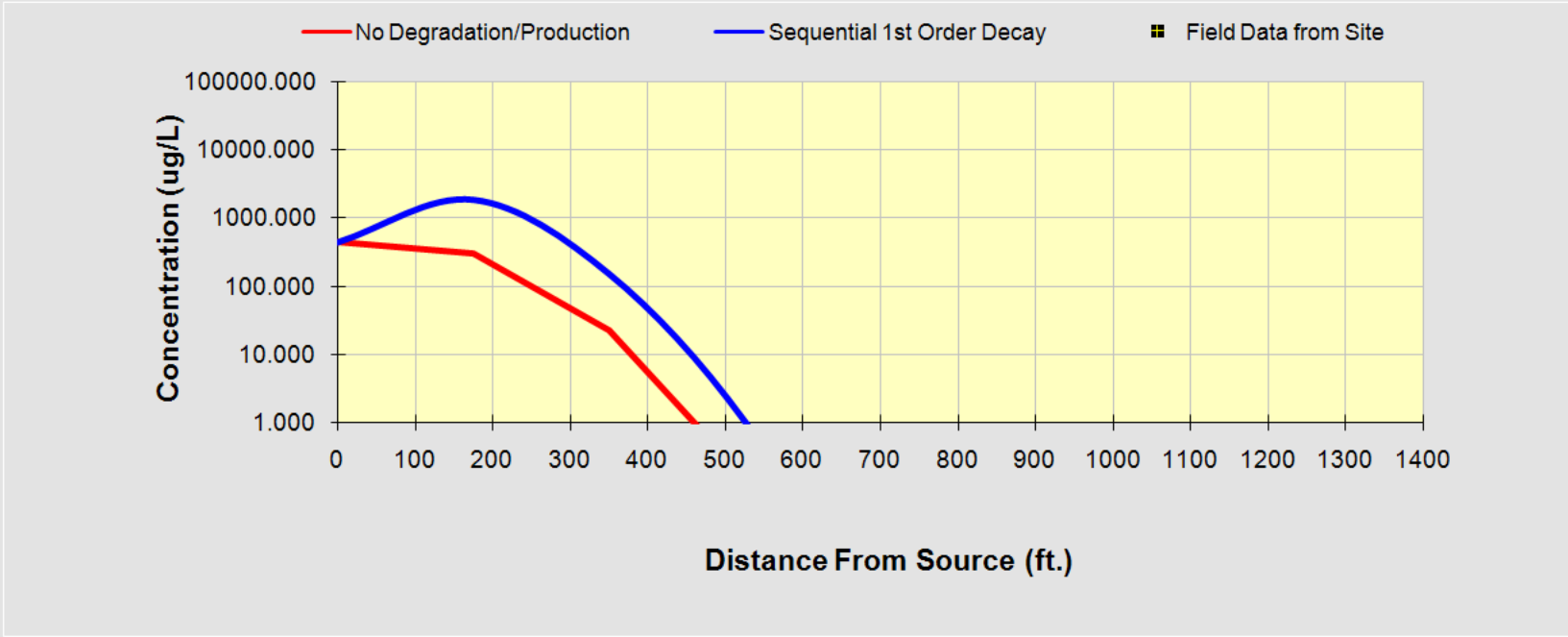


Figure E7 cis-1,2-DCE, 2012

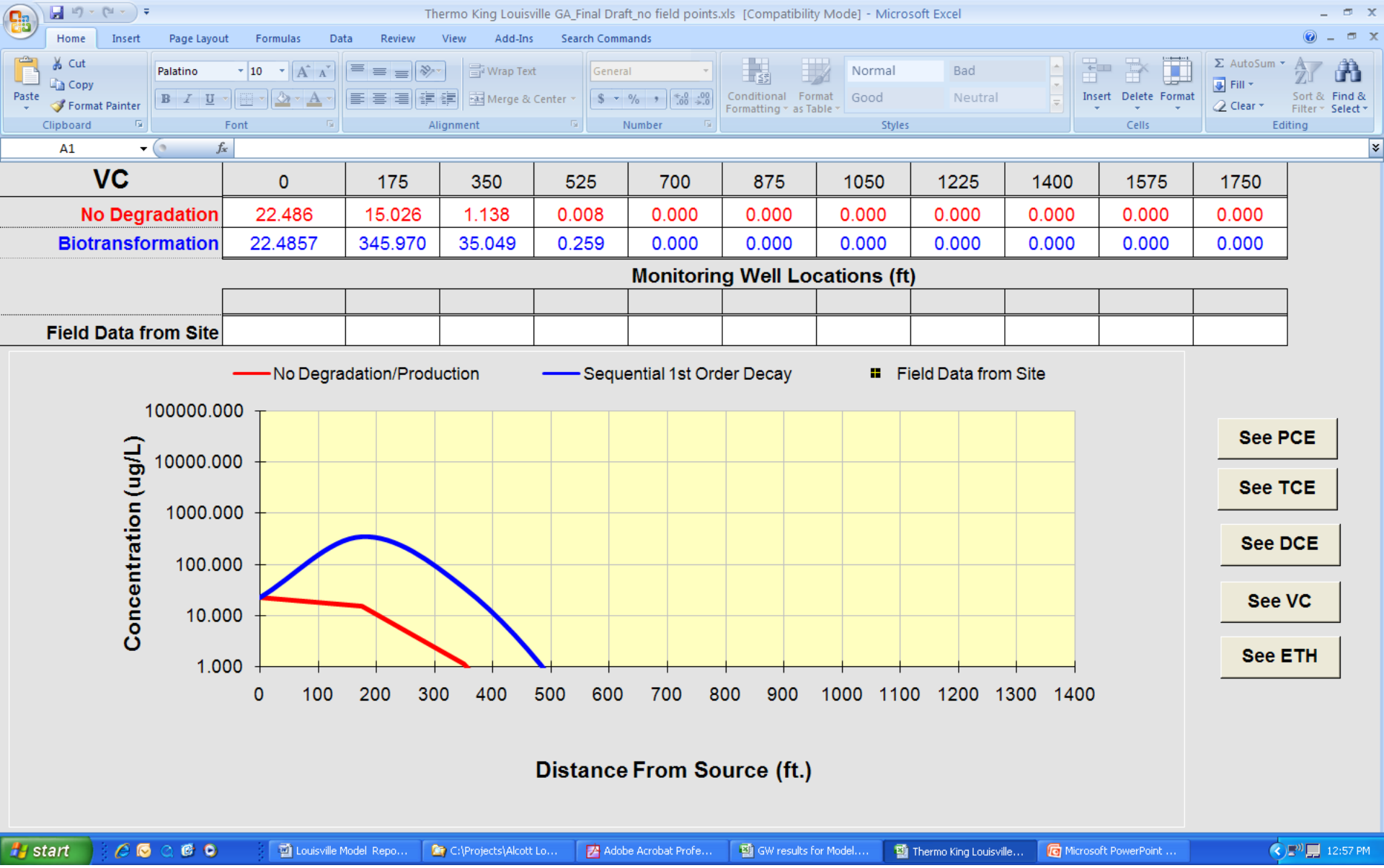


Figure E8 VC, 2012

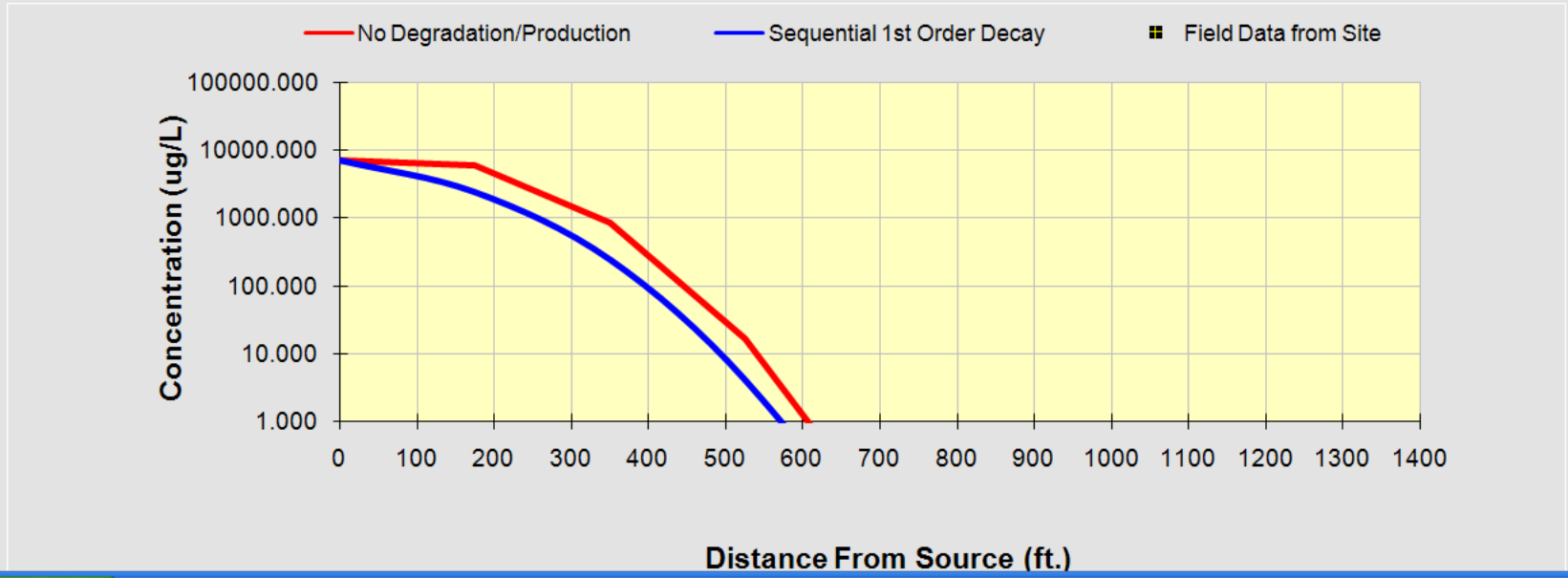
Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Add-Ins | Search Commands

Cut | Copy | Format Painter | Paste | Clipboard | Palatino | 10 | Font | Wrap Text | Merge & Center | Alignment | General | Number | Conditional Formatting | Format as Table | Normal | Bad | Good | Neutral | Styles | Insert | Delete | Format | Cells | AutoSum | Fill | Clear | Sort & Filter | Find & Select | Editing

A1

TCE	Distance from Source (ft) 0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	7064.324	6048.215	854.606	16.177	0.038	0.000	0.000	0.000	0.000	0.000	0.000
Biotransformation	7064.3237	2394.603	242.505	4.063	0.009	0.000	0.000	0.000	0.000	0.000	0.000
	Monitoring Well Locations (ft)										
Field Data from Site											



See PCE | See TCE | See DCE | See VC | See ETH

start | Louisville Model Repo... | C:\Projects\Alcott Lo... | Adobe Acrobat Profe... | GW results for Model.... | Thermo King Louisville... | Microsoft PowerPoint ... | 12:58 PM

Figure E9 TCE, 2015

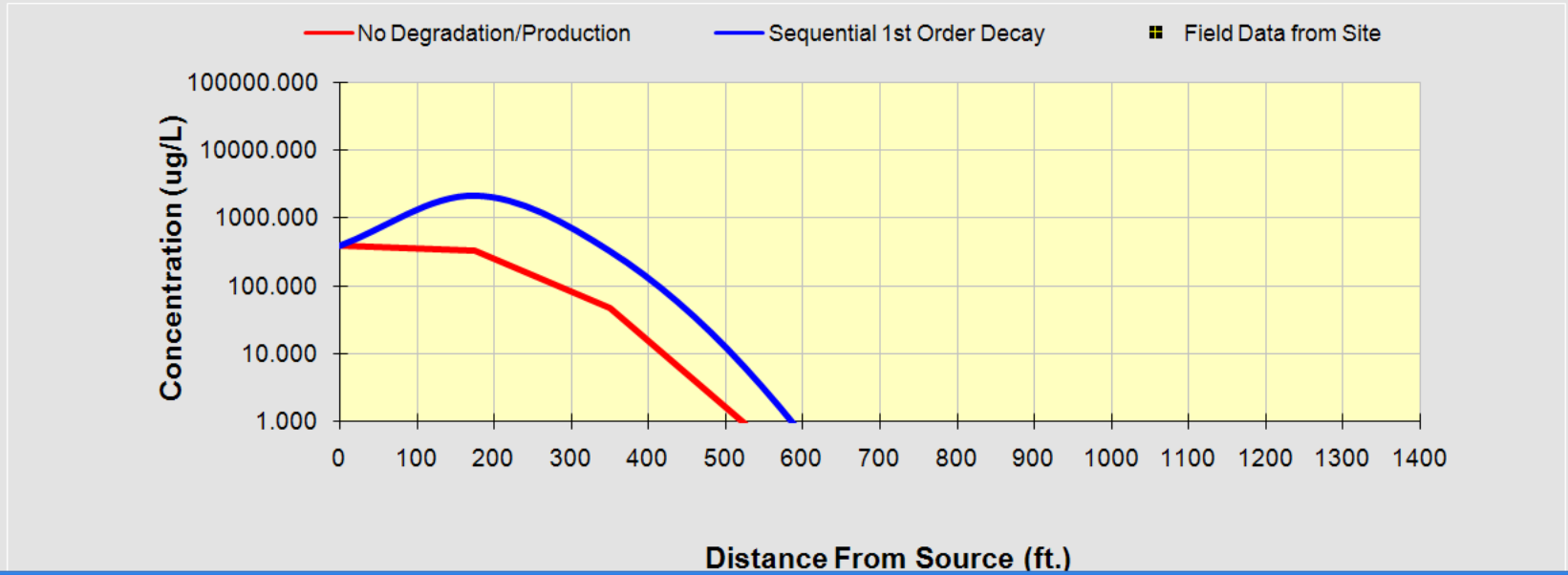
Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Add-Ins | Search Commands

Cut | Copy | Format Painter | Paste | Clipboard | Palatino | 10 | Font | Wrap Text | Merge & Center | Alignment | General | Number | Conditional Formatting | Format as Table | Normal | Bad | Good | Neutral | Styles | Insert | Delete | Format | Cells | AutoSum | Fill | Clear | Sort & Filter | Find & Select | Editing

A1

DCE	Distance from Source (ft) 0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	398.630	341.292	48.224	0.913	0.002	0.000	0.000	0.000	0.000	0.000	0.000
Biotransformation	398.6301	2189.784	330.033	6.273	0.015	0.000	0.000	0.000	0.000	0.000	0.000
	Monitoring Well Locations (ft)										
Field Data from Site											



See PCE | See TCE | See DCE | See VC | See ETH

start | Louisville Model Repo... | C:\Projects\Alcott Lo... | Adobe Acrobat Profe... | GW results for Model.... | Thermo King Louisville... | Microsoft PowerPoint ... | 12:59 PM

Figure E10 cis-1,2-DCE, 2015

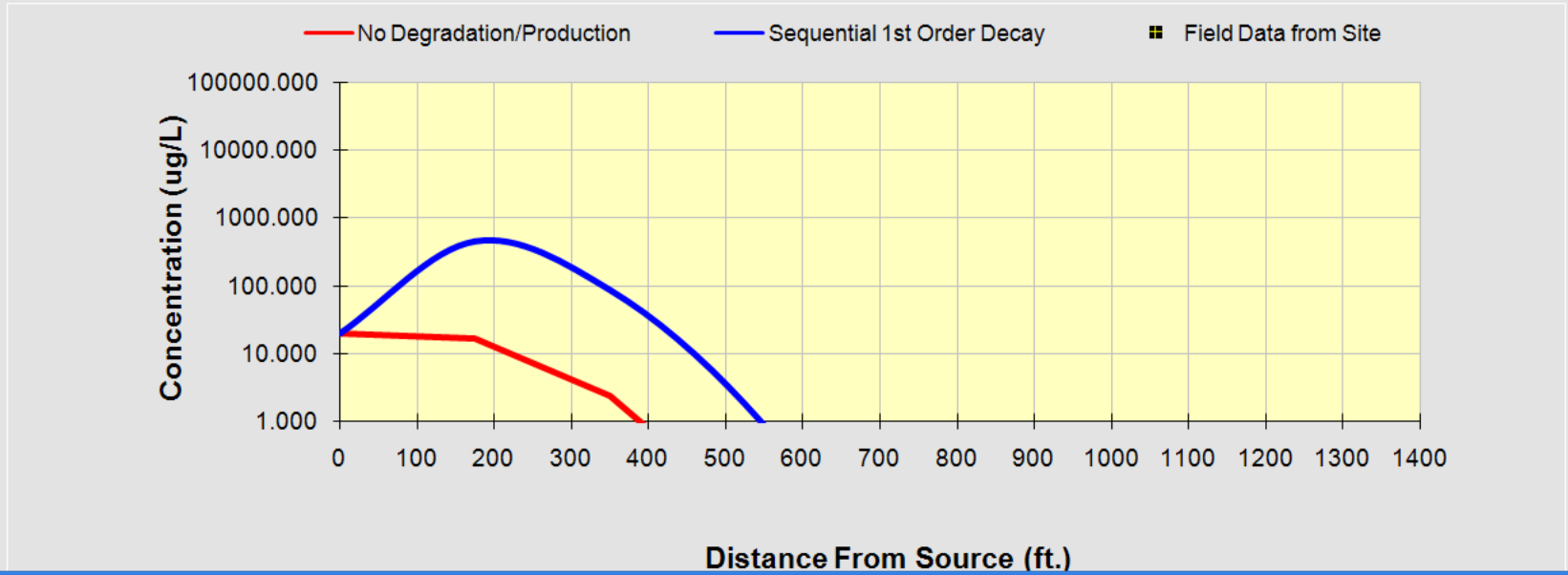
Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Add-Ins | Search Commands

Cut | Copy | Format Painter | Paste | Clipboard | Palatino | 10 | Font | Wrap Text | Merge & Center | Alignment | General | Number | Conditional Formatting | Format as Table | Normal | Bad | Good | Neutral | Styles | Insert | Delete | Format | Cells | AutoSum | Fill | Clear | Sort & Filter | Find & Select | Editing

A1

	Distance from Source (ft)										
VC	0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	20.184	17.281	2.442	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Biotransformation	20.1838	461.383	88.415	1.829	0.004	0.000	0.000	0.000	0.000	0.000	0.000
	Monitoring Well Locations (ft)										
Field Data from Site											



See PCE

See TCE

See DCE

See VC

See ETH

start | Louisville Model Repo... | C:\Projects\Alcott Lo... | Adobe Acrobat Profe... | GW results for Model.... | Thermo King Louisville... | Microsoft PowerPoint ... | 12:59 PM

Figure E11 VC, 2015

Figure E12 TCE, 2020

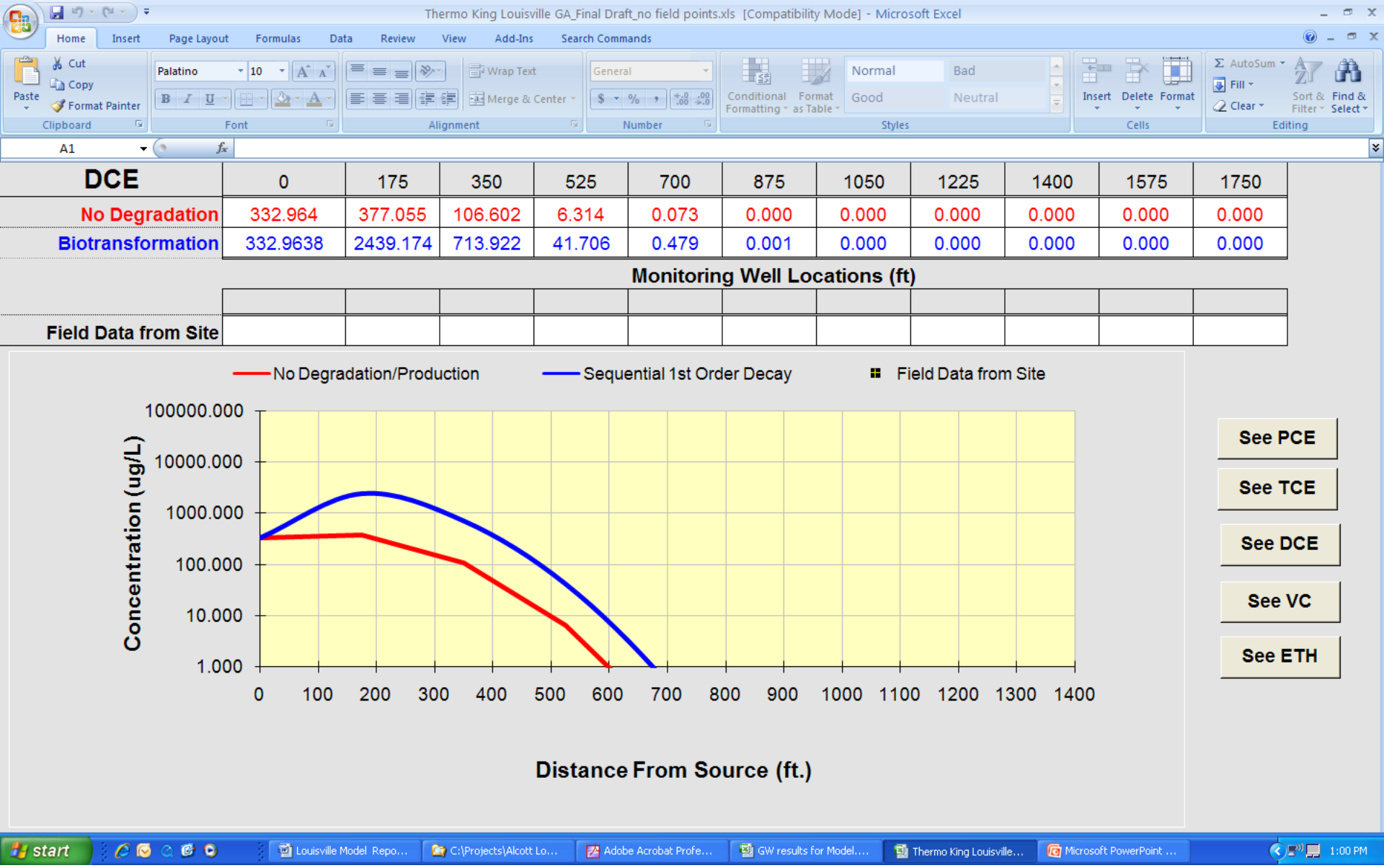


Figure E13 cis-1,2-DCE, 2020

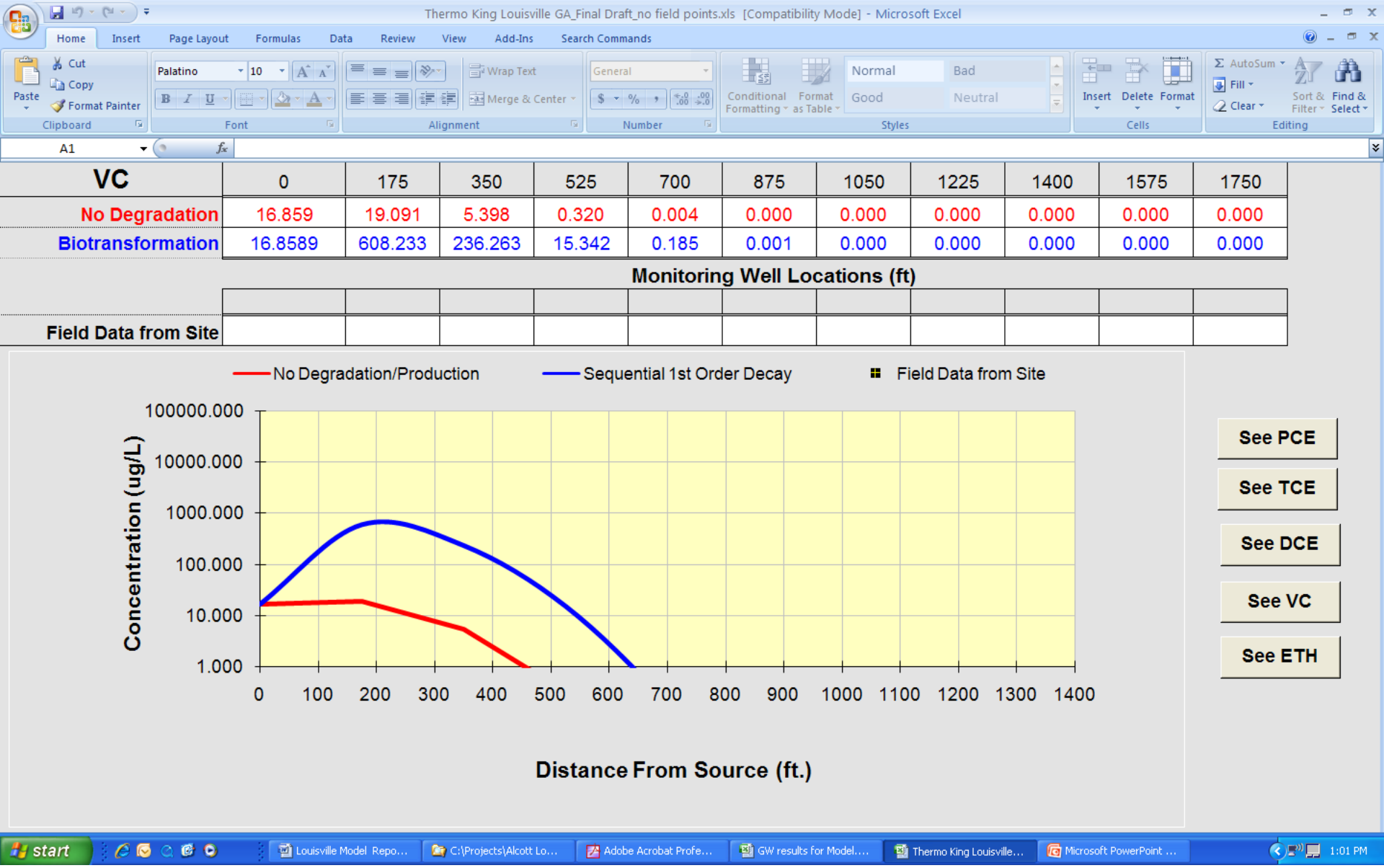


Figure E14 VC, 2020

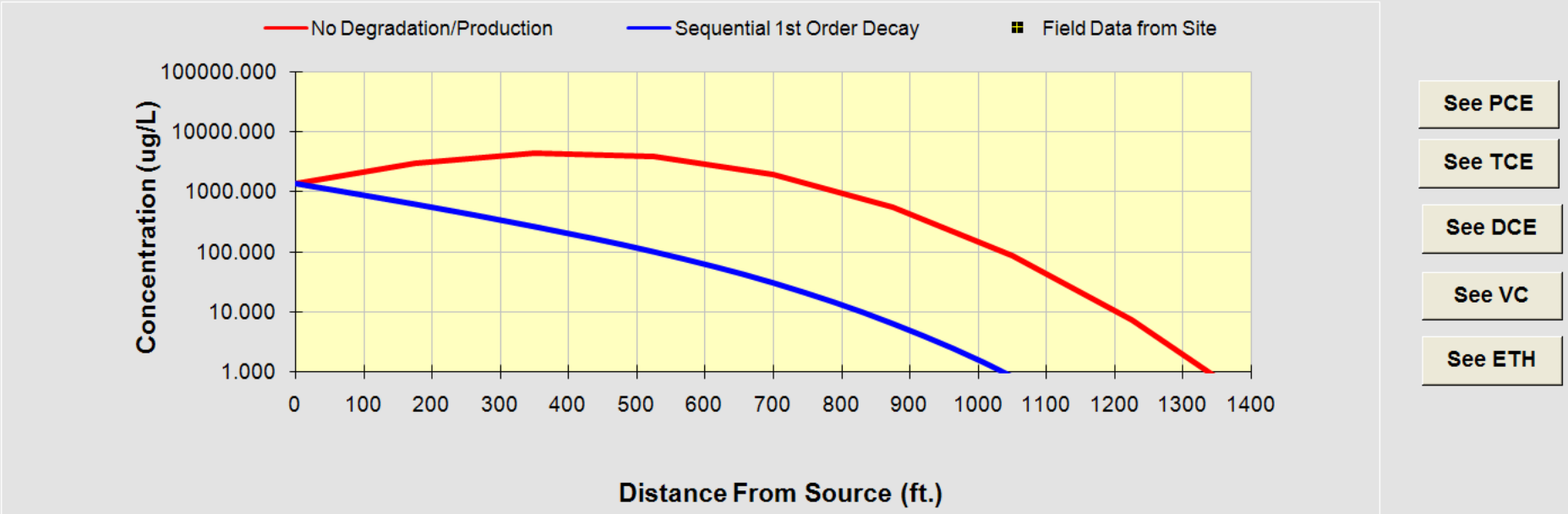
Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Add-Ins | Search Commands

Cut | Copy | Format Painter | Paste | Clipboard | Palatino | 10 | Font | Wrap Text | Merge & Center | Alignment | General | Number | Conditional Formatting | Format as Table | Normal | Bad | Good | Neutral | Styles | Insert | Delete | Format | Cells | AutoSum | Fill | Clear | Sort & Filter | Find & Select | Editing

A1

TCE	Distance from Source (ft) 0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	1398.021	3108.757	4505.446	3947.983	1996.486	564.214	87.346	7.315	0.329	0.010	0.000
Biotransformation	1398.0205	633.892	267.132	101.413	30.726	6.412	0.829	0.048	0.002	0.000	0.000
	Monitoring Well Locations (ft)										
Field Data from Site											



start | Louisville Model Repo... | C:\Projects\Alcott Lo... | Adobe Acrobat Profe... | GW results for Model.... | Thermo King Louisville... | Microsoft PowerPoint ... | 1:01 PM

Figure E15 TCE, 2060

Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

	Distance from Source (ft)										
DCE	0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	78.888	175.423	254.236	222.779	112.659	31.838	4.929	0.413	0.019	0.001	0.000
Biotransformation	78.8884	954.181	1035.505	692.222	292.829	74.029	10.674	0.858	0.025	0.001	0.000
	Monitoring Well Locations (ft)										
Field Data from Site											

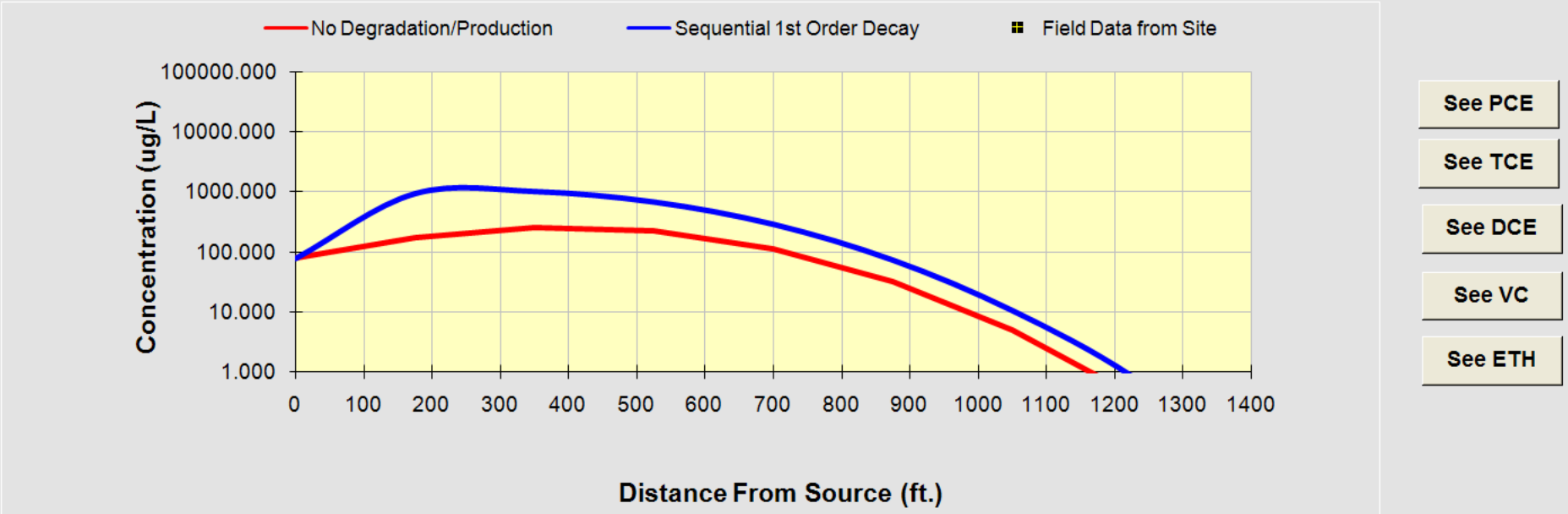


Figure E16 cis-1,2-DCE, 2060

Thermo King Louisville GA_Final Draft_no field points.xls [Compatibility Mode] - Microsoft Excel

Distance from Source (ft)

VC	0	175	350	525	700	875	1050	1225	1400	1575	1750
No Degradation	3.994	8.882	12.873	11.280	5.704	1.612	0.250	0.021	0.001	0.000	0.000
Biotransformation	3.9944	404.081	747.340	660.644	325.043	89.442	13.570	1.228	0.032	0.001	0.000

Monitoring Well Locations (ft)

Field Data from Site											

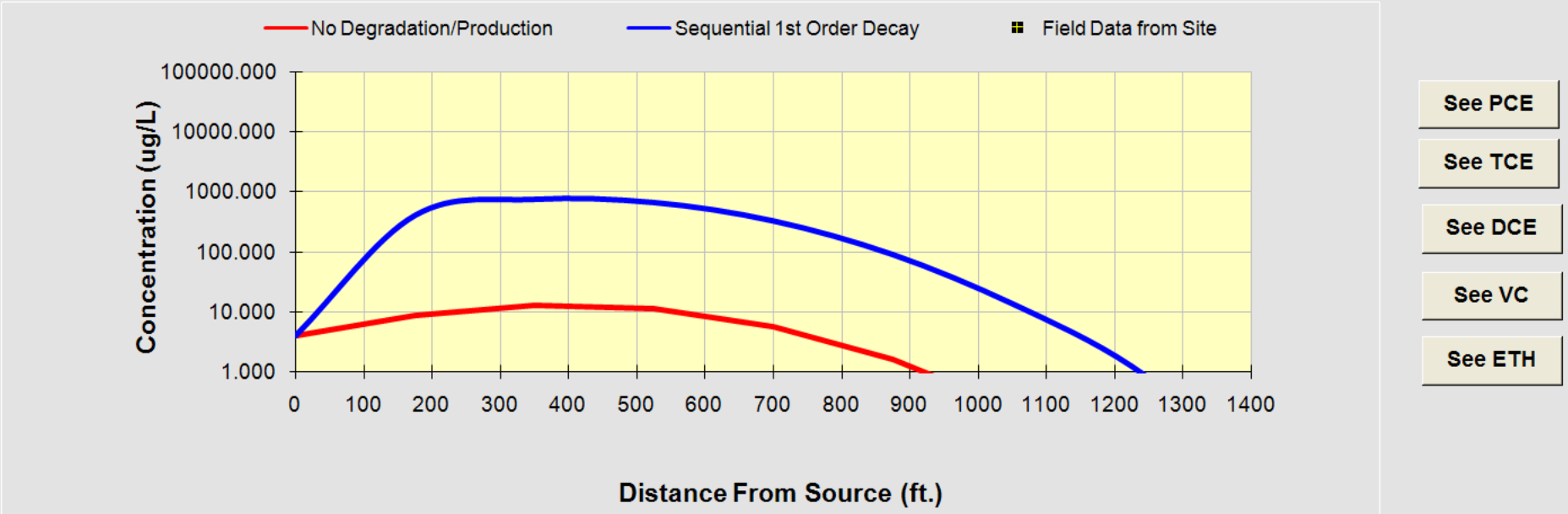


Figure E17 VC, 2060

APPENDIX F:

WELL CONSTRUCTION DIAGRAMS FOR NEW WELLS MW-25, MW-26, MW-27, and MW-28

TEST BORING RECORD

HEIGHT OF RISER: -0.31
TOP OF CASING ELEVATION: 321.18

C:\TKLOGS\MW25.PL3 JMO-1 11-22-10

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PID Reading (meter units)	Sample Points
321.5	0.0	Red-brown moist sandy medium plasticity CLAY (CH) (probable pond fill)			
	2.0	Red-brown moist medium plasticity CLAY (CH) (probable pond fill); higher plasticity than 0-2 feet		0	
316.5					
	7.0	Red-brown moist slightly sandy to sandy high plasticity CLAY (CH)			
311.5				0	
306.5					
301.5					
	21.5	Red-brown moist micaceous clayey fine to medium SAND (SC)		0	
296.5					
	27.0	White and orange-brown slightly clayey poorly graded fine to medium SAND (SP) with some slightly cemented zones			
291.5				0	
286.5					
	37.0	Light red-brown poorly graded SAND (SP)			
281.5	40.0				

REMARKS:
1) Drilling technique: 0 to 107 feet using rotosonic techniques.
2) Boring advanced 0 to 60 feet with 10-inch diameter outer rotosonic casing and 4-inch dia. soil sampler.
3) 6-inch diameter PVC surface casing grouted in place from 0 to 60 feet.

DRILLED BY Boart Longyear
LOGGED BY J. Moore
CHECKED BY J. Quinn

BORING NUMBER MW-25
DATE STARTED 6/1/10
DATE COMPLETED 6/2/10
JOB NUMBER 6122-09-0322

MACTEC

TEST BORING RECORD

HEIGHT OF RISER: -0.31
TOP OF CASING ELEVATION: 321.18

C:\TKLOGS\MW25.PL3 JMO-1 11-22-10

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	PID Reading (meter units)
281.5	40.0	(continued) Light red-brown poorly graded SAND (SP)	0
	43.0	Light red-brown poorly graded SAND (SP) with thin brown clay zones and white limestone fragments	
276.5	46.5		
	47.0	Dark brown wet poorly graded SAND (SP) with clay zones; some foliation in clay zones	
		Light gray, white and yellow-brown poorly graded SAND (SP) with increasing fines with depth	0
271.5			
266.5	55.0	Stiff white, tan and light gray moist CLAY with some angular fossiliferous limestone fragments	
261.5	60.0	Stiff light gray and white moist to dry low plasticity CLAY (CL) with some limestone fragments	0
256.5			
251.5			
246.5	74.7	Light gray and greenish-gray moist micaceous silty fine to coarse SAND (SM) with clay zones, fossiliferous limestone fragments and slight hydrocarbon odor	8.1
241.5	80.0		

WELL DIAGRAM

Sample Points

REMARKS:
4) Boring advanced from 60 to 107 feet inside 6-inch diameter PVC surface casing with nominal 6-inch diameter outer rotosonic casing and 4-inch diameter soil sampler.

DRILLED BY Boart Longyear
LOGGED BY J. Moore
CHECKED BY J. Quinn

BORING NUMBER MW-25
DATE STARTED 6/1/10
DATE COMPLETED 6/2/10
JOB NUMBER 6122-09-0322

MACTEC

TEST BORING RECORD

HEIGHT OF RISER: -0.31
TOP OF CASING ELEVATION: 321.18

C:\TKLOGS\MW25.PL3 JMO-1 11-22-10

ELEVATION (FEET)	DEPTH (FEET)	DESCRIPTION	WELL DIAGRAM	PID Reading (meter units)	Sample Points
241.5	80.0	(continued) Light gray and greenish-gray moist micaceous silty fine to coarse SAND (SM) with fossiliferous limestone fragments and slight hydrocarbon odor		12.7	
236.5					
	87.0	Gray to blue-gray silty fine to coarse SAND (SM) with interbedded CLAY and SILT and chert and limestone fragments and slight hydrocarbon odor			
231.5				8.7	
226.5					
221.5				11.4	
216.5					
	106.0	Stiff gray to blue-gray CLAY (CH) with slight hydrocarbon odor			
	107.0	Boring terminated at 107.0 feet			
211.5					
206.5					
201.5	120.0				

REMARKS:
5) Inner Casing: Schedule 40 PVC, 2-inch diameter well casing set 0 to 107 feet with 15 feet of 0.01-inch slot well screen at 91.8 to 106.8 feet.
6) ∓ Static water level on 6/24/10.

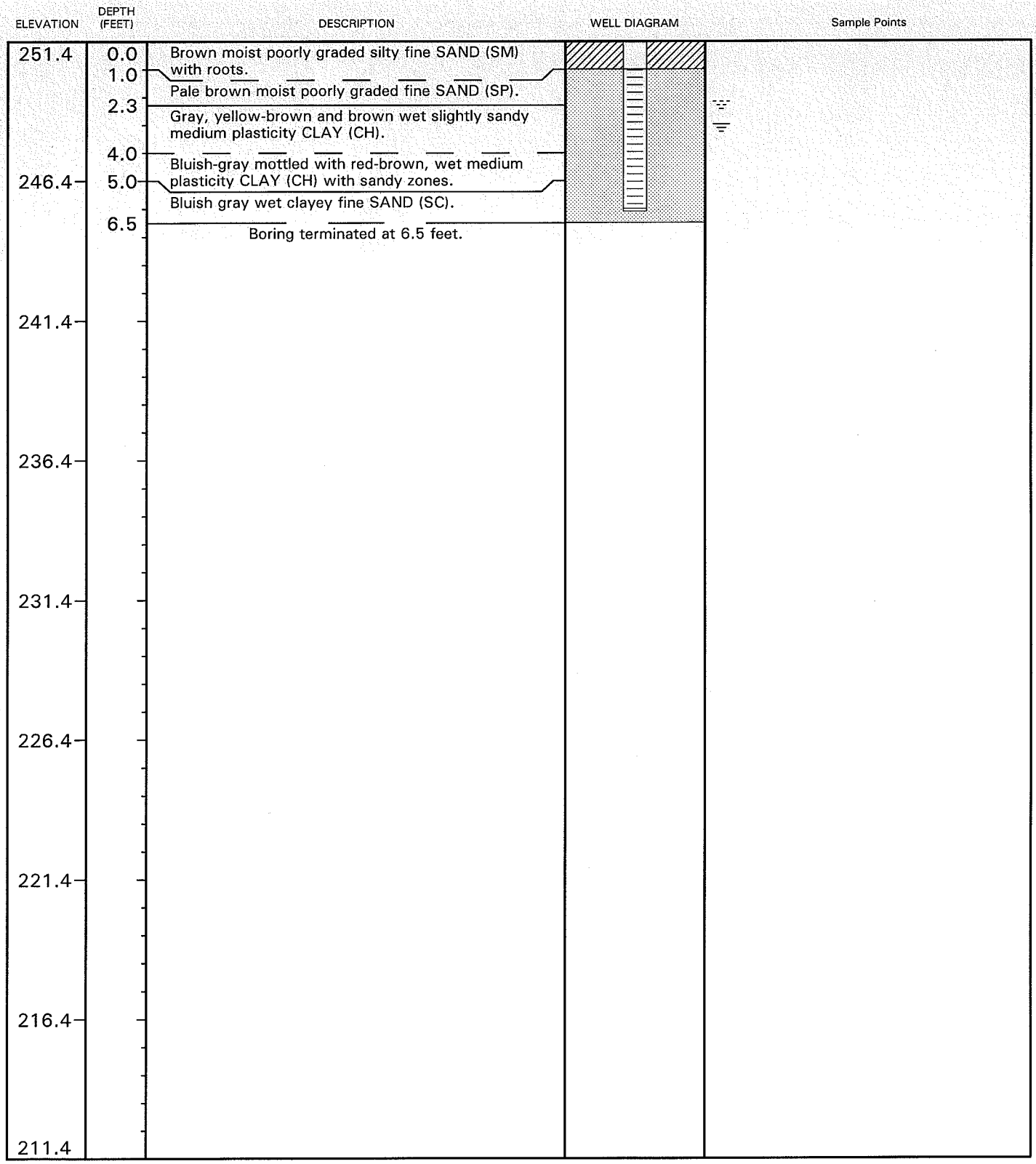
DRILLED BY	Boart Longyear	BORING NUMBER	MW-25
LOGGED BY	J. Moore	DATE STARTED	6/1/10
CHECKED BY	J. Quinn	DATE COMPLETED	6/2/10
		JOB NUMBER	6122-09-0322

MACTEC

TEST BORING RECORD

Height of riser 3.85 ft
Top of casing elevation 255.29 ft

C:\TKLOGS\MW26.PL3 JMO--1 11-22-10



REMARKS:
1. Drilling Technique: 0 to 6.5 feet using 4-inch OD hand auger.
2. 3/4-inch PVC well with 5 feet pre-packed screen.
3. ⏚ Water level measured on 10/20/10.

DRILLED BY MACTEC
LOGGED BY J. Moore
CHECKED BY J. Quinn

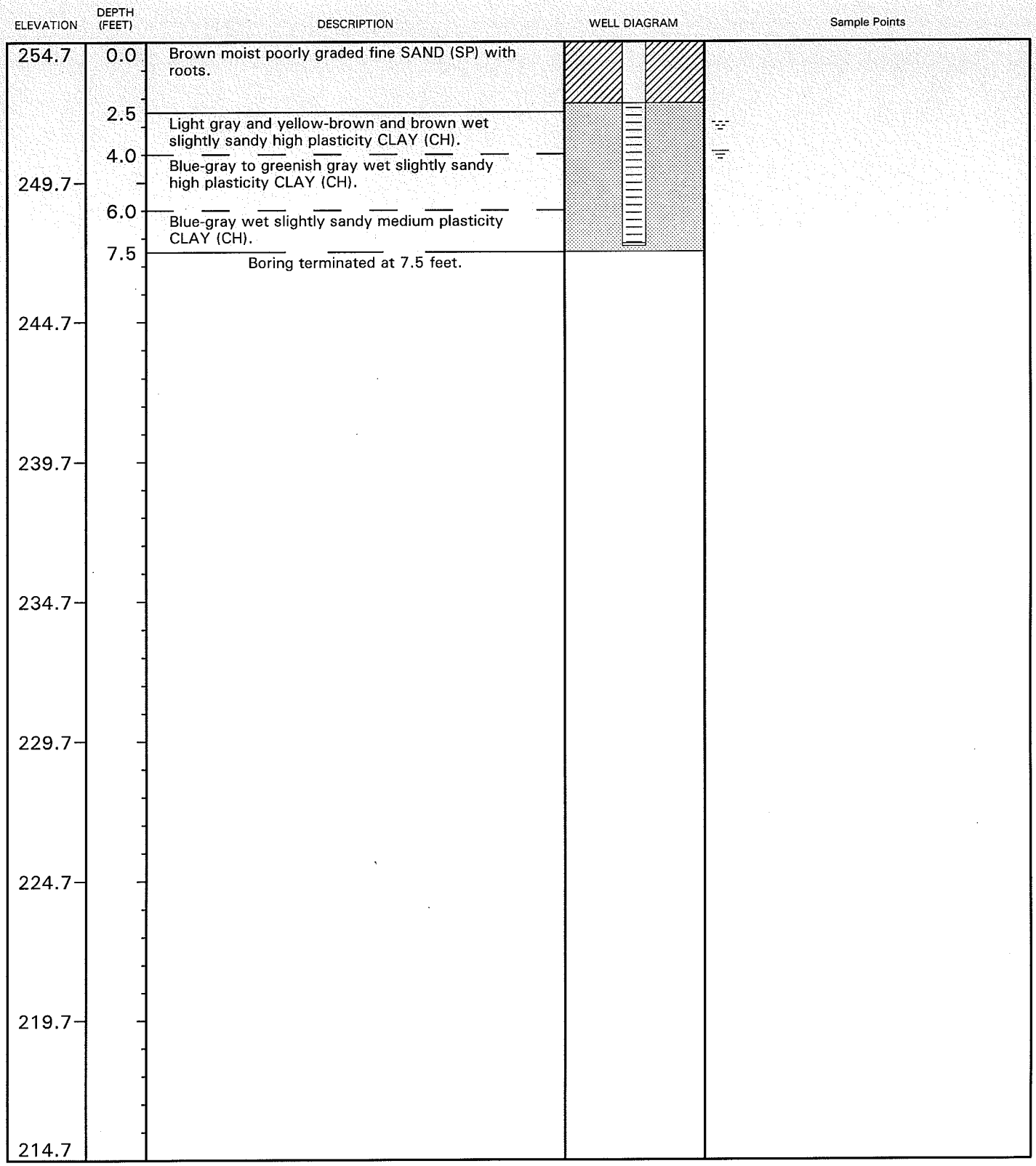
BORING NUMBER	MW-26
DATE STARTED	10/19/2010
DATE COMPLETED	10/19/2010
JOB NUMBER	6122-09-0322

MACTEC Engineering&Consulting

TEST BORING RECORD

Height of riser 2.8 ft
Top of casing elevation 257.50 ft

C:\TKLOGS\MW27.PL3 JMQ-1 11-22-10



REMARKS:
1. Drilling Technique: 0 to 7.5 feet using 4-inch OD hand auger.
2. 3/4-inch PVC well with 5 feet pre-packed screen.
3. ⏚ Water level measured on 10/20/10.

DRILLED BY MACTEC
LOGGED BY J. Moore
CHECKED BY J. Quinn

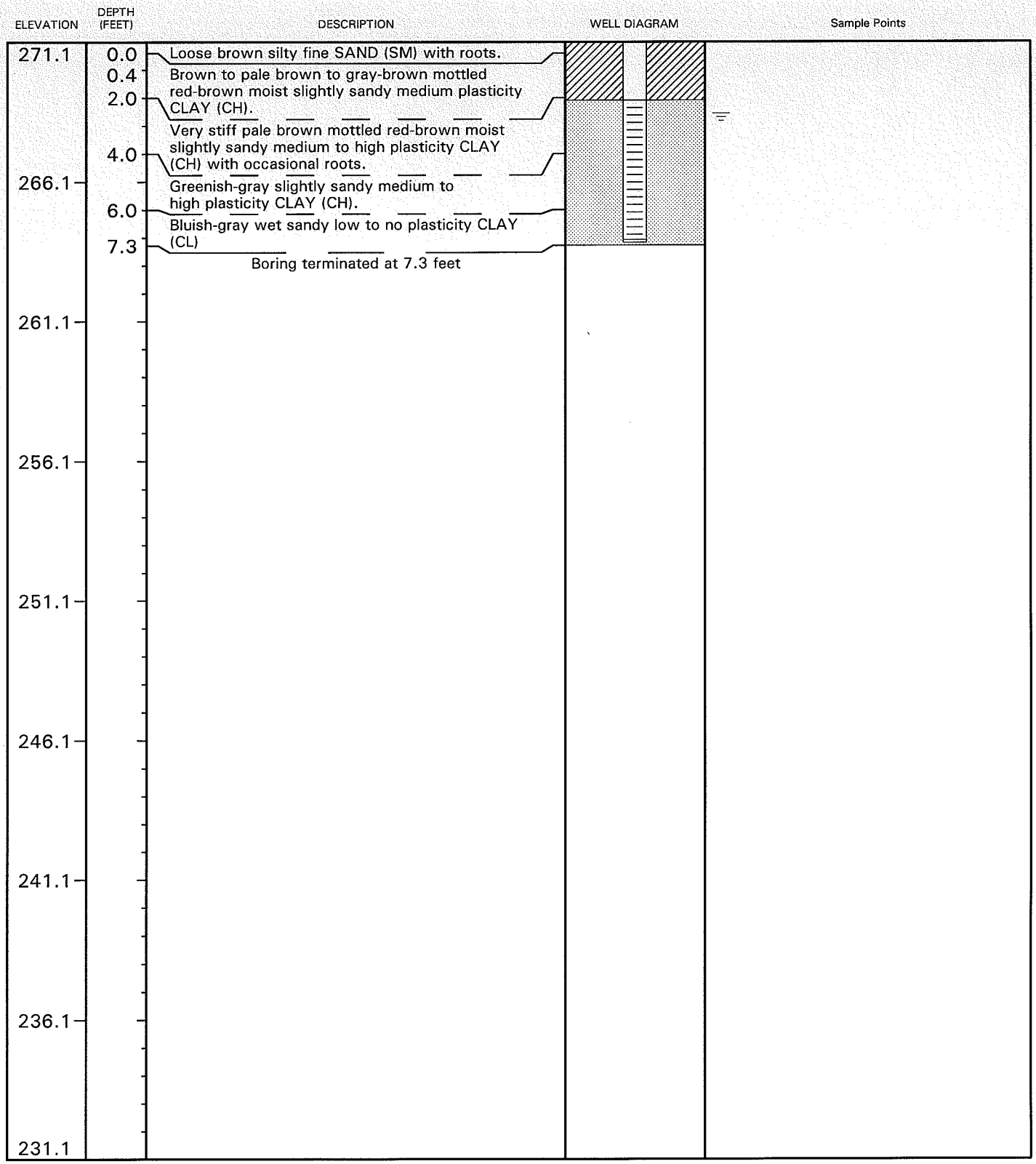
BORING NUMBER	MW-27
DATE STARTED	10/19/2010
DATE COMPLETED	10/19/2010
JOB NUMBER	6122-09-0322

MACTEC Engineering&Consulting

TEST BORING RECORD

Height of riser 0.65 ft
Top of casing elevation 271.73 ft

C:\TKLOGS\MW28.PL3 JMQ-1 11-22-10



REMARKS:
1. Drilling Technique: 0 to 7.3 feet using 4-inch OD hand auger.
2. 3/4-inch PVC well with 5 feet pre-packed screen.
3. ⏚ Water level measured on 10/20/10.

DRILLED BY MACTEC
LOGGED BY J. Moore
CHECKED BY J. Quinn

BORING NUMBER	MW-28
DATE STARTED	10/19/2010
DATE COMPLETED	10/19/2010
JOB NUMBER	6122-09-0322

MACTEC Engineering&Consulting

WELL DEVELOPMENT DATA

MACTEC JOB NAME___TK-Louisville___JOB NUMBER_6122-09-0322____

BY__JAM_____ DATE__6/3/2010____ CHECKED__RNQ_____ DATE_7/19/2010_____
SHEET _1__OF _1_

WELL DEVELOPMENT DATA

- WELL NO.__MW-25_____
- DATE OF INSTALLATION:___6/2/2010_____ DATE OF DEVELOPMENT:___6/3/2010_____
- STATIC WATER LEVEL: Before Development 73.38 FT.; 24 Hours After Development _75.91__FT.
- QUANTITY OF WATER LOST DURING DRILLING, IF USED:__0_____GAL.
- QUANTITY OF STANDING WATER IN WATER AND ANNULUS BEFORE DEVELOPMENT__21____GAL.

Volume Removed (gals)	pH std units	Specific Cond. (uS/cm)	Temp. (F or C °)	Turbidity NTUs	Notes
0	6.1	0.4	21 C	nm	
20	6.1	0.4	21 C	nm	Very turbid with odor
56	6.1	0.4	21 C	nm	Water clearing, light white-gray color and silty
111	6.1	0.4	21 C	nm	
116	6.5	0.4	21 C	nm	
121		0.4	21 C	nm	Continued pump/surge
126	6.5	0.4	21 C	nm	Continued pump/surge
131	6.5	0.4	21 C	nm	Continued pump/surge
136	6.5	0.4	21 C	nm	Water clear

- DEPTH FROM TOP OF WELL CASING TO BOTTOM OF WELL _____107_____FT.
- SCREEN LENGTH _____15_____FT.
- DEPTH TO TOP OF SEDIMENT: Before Development 106.5__ FT.; After Development _107____FT.
- PHYSICAL CHARACTER OF WATER:__begins as very turbid and clears after pumping and surging_
- TYPE AND SIZE OF WELL DEVELOPMENT EQUIPMENT:__air lift pump_____
- DESCRIPTION OF SURGE TECHNIQUE , IF USED:__moving pump up and down through screen interval__
- HEIGHT OF WELL CASING ABOVE GROUND SURFACE____-0.3_____FT.
- TIME FOR REMOVAL: _____5 hrs_____Hr./ Min.

- DEVELOPMENT CONDITIONS: 1) Well Water is Reasonably Clear 2) Sediment Thickness <5% of screen Length 3) Removal of 5 Well Volumes, Including Saturated Filter Annulus

MACTEC JOB NAME TK-Louisville JOB NUMBER 6122-09-0322

BY JAM DATE 10/19/2010 CHECKED RNQ DATE 12/17/2010
SHEET 1 OF 1

WELL DEVELOPMENT DATA

- WELL NO. MW-26
- DATE OF INSTALLATION: 10/19/2010 DATE OF DEVELOPMENT: 10/20/2010
- STATIC WATER LEVEL: Before Development 7.0 FT.; 24 Hours After Development 7.0 FT.
- QUANTITY OF WATER LOST DURING DRILLING, IF USED: 0 GAL.
- QUANTITY OF STANDING WATER IN WATER AND ANNULUS BEFORE DEVELOPMENT 1.1 GAL.

Volume Removed (gals)	pH std units	Specific Cond. (uS/cm)	Temp. (F or C °)	Turbidity NTUs	Notes
0	nm	nm	nm	nm	
2	6.27	0.25	18.8 C	22.7	Very turbid at beginning and then clears and then goes dry

- DEPTH FROM TOP OF WELL CASING TO BOTTOM OF WELL 10 ft (3.9 ft stickup well set to 6.1 ft bgs) FT.
- SCREEN LENGTH 5 prepack screen FT.
- DEPTH TO TOP OF SEDIMENT: Before Development 10 FT.; After Development 10 FT.
- PHYSICAL CHARACTER OF WATER: begins as very turbid and clears after pumping and surging
- TYPE AND SIZE OF WELL DEVELOPMENT EQUIPMENT: peristaltic pump
- DESCRIPTION OF SURGE TECHNIQUE , IF USED: moving tubing up and down through screen interval
- HEIGHT OF WELL CASING ABOVE GROUND SURFACE 3.9 FT.
- TIME FOR REMOVAL: 15 min Hr./ Min.

- DEVELOPMENT CONDITIONS: 1) Well Water is Reasonably Clear 2) Sediment Thickness <5% of screen Length 3) Removal of 5 Well Volumes, Including Saturated Filter Annulus

MACTEC JOB NAME TK-Louisville JOB NUMBER 6122-09-0322

BY JAM DATE 10/19/2010 CHECKED RNQ DATE 12/17/2010
SHEET 1 OF 1

WELL DEVELOPMENT DATA

- WELL NO. MW-27
- DATE OF INSTALLATION: 10/19/2010 DATE OF DEVELOPMENT: 10/20/2010
- STATIC WATER LEVEL: Before Development 6.84 FT.; 24 Hours After Development 6.84 FT.
- QUANTITY OF WATER LOST DURING DRILLING, IF USED: 0 GAL.
- QUANTITY OF STANDING WATER IN WATER AND ANNULUS BEFORE DEVELOPMENT 1.2 GAL.

Volume Removed (gals)	pH std units	Specific Cond. (uS/cm)	Temp. (F or C °)	Turbidity NTUs	Notes
0	nm	nm	nm	nm	
0.5	nm	nm	nm	nm	Pumped dry, turbid
1	nm	nm	nm	nm	turbid
1.2	5.42	0.07	18.9	111	clearing

- DEPTH FROM TOP OF WELL CASING TO BOTTOM OF WELL 10.1 (2.8 ft stickup well set to 7.3 ft bgs) FT.
- SCREEN LENGTH 5 prepack screen FT.
- DEPTH TO TOP OF SEDIMENT: Before Development 10.1 FT.; After Development 10.1 FT.
- PHYSICAL CHARACTER OF WATER: begins as turbid and clears after pumping and surging
- TYPE AND SIZE OF WELL DEVELOPMENT EQUIPMENT: peristaltic pump
- DESCRIPTION OF SURGE TECHNIQUE , IF USED: moving tubing up and down through screen interval
- HEIGHT OF WELL CASING ABOVE GROUND SURFACE 2.8 FT.
- TIME FOR REMOVAL: 11 min Hr./ Min.

- DEVELOPMENT CONDITIONS: 1) Well Water is Reasonably Clear 2) Sediment Thickness <5% of screen Length 3) Removal of 5 Well Volumes, Including Saturated Filter Annulus

MACTEC JOB NAME TK-Louisville JOB NUMBER 6122-09-0322

BY JAM DATE 10/19/2010 CHECKED RNQ DATE 12/17/2010
SHEET 1 OF 1

WELL DEVELOPMENT DATA

- WELL NO. MW-28
- DATE OF INSTALLATION: 10/19/2010 DATE OF DEVELOPMENT: 10/20/2010
- STATIC WATER LEVEL: Before Development 5.59 FT.; 24 Hours After Development 5.59 FT.
- QUANTITY OF WATER LOST DURING DRILLING, IF USED: 0 GAL.
- QUANTITY OF STANDING WATER IN WATER AND ANNULUS BEFORE DEVELOPMENT 1.6 GAL.

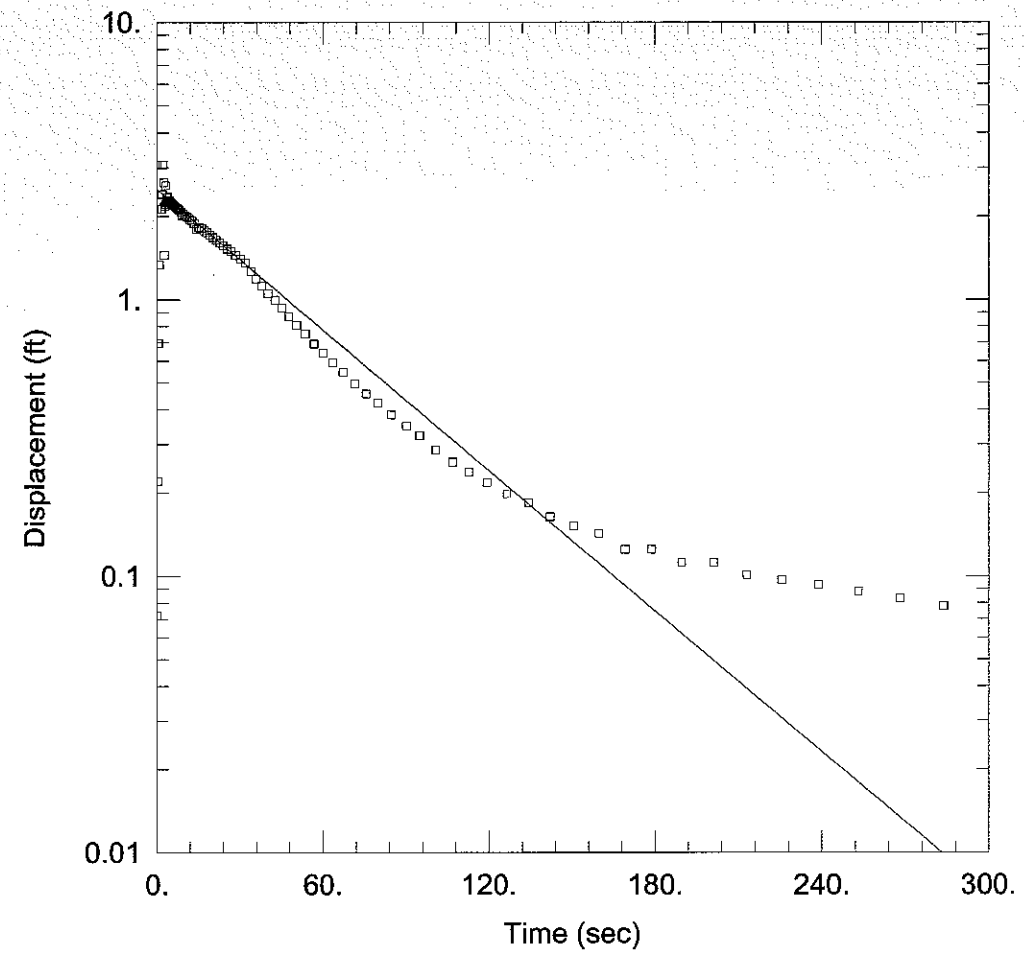
Volume Removed (gals)	pH std units	Specific Cond. (uS/cm)	Temp. (F or C °)	Turbidity NTUs	Notes
0	nm	nm	nm	nm	Turbid gray &white
1.5	nm	nm	nm	614	Turbid gray &white
4	5.58	0.13	18	93	clearing
5	5.6	0.11	18.6	72	clearing

- DEPTH FROM TOP OF WELL CASING TO BOTTOM OF WELL 10.1 (2.9 ft stickup well set to 7.2 ft bgs) FT.
- SCREEN LENGTH 5 prepack screen FT.
- DEPTH TO TOP OF SEDIMENT: Before Development 10.1 FT.; After Development 10.1 FT.
- PHYSICAL CHARACTER OF WATER: begins as turbid and clears after pumping and surging
- TYPE AND SIZE OF WELL DEVELOPMENT EQUIPMENT: peristaltic pump
- DESCRIPTION OF SURGE TECHNIQUE , IF USED: moving tubing up and down through screen interval
- HEIGHT OF WELL CASING ABOVE GROUND SURFACE 2.9 FT.
- TIME FOR REMOVAL: 25 min Hr./ Min.

- DEVELOPMENT CONDITIONS: 1) Well Water is Reasonably Clear 2) Sediment Thickness <5% of screen Length 3) Removal of 5 Well Volumes, Including Saturated Filter Annulus

APPENDIX G:

2010 HYDRAULIC CONDUCTIVITY TESTING RESULTS



WELL TEST ANALYSIS

Data Set: C:\...\MW-17in (3).aqt
Date: 08/04/10 Time: 19:25:41

PROJECT INFORMATION

Company: Mactec
Test Well: MW-17

AQUIFER DATA

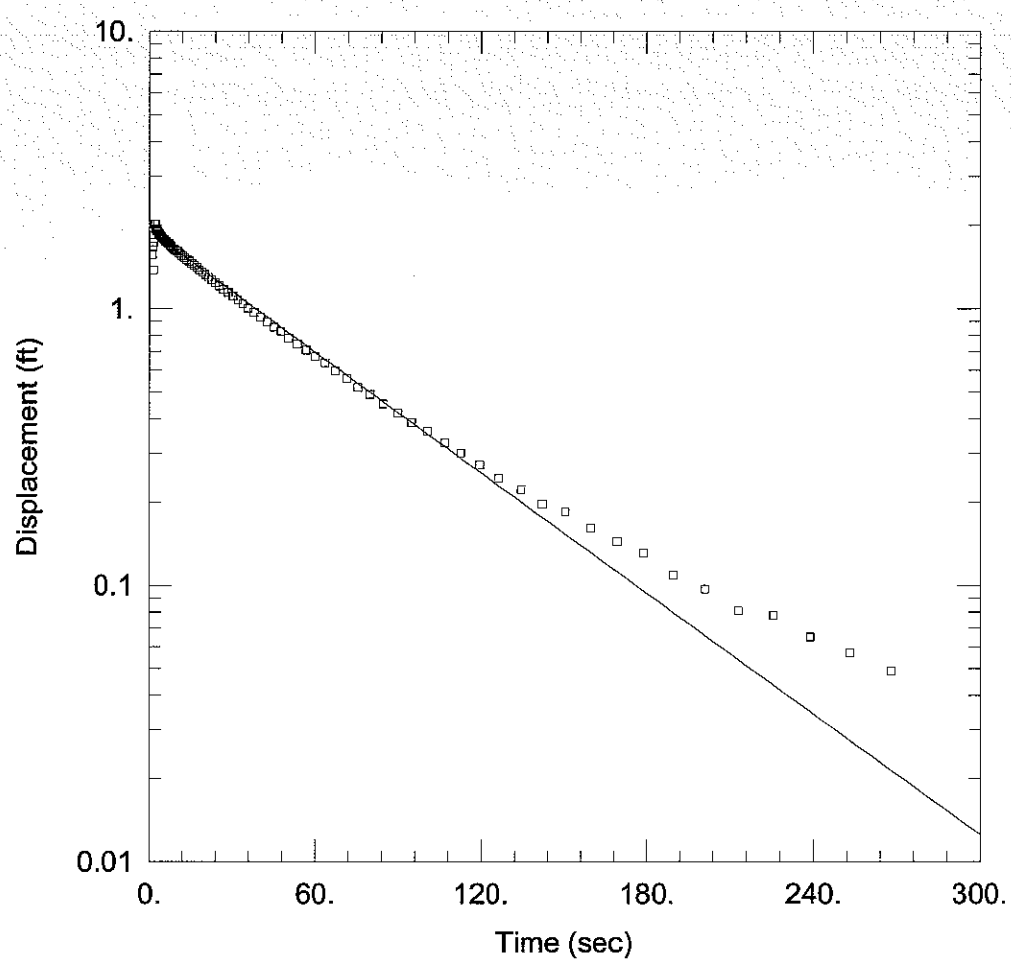
Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-17 In)

Initial Displacement: 3.064 ft
Total Well Penetration Depth: 36.5 ft
Casing Radius: 0.083 ft
Static Water Column Height: 36.5 ft
Screen Length: 14.5 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0004302 cm/sec
y0 = 2.501 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-17out (3).aqt
Date: 08/04/10 Time: 19:26:10

PROJECT INFORMATION

Company: MACTEC
Client: Thermo King
Location: Lousiville
Test Well: MW-17 Out
Test Date: 6/2/10

AQUIFER DATA

Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

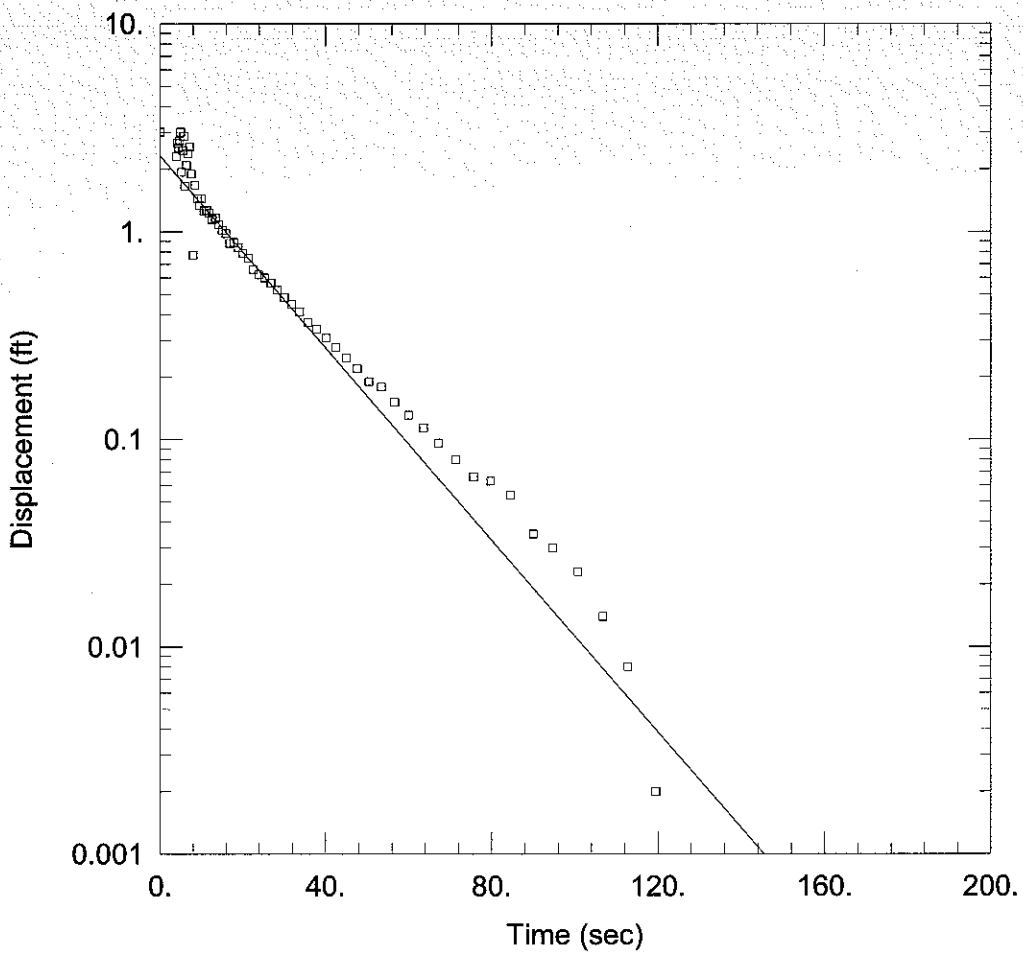
WELL DATA (MW-17 Out)

Initial Displacement: 2.023 ft
Total Well Penetration Depth: 36.5 ft
Casing Radius: 0.083 ft
Static Water Column Height: 36.5 ft
Screen Length: 14.5 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003693 cm/sec y0 = 1.904 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-20in (3).aqt
Date: 08/04/10 Time: 19:26:41

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousivelle
Test Well: MW-20 In
Test Date: 6/2/10

AQUIFER DATA

Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

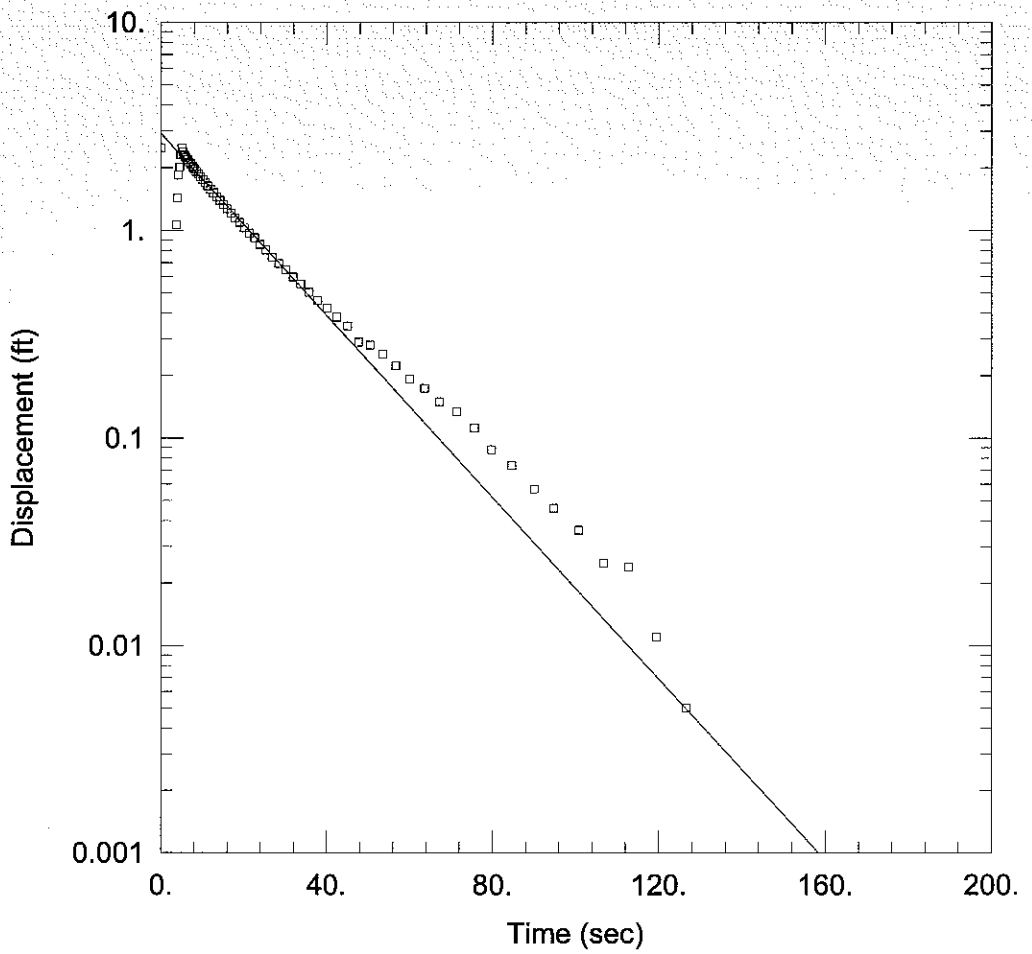
WELL DATA (MW-20 In)

Initial Displacement: 3.015 ft
Total Well Penetration Depth: 26.65 ft
Casing Radius: 0.083 ft
Static Water Column Height: 26.65 ft
Screen Length: 15. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.001088 cm/sec y0 = 2.322 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-20out (3).aqt
Date: 08/04/10 Time: 19:27:14

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville
Test Well: MW-20 Out
Test Date: 6/2/10

AQUIFER DATA

Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

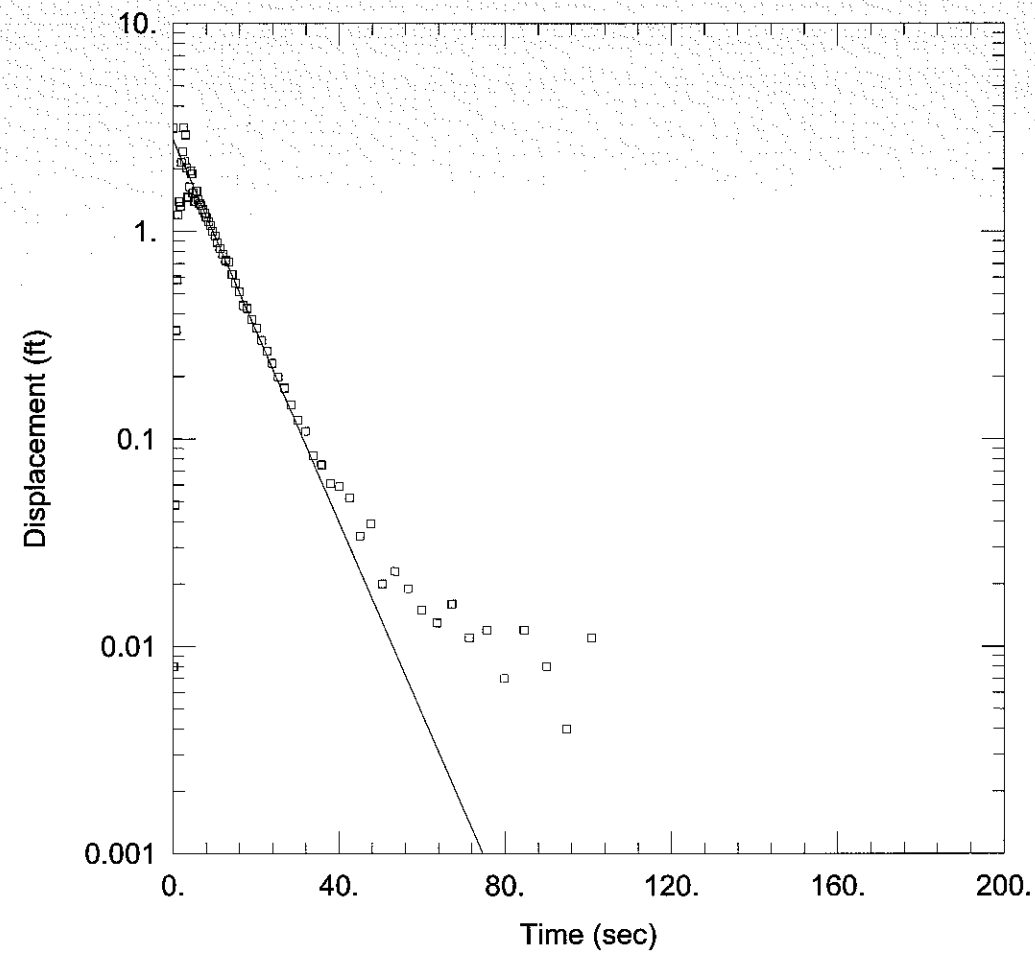
WELL DATA (MW-20 Out)

Initial Displacement: 2.497 ft
Total Well Penetration Depth: 26.65 ft
Casing Radius: 0.083 ft
Static Water Column Height: 26.65 ft
Screen Length: 15. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.001029 cm/sec y0 = 2.925 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-22in (3).aqt
Date: 08/04/10 Time: 19:27:44

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville, KY
Test Well: MW-22 In
Test Date: 6/2/10

AQUIFER DATA

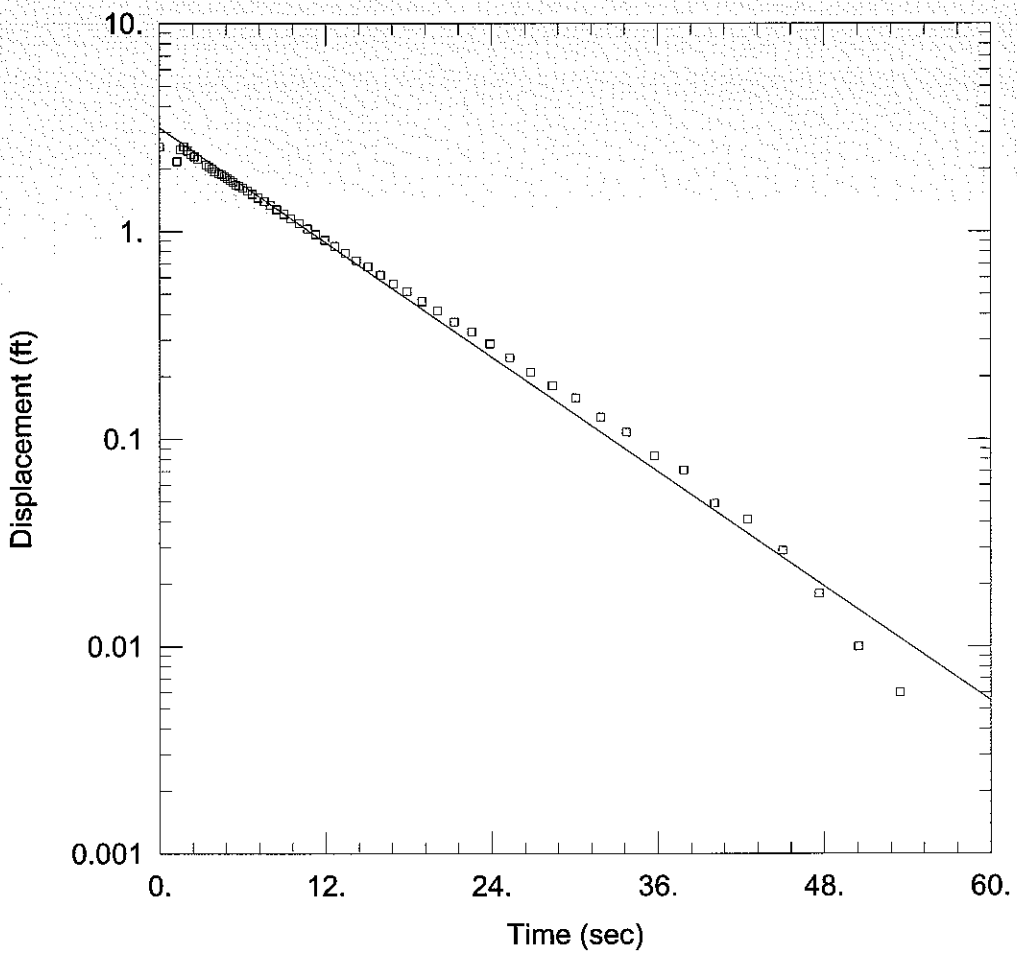
Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-22 In)

Initial Displacement: 3.146 ft Static Water Column Height: 24.43 ft
Total Well Penetration Depth: 24.43 ft Screen Length: 15. ft
Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.002138 cm/sec y0 = 2.756 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-22out (3).aqt
Date: 08/04/10 Time: 19:28:11

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville, KY
Test Well: MW-22 Out
Test Date: 6/2/10

AQUIFER DATA

Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

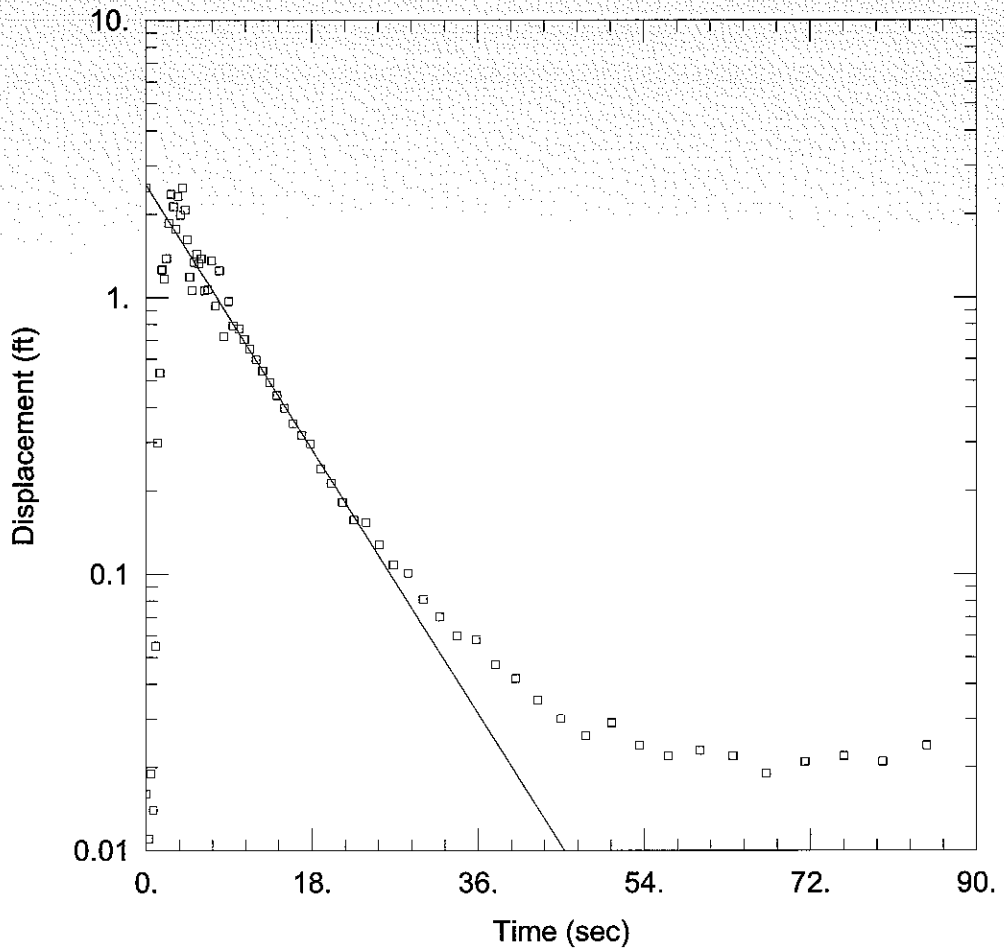
WELL DATA (MW-22 Out)

Initial Displacement: 2.553 ft
Total Well Penetration Depth: 24.43 ft
Casing Radius: 0.083 ft
Static Water Column Height: 24.43 ft
Screen Length: 15. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.002132 cm/sec y0 = 3.15 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-23in (3).aqt
Date: 08/04/10 Time: 19:28:37

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville, KY
Test Well: MW-23 In
Test Date: 6/2/10

AQUIFER DATA

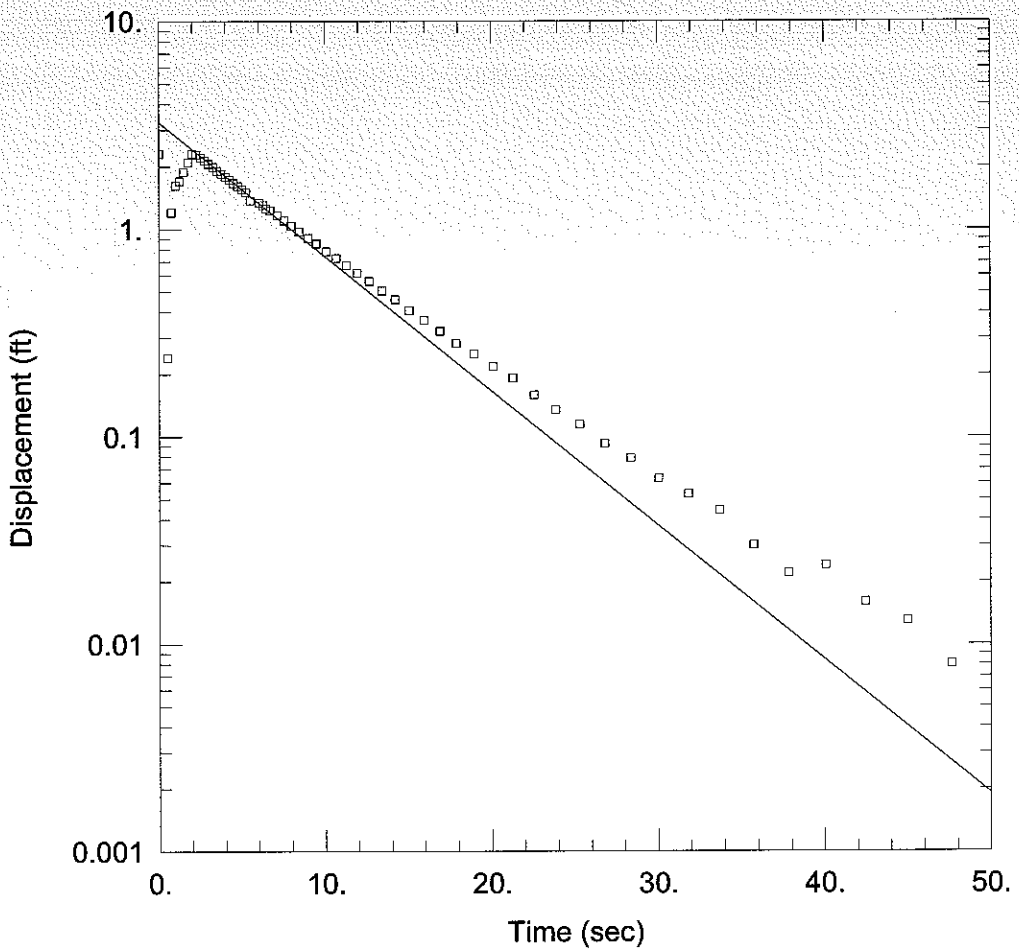
Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-23 In)

Initial Displacement: 2.492 ft Static Water Column Height: 26.95 ft
Total Well Penetration Depth: 26.95 ft Screen Length: 16. ft
Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.002368 cm/sec y0 = 2.559 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-23out (3).aqt
Date: 08/04/10 Time: 19:29:01

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville, KY
Test Well: MW-23 Out
Test Date: 6/2/10

AQUIFER DATA

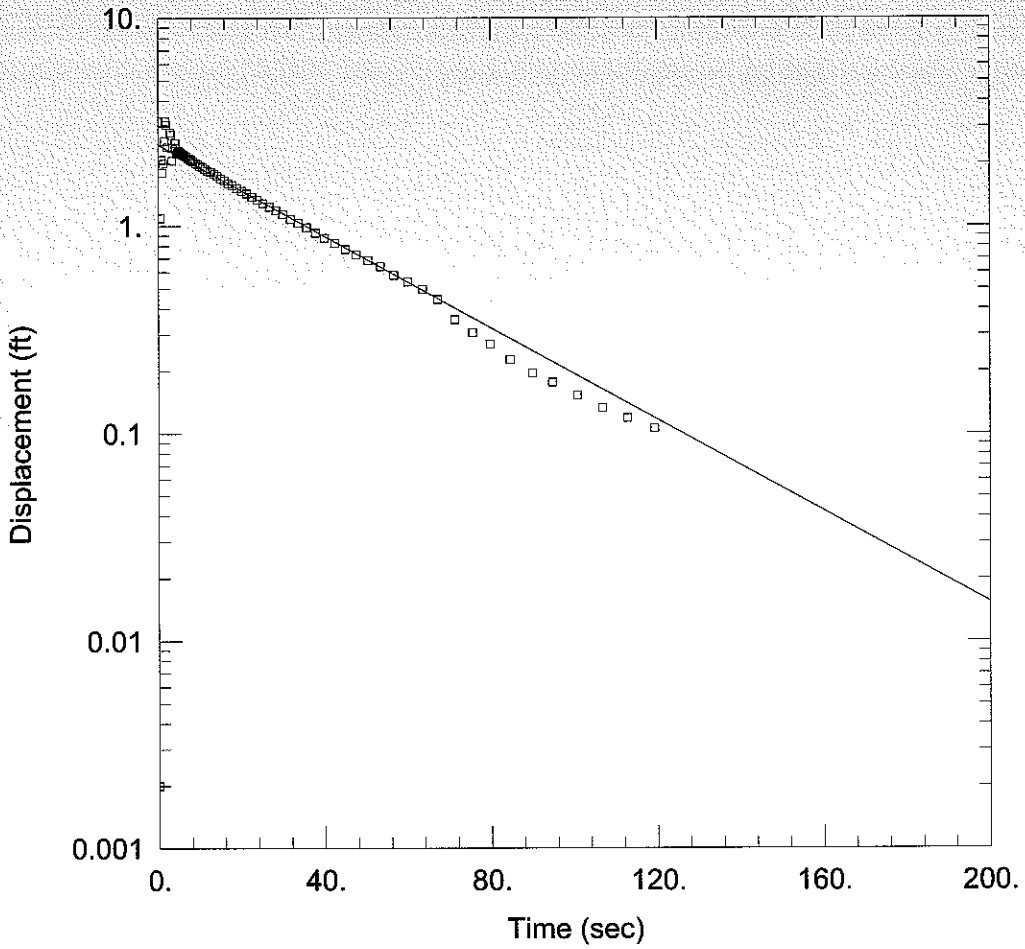
Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-23 Out)

Initial Displacement: 2.309 ft
Total Well Penetration Depth: 26.95 ft
Casing Radius: 0.083 ft
Static Water Column Height: 26.95 ft
Screen Length: 16. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.002884 cm/sec
y0 = 3.272 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-25in (3).aqt
Date: 08/04/10 Time: 19:29:25

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville, KY
Test Well: MW-25 In
Test Date: 6/4/10

AQUIFER DATA

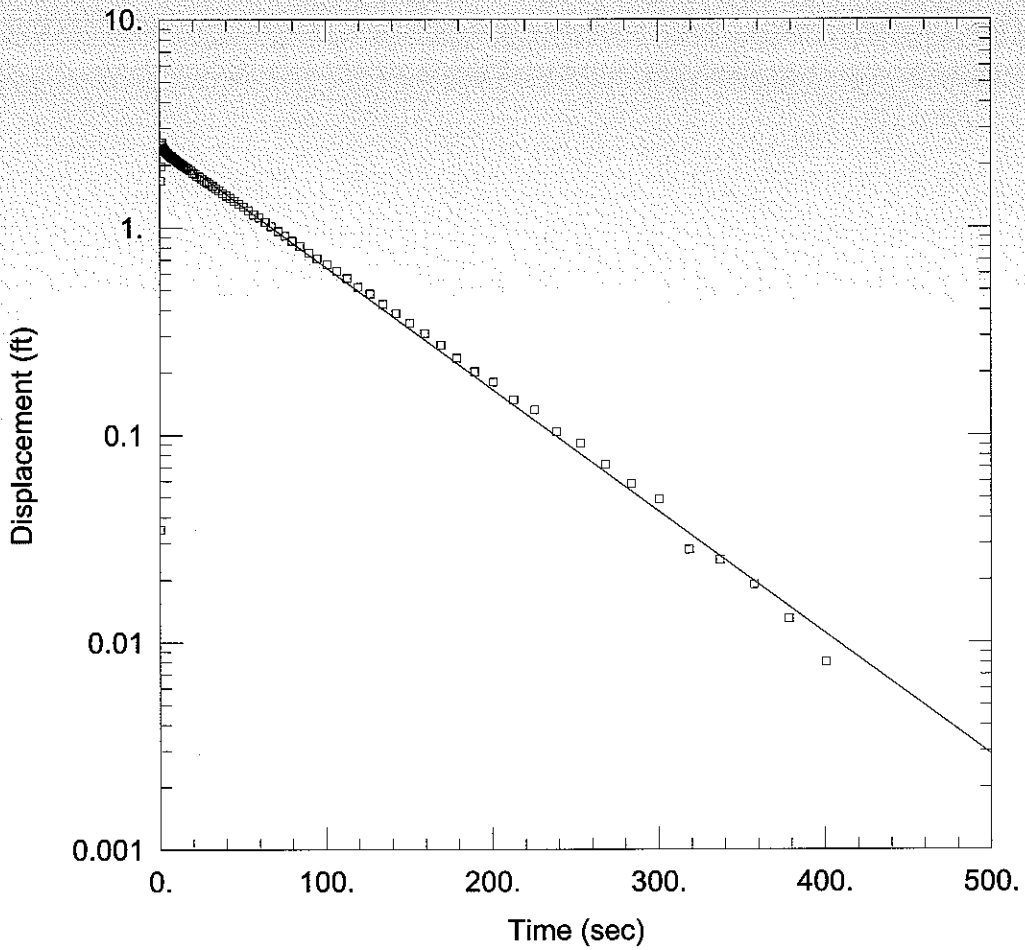
Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-25 In)

Initial Displacement: 3.185 ft
Total Well Penetration Depth: 32.1 ft
Casing Radius: 0.083 ft
Static Water Column Height: 32.1 ft
Screen Length: 15. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0005333 cm/sec y0 = 2.461 ft



WELL TEST ANALYSIS

Data Set: C:\...\MW-25out (3).aqt
Date: 08/04/10 Time: 19:25:14

PROJECT INFORMATION

Company: Mactec
Client: Thermo King
Location: Lousiville, KY
Test Well: MW-25 Out
Test Date: 6/4/10

AQUIFER DATA

Saturated Thickness: 99. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-25 Out)

Initial Displacement: 2.57 ft
Total Well Penetration Depth: 32.1 ft
Casing Radius: 0.083 ft
Static Water Column Height: 32.1 ft
Screen Length: 15. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0002839 cm/sec y0 = 2.475 ft

APPENDIX H:

LABORATORY REPORTS FOR 2010 GROUNDWATER, SEEP, and SURFACE WATER SAMPLES INCLUDING LAB CERTICATION LETTERS

GROUNDWATER

Georgia Department of Natural Resources
Environmental Protection Division
2 Martin Luther King Jr. Drive SE, Suite 1152 East Tower, Atlanta, Georgia 30334-9000
Carol A. Couch PhD, Director
(404) 656-4713
FAX: (404) 651-5778

30 June 2010

Mr. Jeffrey C. Smith, Quality Assurance Specialist
TestAmerica Laboratories, Inc. North Canton
4101 Shuffel Street, NW
North Canton, OH 44720

RE: Laboratory Approval

Dear Mr. Smith:

I have received your June 29, 2010 communication requesting a renewal of your approval status. Please note that the Environmental Protection Division does not accredit or certify commercial laboratories (other than for drinking water) or issue certification, but rather we require commercial environmental laboratories to be approved under our Rules for Commercial Environmental Laboratories. You provided documentation that your laboratory is accredited by the State of Florida, Department of Health, Bureau of Laboratories (hereinafter, "Florida"), in accordance with NELAP. The accreditation is in the categories of Environmental Analyses for non-potable water and for solid and chemical materials.

After reviewing the information provided in your letter and the attached documentation from Florida, approval is granted under our Rules for Commercial Environmental Laboratories for those individual parameters within the categories of (1) Non-potable Water and (2) Solid and Chemical Materials, which you are certified by Florida. This approval is valid through June 30, 2011, which is the expiration date of your accreditation. To be approved after that date, your accreditation must be renewed.

I trust this response meets your needs; should you require further information, please do not hesitate to call me at (404) 656-3204.

Sincerely,

Ted V. Jackson, Manager
Environmental Emergency & Radiation Program
Georgia Environmental Protection Division

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 6122-09-0322,01

TK-LOUISVILLE

Lot #: A0F040435

Rhonda Quinn

MACTEC Engineering & Consultin
3200 Town Point Drive NW
Suite 100
Kennesaw, GA 30144

TESTAMERICA LABORATORIES, INC.

Alesia M. Danford

Approved for release.
Alesia M. Danford
Project Manager
6/23/2010 1:58 PM

Alesia M. Danford
Project Manager
alesia.danford@testamericainc.com

June 23, 2010

CASE NARRATIVE

A0F040435

The following report contains the analytical results for thirty-four water samples and one quality control sample submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the TK-Louisville Site, project number 6122-09-0322,01. The samples were received June 04, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Rhonda Quinn on June 07, 2010, Terrell Parker and Rhonda Quinn on June 10, 2010, and Terrell Parker and Rhonda Quinn on June 20, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Alesia M. Danford, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 0.7°C.

See TestAmerica's Cooler Receipt Form for additional information.

GC/MS VOLATILES

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 0166410 and 0168150. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

Result concentration exceeds the calibration range. Refer to the sample report pages for the affected compound(s) flagged with "E".

Sample(s) MW-14 PDB, MW-14 PURGE, MW-19 PDB, MW-19 PURGED, MW-19 PURGEDMSD, MW-19 PURGEDMS, and SEEP C had elevated reporting limits due to matrix interferences.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0F040435

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-5 PDB 06/01/10 17:10 003				
1,1-Dichloroethene	8.9	8.0	ug/L	SW846 8260B
Trichloroethene	210	8.0	ug/L	SW846 8260B
MW-7 PDB 06/01/10 16:37 004				
Chloroform	4.1	1.0	ug/L	SW846 8260B
MW-1 PDB 06/01/10 15:50 006				
Chloroform	4.9	1.0	ug/L	SW846 8260B
MW-8 PDB 06/01/10 16:10 007				
Chloroform	1.0	1.0	ug/L	SW846 8260B
MW-2 PDB 06/01/10 14:42 008				
Chloroform	2.1	1.0	ug/L	SW846 8260B
MW-6 PDB 06/01/10 14:22 011				
Chloroform	1.2	1.0	ug/L	SW846 8260B
MW-20 PDB 06/01/10 13:47 012				
cis-1,2-Dichloroethene	150	5.0	ug/L	SW846 8260B
Vinyl chloride	15	5.0	ug/L	SW846 8260B
MW-3 PDB 06/02/10 08:12 013				
Chloroform	2.3	1.0	ug/L	SW846 8260B
Trichloroethene	1.6	1.0	ug/L	SW846 8260B
MW-19 PDB 06/02/10 09:00 015				
1,1-Dichloroethene	82	56	ug/L	SW846 8260B
Trichloroethene	1700	56	ug/L	SW846 8260B
1,1-Dichloroethene	100	56	ug/L	SW846 8260B
Trichloroethene	1900	56	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A0F040435

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-14 PDB 06/02/10 09:15 016				
cis-1,2-Dichloroethene	370	120	ug/L	SW846 8260B
Trichloroethene	3500	120	ug/L	SW846 8260B
cis-1,2-Dichloroethene	320	25	ug/L	SW846 8260B
1,1-Dichloroethene	57	25	ug/L	SW846 8260B
Trichloroethene	3000 E	25	ug/L	SW846 8260B
MW-10 PDB 06/02/10 09:48 017				
Chloroform	1.8	1.0	ug/L	SW846 8260B
Trichloroethene	3.4	1.0	ug/L	SW846 8260B
MW-5 PURGED 06/02/10 16:22 026				
1,1-Dichloroethene	22	8.0	ug/L	SW846 8260B
Trichloroethene	250	8.0	ug/L	SW846 8260B
MW-20 PURGED 06/02/10 17:30 027				
cis-1,2-Dichloroethene	170	5.7	ug/L	SW846 8260B
MANSON BRANCH #2 06/02/10 17:50 029				
cis-1,2-Dichloroethene	180	50	ug/L	SW846 8260B
1,1-Dichloroethene	160	50	ug/L	SW846 8260B
1,1,1-Trichloroethane	61	50	ug/L	SW846 8260B
Trichloroethene	1700	50	ug/L	SW846 8260B
SEEP H 06/03/10 14:25 030				
cis-1,2-Dichloroethene	63	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	12	2.0	ug/L	SW846 8260B
Trichloroethene	41	2.0	ug/L	SW846 8260B
MW-10 PURGE 06/03/10 10:00 031				
Chloroform	1.9	1.0	ug/L	SW846 8260B
Trichloroethene	2.8	1.0	ug/L	SW846 8260B
MW-3 PURGED 06/03/10 11:25 032				
Chloroform	2.3	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	1.7	1.0	ug/L	SW846 8260B
Trichloroethene	2.4	1.0	ug/L	SW846 8260B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A0F040435

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-14 PURGE 06/03/10 13:15 033				
cis-1,2-Dichloroethene	380	140	ug/L	SW846 8260B
Trichloroethene	3600	140	ug/L	SW846 8260B
cis-1,2-Dichloroethene	330	29	ug/L	SW846 8260B
1,1-Dichloroethene	58	29	ug/L	SW846 8260B
Trichloroethene	3200 E	29	ug/L	SW846 8260B
MW-19 PURGED 06/03/10 13:45 034				
Trichloroethene	5800	200	ug/L	SW846 8260B
1,1-Dichloroethene	72	40	ug/L	SW846 8260B
Trichloroethene	5800 E	40	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0F040435

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B
Volatile Organics by GC/MS SIM	SW846 8260B SIM

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

A0F040435

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260B	Larry R. Williams	001644
SW846 8260B	Richard J. Quayle	001904
SW846 8260B SIM	Richard J. Quayle	001904

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0F040435

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L2F43	001	MW-22 PDB	06/01/10	15:35
L2F5C	002	MW-24 PDB	06/01/10	16:58
L2F5D	003	MW-5 PDB	06/01/10	17:10
L2F5E	004	MW-7 PDB	06/01/10	16:37
L2F5H	005	MW-9 PDB	06/01/10	15:17
L2F5J	006	MW-1 PDB	06/01/10	15:50
L2F5M	007	MW-8 PDB	06/01/10	16:10
L2F5N	008	MW-2 PDB	06/01/10	14:42
L2F5P	009	MW-23 PDB	06/01/10	15:02
L2F5R	010	MW-21 PDB	06/01/10	16:25
L2F5T	011	MW-6 PDB	06/01/10	14:22
L2F5W	012	MW-20 PDB	06/01/10	13:47
L2F51	013	MW-3 PDB	06/02/10	08:12
L2F53	014	MW-4 PDB	06/02/10	08:38
L2F55	015	MW-19 PDB	06/02/10	09:00
L2F57	016	MW-14 PDB	06/02/10	09:15
L2F6A	017	MW-10 PDB	06/02/10	09:48
L2F6E	018	MW-18 PDB	06/02/10	10:15
L2F6F	019	MW-16 PDB	06/02/10	10:25
L2F6G	020	MW-17 PDB	06/02/10	10:40
L2F6L	021	MW-15 PDB	06/02/10	10:53
L2F6M	022	MW-11 PDB	06/02/10	11:25
L2F6N	023	MW-12 PDB	06/02/10	11:40
L2F6P	024	MW-13 PDB	06/02/10	12:00
L2F6Q	025	TRIP BLANK 060110	06/01/10	12:00
L2F6T	026	MW-5 PURGED	06/02/10	16:22
L2F6V	027	MW-20 PURGED	06/02/10	17:30
L2F6W	028	SEEP C	06/02/10	17:33
L2F60	029	MANSON BRANCH #2	06/02/10	17:50
L2F61	030	SEEP H	06/03/10	14:25
L2F62	031	MW-10 PURGE	06/03/10	10:00
L2F63	032	MW-3 PURGED	06/03/10	11:25
L2F64	033	MW-14 PURGE	06/03/10	13:15
L2F66	034	MW-19 PURGED	06/03/10	13:45
L2F7A	035	SEEP L	06/03/10	16:00

(Continued on next page)

SAMPLE SUMMARY

A0F040435

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-22 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-001 **Work Order #...:** L2F431AA **Matrix.....:** WG
Date Sampled...: 06/01/10 15:35 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-22 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-001 **Work Order #...:** L2F431AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	105	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-24 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-002 **Work Order #...:** L2F5C1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 16:58 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-24 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-002 **Work Order #...:** L2F5C1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-5 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-003 **Work Order #...:** L2F5D1AC **Matrix.....:** WG
Date Sampled...: 06/01/10 17:10 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 8
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	8.0	ug/L	1.0
Benzene	ND	8.0	ug/L	1.0
Bromochloromethane	ND	8.0	ug/L	2.3
Bromodichloromethane	ND	8.0	ug/L	1.2
Bromoform	ND	8.0	ug/L	5.1
Bromomethane	ND	8.0	ug/L	3.3
n-Butylbenzene	ND	8.0	ug/L	0.96
sec-Butylbenzene	ND	8.0	ug/L	1.0
tert-Butylbenzene	ND	8.0	ug/L	1.0
Carbon tetrachloride	ND	8.0	ug/L	1.0
Chlorobenzene	ND	8.0	ug/L	1.2
Chlorodibromomethane	ND	8.0	ug/L	1.4
Chloroethane	ND	8.0	ug/L	2.3
Chloroform	ND	8.0	ug/L	1.3
Chloromethane	ND	8.0	ug/L	2.4
2-Chlorotoluene	ND	8.0	ug/L	0.88
4-Chlorotoluene	ND	8.0	ug/L	1.4
1,2-Dibromo-3-chloropropane (DBCP)	ND	16	ug/L	5.4
1,2-Dibromoethane	ND	8.0	ug/L	1.9
Dibromomethane	ND	8.0	ug/L	2.2
1,2-Dichlorobenzene	ND	8.0	ug/L	1.0
1,3-Dichlorobenzene	ND	8.0	ug/L	1.1
1,4-Dichlorobenzene	ND	8.0	ug/L	1.0
Dichlorodifluoromethane	ND	8.0	ug/L	2.5
1,1-Dichloroethane	ND	8.0	ug/L	1.2
1,2-Dichloroethane	ND	8.0	ug/L	1.8
cis-1,2-Dichloroethene	ND	8.0	ug/L	1.4
trans-1,2-Dichloroethene	ND	8.0	ug/L	1.5
1,1-Dichloroethene	**8.9**	**8.0**	**ug/L**	**1.5**
1,2-Dichloropropane	ND	8.0	ug/L	1.4
1,3-Dichloropropane	ND	8.0	ug/L	1.3
2,2-Dichloropropane	ND	8.0	ug/L	1.0
1,1-Dichloropropene	ND	8.0	ug/L	1.0
1,4-Dioxane	ND	400	ug/L	150
Ethylbenzene	ND	8.0	ug/L	1.4
Hexachlorobutadiene	ND	8.0	ug/L	2.4

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-5 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-003 **Work Order #...:** L2F5D1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	8.0	ug/L	0.96
Methylene chloride	ND	8.0	ug/L	2.6
Naphthalene	ND	8.0	ug/L	1.9
n-Propylbenzene	ND	8.0	ug/L	1.1
Styrene	ND	8.0	ug/L	0.88
1,1,1,2-Tetrachloroethane	ND	8.0	ug/L	1.8
1,1,2,2-Tetrachloroethane	ND	8.0	ug/L	1.4
Tetrachloroethene	ND	8.0	ug/L	2.3
Toluene	ND	8.0	ug/L	1.0
1,2,3-Trichlorobenzene	ND	8.0	ug/L	1.4
1,2,4-Trichloro-benzene	ND	8.0	ug/L	1.2
1,1,1-Trichloroethane	ND	8.0	ug/L	1.8
1,1,2-Trichloroethane	ND	8.0	ug/L	2.2
Trichloroethene	**210**	**8.0**	**ug/L**	**1.4**
Trichlorofluoromethane	ND	8.0	ug/L	1.7
1,2,3-Trichloropropane	ND	8.0	ug/L	3.4
1,2,4-Trimethylbenzene	ND	8.0	ug/L	0.96
1,3,5-Trimethylbenzene	ND	8.0	ug/L	0.77
Vinyl chloride	ND	8.0	ug/L	1.8
m-Xylene & p-Xylene	ND	16	ug/L	1.9
o-Xylene	ND	8.0	ug/L	1.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-5 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-003 **Work Order #...:** L2F5D1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 17:10 **Date Received..:** 06/04/10
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-004 **Work Order #...:** L2F5E1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 16:37 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**4.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-7 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-004 **Work Order #...:** L2F5E1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	104	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-9 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-005 **Work Order #...:** L2F5H1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 15:17 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-9 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-005 **Work Order #...:** L2F5H1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	104	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-1 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-006 **Work Order #...:** L2F5J1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 15:50 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**4.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-1 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-006 **Work Order #...:** L2F5J1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	104	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-8 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-007 **Work Order #...:** L2F5M1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 16:10 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**1.0**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-8 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-007 **Work Order #...:** L2F5M1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-2 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-008 **Work Order #...:** L2F5N1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 14:42 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0166410
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**2.1**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-2 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-008 **Work Order #...:** L2F5N1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-23 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-009 **Work Order #...:** L2F5P1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 15:02 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-23 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-009 **Work Order #...:** L2F5P1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-21 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-010 **Work Order #...:** L2F5R1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 16:25 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-21 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-010 **Work Order #...:** L2F5R1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-6 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-011 **Work Order #...:** L2F5T1AA **Matrix.....:** WG
Date Sampled...: 06/01/10 14:22 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**1.2**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-6 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-011 **Work Order #...:** L2F5T1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-20 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-012 **Work Order #...:** L2F5W1AC **Matrix.....:** WG
Date Sampled...: 06/01/10 13:47 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 5
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	5.0	ug/L	0.65
Benzene	ND	5.0	ug/L	0.65
Bromochloromethane	ND	5.0	ug/L	1.4
Bromodichloromethane	ND	5.0	ug/L	0.75
Bromoform	ND	5.0	ug/L	3.2
Bromomethane	ND	5.0	ug/L	2.0
n-Butylbenzene	ND	5.0	ug/L	0.60
sec-Butylbenzene	ND	5.0	ug/L	0.65
tert-Butylbenzene	ND	5.0	ug/L	0.65
Carbon tetrachloride	ND	5.0	ug/L	0.65
Chlorobenzene	ND	5.0	ug/L	0.75
Chlorodibromomethane	ND	5.0	ug/L	0.90
Chloroethane	ND	5.0	ug/L	1.4
Chloroform	ND	5.0	ug/L	0.80
Chloromethane	ND	5.0	ug/L	1.5
2-Chlorotoluene	ND	5.0	ug/L	0.55
4-Chlorotoluene	ND	5.0	ug/L	0.90
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	ug/L	3.4
1,2-Dibromoethane	ND	5.0	ug/L	1.2
Dibromomethane	ND	5.0	ug/L	1.4
1,2-Dichlorobenzene	ND	5.0	ug/L	0.65
1,3-Dichlorobenzene	ND	5.0	ug/L	0.70
1,4-Dichlorobenzene	ND	5.0	ug/L	0.65
Dichlorodifluoromethane	ND	5.0	ug/L	1.6
1,1-Dichloroethane	ND	5.0	ug/L	0.75
1,2-Dichloroethane	ND	5.0	ug/L	1.1
cis-1,2-Dichloroethene	**150**	**5.0**	**ug/L**	**0.85**
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.95
1,1-Dichloroethene	ND	5.0	ug/L	0.95
1,2-Dichloropropane	ND	5.0	ug/L	0.90
1,3-Dichloropropane	ND	5.0	ug/L	0.80
2,2-Dichloropropane	ND	5.0	ug/L	0.65
1,1-Dichloropropene	ND	5.0	ug/L	0.65
1,4-Dioxane	ND	250	ug/L	95
Ethylbenzene	ND	5.0	ug/L	0.85
Hexachlorobutadiene	ND	5.0	ug/L	1.5

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-20 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-012 **Work Order #...:** L2F5W1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	5.0	ug/L	0.60
Methylene chloride	ND	5.0	ug/L	1.6
Naphthalene	ND	5.0	ug/L	1.2
n-Propylbenzene	ND	5.0	ug/L	0.70
Styrene	ND	5.0	ug/L	0.55
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	1.2
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	0.90
Tetrachloroethene	ND	5.0	ug/L	1.4
Toluene	ND	5.0	ug/L	0.65
1,2,3-Trichlorobenzene	ND	5.0	ug/L	0.85
1,2,4-Trichloro-benzene	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	5.0	ug/L	1.1
1,1,2-Trichloroethane	ND	5.0	ug/L	1.4
Trichloroethene	ND	5.0	ug/L	0.85
Trichlorofluoromethane	ND	5.0	ug/L	1.0
1,2,3-Trichloropropane	ND	5.0	ug/L	2.2
1,2,4-Trimethylbenzene	ND	5.0	ug/L	0.60
1,3,5-Trimethylbenzene	ND	5.0	ug/L	0.48
Vinyl chloride	**15**	**5.0**	**ug/L**	**1.1**
m-Xylene & p-Xylene	ND	10	ug/L	1.2
o-Xylene	ND	5.0	ug/L	0.70

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-20 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-012	Work Order #...: L2F5W1AA	Matrix.....: WG	
Date Sampled...: 06/01/10 13:47	Date Received..: 06/04/10		
Prep Date.....: 06/15/10	Analysis Date..: 06/15/10		
Prep Batch #...: 0168150			
Dilution Factor: 1			
Analyst ID.....: 001904	Instrument ID..: UX16		
	Method.....: SW846 8260B SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	95	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-3 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-013 **Work Order #...:** L2F511AC **Matrix.....:** WG
Date Sampled...: 06/02/10 08:12 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**2.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-3 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-013 Work Order #...: L2F511AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**1.6**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-3 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-013 Work Order #...: L2F511AA Matrix.....: WG
Date Sampled...: 06/02/10 08:12 Date Received..: 06/04/10
Prep Date.....: 06/15/10 Analysis Date..: 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1
Analyst ID.....: 001904 Instrument ID..: UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	99	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-4 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-014 **Work Order #...:** L2F531AA **Matrix.....:** WG
Date Sampled...: 06/02/10 08:38 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-4 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-014 **Work Order #...:** L2F531AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-015 **Work Order #...:** L2F551AC **Matrix.....:** WG
Date Sampled...: 06/02/10 09:00 **Date Received..:** 06/04/10
Prep Date.....: 06/04/10 **Analysis Date..:** 06/04/10
Prep Batch #...: 0158112
Dilution Factor: 55.56
Analyst ID.....: 001644 **Instrument ID..:** UX11
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	56	ug/L	7.2
Benzene	ND	56	ug/L	7.2
Bromochloromethane	ND	56	ug/L	16
Bromodichloromethane	ND	56	ug/L	8.3
Bromoform	ND	56	ug/L	36
Bromomethane	ND	56	ug/L	23
n-Butylbenzene	ND	56	ug/L	6.7
sec-Butylbenzene	ND	56	ug/L	7.2
tert-Butylbenzene	ND	56	ug/L	7.2
Carbon tetrachloride	ND	56	ug/L	7.2
Chlorobenzene	ND	56	ug/L	8.3
Chlorodibromomethane	ND	56	ug/L	10
Chloroethane	ND	56	ug/L	16
Chloroform	ND	56	ug/L	8.9
Chloromethane	ND	56	ug/L	17
2-Chlorotoluene	ND	56	ug/L	6.1
4-Chlorotoluene	ND	56	ug/L	10
1,2-Dibromo-3-chloropropane (DBCP)	ND	110	ug/L	37
1,2-Dibromoethane	ND	56	ug/L	13
Dibromomethane	ND	56	ug/L	16
1,2-Dichlorobenzene	ND	56	ug/L	7.2
1,3-Dichlorobenzene	ND	56	ug/L	7.8
1,4-Dichlorobenzene	ND	56	ug/L	7.2
Dichlorodifluoromethane	ND	56	ug/L	17
1,1-Dichloroethane	ND	56	ug/L	8.3
1,2-Dichloroethane	ND	56	ug/L	12
cis-1,2-Dichloroethene	ND	56	ug/L	9.4
trans-1,2-Dichloroethene	ND	56	ug/L	11
1,1-Dichloroethene	**82**	**56**	**ug/L**	**11**
1,2-Dichloropropane	ND	56	ug/L	10
1,3-Dichloropropane	ND	56	ug/L	8.9
2,2-Dichloropropane	ND	56	ug/L	7.2
1,1-Dichloropropene	ND	56	ug/L	7.2
1,4-Dioxane	ND	2800	ug/L	1100
Ethylbenzene	ND	56	ug/L	9.4
Hexachlorobutadiene	ND	56	ug/L	17

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-015 **Work Order #...:** L2F551AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	56	ug/L	6.7
Methylene chloride	ND	56	ug/L	18
Naphthalene	ND	56	ug/L	13
n-Propylbenzene	ND	56	ug/L	7.8
Styrene	ND	56	ug/L	6.1
1,1,1,2-Tetrachloroethane	ND	56	ug/L	13
1,1,2,2-Tetrachloroethane	ND	56	ug/L	10
Tetrachloroethene	ND	56	ug/L	16
Toluene	ND	56	ug/L	7.2
1,2,3-Trichlorobenzene	ND	56	ug/L	9.4
1,2,4-Trichloro-benzene	ND	56	ug/L	8.3
1,1,1-Trichloroethane	ND	56	ug/L	12
1,1,2-Trichloroethane	ND	56	ug/L	15
Trichloroethene	**1700**	**56**	**ug/L**	**9.4**
Trichlorofluoromethane	ND	56	ug/L	12
1,2,3-Trichloropropane	ND	56	ug/L	24
1,2,4-Trimethylbenzene	ND	56	ug/L	6.7
1,3,5-Trimethylbenzene	ND	56	ug/L	5.3
Vinyl chloride	ND	56	ug/L	12
m-Xylene & p-Xylene	ND	110	ug/L	13
o-Xylene	ND	56	ug/L	7.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-015 **Work Order #...:** L2F552AC **Matrix.....:** WG
Date Sampled...: 06/02/10 09:00 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 55.56
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	56	ug/L	7.2
Benzene	ND	56	ug/L	7.2
Bromochloromethane	ND	56	ug/L	16
Bromodichloromethane	ND	56	ug/L	8.3
Bromoform	ND	56	ug/L	36
Bromomethane	ND	56	ug/L	23
n-Butylbenzene	ND	56	ug/L	6.7
sec-Butylbenzene	ND	56	ug/L	7.2
tert-Butylbenzene	ND	56	ug/L	7.2
Carbon tetrachloride	ND	56	ug/L	7.2
Chlorobenzene	ND	56	ug/L	8.3
Chlorodibromomethane	ND	56	ug/L	10
Chloroethane	ND	56	ug/L	16
Chloroform	ND	56	ug/L	8.9
Chloromethane	ND	56	ug/L	17
2-Chlorotoluene	ND	56	ug/L	6.1
4-Chlorotoluene	ND	56	ug/L	10
1,2-Dibromo-3-chloropropane (DBCP)	ND	110	ug/L	37
1,2-Dibromoethane	ND	56	ug/L	13
Dibromomethane	ND	56	ug/L	16
1,2-Dichlorobenzene	ND	56	ug/L	7.2
1,3-Dichlorobenzene	ND	56	ug/L	7.8
1,4-Dichlorobenzene	ND	56	ug/L	7.2
Dichlorodifluoromethane	ND	56	ug/L	17
1,1-Dichloroethane	ND	56	ug/L	8.3
1,2-Dichloroethane	ND	56	ug/L	12
cis-1,2-Dichloroethene	ND	56	ug/L	9.4
trans-1,2-Dichloroethene	ND	56	ug/L	11
1,1-Dichloroethene	**100**	**56**	**ug/L**	**11**
1,2-Dichloropropane	ND	56	ug/L	10
1,3-Dichloropropane	ND	56	ug/L	8.9
2,2-Dichloropropane	ND	56	ug/L	7.2
1,1-Dichloropropene	ND	56	ug/L	7.2
1,4-Dioxane	ND	2800	ug/L	1100
Ethylbenzene	ND	56	ug/L	9.4
Hexachlorobutadiene	ND	56	ug/L	17

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-015 **Work Order #...:** L2F552AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	56	ug/L	6.7
Methylene chloride	ND	56	ug/L	18
Naphthalene	ND	56	ug/L	13
n-Propylbenzene	ND	56	ug/L	7.8
Styrene	ND	56	ug/L	6.1
1,1,1,2-Tetrachloroethane	ND	56	ug/L	13
1,1,2,2-Tetrachloroethane	ND	56	ug/L	10
Tetrachloroethene	ND	56	ug/L	16
Toluene	ND	56	ug/L	7.2
1,2,3-Trichlorobenzene	ND	56	ug/L	9.4
1,2,4-Trichloro-benzene	ND	56	ug/L	8.3
1,1,1-Trichloroethane	ND	56	ug/L	12
1,1,2-Trichloroethane	ND	56	ug/L	15
Trichloroethene	**1900**	**56**	**ug/L**	**9.4**
Trichlorofluoromethane	ND	56	ug/L	12
1,2,3-Trichloropropane	ND	56	ug/L	24
1,2,4-Trimethylbenzene	ND	56	ug/L	6.7
1,3,5-Trimethylbenzene	ND	56	ug/L	5.3
Vinyl chloride	ND	56	ug/L	12
m-Xylene & p-Xylene	ND	110	ug/L	13
o-Xylene	ND	56	ug/L	7.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-015 Work Order #...: L2F551AA Matrix.....: WG
Date Sampled...: 06/02/10 09:00 Date Received..: 06/04/10
Prep Date.....: 06/15/10 Analysis Date..: 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 5.56
Analyst ID.....: 001904 Instrument ID..: UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	11	ug/L	1.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	99	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-016 **Work Order #...:** L2F571AC **Matrix.....:** WG
Date Sampled...: 06/02/10 09:15 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 125
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	120	ug/L	16
Benzene	ND	120	ug/L	16
Bromochloromethane	ND	120	ug/L	36
Bromodichloromethane	ND	120	ug/L	19
Bromoform	ND	120	ug/L	80
Bromomethane	ND	120	ug/L	51
n-Butylbenzene	ND	120	ug/L	15
sec-Butylbenzene	ND	120	ug/L	16
tert-Butylbenzene	ND	120	ug/L	16
Carbon tetrachloride	ND	120	ug/L	16
Chlorobenzene	ND	120	ug/L	19
Chlorodibromomethane	ND	120	ug/L	22
Chloroethane	ND	120	ug/L	36
Chloroform	ND	120	ug/L	20
Chloromethane	ND	120	ug/L	38
2-Chlorotoluene	ND	120	ug/L	14
4-Chlorotoluene	ND	120	ug/L	22
1,2-Dibromo-3-chloropropane (DBCP)	ND	250	ug/L	84
1,2-Dibromoethane	ND	120	ug/L	30
Dibromomethane	ND	120	ug/L	35
1,2-Dichlorobenzene	ND	120	ug/L	16
1,3-Dichlorobenzene	ND	120	ug/L	18
1,4-Dichlorobenzene	ND	120	ug/L	16
Dichlorodifluoromethane	ND	120	ug/L	39
1,1-Dichloroethane	ND	120	ug/L	19
1,2-Dichloroethane	ND	120	ug/L	28
cis-1,2-Dichloroethene	**370**	**120**	**ug/L**	**21**
trans-1,2-Dichloroethene	ND	120	ug/L	24
1,1-Dichloroethene	ND	120	ug/L	24
1,2-Dichloropropane	ND	120	ug/L	22
1,3-Dichloropropane	ND	120	ug/L	20
2,2-Dichloropropane	ND	120	ug/L	16
1,1-Dichloropropene	ND	120	ug/L	16
1,4-Dioxane	ND	6200	ug/L	2400
Ethylbenzene	ND	120	ug/L	21
Hexachlorobutadiene	ND	120	ug/L	38

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-016 **Work Order #...:** L2F571AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	120	ug/L	15
Methylene chloride	ND	120	ug/L	41
Naphthalene	ND	120	ug/L	30
n-Propylbenzene	ND	120	ug/L	18
Styrene	ND	120	ug/L	14
1,1,1,2-Tetrachloroethane	ND	120	ug/L	29
1,1,2,2-Tetrachloroethane	ND	120	ug/L	22
Tetrachloroethene	ND	120	ug/L	36
Toluene	ND	120	ug/L	16
1,2,3-Trichlorobenzene	ND	120	ug/L	21
1,2,4-Trichloro-benzene	ND	120	ug/L	19
1,1,1-Trichloroethane	ND	120	ug/L	28
1,1,2-Trichloroethane	ND	120	ug/L	34
Trichloroethene	**3500**	**120**	**ug/L**	**21**
Trichlorofluoromethane	ND	120	ug/L	26
1,2,3-Trichloropropane	ND	120	ug/L	54
1,2,4-Trimethylbenzene	ND	120	ug/L	15
1,3,5-Trimethylbenzene	ND	120	ug/L	12
Vinyl chloride	ND	120	ug/L	28
m-Xylene & p-Xylene	ND	250	ug/L	30
o-Xylene	ND	120	ug/L	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-016 **Work Order #...:** L2F572AC **Matrix.....:** WG
Date Sampled...: 06/02/10 09:15 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 25
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	25	ug/L	3.2
Benzene	ND	25	ug/L	3.2
Bromochloromethane	ND	25	ug/L	7.2
Bromodichloromethane	ND	25	ug/L	3.8
Bromoform	ND	25	ug/L	16
Bromomethane	ND	25	ug/L	10
n-Butylbenzene	ND	25	ug/L	3.0
sec-Butylbenzene	ND	25	ug/L	3.2
tert-Butylbenzene	ND	25	ug/L	3.2
Carbon tetrachloride	ND	25	ug/L	3.2
Chlorobenzene	ND	25	ug/L	3.8
Chlorodibromomethane	ND	25	ug/L	4.5
Chloroethane	ND	25	ug/L	7.2
Chloroform	ND	25	ug/L	4.0
Chloromethane	ND	25	ug/L	7.5
2-Chlorotoluene	ND	25	ug/L	2.8
4-Chlorotoluene	ND	25	ug/L	4.5
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	ug/L	17
1,2-Dibromoethane	ND	25	ug/L	6.0
Dibromomethane	ND	25	ug/L	7.0
1,2-Dichlorobenzene	ND	25	ug/L	3.2
1,3-Dichlorobenzene	ND	25	ug/L	3.5
1,4-Dichlorobenzene	ND	25	ug/L	3.2
Dichlorodifluoromethane	ND	25	ug/L	7.8
1,1-Dichloroethane	ND	25	ug/L	3.8
1,2-Dichloroethane	ND	25	ug/L	5.5
cis-1,2-Dichloroethene	**320**	**25**	**ug/L**	**4.2**
trans-1,2-Dichloroethene	ND	25	ug/L	4.8
1,1-Dichloroethene	**57**	**25**	**ug/L**	**4.8**
1,2-Dichloropropane	ND	25	ug/L	4.5
1,3-Dichloropropane	ND	25	ug/L	4.0
2,2-Dichloropropane	ND	25	ug/L	3.2
1,1-Dichloropropene	ND	25	ug/L	3.2
1,4-Dioxane	ND	1200	ug/L	480
Ethylbenzene	ND	25	ug/L	4.2
Hexachlorobutadiene	ND	25	ug/L	7.5

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-016 Work Order #...: L2F572AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	25	ug/L	3.0
Methylene chloride	ND	25	ug/L	8.2
Naphthalene	ND	25	ug/L	6.0
n-Propylbenzene	ND	25	ug/L	3.5
Styrene	ND	25	ug/L	2.8
1,1,1,2-Tetrachloroethane	ND	25	ug/L	5.8
1,1,2,2-Tetrachloroethane	ND	25	ug/L	4.5
Tetrachloroethene	ND	25	ug/L	7.2
Toluene	ND	25	ug/L	3.2
1,2,3-Trichlorobenzene	ND	25	ug/L	4.2
1,2,4-Trichloro-benzene	ND	25	ug/L	3.8
1,1,1-Trichloroethane	ND	25	ug/L	5.5
1,1,2-Trichloroethane	ND	25	ug/L	6.8
Trichloroethene	**3000 E**	**25**	**ug/L**	**4.2**
Trichlorofluoromethane	ND	25	ug/L	5.2
1,2,3-Trichloropropane	ND	25	ug/L	11
1,2,4-Trimethylbenzene	ND	25	ug/L	3.0
1,3,5-Trimethylbenzene	ND	25	ug/L	2.4
Vinyl chloride	ND	25	ug/L	5.5
m-Xylene & p-Xylene	ND	50	ug/L	6.0
o-Xylene	ND	25	ug/L	3.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-016 **Work Order #...:** L2F571AA **Matrix.....:** WG
Date Sampled...: 06/02/10 09:15 **Date Received..:** 06/04/10
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 12.5
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	25	ug/L	4.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-10 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-017 **Work Order #...:** L2F6A1AC **Matrix.....:** WG
Date Sampled...: 06/02/10 09:48 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**1.8**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-10 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-017 **Work Order #...:** L2F6A1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**3.4**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-10 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-017 Work Order #...: L2F6A1AA Matrix.....: WG
Date Sampled...: 06/02/10 09:48 Date Received..: 06/04/10
Prep Date.....: 06/15/10 Analysis Date..: 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1
Analyst ID.....: 001904 Instrument ID..: UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-18 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-018 **Work Order #...:** L2F6E1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 10:15 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-18 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-018 **Work Order #...:** L2F6E1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-019 Work Order #...: L2F6F1AA Matrix.....: WG
Date Sampled...: 06/02/10 10:25 Date Received..: 06/04/10
Prep Date.....: 06/10/10 Analysis Date..: 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 Instrument ID..: UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-16 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-019 **Work Order #...:** L2F6F1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-020 **Work Order #...:** L2F6G1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 10:40 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-17 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-020 **Work Order #...:** L2F6G1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-15 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-021 **Work Order #...:** L2F6L1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 10:53 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-15 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-021 **Work Order #...:** L2F6L1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-11 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-022 **Work Order #...:** L2F6M1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 11:25 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-11 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-022 Work Order #...: L2F6M1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-12 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-023 **Work Order #...:** L2F6N1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 11:40 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-12 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-023 Work Order #...: L2F6N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-13 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-024 **Work Order #...:** L2F6P1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 12:00 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-13 PDB

GC/MS Volatiles

Lot-Sample #...: A0F040435-024 Work Order #...: L2F6P1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK 060110

GC/MS Volatiles

Lot-Sample #...: A0F040435-025 **Work Order #...:** L2F6Q1AA **Matrix.....:** WQ
Date Sampled...: 06/01/10 12:00 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK 060110

GC/MS Volatiles

Lot-Sample #...: A0F040435-025 Work Order #...: L2F6Q1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-5 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-026 **Work Order #...:** L2F6T1AC **Matrix.....:** WG
Date Sampled...: 06/02/10 16:22 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 8
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	8.0	ug/L	1.0
Benzene	ND	8.0	ug/L	1.0
Bromochloromethane	ND	8.0	ug/L	2.3
Bromodichloromethane	ND	8.0	ug/L	1.2
Bromoform	ND	8.0	ug/L	5.1
Bromomethane	ND	8.0	ug/L	3.3
n-Butylbenzene	ND	8.0	ug/L	0.96
sec-Butylbenzene	ND	8.0	ug/L	1.0
tert-Butylbenzene	ND	8.0	ug/L	1.0
Carbon tetrachloride	ND	8.0	ug/L	1.0
Chlorobenzene	ND	8.0	ug/L	1.2
Chlorodibromomethane	ND	8.0	ug/L	1.4
Chloroethane	ND	8.0	ug/L	2.3
Chloroform	ND	8.0	ug/L	1.3
Chloromethane	ND	8.0	ug/L	2.4
2-Chlorotoluene	ND	8.0	ug/L	0.88
4-Chlorotoluene	ND	8.0	ug/L	1.4
1,2-Dibromo-3-chloropropane (DBCP)	ND	16	ug/L	5.4
1,2-Dibromoethane	ND	8.0	ug/L	1.9
Dibromomethane	ND	8.0	ug/L	2.2
1,2-Dichlorobenzene	ND	8.0	ug/L	1.0
1,3-Dichlorobenzene	ND	8.0	ug/L	1.1
1,4-Dichlorobenzene	ND	8.0	ug/L	1.0
Dichlorodifluoromethane	ND	8.0	ug/L	2.5
1,1-Dichloroethane	ND	8.0	ug/L	1.2
1,2-Dichloroethane	ND	8.0	ug/L	1.8
cis-1,2-Dichloroethene	ND	8.0	ug/L	1.4
trans-1,2-Dichloroethene	ND	8.0	ug/L	1.5
1,1-Dichloroethene	**22**	**8.0**	**ug/L**	**1.5**
1,2-Dichloropropane	ND	8.0	ug/L	1.4
1,3-Dichloropropane	ND	8.0	ug/L	1.3
2,2-Dichloropropane	ND	8.0	ug/L	1.0
1,1-Dichloropropene	ND	8.0	ug/L	1.0
1,4-Dioxane	ND	400	ug/L	150
Ethylbenzene	ND	8.0	ug/L	1.4
Hexachlorobutadiene	ND	8.0	ug/L	2.4

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-5 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-026 Work Order #...: L2E6T1AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	8.0	ug/L	0.96
Methylene chloride	ND	8.0	ug/L	2.6
Naphthalene	ND	8.0	ug/L	1.9
n-Propylbenzene	ND	8.0	ug/L	1.1
Styrene	ND	8.0	ug/L	0.88
1,1,1,2-Tetrachloroethane	ND	8.0	ug/L	1.8
1,1,2,2-Tetrachloroethane	ND	8.0	ug/L	1.4
Tetrachloroethene	ND	8.0	ug/L	2.3
Toluene	ND	8.0	ug/L	1.0
1,2,3-Trichlorobenzene	ND	8.0	ug/L	1.4
1,2,4-Trichloro-benzene	ND	8.0	ug/L	1.2
1,1,1-Trichloroethane	ND	8.0	ug/L	1.8
1,1,2-Trichloroethane	ND	8.0	ug/L	2.2
Trichloroethene	**250**	**8.0**	**ug/L**	**1.4**
Trichlorofluoromethane	ND	8.0	ug/L	1.7
1,2,3-Trichloropropane	ND	8.0	ug/L	3.4
1,2,4-Trimethylbenzene	ND	8.0	ug/L	0.96
1,3,5-Trimethylbenzene	ND	8.0	ug/L	0.77
Vinyl chloride	ND	8.0	ug/L	1.8
m-Xylene & p-Xylene	ND	16	ug/L	1.9
o-Xylene	ND	8.0	ug/L	1.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-5 PURGED

GC/MS Volatiles

Lot-Sample #...: A0E040435-026 **Work Order #...:** L2F6T1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 16:22 **Date Received..:** 06/04/10
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	99	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-20 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-027 **Work Order #...:** L2F6V1AC **Matrix.....:** WG
Date Sampled...: 06/02/10 17:30 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 5.71
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	5.7	ug/L	0.74
Benzene	ND	5.7	ug/L	0.74
Bromochloromethane	ND	5.7	ug/L	1.7
Bromodichloromethane	ND	5.7	ug/L	0.86
Bromoform	ND	5.7	ug/L	3.7
Bromomethane	ND	5.7	ug/L	2.3
n-Butylbenzene	ND	5.7	ug/L	0.69
sec-Butylbenzene	ND	5.7	ug/L	0.74
tert-Butylbenzene	ND	5.7	ug/L	0.74
Carbon tetrachloride	ND	5.7	ug/L	0.74
Chlorobenzene	ND	5.7	ug/L	0.86
Chlorodibromomethane	ND	5.7	ug/L	1.0
Chloroethane	ND	5.7	ug/L	1.7
Chloroform	ND	5.7	ug/L	0.91
Chloromethane	ND	5.7	ug/L	1.7
2-Chlorotoluene	ND	5.7	ug/L	0.63
4-Chlorotoluene	ND	5.7	ug/L	1.0
1,2-Dibromo-3-chloropropane (DBCP)	ND	11	ug/L	3.8
1,2-Dibromoethane	ND	5.7	ug/L	1.4
Dibromomethane	ND	5.7	ug/L	1.6
1,2-Dichlorobenzene	ND	5.7	ug/L	0.74
1,3-Dichlorobenzene	ND	5.7	ug/L	0.80
1,4-Dichlorobenzene	ND	5.7	ug/L	0.74
Dichlorodifluoromethane	ND	5.7	ug/L	1.8
1,1-Dichloroethane	ND	5.7	ug/L	0.86
1,2-Dichloroethane	ND	5.7	ug/L	1.3
cis-1,2-Dichloroethene	**170**	**5.7**	**ug/L**	**0.97**
trans-1,2-Dichloroethene	ND	5.7	ug/L	1.1
1,1-Dichloroethene	ND	5.7	ug/L	1.1
1,2-Dichloropropane	ND	5.7	ug/L	1.0
1,3-Dichloropropane	ND	5.7	ug/L	0.91
2,2-Dichloropropane	ND	5.7	ug/L	0.74
1,1-Dichloropropene	ND	5.7	ug/L	0.74
1,4-Dioxane	ND	290	ug/L	110
Ethylbenzene	ND	5.7	ug/L	0.97
Hexachlorobutadiene	ND	5.7	ug/L	1.7

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-20 PURGED

GC/MS Volatiles

Lot-Sample #...: A0E040435-027 **Work Order #...:** L2F6V1AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	5.7	ug/L	0.69
Methylene chloride	ND	5.7	ug/L	1.9
Naphthalene	ND	5.7	ug/L	1.4
n-Propylbenzene	ND	5.7	ug/L	0.80
Styrene	ND	5.7	ug/L	0.63
1,1,1,2-Tetrachloroethane	ND	5.7	ug/L	1.3
1,1,2,2-Tetrachloroethane	ND	5.7	ug/L	1.0
Tetrachloroethene	ND	5.7	ug/L	1.7
Toluene	ND	5.7	ug/L	0.74
1,2,3-Trichlorobenzene	ND	5.7	ug/L	0.97
1,2,4-Trichloro-benzene	ND	5.7	ug/L	0.86
1,1,1-Trichloroethane	ND	5.7	ug/L	1.3
1,1,2-Trichloroethane	ND	5.7	ug/L	1.5
Trichloroethene	ND	5.7	ug/L	0.97
Trichlorofluoromethane	ND	5.7	ug/L	1.2
1,2,3-Trichloropropane	ND	5.7	ug/L	2.5
1,2,4-Trimethylbenzene	ND	5.7	ug/L	0.69
1,3,5-Trimethylbenzene	ND	5.7	ug/L	0.55
Vinyl chloride	ND	5.7	ug/L	1.3
m-Xylene & p-Xylene	ND	11	ug/L	1.4
o-Xylene	ND	5.7	ug/L	0.80

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-20 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-027 Work Order #...: L2F6V1AA Matrix.....: WG
Date Sampled...: 06/02/10 17:30 Date Received..: 06/04/10
Prep Date.....: 06/15/10 Analysis Date..: 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1
Analyst ID.....: 001904 Instrument ID..: UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP C

GC/MS Volatiles

Lot-Sample #...: A0F040435-028 **Work Order #...:** L2F6W1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 17:33 **Date Received..:** 06/04/10
Prep Date.....: 06/16/10 **Analysis Date..:** 06/16/10
Prep Batch #...: 0168150
Dilution Factor: 2.5
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	5.0	ug/L	0.82

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MANSON BRANCH #2

GC/MS Volatiles

Lot-Sample #...: A0F040435-029 **Work Order #...:** L2F601AA **Matrix.....:** WG
Date Sampled...: 06/02/10 17:50 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 50
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	50	ug/L	6.5
Benzene	ND	50	ug/L	6.5
Bromochloromethane	ND	50	ug/L	14
Bromodichloromethane	ND	50	ug/L	7.5
Bromoform	ND	50	ug/L	32
Bromomethane	ND	50	ug/L	20
n-Butylbenzene	ND	50	ug/L	6.0
sec-Butylbenzene	ND	50	ug/L	6.5
tert-Butylbenzene	ND	50	ug/L	6.5
Carbon tetrachloride	ND	50	ug/L	6.5
Chlorobenzene	ND	50	ug/L	7.5
Chlorodibromomethane	ND	50	ug/L	9.0
Chloroethane	ND	50	ug/L	14
Chloroform	ND	50	ug/L	8.0
Chloromethane	ND	50	ug/L	15
2-Chlorotoluene	ND	50	ug/L	5.5
4-Chlorotoluene	ND	50	ug/L	9.0
1,2-Dibromo-3-chloropropane (DBCP)	ND	100	ug/L	34
1,2-Dibromoethane	ND	50	ug/L	12
Dibromomethane	ND	50	ug/L	14
1,2-Dichlorobenzene	ND	50	ug/L	6.5
1,3-Dichlorobenzene	ND	50	ug/L	7.0
1,4-Dichlorobenzene	ND	50	ug/L	6.5
Dichlorodifluoromethane	ND	50	ug/L	16
1,1-Dichloroethane	ND	50	ug/L	7.5
1,2-Dichloroethane	ND	50	ug/L	11
cis-1,2-Dichloroethene	**180**	**50**	**ug/L**	**8.5**
trans-1,2-Dichloroethene	ND	50	ug/L	9.5
1,1-Dichloroethene	**160**	**50**	**ug/L**	**9.5**
1,2-Dichloropropane	ND	50	ug/L	9.0
1,3-Dichloropropane	ND	50	ug/L	8.0
2,2-Dichloropropane	ND	50	ug/L	6.5
1,1-Dichloropropene	ND	50	ug/L	6.5
1,4-Dioxane	ND	2500	ug/L	950
Ethylbenzene	ND	50	ug/L	8.5
Hexachlorobutadiene	ND	50	ug/L	15

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MANSON BRANCH #2

GC/MS Volatiles

Lot-Sample #...: A0F040435-029 **Work Order #...:** L2F601AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	50	ug/L	6.0
Methylene chloride	ND	50	ug/L	16
Naphthalene	ND	50	ug/L	12
n-Propylbenzene	ND	50	ug/L	7.0
Styrene	ND	50	ug/L	5.5
1,1,1,2-Tetrachloroethane	ND	50	ug/L	12
1,1,2,2-Tetrachloroethane	ND	50	ug/L	9.0
Tetrachloroethene	ND	50	ug/L	14
Toluene	ND	50	ug/L	6.5
1,2,3-Trichlorobenzene	ND	50	ug/L	8.5
1,2,4-Trichloro-benzene	ND	50	ug/L	7.5
1,1,1-Trichloroethane	**61**	**50**	**ug/L**	**11**
1,1,2-Trichloroethane	ND	50	ug/L	14
Trichloroethene	**1700**	**50**	**ug/L**	**8.5**
Trichlorofluoromethane	ND	50	ug/L	10
1,2,3-Trichloropropane	ND	50	ug/L	22
1,2,4-Trimethylbenzene	ND	50	ug/L	6.0
1,3,5-Trimethylbenzene	ND	50	ug/L	4.8
Vinyl chloride	ND	50	ug/L	11
m-Xylene & p-Xylene	ND	100	ug/L	12
o-Xylene	ND	50	ug/L	7.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP H

GC/MS Volatiles

Lot-Sample #...: A0F040435-030 **Work Order #...:** L2F611AA **Matrix.....:** WG
Date Sampled...: 06/03/10 14:25 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 2
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	2.0	ug/L	0.26
Benzene	ND	2.0	ug/L	0.26
Bromochloromethane	ND	2.0	ug/L	0.58
Bromodichloromethane	ND	2.0	ug/L	0.30
Bromoform	ND	2.0	ug/L	1.3
Bromomethane	ND	2.0	ug/L	0.82
n-Butylbenzene	ND	2.0	ug/L	0.24
sec-Butylbenzene	ND	2.0	ug/L	0.26
tert-Butylbenzene	ND	2.0	ug/L	0.26
Carbon tetrachloride	ND	2.0	ug/L	0.26
Chlorobenzene	ND	2.0	ug/L	0.30
Chlorodibromomethane	ND	2.0	ug/L	0.36
Chloroethane	ND	2.0	ug/L	0.58
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.60
2-Chlorotoluene	ND	2.0	ug/L	0.22
4-Chlorotoluene	ND	2.0	ug/L	0.36
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	ug/L	1.3
1,2-Dibromoethane	ND	2.0	ug/L	0.48
Dibromomethane	ND	2.0	ug/L	0.56
1,2-Dichlorobenzene	ND	2.0	ug/L	0.26
1,3-Dichlorobenzene	ND	2.0	ug/L	0.28
1,4-Dichlorobenzene	ND	2.0	ug/L	0.26
Dichlorodifluoromethane	ND	2.0	ug/L	0.62
1,1-Dichloroethane	ND	2.0	ug/L	0.30
1,2-Dichloroethane	ND	2.0	ug/L	0.44
cis-1,2-Dichloroethene	**63**	**2.0**	**ug/L**	**0.34**
trans-1,2-Dichloroethene	ND	2.0	ug/L	0.38
1,1-Dichloroethene	**12**	**2.0**	**ug/L**	**0.38**
1,2-Dichloropropane	ND	2.0	ug/L	0.36
1,3-Dichloropropane	ND	2.0	ug/L	0.32
2,2-Dichloropropane	ND	2.0	ug/L	0.26
1,1-Dichloropropene	ND	2.0	ug/L	0.26
1,4-Dioxane	ND	100	ug/L	38
Ethylbenzene	ND	2.0	ug/L	0.34
Hexachlorobutadiene	ND	2.0	ug/L	0.60

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP H

GC/MS Volatiles

Lot-Sample #...: A0F040435-030 **Work Order #...:** L2F611AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.66
Naphthalene	ND	2.0	ug/L	0.48
n-Propylbenzene	ND	2.0	ug/L	0.28
Styrene	ND	2.0	ug/L	0.22
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	0.46
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.36
Tetrachloroethene	ND	2.0	ug/L	0.58
Toluene	ND	2.0	ug/L	0.26
1,2,3-Trichlorobenzene	ND	2.0	ug/L	0.34
1,2,4-Trichloro-benzene	ND	2.0	ug/L	0.30
1,1,1-Trichloroethane	ND	2.0	ug/L	0.44
1,1,2-Trichloroethane	ND	2.0	ug/L	0.54
Trichloroethene	**41**	**2.0**	**ug/L**	**0.34**
Trichlorofluoromethane	ND	2.0	ug/L	0.42
1,2,3-Trichloropropane	ND	2.0	ug/L	0.86
1,2,4-Trimethylbenzene	ND	2.0	ug/L	0.24
1,3,5-Trimethylbenzene	ND	2.0	ug/L	0.19
Vinyl chloride	ND	2.0	ug/L	0.44
m-Xylene & p-Xylene	ND	4.0	ug/L	0.48
o-Xylene	ND	2.0	ug/L	0.28

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-10 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-031 **Work Order #...:** L2F621AC **Matrix.....:** WG
Date Sampled...: 06/03/10 10:00 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**1.9**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-10 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-031 **Work Order #...:** L2F621AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**2.8**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-10 PURGE

GC/MS Volatiles

Lot-Sample #...:	A0F040435-031	**Work Order #...:**	L2F621AA	**Matrix.....:**	WG
Date Sampled...:	06/03/10 10:00	**Date Received..:**	06/04/10		
Prep Date.....:	06/15/10	**Analysis Date..:**	06/15/10		
Prep Batch #...:	0168150				
Dilution Factor:	1				
Analyst ID.....:	001904	**Instrument ID..:**	UX16		
		Method.....:	SW846 8260B SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	106	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-3 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-032 **Work Order #...:** L2F631AC **Matrix.....:** WG
Date Sampled...: 06/03/10 11:25 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	**2.3**	**1.0**	**ug/L**	**0.16**
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	**1.7**	**1.0**	**ug/L**	**0.19**
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-3 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-032 **Work Order #...:** L2F631AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	**2.4**	**1.0**	**ug/L**	**0.17**
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-3 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-032 **Work Order #...:** L2F631AA **Matrix.....:** WG
Date Sampled...: 06/03/10 11:25 **Date Received..:** 06/04/10
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	2.0	ug/L	0.33

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-033 Work Order #...: L2F641AC Matrix.....: WG
Date Sampled...: 06/03/10 13:15 Date Received..: 06/04/10
Prep Date.....: 06/08/10 Analysis Date..: 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 142.86
Analyst ID.....: 001904 Instrument ID..: UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	140	ug/L	19
Benzene	ND	140	ug/L	19
Bromochloromethane	ND	140	ug/L	41
Bromodichloromethane	ND	140	ug/L	21
Bromoform	ND	140	ug/L	91
Bromomethane	ND	140	ug/L	59
n-Butylbenzene	ND	140	ug/L	17
sec-Butylbenzene	ND	140	ug/L	19
tert-Butylbenzene	ND	140	ug/L	19
Carbon tetrachloride	ND	140	ug/L	19
Chlorobenzene	ND	140	ug/L	21
Chlorodibromomethane	ND	140	ug/L	26
Chloroethane	ND	140	ug/L	41
Chloroform	ND	140	ug/L	23
Chloromethane	ND	140	ug/L	43
2-Chlorotoluene	ND	140	ug/L	16
4-Chlorotoluene	ND	140	ug/L	26
1,2-Dibromo-3-chloropropane (DBCP)	ND	290	ug/L	96
1,2-Dibromoethane	ND	140	ug/L	34
Dibromomethane	ND	140	ug/L	40
1,2-Dichlorobenzene	ND	140	ug/L	19
1,3-Dichlorobenzene	ND	140	ug/L	20
1,4-Dichlorobenzene	ND	140	ug/L	19
Dichlorodifluoromethane	ND	140	ug/L	44
1,1-Dichloroethane	ND	140	ug/L	21
1,2-Dichloroethane	ND	140	ug/L	31
cis-1,2-Dichloroethene	**380**	**140**	**ug/L**	**24**
trans-1,2-Dichloroethene	ND	140	ug/L	27
1,1-Dichloroethene	ND	140	ug/L	27
1,2-Dichloropropane	ND	140	ug/L	26
1,3-Dichloropropane	ND	140	ug/L	23
2,2-Dichloropropane	ND	140	ug/L	19
1,1-Dichloropropene	ND	140	ug/L	19
1,4-Dioxane	ND	7100	ug/L	2700
Ethylbenzene	ND	140	ug/L	24
Hexachlorobutadiene	ND	140	ug/L	43

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-033 **Work Order #...:** L2F641AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	140	ug/L	17
Methylene chloride	ND	140	ug/L	47
Naphthalene	ND	140	ug/L	34
n-Propylbenzene	ND	140	ug/L	20
Styrene	ND	140	ug/L	16
1,1,1,2-Tetrachloroethane	ND	140	ug/L	33
1,1,2,2-Tetrachloroethane	ND	140	ug/L	26
Tetrachloroethene	ND	140	ug/L	41
Toluene	ND	140	ug/L	19
1,2,3-Trichlorobenzene	ND	140	ug/L	24
1,2,4-Trichloro-benzene	ND	140	ug/L	21
1,1,1-Trichloroethane	ND	140	ug/L	31
1,1,2-Trichloroethane	ND	140	ug/L	39
Trichloroethene	**3600**	**140**	**ug/L**	**24**
Trichlorofluoromethane	ND	140	ug/L	30
1,2,3-Trichloropropane	ND	140	ug/L	61
1,2,4-Trimethylbenzene	ND	140	ug/L	17
1,3,5-Trimethylbenzene	ND	140	ug/L	14
Vinyl chloride	ND	140	ug/L	31
m-Xylene & p-Xylene	ND	290	ug/L	34
o-Xylene	ND	140	ug/L	20

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-033 **Work Order #...:** L2F642AC **Matrix.....:** WG
Date Sampled...: 06/03/10 13:15 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 28.57
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	29	ug/L	3.7
Benzene	ND	29	ug/L	3.7
Bromochloromethane	ND	29	ug/L	8.3
Bromodichloromethane	ND	29	ug/L	4.3
Bromoform	ND	29	ug/L	18
Bromomethane	ND	29	ug/L	12
n-Butylbenzene	ND	29	ug/L	3.4
sec-Butylbenzene	ND	29	ug/L	3.7
tert-Butylbenzene	ND	29	ug/L	3.7
Carbon tetrachloride	ND	29	ug/L	3.7
Chlorobenzene	ND	29	ug/L	4.3
Chlorodibromomethane	ND	29	ug/L	5.1
Chloroethane	ND	29	ug/L	8.3
Chloroform	ND	29	ug/L	4.6
Chloromethane	ND	29	ug/L	8.6
2-Chlorotoluene	ND	29	ug/L	3.1
4-Chlorotoluene	ND	29	ug/L	5.1
1,2-Dibromo-3-chloropropane (DBCP)	ND	57	ug/L	19
1,2-Dibromoethane	ND	29	ug/L	6.9
Dibromomethane	ND	29	ug/L	8.0
1,2-Dichlorobenzene	ND	29	ug/L	3.7
1,3-Dichlorobenzene	ND	29	ug/L	4.0
1,4-Dichlorobenzene	ND	29	ug/L	3.7
Dichlorodifluoromethane	ND	29	ug/L	8.9
1,1-Dichloroethane	ND	29	ug/L	4.3
1,2-Dichloroethane	ND	29	ug/L	6.3
cis-1,2-Dichloroethene	**330**	**29**	**ug/L**	**4.9**
trans-1,2-Dichloroethene	ND	29	ug/L	5.4
1,1-Dichloroethene	**58**	**29**	**ug/L**	**5.4**
1,2-Dichloropropane	ND	29	ug/L	5.1
1,3-Dichloropropane	ND	29	ug/L	4.6
2,2-Dichloropropane	ND	29	ug/L	3.7
1,1-Dichloropropene	ND	29	ug/L	3.7
1,4-Dioxane	ND	1400	ug/L	540
Ethylbenzene	ND	29	ug/L	4.9
Hexachlorobutadiene	ND	29	ug/L	8.6

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-033 **Work Order #...:** L2F642AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	29	ug/L	3.4
Methylene chloride	ND	29	ug/L	9.4
Naphthalene	ND	29	ug/L	6.9
n-Propylbenzene	ND	29	ug/L	4.0
Styrene	ND	29	ug/L	3.1
1,1,1,2-Tetrachloroethane	ND	29	ug/L	6.6
1,1,2,2-Tetrachloroethane	ND	29	ug/L	5.1
Tetrachloroethene	ND	29	ug/L	8.3
Toluene	ND	29	ug/L	3.7
1,2,3-Trichlorobenzene	ND	29	ug/L	4.9
1,2,4-Trichloro-benzene	ND	29	ug/L	4.3
1,1,1-Trichloroethane	ND	29	ug/L	6.3
1,1,2-Trichloroethane	ND	29	ug/L	7.7
Trichloroethene	**3200 E**	**29**	**ug/L**	**4.9**
Trichlorofluoromethane	ND	29	ug/L	6.0
1,2,3-Trichloropropane	ND	29	ug/L	12
1,2,4-Trimethylbenzene	ND	29	ug/L	3.4
1,3,5-Trimethylbenzene	ND	29	ug/L	2.7
Vinyl chloride	ND	29	ug/L	6.3
m-Xylene & p-Xylene	ND	57	ug/L	6.9
o-Xylene	ND	29	ug/L	4.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-14 PURGE

GC/MS Volatiles

Lot-Sample #...: A0F040435-033 **Work Order #...:** L2F641AA **Matrix.....:** WG
Date Sampled...: 06/03/10 13:15 **Date Received..:** 06/04/10
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 14.29
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	29	ug/L	4.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-034 **Work Order #...:** L2F661AC **Matrix.....:** WG
Date Sampled...: 06/03/10 13:45 **Date Received..:** 06/04/10
Prep Date.....: 06/07/10 **Analysis Date..:** 06/07/10
Prep Batch #...: 0158191
Dilution Factor: 200
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	200	ug/L	26
Benzene	ND	200	ug/L	26
Bromochloromethane	ND	200	ug/L	58
Bromodichloromethane	ND	200	ug/L	30
Bromoform	ND	200	ug/L	130
Bromomethane	ND	200	ug/L	82
n-Butylbenzene	ND	200	ug/L	24
sec-Butylbenzene	ND	200	ug/L	26
tert-Butylbenzene	ND	200	ug/L	26
Carbon tetrachloride	ND	200	ug/L	26
Chlorobenzene	ND	200	ug/L	30
Chlorodibromomethane	ND	200	ug/L	36
Chloroethane	ND	200	ug/L	58
Chloroform	ND	200	ug/L	32
Chloromethane	ND	200	ug/L	60
2-Chlorotoluene	ND	200	ug/L	22
4-Chlorotoluene	ND	200	ug/L	36
1,2-Dibromo-3-chloropropane (DBCP)	ND	400	ug/L	130
1,2-Dibromoethane	ND	200	ug/L	48
Dibromomethane	ND	200	ug/L	56
1,2-Dichlorobenzene	ND	200	ug/L	26
1,3-Dichlorobenzene	ND	200	ug/L	28
1,4-Dichlorobenzene	ND	200	ug/L	26
Dichlorodifluoromethane	ND	200	ug/L	62
1,1-Dichloroethane	ND	200	ug/L	30
1,2-Dichloroethane	ND	200	ug/L	44
cis-1,2-Dichloroethene	ND	200	ug/L	34
trans-1,2-Dichloroethene	ND	200	ug/L	38
1,1-Dichloroethene	ND	200	ug/L	38
1,2-Dichloropropane	ND	200	ug/L	36
1,3-Dichloropropane	ND	200	ug/L	32
2,2-Dichloropropane	ND	200	ug/L	26
1,1-Dichloropropene	ND	200	ug/L	26
1,4-Dioxane	ND	10000	ug/L	3800
Ethylbenzene	ND	200	ug/L	34
Hexachlorobutadiene	ND	200	ug/L	60

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-034 Work Order #...: L2F661AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	200	ug/L	24
Methylene chloride	ND	200	ug/L	66
Naphthalene	ND	200	ug/L	48
n-Propylbenzene	ND	200	ug/L	28
Styrene	ND	200	ug/L	22
1,1,1,2-Tetrachloroethane	ND	200	ug/L	46
1,1,2,2-Tetrachloroethane	ND	200	ug/L	36
Tetrachloroethene	ND	200	ug/L	58
Toluene	ND	200	ug/L	26
1,2,3-Trichlorobenzene	ND	200	ug/L	34
1,2,4-Trichloro-benzene	ND	200	ug/L	30
1,1,1-Trichloroethane	ND	200	ug/L	44
1,1,2-Trichloroethane	ND	200	ug/L	54
Trichloroethene	**5800**	**200**	**ug/L**	**34**
Trichlorofluoromethane	ND	200	ug/L	42
1,2,3-Trichloropropane	ND	200	ug/L	86
1,2,4-Trimethylbenzene	ND	200	ug/L	24
1,3,5-Trimethylbenzene	ND	200	ug/L	19
Vinyl chloride	ND	200	ug/L	44
m-Xylene & p-Xylene	ND	400	ug/L	48
o-Xylene	ND	200	ug/L	28

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-034 **Work Order #...:** L2F662AC **Matrix.....:** WG
Date Sampled...: 06/03/10 13:45 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 40
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	40	ug/L	5.2
Benzene	ND	40	ug/L	5.2
Bromochloromethane	ND	40	ug/L	12
Bromodichloromethane	ND	40	ug/L	6.0
Bromoform	ND	40	ug/L	26
Bromomethane	ND	40	ug/L	16
n-Butylbenzene	ND	40	ug/L	4.8
sec-Butylbenzene	ND	40	ug/L	5.2
tert-Butylbenzene	ND	40	ug/L	5.2
Carbon tetrachloride	ND	40	ug/L	5.2
Chlorobenzene	ND	40	ug/L	6.0
Chlorodibromomethane	ND	40	ug/L	7.2
Chloroethane	ND	40	ug/L	12
Chloroform	ND	40	ug/L	6.4
Chloromethane	ND	40	ug/L	12
2-Chlorotoluene	ND	40	ug/L	4.4
4-Chlorotoluene	ND	40	ug/L	7.2
1,2-Dibromo-3-chloropropane (DBCP)	ND	80	ug/L	27
1,2-Dibromoethane	ND	40	ug/L	9.6
Dibromomethane	ND	40	ug/L	11
1,2-Dichlorobenzene	ND	40	ug/L	5.2
1,3-Dichlorobenzene	ND	40	ug/L	5.6
1,4-Dichlorobenzene	ND	40	ug/L	5.2
Dichlorodifluoromethane	ND	40	ug/L	12
1,1-Dichloroethane	ND	40	ug/L	6.0
1,2-Dichloroethane	ND	40	ug/L	8.8
cis-1,2-Dichloroethene	ND	40	ug/L	6.8
trans-1,2-Dichloroethene	ND	40	ug/L	7.6
1,1-Dichloroethene	**72**	**40**	**ug/L**	**7.6**
1,2-Dichloropropane	ND	40	ug/L	7.2
1,3-Dichloropropane	ND	40	ug/L	6.4
2,2-Dichloropropane	ND	40	ug/L	5.2
1,1-Dichloropropene	ND	40	ug/L	5.2
1,4-Dioxane	ND	2000	ug/L	760
Ethylbenzene	ND	40	ug/L	6.8
Hexachlorobutadiene	ND	40	ug/L	12

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-034 Work Order #...: L2F662AC Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	40	ug/L	4.8
Methylene chloride	ND	40	ug/L	13
Naphthalene	ND	40	ug/L	9.6
n-Propylbenzene	ND	40	ug/L	5.6
Styrene	ND	40	ug/L	4.4
1,1,1,2-Tetrachloroethane	ND	40	ug/L	9.2
1,1,2,2-Tetrachloroethane	ND	40	ug/L	7.2
Tetrachloroethene	ND	40	ug/L	12
Toluene	ND	40	ug/L	5.2
1,2,3-Trichlorobenzene	ND	40	ug/L	6.8
1,2,4-Trichloro-benzene	ND	40	ug/L	6.0
1,1,1-Trichloroethane	ND	40	ug/L	8.8
1,1,2-Trichloroethane	ND	40	ug/L	11
Trichloroethene	**5800 E**	**40**	**ug/L**	**6.8**
Trichlorofluoromethane	ND	40	ug/L	8.4
1,2,3-Trichloropropane	ND	40	ug/L	17
1,2,4-Trimethylbenzene	ND	40	ug/L	4.8
1,3,5-Trimethylbenzene	ND	40	ug/L	3.8
Vinyl chloride	ND	40	ug/L	8.8
m-Xylene & p-Xylene	ND	80	ug/L	9.6
o-Xylene	ND	40	ug/L	5.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-19 PURGED

GC/MS Volatiles

Lot-Sample #...: A0F040435-034 **Work Order #...:** L2F661AA **Matrix.....:** WG
Date Sampled...: 06/03/10 13:45 **Date Received..:** 06/04/10
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 20
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	40	ug/L	6.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP L

GC/MS Volatiles

Lot-Sample #...: A0F040435-035 **Work Order #...:** L2F7A1AA **Matrix.....:** WG
Date Sampled...: 06/03/10 16:00 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP L

GC/MS Volatiles

Lot-Sample #...: A0F040435-035 **Work Order #...:** L2F7A1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0E040435 **Work Order #...:** L2JPQ1AA **Matrix.....:** WATER
MB Lot-Sample #: A0F070000-112

Prep Date.....: 06/04/10 **Instrument ID..:** UX11
Analysis Date..: 06/04/10 **Prep Batch #...:** 0158112
Dilution Factor: 1

Analyst ID.....: 001644

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2JPQ1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2J1K1AA **Matrix.....:** WATER
MB Lot-Sample #: A0F070000-191

Prep Date.....: 06/07/10 **Instrument ID..:** UX10

Analysis Date..: 06/07/10 **Prep Batch #...:** 0158191
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2J1K1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2L2E1AA **Matrix.....:** WATER
MB Lot-Sample #: A0F080000-358

Prep Date.....: 06/08/10 **Instrument ID..:** UX10
Analysis Date..: 06/08/10 **Prep Batch #...:** 0159358
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2L2E1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2PFK1AA **Matrix.....:** WATER
MB Lot-Sample #: A0F100000-174

Prep Date.....: 06/09/10 **Instrument ID..:** UX10
Analysis Date..: 06/09/10 **Prep Batch #...:** 0161174
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2PFK1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2QXX1AA **Matrix.....:** WATER
MB Lot-Sample #: A0F110000-041

Prep Date.....: 06/10/10 **Instrument ID..:** UX10
Analysis Date..: 06/10/10 **Prep Batch #...:** 0162041
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0E040435 **Work Order #...:** L2QXX1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	104	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2X4L1AA **Matrix.....:** WATER
MB Lot-Sample #: A0F150000-410

Prep Date.....: 06/09/10 **Instrument ID..:** UX10
Analysis Date..: 06/09/10 **Prep Batch #...:** 0166410
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2X4L1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L22G21AA **Matrix.....:** WATER
MB Lot-Sample #: A0F170000-150

Prep Date.....: 06/15/10 **Instrument ID..:** UX16
Analysis Date..: 06/15/10 **Prep Batch #...:** 0168150
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dioxane	ND	2.0	ug/L	SW846 8260B SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(61 - 128)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2JPQ1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F070000-112 L2JPQ1AD-LCSD
Prep Date.....: 06/04/10 **Analysis Date..:** 06/04/10
Prep Batch #...: 0158112
Dilution Factor: 1 **Instrument ID..:** UX11
Analyst ID.....: 001644

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**86**	**(63 - 130)**			**SW846 8260B**
	88	**(63 - 130)**	**2.5**	**(0-20)**	**SW846 8260B**
Trichloroethene	**90**	**(75 - 122)**			**SW846 8260B**
	92	**(75 - 122)**	**2.3**	**(0-20)**	**SW846 8260B**
Benzene	**101**	**(80 - 116)**			**SW846 8260B**
	103	**(80 - 116)**	**2.2**	**(0-20)**	**SW846 8260B**
Toluene	**104**	**(74 - 119)**			**SW846 8260B**
	106	**(74 - 119)**	**2.0**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	101	**(76 - 117)**	**1.1**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	91	(61 - 128)
Toluene-d8	96	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2J1K1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F070000-191 L2J1K1AD-LCSD
Prep Date.....: 06/07/10 **Analysis Date..:** 06/07/10
Prep Batch #...: 0158191
Dilution Factor: 1 **Instrument ID..:** UX10
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**109**	**(63 - 130)**			**SW846 8260B**
	107	**(63 - 130)**	**2.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**1.4**	**(0-20)**	**SW846 8260B**
Benzene	**100**	**(80 - 116)**			**SW846 8260B**
	98	**(80 - 116)**	**2.7**	**(0-20)**	**SW846 8260B**
Toluene	**95**	**(74 - 119)**			**SW846 8260B**
	96	**(74 - 119)**	**1.6**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**1.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	104	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	102	(61 - 128)
Toluene-d8	100	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2L2E1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F080000-358 L2L2E1AD-LCSD
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1 **Instrument ID..:** UX10
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	104	(63 - 130)			SW846 8260B
	108	(63 - 130)	3.8	(0-20)	SW846 8260B
Trichloroethene	94	(75 - 122)			SW846 8260B
	98	(75 - 122)	4.4	(0-20)	SW846 8260B
Benzene	96	(80 - 116)			SW846 8260B
	100	(80 - 116)	4.2	(0-20)	SW846 8260B
Toluene	93	(74 - 119)			SW846 8260B
	96	(74 - 119)	3.2	(0-20)	SW846 8260B
Chlorobenzene	94	(76 - 117)			SW846 8260B
	96	(76 - 117)	2.2	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
	106	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	104	(61 - 128)
Toluene-d8	100	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2PFK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F100000-174 L2PFK1AD-LCSD
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 1 **Instrument ID..:** UX10
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**107**	**(63 - 130)**			**SW846 8260B**
	106	**(63 - 130)**	**1.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**0.91**	**(0-20)**	**SW846 8260B**
Benzene	**100**	**(80 - 116)**			**SW846 8260B**
	100	**(80 - 116)**	**0.22**	**(0-20)**	**SW846 8260B**
Toluene	**94**	**(74 - 119)**			**SW846 8260B**
	96	**(74 - 119)**	**2.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(76 - 117)**			**SW846 8260B**
	98	**(76 - 117)**	**1.6**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	102	(61 - 128)
Toluene-d8	99	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2QXX1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F110000-041 L2QXX1AD-LCSD
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1 **Instrument ID..:** UX10
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**110**	**(63 - 130)**			**SW846 8260B**
	109	**(63 - 130)**	**0.85**	**(0-20)**	**SW846 8260B**
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**0.89**	**(0-20)**	**SW846 8260B**
Benzene	**102**	**(80 - 116)**			**SW846 8260B**
	101	**(80 - 116)**	**1.3**	**(0-20)**	**SW846 8260B**
Toluene	**102**	**(74 - 119)**			**SW846 8260B**
	101	**(74 - 119)**	**1.7**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**102**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**2.1**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	101	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	92	(61 - 128)
Toluene-d8	102	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)
	95	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2X4L1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F150000-410 L2X4L1AD-LCSD
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0166410
Dilution Factor: 1 **Instrument ID..:** UX10
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	102	**(63 - 130)**			**SW846 8260B**
	99	**(63 - 130)**	**3.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	89	**(75 - 122)**			**SW846 8260B**
	91	**(75 - 122)**	**1.8**	**(0-20)**	**SW846 8260B**
Benzene	91	**(80 - 116)**			**SW846 8260B**
	94	**(80 - 116)**	**3.0**	**(0-20)**	**SW846 8260B**
Toluene	90	**(74 - 119)**			**SW846 8260B**
	94	**(74 - 119)**	**4.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	92	**(76 - 117)**			**SW846 8260B**
	95	**(76 - 117)**	**2.8**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	100	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	98	(61 - 128)
Toluene-d8	100	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L22G21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0F170000-150 L22G21AD-LCSD
Prep Date.....: 06/15/10 **Analysis Date..:** 06/15/10
Prep Batch #...: 0168150
Dilution Factor: 1 **Instrument ID..:** UX16
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,4-Dioxane	**96**	**(50 - 150)**			**SW846 8260B SIM**
	100	**(50 - 150)**	**3.8**	**(0-30)**	**SW846 8260B SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(61 - 128)
	100	(61 - 128)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2DNR1C1-MS **Matrix.....:** WATER
MS Lot-Sample #: A0F020548-001 L2DNR1C2-MSD
Date Sampled...: 06/01/10 10:15 **Date Received..:** 06/02/10
Prep Date.....: 06/05/10 **Analysis Date..:** 06/05/10
Prep Batch #...: 0158112
Dilution Factor: 142.86 **Analyst ID.....:** 001644 **Instrument ID..:** UX11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	83	(62 - 130)			SW846 8260B
	85	(62 - 130)	2.0	(0-20)	SW846 8260B
Trichloroethene	80	(62 - 130)			SW846 8260B
	88	(62 - 130)	2.3	(0-20)	SW846 8260B
Benzene	97	(78 - 118)			SW846 8260B
	99	(78 - 118)	1.6	(0-20)	SW846 8260B
Toluene	99	(70 - 119)			SW846 8260B
	100	(70 - 119)	1.2	(0-20)	SW846 8260B
Chlorobenzene	93	(76 - 117)			SW846 8260B
	95	(76 - 117)	1.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	95	(61 - 128)
Toluene-d8	98	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 Work Order #...: L2GG51AC-MS Matrix.....: WATER
MS Lot-Sample #: A0F040471-001 L2GG51AD-MSD
Date Sampled...: 06/03/10 14:05 Date Received..: 06/04/10
Prep Date.....: 06/07/10 Analysis Date..: 06/07/10
Prep Batch #...: 0158191
Dilution Factor: 2.5 Analyst ID.....: 001904 Instrument ID..: UX10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	105	(62 - 130)			SW846 8260B
	112	(62 - 130)	6.5	(0-20)	SW846 8260B
Trichloroethene	100	(62 - 130)			SW846 8260B
	99	(62 - 130)	0.10	(0-20)	SW846 8260B
Benzene	99	(78 - 118)			SW846 8260B
	101	(78 - 118)	2.6	(0-20)	SW846 8260B
Toluene	96	(70 - 119)			SW846 8260B
	98	(70 - 119)	2.7	(0-20)	SW846 8260B
Chlorobenzene	98	(76 - 117)			SW846 8260B
	99	(76 - 117)	1.1	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
	104	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
	101	(61 - 128)
Toluene-d8	100	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A0F040435	**Work Order #...:**	L2F5W1AD-MS	**Matrix.....:**	WG
MS Lot-Sample #:	A0F040435-012		L2F5W1AE-MSD		
Date Sampled...:	06/01/10 13:47	**Date Received..:**	06/04/10		
Prep Date.....:	06/08/10	**Analysis Date..:**	06/08/10		
Prep Batch #...:	0159358				
Dilution Factor:	5	**Analyst ID.....:**	001904	**Instrument ID..:**	UX10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	107	(62 - 130)			SW846 8260B
	108	(62 - 130)	0.76	(0-20)	SW846 8260B
Trichloroethene	97	(62 - 130)			SW846 8260B
	99	(62 - 130)	2.3	(0-20)	SW846 8260B
Benzene	98	(78 - 118)			SW846 8260B
	100	(78 - 118)	2.6	(0-20)	SW846 8260B
Toluene	94	(70 - 119)			SW846 8260B
	95	(70 - 119)	1.6	(0-20)	SW846 8260B
Chlorobenzene	96	(76 - 117)			SW846 8260B
	97	(76 - 117)	1.7	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	104	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
	97	(61 - 128)
Toluene-d8	100	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)
	97	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A0F040435	**Work Order #...:**	L2F6E1AC-MS	**Matrix.....:**	WG
MS Lot-Sample #:	A0F040435-018		L2F6E1AD-MSD		
Date Sampled...:	06/02/10 10:15	**Date Received..:**	06/04/10		
Prep Date.....:	06/09/10	**Analysis Date..:**	06/09/10		
Prep Batch #...:	0161174				
Dilution Factor:	1	**Analyst ID.....:**	001904	**Instrument ID..:**	UX10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	104	(62 - 130)			**SW846 8260B**
	102	(62 - 130)	2.0	(0-20)	**SW846 8260B**
Trichloroethene	92	(62 - 130)			**SW846 8260B**
	92	(62 - 130)	0.70	(0-20)	**SW846 8260B**
Benzene	93	(78 - 118)			**SW846 8260B**
	93	(78 - 118)	0.63	(0-20)	**SW846 8260B**
Toluene	94	(70 - 119)			**SW846 8260B**
	93	(70 - 119)	1.0	(0-20)	**SW846 8260B**
Chlorobenzene	95	(76 - 117)			**SW846 8260B**
	94	(76 - 117)	2.0	(0-20)	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
	93	(61 - 128)
Toluene-d8	100	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F040435 **Work Order #...:** L2G8K1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: A0F040546-016 L2G8K1AE-MSD
Date Sampled...: 06/01/10 15:30 **Date Received..:** 06/04/10
Prep Date.....: 06/10/10 **Analysis Date..:** 06/10/10
Prep Batch #...: 0162041
Dilution Factor: 1 **Analyst ID.....:** 001904 **Instrument ID..:** UX10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	110	(62 - 130)			SW846 8260B
	106	(62 - 130)	1.8	(0-20)	SW846 8260B
Trichloroethene	97	(62 - 130)			SW846 8260B
	96	(62 - 130)	1.0	(0-20)	SW846 8260B
Benzene	100	(78 - 118)			SW846 8260B
	98	(78 - 118)	2.5	(0-20)	SW846 8260B
Toluene	99	(70 - 119)			SW846 8260B
	100	(70 - 119)	1.0	(0-20)	SW846 8260B
Chlorobenzene	99	(76 - 117)			SW846 8260B
	98	(76 - 117)	1.5	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
	100	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	94	(61 - 128)
Toluene-d8	103	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)
	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: NORTH CANTON

Regulatory program: ☐ DW ☐ NPDES ■ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: MACTEC	Client Project Manager: Greg Wrenn	Site Contact: Terrell Parker	Lab Contact: Alicia Danford
Address: 3200 Town Point Dr. Suite 100	Telephone: 770-421-3400	Telephone: 404-934-8970	Telephone:
City/State/Zip: Kennesaw, GA 30144	Email:		
Phone: 770-421-3400		TAT if different from below: ■ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	
Project Name: TK-Louisville	Method of Shipment/Carrier: FedEx		
Project Number: 6122-09-0322, 01	Shipping/Tracking No: 8566 3051 9668		
PO#			

COC No: 060110

1 of 4 COCs

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Preservation: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	# of Containers	Type	8260B 1,4-Dioxane	8270B 1,4-Dioxane by SIM	Sample Specific Notes / Special Instructions:
MW-22 PDB	6-1-10	15:35		X						3					N	G	X		
MW-24 PDB	6-1-10	16:58		X						3					N	G	X		
MW-5 PDB	6-1-10	17:10		X						4					N	G	X	X	
MW-7 PDB	6-1-10	16:37		X						3					N	G	X		
MW-9 PDB	6-1-10	15:17		X						3					N	G	X		
MW-1 PDB	6-1-10	15:50		X						3					N	G	X		
MW-8 PDB	6-1-10	16:10		X						3					N	G	X		
MW-2 PDB	6-1-10	14:42		X						3					N	G	X		
MW-23 PDB	6-1-10	15:02		X						3					N	G	X		
MW-21 PDB	6-1-10	16:25		X						3					N	G	X		

Possible Hazard Identification: ■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seal # 719687

Tommy Parker to FedEx

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	MACTEC	6-3-2010/19:50			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TAL NC	6/4/10 915

©2008, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: North Canton

Regulatory program: ☐ DW ☐ NPDES ■ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: MACTEC	Greg Wrenn	Terrell Parker	Alicia Danford	060110
Address: 3200 Town Point Dr. Suite 100	Telephone: 770-421-3400	Telephone: 404-934-8970	Telephone:	2 of 4 COCs
City/State/Zip: Kennesaw, GA 30144	Email:	TAT if different from below	Analyses	
Phone: 770-421-3400		■ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	8260B +1,4-Dioxane; 8260B +1,4-Dioxane by SIM	
Project Name: TK-Louisville	Method of Shipment/Carrier: FEDEX			
Project Number: 6122-09-0322, 01	Shipping/Tracking No: 8566 3051 9668			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Preservation: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:												Sample Specific Notes / Special Instructions:
MW-6 PDB	6-1-10	14:22		X						3					N	G	X									
MW-20 PDB	6-1-10	13:47		X						4					N	G		X								
MW-3 PDB	6-2-10	08:12		X						4					N	G		X								
MW-4 PDB	6-2-10	08:38		X						3					N	G	X									
MW-19 PDB	6-2-10	09:00		X						4					N	G		X								48 hr TAT
MW-14 PDB	6-2-10	09:15		X						4					N	G		X								
MW-10 PDB	6-2-10	09:48		X						4					N	G		X								
MW-18 PDB	6-2-10	10:15		X						3					N	G	X									
MW-16 PDB	6-2-10	10:25		X						3					N	G	X									
MW-17 PDB	6-2-10	18:40		X						3					N	G	X									

Possible Hazard Identification: ■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

NEED RESULTS FOR MW-19 by MONDAY AFTERNOON.

JAMES T. PARKER to FEDEX

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	MACTEC	6-3-2010 / 19:50			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Alana Mangum	Company: TAL NC	Date/Time: 6/4/10 915

©2008, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Desktop™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

Chain of Custody Record

TestAmerica Laboratory location: NORTH CANTON

Regulatory program: ☐ DW ☐ NPDES ■ RCRA ☐ Other

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

COC No: 060110

3 of 4 COCs

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:
Company Name: MACTEC	Greg Wrenn	Terrell Parker	ALICIA DAMFORD MARK LOCO 6-2-10
Address: 3200 Town Point Dr, Suite 100	Telephone: 770-421-3400	Telephone: 404-934-8970	Telephone: 330-966-9387
City/State/Zip: Kennesaw, GA 30144	Email:	TAT if different from below: ■ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	
Phone: 770-421-3400			
Project Name: TK-Louisville	Method of Shipment/Carrier: FedEx		
Project Number: 6122-09-0322,01	Shipping/Tracking No: 8566 3051 9668		
PO #			

Analyses: 8260 B +1,4-Dioxane, 8260B +1,4-Dioxane by SIM, Carbon Tetra CC

Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Cyprex	Other:																	Sample Specific Notes / Special Instructions:
MW-15	6-2-10	10:53		X						3					N	G	X														
MW-11	6-2-10	11:25		X						3					N	G	X														
MW-12	6-2-10	11:40		X						3					N	G	X														
MW-13	6-2-10	12:00		X						3					N	G	X														
TRIP Blank 060110	6-1-10	12:00		X						1					N	G	X														
Temp Blank	6-2-10	—		X									1						X												
MW-5 Purged	6-2-10	16:22		X						4					N	G		X													
MW-20 Purged	6-2-10	17:30		X						4					N	G		X													
SEEP C	6-2-10	17:33		X						3					N	G	X														
MANSON Branch #2	6-2-10	17:50		X						3					N	G	X														

Possible Hazard Identification: ■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

James T. Parker to FedEx

Relinquished by:	Company: MACTEC	Date/Time: 6-3-2010/19:50	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL NOC	Date/Time: 6/4/10 915

©2008, TestAmerica Laboratories, Inc. All rights reserved
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

Chain of Custody Record

TestAmerica Laboratory location: North Canton

Regulatory program: ☐ DW ☐ NPDES ■ RCRA ☐ Other

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: MACTEC	Client Project Manager: Greg Wrenn	Site Contact: Terrell Parker	Lab Contact: Alicia Danford	COC No: 060110
Address: 3200 Town Point Dr Suite 100	Telephone: 770-421-3400	Telephone: 404-934-8970	Telephone: 330-966-9387	4 of 4 COCs
City/State/Zip: Kennesaw, GA 30144	Email:			
Phone: 770-421-3400		TAT if different from below: ■ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: TK-Louisville	Method of Shipment/Carrier: FEDEX			
Project Number: 6122-07-0322,01	Shipping/Tracking No: 8566 3051 9668			
P.O.#				

Analyses: 8260B t, 4-bromofluorobenzene; 8260B t, 4-bromofluorobenzene

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Preservation: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	# of Containers	Filtered	8260B t	8260B t, 4-bromofluorobenzene by SIM	Sample Specific Notes / Special Instructions:
SEEP H	6-3-10	14:25		X						3					N	G	X		
MW-10 Purge	6-3-10	10:00		X						4					N	G		X	
MW-3 Purged	6-3-10	11:25		X						4					N	G		X	
MW-14 Purge	6-3-10	13:15		X						4					N	G		X	
MW-19 Purged	6-3-10	13:45		X						4					N	G		X	
SEEP L	6-3-10	16:00		X						3					N	G	X		

6-3-2010

Possible Hazard Identification: ■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: James T. Parker to FEDEX

Relinquished by:	Company: MACTEC	Date/Time: 6-3-2010/19:50	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL NC	Date/Time: 6/4/10 915

©2006, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A0F0404435
North Canton Facility

Client Pilactec Project TK-Louisville By _____
Cooler Received on 6/3/10 Opened on 6/4/10 (Signature)
FedEx [X] UPS [ ] DHL [ ] FAS [ ] Stetson [ ] Client Drop Off [ ] TestAmerica Courier [ ] Other _____
TestAmerica Cooler # A386 Multiple Coolers [ ] Foam Box [ ] Client Cooler [ ] Other _____

1. Were custody seals on the outside of the cooler(s)? Yes [X] No [ ] Intact? Yes [X] No [ ] NA [ ]
   If YES, Quantity 1 Quantity Unsalvageable on 6/4/10
   Were custody seals on the outside of cooler(s) signed and dated? Yes [X] No [ ] NA [ ]
   Were custody seals on the bottle(s)? Yes [ ] No [X]
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes [X] No [ ]
3. Did custody papers accompany the sample(s)? Yes [X] No [ ] Relinquished by client? Yes [X] No [ ]
4. Were the custody papers signed in the appropriate place? Yes [X] No [ ]
5. Packing material used: Bubble Wrap [X] Foam [ ] None [ ] Other paper towel
6. Cooler temperature upon receipt 2.7 °C See back of form for multiple coolers/temps [ ]
   METHOD: IR [X] Other [ ] _____
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
8. Could all bottle labels be reconciled with the COC? Yes [X] No [ ]
9. Were sample(s) at the correct pH upon receipt? Yes [ ] No [ ] NA [X]
10. Were correct bottle(s) used for the test(s) indicated? Yes [X] No [ ]
11. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] NA [ ]
12. Sufficient quantity received to perform indicated analyses? Yes [X] No [ ]
13. Was a trip blank present in the cooler(s)? Yes [X] No [ ] Were VOAs on the COC? Yes [X] No [ ]

Contacted PM HMD Date 6/4/10 by AM via Verbal [X] Voice Mail [ ] Other [ ]
Concerning 14 4 am 6/4/10

14. CHAIN OF CUSTODY

The following discrepancies occurred:

COC = MW-15, 11, 12 + 13, label = MW-15 TPB, 11 PDB, 12 PDB + 13 PDB, will log per label.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 121709-HNO_3; *Sulfuric Acid Lot#* 121709-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 6122090322

TK LOUISVILLE

Lot #: A0F260423

Rhonda Quinn

MACTEC Engineering & Consultin
3200 Town Point Drive NW
Suite 100
Kennesaw, GA 30144

TESTAMERICA LABORATORIES, INC.

Alesia M. Danford

Approved for release.
Alesia M. Danford
Project Manager
7/14/2010 4:05 PM

Alesia M. Danford
Project Manager
alesia.danford@testamericainc.com

July 14, 2010

CASE NARRATIVE

A0F260423

The following report contains the analytical results for one water sample and one quality control sample submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the TK Louisville Site, project number 6122090322. The samples were received June 26, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Terrell Parker and Rhonda Quinn on July 12, 2010, and Terrell Parker and Rhonda Quinn on July 13, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Alesia M. Danford, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.9°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

Sample(s) MW-25 had elevated reporting limits due to matrix interferences.

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch 0188101. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A0F260423

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-25 06/24/10 17:20 001				
cis-1,2-Dichloroethene	820	83	ug/L	SW846 8260B
Trichloroethene	2800	83	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0F260423

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B
Volatile Organics by GC/MS SIM	SW846 8260B SIM

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

A0F260423

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260B	Richard J. Quayle	001904
SW846 8260B SIM	Richard J. Quayle	001904

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0F260423

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L3F50	001	MW-25	06/24/10	17:20
L3F51	002	TRIP BLANK	06/24/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-25

GC/MS Volatiles

Lot-Sample #...: A0F260423-001 **Work Order #...:** L3F501AC **Matrix.....:** WG
Date Sampled...: 06/24/10 17:20 **Date Received..:** 06/26/10
Prep Date.....: 07/06/10 **Analysis Date..:** 07/06/10
Prep Batch #...: 0188207
Dilution Factor: 83.33
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	83	ug/L	11
Benzene	ND	83	ug/L	11
Bromochloromethane	ND	83	ug/L	24
Bromodichloromethane	ND	83	ug/L	12
Bromoform	ND	83	ug/L	53
Bromomethane	ND	83	ug/L	34
n-Butylbenzene	ND	83	ug/L	10
sec-Butylbenzene	ND	83	ug/L	11
tert-Butylbenzene	ND	83	ug/L	11
Carbon tetrachloride	ND	83	ug/L	11
Chlorobenzene	ND	83	ug/L	12
Chlorodibromomethane	ND	83	ug/L	15
Chloroethane	ND	83	ug/L	24
Chloroform	ND	83	ug/L	13
Chloromethane	ND	83	ug/L	25
2-Chlorotoluene	ND	83	ug/L	9.2
4-Chlorotoluene	ND	83	ug/L	15
1,2-Dibromo-3-chloropropane (DBCP)	ND	170	ug/L	56
1,2-Dibromoethane	ND	83	ug/L	20
Dibromomethane	ND	83	ug/L	23
1,2-Dichlorobenzene	ND	83	ug/L	11
1,3-Dichlorobenzene	ND	83	ug/L	12
1,4-Dichlorobenzene	ND	83	ug/L	11
Dichlorodifluoromethane	ND	83	ug/L	26
1,1-Dichloroethane	ND	83	ug/L	12
1,2-Dichloroethane	ND	83	ug/L	18
cis-1,2-Dichloroethene	**820**	**83**	**ug/L**	**14**
trans-1,2-Dichloroethene	ND	83	ug/L	16
1,1-Dichloroethene	ND	83	ug/L	16
1,2-Dichloropropane	ND	83	ug/L	15
1,3-Dichloropropane	ND	83	ug/L	13
2,2-Dichloropropane	ND	83	ug/L	11
1,1-Dichloropropene	ND	83	ug/L	11
1,4-Dioxane	ND	4200	ug/L	1600
Ethylbenzene	ND	83	ug/L	14
Hexachlorobutadiene	ND	83	ug/L	25

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-25

GC/MS Volatiles

Lot-Sample #...: A0F260423-001 **Work Order #...:** L3F501AC **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	83	ug/L	10
Methylene chloride	ND	83	ug/L	27
Naphthalene	ND	83	ug/L	20
n-Propylbenzene	ND	83	ug/L	12
Styrene	ND	83	ug/L	9.2
1,1,1,2-Tetrachloroethane	ND	83	ug/L	19
1,1,2,2-Tetrachloroethane	ND	83	ug/L	15
Tetrachloroethene	ND	83	ug/L	24
Toluene	ND	83	ug/L	11
1,2,3-Trichlorobenzene	ND	83	ug/L	14
1,2,4-Trichloro-benzene	ND	83	ug/L	12
1,1,1-Trichloroethane	ND	83	ug/L	18
1,1,2-Trichloroethane	ND	83	ug/L	22
Trichloroethene	**2800**	**83**	**ug/L**	**14**
Trichlorofluoromethane	ND	83	ug/L	17
1,2,3-Trichloropropane	ND	83	ug/L	36
1,2,4-Trimethylbenzene	ND	83	ug/L	10
1,3,5-Trimethylbenzene	ND	83	ug/L	8.0
Vinyl chloride	ND	83	ug/L	18
m-Xylene & p-Xylene	ND	170	ug/L	20
o-Xylene	ND	83	ug/L	12

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: MW-25

GC/MS Volatiles

Lot-Sample #...: A0F260423-001	**Work Order #...:** L3F501AA		**Matrix.....:** WG
Date Sampled...: 06/24/10 17:20	**Date Received..:** 06/26/10		
Prep Date.....: 07/06/10	**Analysis Date..:** 07/06/10		
Prep Batch #...: 0188101			
Dilution Factor: 8.33			
Analyst ID.....: 001904	**Instrument ID..:** UX16		
	Method.....: SW846 8260B SIM		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	17	ug/L	2.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0F260423-002 **Work Order #...:** L3F511AA **Matrix.....:** WQ
Date Sampled...: 06/24/10 **Date Received..:** 06/26/10
Prep Date.....: 07/06/10 **Analysis Date..:** 07/06/10
Prep Batch #...: 0188207
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0F260423-002 **Work Order #...:** L3F511AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F260423 **Work Order #...:** L3VR81AA **Matrix.....:** WATER
MB Lot-Sample #: A0G070000-207

Prep Date.....: 07/06/10 **Instrument ID..:** UX10
Analysis Date..: 07/06/10 **Prep Batch #...:** 0188207
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	50	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F260423 **Work Order #...:** L3VR81AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0F260423
MB Lot-Sample #: A0G070000-101

Work Order #...: L3VE31AA

Matrix.....: WATER

Prep Date.....: 07/06/10
Prep Batch #...: 0188101

Instrument ID..: UX16

Analysis Date..: 07/06/10
Dilution Factor: 1

Analyst ID.....: 001904

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dioxane	ND	2.0	ug/L	SW846 8260B SIM

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(61 - 128)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F260423 **Work Order #...:** L3VR81AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0G070000-207 L3VR81AD-LCSD
Prep Date.....: 07/06/10 **Analysis Date..:** 07/06/10
Prep Batch #...: 0188207
Dilution Factor: 1 **Instrument ID..:** UX10
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**114**	**(63 - 130)**			**SW846 8260B**
	109	**(63 - 130)**	**5.1**	**(0-20)**	**SW846 8260B**
Trichloroethene	**102**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**4.1**	**(0-20)**	**SW846 8260B**
Benzene	**101**	**(80 - 116)**			**SW846 8260B**
	99	**(80 - 116)**	**2.6**	**(0-20)**	**SW846 8260B**
Toluene	**96**	**(74 - 119)**			**SW846 8260B**
	95	**(74 - 119)**	**0.76**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**100**	**(76 - 117)**			**SW846 8260B**
	98	**(76 - 117)**	**2.7**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	100	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
	87	(61 - 128)
Toluene-d8	100	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	93	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F260423 **Work Order #...:** L3VE31AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0G070000-101 L3VE31AD-LCSD
Prep Date.....: 07/06/10 **Analysis Date..:** 07/06/10
Prep Batch #...: 0188101
Dilution Factor: 1 **Instrument ID..:** UX16
Analyst ID.....: 001904

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,4-Dioxane	**83**	**(50 - 150)**			**SW846 8260B SIM**
	95	**(50 - 150)**	**13**	**(0-30)**	**SW846 8260B SIM**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	94	(61 - 128)
	95	(61 - 128)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0F260423 **Work Order #...:** L3EFC1AJ-MS **Matrix.....:** WATER
MS Lot-Sample #: A0F250411-001 L3EFC1AK-MSD
Date Sampled...: 06/24/10 07:35 **Date Received..:** 06/25/10
Prep Date.....: 07/07/10 **Analysis Date..:** 07/07/10
Prep Batch #...: 0188207
Dilution Factor: 200 **Analyst ID.....:** 001904 **Instrument ID..:** UX10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	112	(62 - 130)			SW846 8260B
	117	(62 - 130)	4.1	(0-20)	SW846 8260B
Trichloroethene	99	(62 - 130)			SW846 8260B
	103	(62 - 130)	2.2	(0-20)	SW846 8260B
Benzene	99	(78 - 118)			SW846 8260B
	101	(78 - 118)	1.9	(0-20)	SW846 8260B
Toluene	94	(70 - 119)			SW846 8260B
	97	(70 - 119)	3.8	(0-20)	SW846 8260B
Chlorobenzene	96	(76 - 117)			SW846 8260B
	99	(76 - 117)	2.9	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	100	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
	91	(61 - 128)
Toluene-d8	100	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: NORTH CANTON

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: MACTEC	Client Project Manager: MRS. R. QUINN	Site Contact:	Lab Contact:	COC No:
Address: 3200 TOWN PT. DR. #100	Telephone: 770-421-3400	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: KENNESAW, GA 30144	Email: RNQUINN@MACTEC.COM			
Phone: 770 421-3400		TAT if different from below _____ ☐ 3 weeks ☒ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	Analyses	
Project Name: TK LOUISVILLE	Method of Shipment/Carrier: FEDEX			
Project Number: 6122 09 0322	Shipping/Tracking No: 8473 7862 1240			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Preservation: H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	8260B SIM (14 DIOXANE)	8260B STEE SPECIFIC	Sample Specific Notes / Special Instructions:
MW-25	6/24/10	1720		X						5				NG	X	X	
TRIP BLANK	6/24/10			X						1					X		

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: MACTEC	Date/Time: 6/25/10 1800	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TALE	Date/Time: 4-26-10 1010

©2008, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 440260423
North Canton Facility

Client MACTEC Project TK Louisville By: [signature]
Cooler Received on 6/26/10 Opened on 6-26-10 (Signature)
FedEx ☑ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☑ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____ Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottle(s)? Yes ☐ No ☑
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☐ No ☐ Relinquished by client? Yes ☑ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 1.9 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☑ Other ☐ _____
   COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☑
10. Were correct bottle(s) used for the test(s) indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☑ No ☐ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 051010-HNO_3; *Sulfuric Acid Lot#* 121709-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN$/*NaOH*. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

AES
Analytical Environmental Services, Inc.,
3785 Presidential Parkway
Atlanta, GA 30340

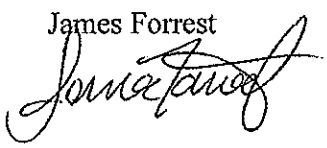
Stipulation of Approval for Commercial Laboratory

According to Georgia State Law (O.C.G.A. 12-2-9) Commercial Rules for Commercial Laboratory Accreditation, any person submitting data to EPD prepared by a commercial laboratory shall stipulate that the laboratory is approved (Chapter 391-3-26-.05). The following information is provided as requested.

Laboratory	Analytical Environmental Services, Inc. (AES) 3785 Presidential Parkway, NE Atlanta, GA 30340 (770) 457-8177
Accredited By:	State of Florida, Department of Health, Bureau of Laboratories; Accrediting NELAP Authority
Accreditation ID:	E87582
Scope:	Clean Water Act – Extractable Organics, General Chemistry, Metals, Microbiology, Pesticides-Herbicides, PCBs, Volatile Organics RCRA/CERCLA – Extractable Organics, General Chemistry, Metals, Pesticides-Herbicides, PCBs, Volatile Organics
Effective:	July 1, 2010
Expires:	June 30, 2011

I further certify that the sample(s) for which this data is being submitted has been handled pursuant to the appropriate chain of custody. Any question regarding this stipulation of approval may be directed to AES at 770 457-8177. Thank you for your business and please do not hesitate contacting us if we can be of further assistance.

James Forrest



July 15, 2010
Project Manager

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 28, 2010

Rhonda Quinn
Mactec Engineering and Consulting, Inc.
3200 Town Point Dr.
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: Thermo King

Dear Rhonda Quinn: Order No: 1010H38

Analytical Environmental Services, Inc. received 4 samples on 10/21/2010 10:25:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
-AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

James Forrest
Project Manager

3785 PRESIDENTIAL PARKWAY • ATLANTA, GEORGIA 30340 • TEL: (770) 457-8177 • FAX: (770)457-8188

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1010 H38

Date: 10-20-10 Page 1 of 1

Page 2 of 17

COMPANY: MACTEC

ADDRESS: 3200 Town Point Dr Kennesaw, GA

PHONE: 770-421-3400

FAX: 770-421-3486

SAMPLED BY: Jeff Moore

SIGNATURE: Jeff Moore

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	8260B	PRESERVATION (See codes) H+I	REMARKS	No # of Containers
1	HMW28-102010	10-20-10	10:17	✓		GW		2	Site-Specific	
2	HMW27-102010	10-20-10	11:12	✓		GW		2	Volatiles	
3	HMW26-102010	10-20-10	12:52	✓		GW		2	Plus 1,4 dioxane	
4	Trip Blank							2		
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY / DATE/TIME

1: Jeff Moore 10-20-10 5:00

2:

3:

RECEIVED BY / DATE/TIME

1: Mwoore 10/21/10

2: 10:25

3:

SPECIAL INSTRUCTIONS/COMMENTS: Site Specific + 1,4 Dioxane

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL COURIER

GREYHOUND OTHER_____

PROJECT INFORMATION

PROJECT NAME: Thermo King

PROJECT #: 6122-09-0322

SITE ADDRESS: Louisville, GA

SEND REPORT TO: Rhonda Quinn

INVOICE TO: (IF DIFFERENT FROM ABOVE) mactec - Alpharetta

QUOTE #:_____ PO#:_____

RECEIPT

Total # of Containers

Turnaround Time Request

- (●) Standard 5 Business Days
- ( ) 2 Business Day Rush
- ( ) Next Business Day Rush
- ( ) Same Day Rush (auth req.)
- ( ) Other_____

STATE PROGRAM (if any): _____

E-mail? Y / N; Fax? Y / N

DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 28-Oct-10

Client: Mactec Engineering and Consulting, Inc.
Project: Thermo King
Lab ID: 1010H38

Case Narrative

Volatile Organic Compounds Analysis by Method 8260B:

Percent recovery for the internal standard compound 1,4-Dichlorobenzene-d4 on sample 1010H38-001A was outside control limits biased low due to suspected matrix interference. All other internal standard recoveries were within control limits.

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW28-102010
Project:	Thermo King	**Collection Date:**	10/20/2010 10:17:00 AM
Lab ID:	1010H38-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**			
1,1,1-Trichloroethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,1-Dichloroethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,1-Dichloroethene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,2-Dibromoethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,2-Dichloroethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,2-Dichloropropane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
1,4-Dioxane	BRL	150		ug/L	137028	1	10/25/2010 10:51	SB
2-Butanone	BRL	50		ug/L	137028	1	10/25/2010 10:51	SB
2-Hexanone	BRL	10		ug/L	137028	1	10/25/2010 10:51	SB
4-Methyl-2-pentanone	BRL	10		ug/L	137028	1	10/25/2010 10:51	SB
Acetone	BRL	50		ug/L	137028	1	10/25/2010 10:51	SB
Benzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Bromodichloromethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Bromoform	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Bromomethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Carbon disulfide	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Carbon tetrachloride	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Chlorobenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Chloroethane	BRL	10		ug/L	137028	1	10/25/2010 10:51	SB
Chloroform	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Chloromethane	BRL	10		ug/L	137028	1	10/25/2010 10:51	SB
cis-1,2-Dichloroethene	9.4	5.0		ug/L	137028	1	10/25/2010 10:51	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Cyclohexane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Dibromochloromethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Dichlorodifluoromethane	BRL	10		ug/L	137028	1	10/25/2010 10:51	SB
Ethylbenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Freon-113	BRL	10		ug/L	137028	1	10/25/2010 10:51	SB
Isopropylbenzene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Methyl acetate	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Methylcyclohexane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Methylene chloride	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Styrene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW28-102010
Project:	Thermo King	**Collection Date:**	10/20/2010 10:17:00 AM
Lab ID:	1010H38-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
Tetrachloroethene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Toluene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Trichloroethene	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Trichlorofluoromethane	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Vinyl chloride	BRL	2.0		ug/L	137028	1	10/25/2010 10:51	SB
Xylenes, Total	BRL	5.0		ug/L	137028	1	10/25/2010 10:51	SB
Surr: 4-Bromofluorobenzene	88	64.7-130		%REC	137028	1	10/25/2010 10:51	SB
Surr: Dibromofluoromethane	114	80.7-129		%REC	137028	1	10/25/2010 10:51	SB
Surr: Toluene-d8	92.6	71.1-120		%REC	137028	1	10/25/2010 10:51	SB

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value		

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW27-102010
Project:	Thermo King	**Collection Date:**	10/20/2010 11:12:00 AM
Lab ID:	1010H38-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,1-Dichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,1-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,2-Dibromoethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,2-Dichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,2-Dichloropropane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
1,4-Dioxane	BRL	150		ug/L	137028	1	10/22/2010 22:41	SB
2-Butanone	BRL	50		ug/L	137028	1	10/22/2010 22:41	SB
2-Hexanone	BRL	10		ug/L	137028	1	10/22/2010 22:41	SB
4-Methyl-2-pentanone	BRL	10		ug/L	137028	1	10/22/2010 22:41	SB
Acetone	BRL	50		ug/L	137028	1	10/22/2010 22:41	SB
Benzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Bromodichloromethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Bromoform	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Bromomethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Carbon disulfide	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Carbon tetrachloride	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Chlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Chloroethane	BRL	10		ug/L	137028	1	10/22/2010 22:41	SB
Chloroform	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Chloromethane	BRL	10		ug/L	137028	1	10/22/2010 22:41	SB
cis-1,2-Dichloroethene	5.2	5.0		ug/L	137028	1	10/22/2010 22:41	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Cyclohexane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Dibromochloromethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Dichlorodifluoromethane	BRL	10		ug/L	137028	1	10/22/2010 22:41	SB
Ethylbenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Freon-113	BRL	10		ug/L	137028	1	10/22/2010 22:41	SB
Isopropylbenzene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Methyl acetate	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Methylcyclohexane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Methylene chloride	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Styrene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW27-102010
Project:	Thermo King	**Collection Date:**	10/20/2010 11:12:00 AM
Lab ID:	1010H38-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Toluene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Trichloroethene	10	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Trichlorofluoromethane	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Vinyl chloride	BRL	2.0		ug/L	137028	1	10/22/2010 22:41	SB
Xylenes, Total	BRL	5.0		ug/L	137028	1	10/22/2010 22:41	SB
Surr: 4-Bromofluorobenzene	86.1	64.7-130		%REC	137028	1	10/22/2010 22:41	SB
Surr: Dibromofluoromethane	110	80.7-129		%REC	137028	1	10/22/2010 22:41	SB
Surr: Toluene-d8	93.7	71.1-120		%REC	137028	1	10/22/2010 22:41	SB

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value		

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW26-102010
Project:	Thermo King	**Collection Date:**	10/20/2010 12:52:00 PM
Lab ID:	1010H38-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				(SW5030B)				
1,1,1-Trichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,1-Dichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,1-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,2-Dibromoethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,2-Dichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,2-Dichloropropane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
1,4-Dioxane	BRL	150		ug/L	137028	1	10/22/2010 23:08	SB
2-Butanone	BRL	50		ug/L	137028	1	10/22/2010 23:08	SB
2-Hexanone	BRL	10		ug/L	137028	1	10/22/2010 23:08	SB
4-Methyl-2-pentanone	BRL	10		ug/L	137028	1	10/22/2010 23:08	SB
Acetone	BRL	50		ug/L	137028	1	10/22/2010 23:08	SB
Benzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Bromodichloromethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Bromoform	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Bromomethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Carbon disulfide	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Carbon tetrachloride	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Chlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Chloroethane	BRL	10		ug/L	137028	1	10/22/2010 23:08	SB
Chloroform	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Chloromethane	BRL	10		ug/L	137028	1	10/22/2010 23:08	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Cyclohexane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Dibromochloromethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Dichlorodifluoromethane	BRL	10		ug/L	137028	1	10/22/2010 23:08	SB
Ethylbenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Freon-113	BRL	10		ug/L	137028	1	10/22/2010 23:08	SB
Isopropylbenzene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Methyl acetate	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Methylcyclohexane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Methylene chloride	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Styrene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW26-102010
Project:	Thermo King	**Collection Date:**	10/20/2010 12:52:00 PM
Lab ID:	1010H38-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)			
Tetrachloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Toluene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Trichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Trichlorofluoromethane	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Vinyl chloride	BRL	2.0		ug/L	137028	1	10/22/2010 23:08	SB
Xylenes, Total	BRL	5.0		ug/L	137028	1	10/22/2010 23:08	SB
Surr: 4-Bromofluorobenzene	93.7	64.7-130		%REC	137028	1	10/22/2010 23:08	SB
Surr: Dibromofluoromethane	111	80.7-129		%REC	137028	1	10/22/2010 23:08	SB
Surr: Toluene-d8	95.9	71.1-120		%REC	137028	1	10/22/2010 23:08	SB

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value		

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	TRIP BLANK
Project:	Thermo King	**Collection Date:**	10/20/2010
Lab ID:	1010H38-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				(SW5030B)				
1,1,1-Trichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,1-Dichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,1-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,2-Dibromoethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,2-Dichloroethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,2-Dichloropropane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
1,4-Dioxane	BRL	150		ug/L	137028	1	10/22/2010 21:18	SB
2-Butanone	BRL	50		ug/L	137028	1	10/22/2010 21:18	SB
2-Hexanone	BRL	10		ug/L	137028	1	10/22/2010 21:18	SB
4-Methyl-2-pentanone	BRL	10		ug/L	137028	1	10/22/2010 21:18	SB
Acetone	BRL	50		ug/L	137028	1	10/22/2010 21:18	SB
Benzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Bromodichloromethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Bromoform	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Bromomethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Carbon disulfide	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Carbon tetrachloride	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Chlorobenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Chloroethane	BRL	10		ug/L	137028	1	10/22/2010 21:18	SB
Chloroform	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Chloromethane	BRL	10		ug/L	137028	1	10/22/2010 21:18	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Cyclohexane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Dibromochloromethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Dichlorodifluoromethane	BRL	10		ug/L	137028	1	10/22/2010 21:18	SB
Ethylbenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Freon-113	BRL	10		ug/L	137028	1	10/22/2010 21:18	SB
Isopropylbenzene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Methyl acetate	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Methylcyclohexane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Methylene chloride	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Styrene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	TRIP BLANK
Project:	Thermo King	**Collection Date:**	10/20/2010
Lab ID:	1010H38-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				(SW5030B)				
Tetrachloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Toluene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Trichloroethene	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Trichlorofluoromethane	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Vinyl chloride	BRL	2.0		ug/L	137028	1	10/22/2010 21:18	SB
Xylenes, Total	BRL	5.0		ug/L	137028	1	10/22/2010 21:18	SB
Surr: 4-Bromofluorobenzene	97.1	64.7-130		%REC	137028	1	10/22/2010 21:18	SB
Surr: Dibromofluoromethane	117	80.7-129		%REC	137028	1	10/22/2010 21:18	SB
Surr: Toluene-d8	95.7	71.1-120		%REC	137028	1	10/22/2010 21:18	SB

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Mactec Work Order Number 1010438

Checklist completed by [signature] 10/21/10
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good __ ~~Other~~(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 28-Oct-10

Client: Mactec Engineering and Consulting, Inc.
Project: Thermo King
Lab Order: 1010H38

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1010H38-001A	HMW28-102010	10/20/2010 10:17:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/22/2010	10/25/2010
1010H38-002A	HMW27-102010	10/20/2010 11:12:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/22/2010	10/22/2010
1010H38-003A	HMW26-102010	10/20/2010 12:52:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/22/2010	10/22/2010
1010H38-004A	TRIP BLANK	10/20/2010 12:00:00AM	Aqueous	Volatile Organic Compounds by GC/MS		10/22/2010	10/22/2010

Client: Mactec Engineering and Consulting, Inc.
Project Name: Thermo King
Workorder: 1010H38

ANALYTICAL QC SUMMARY REPORT

BatchID: 137028

Sample ID: **MB-137028** Client ID: Units: **ug/L** Prep Date: **10/22/2010** Run No: **183035**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **137028** Analysis Date: **10/22/2010** Seq No: **3810905**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dioxane	BRL	150	0	0	0	0	0	0	0	0	
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	
Acetone	BRL	50	0	0	0	0	0	0	0	0	
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Mactec Engineering and Consulting, Inc.
Project Name: Thermo King
Workorder: 1010H38

ANALYTICAL QC SUMMARY REPORT

BatchID: 137028

Sample ID: **MB-137028** Client ID:
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B**
Units: **ug/L** Prep Date: **10/22/2010** Run No: **183035**
BatchID: **137028** Analysis Date: **10/22/2010** Seq No: **3810905**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Xylenes, Total	BRL	5.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	47.05	0	50	0	94.1	64.7	130	0	0	0	
Surr: Dibromofluoromethane	55.21	0	50	0	110	80.7	129	0	0	0	
Surr: Toluene-d8	45.22	0	50	0	90.4	71.1	120	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Mactec Engineering and Consulting, Inc.
Project Name: Thermo King
Workorder: 1010H38

ANALYTICAL QC SUMMARY REPORT

BatchID: 137028

Sample ID: **LCS-137028** Client ID: Units: **ug/L** Prep Date: **10/22/2010** Run No: **183035**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **137028** Analysis Date: **10/22/2010** Seq No: **3810921**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	66.54	5.0	50	0	133	51	154	0	0	0	
Benzene	57.03	5.0	50	0	114	73.6	129	0	0	0	
Chlorobenzene	50.35	5.0	50	0	101	77.6	125	0	0	0	
Toluene	57.61	5.0	50	0	115	75.7	128	0	0	0	
Trichloroethene	60.37	5.0	50	0	121	73.9	132	0	0	0	
Surr: 4-Bromofluorobenzene	53.35	0	50	0	107	64.7	130	0	0	0	
Surr: Dibromofluoromethane	58.42	0	50	0	117	80.7	129	0	0	0	
Surr: Toluene-d8	51.22	0	50	0	102	71.1	120	0	0	0	

Sample ID: **1010H38-001AMS** Client ID: **HMW28-102010** Units: **ug/L** Prep Date: **10/22/2010** Run No: **183035**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **137028** Analysis Date: **10/22/2010** Seq No: **3810929**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	69.01	5.0	50	0	138	46.2	183	0	0	0	
Benzene	60.91	5.0	50	0	122	62.2	143	0	0	0	
Chlorobenzene	54.39	5.0	50	0	109	72.2	137	0	0	0	
Toluene	61.74	5.0	50	0	123	57.8	149	0	0	0	
Trichloroethene	68.06	5.0	50	3.280	130	70.5	149	0	0	0	
Surr: 4-Bromofluorobenzene	56.75	0	50	0	114	64.7	130	0	0	0	
Surr: Dibromofluoromethane	57.59	0	50	0	115	80.7	129	0	0	0	
Surr: Toluene-d8	53.30	0	50	0	107	71.1	120	0	0	0	

Sample ID: **1010H38-001AMSD** Client ID: **HMW28-102010** Units: **ug/L** Prep Date: **10/22/2010** Run No: **183035**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **137028** Analysis Date: **10/22/2010** Seq No: **3810931**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	67.81	5.0	50	0	136	46.2	183	69.01	1.75	20	
Benzene	56.66	5.0	50	0	113	62.2	143	60.91	7.23	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Mactec Engineering and Consulting, Inc.
Project Name: Thermo King
Workorder: 1010H38

ANALYTICAL QC SUMMARY REPORT

BatchID: 137028

Sample ID: **1010H38-001AMSD** Client ID: **HMW28-102010** Units: **ug/L** Prep Date: **10/22/2010** Run No: **183035**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **137028** Analysis Date: **10/22/2010** Seq No: **3810931**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	52.19	5.0	50	0	104	72.2	137	54.39	4.13	20	
Toluene	56.03	5.0	50	0	112	57.8	149	61.74	9.7	20	
Trichloroethene	61.91	5.0	50	3.280	117	70.5	149	68.06	9.46	20	
Surr: 4-Bromofluorobenzene	54.72	0	50	0	109	64.7	130	56.75	0	0	
Surr: Dibromofluoromethane	56.99	0	50	0	114	80.7	129	57.59	0	0	
Surr: Toluene-d8	51.85	0	50	0	104	71.1	120	53.30	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

SEEP and SURFACE WATER

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 6122-09-0322,02

TK - LOUISVILLE

Lot #: A0D230511

Rhonda Quinn

MACTEC Engineering & Consultin
3200 Town Point Drive NW
Suite 100
Kennesaw, GA 30144

TESTAMERICA LABORATORIES, INC.

Alesia M. Danford

Approved for release.
Alesia M. Danford
Project Manager
6/11/2010 10:11 AM

Alesia M. Danford
Project Manager
alesia.danford@testamericainc.com

May 10, 2010

TestAmerica Laboratories, Inc.
TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720
Tel (330)497-9396 Fax (330)497-0772 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE

A0D230511

The following report contains the analytical results for twelve water samples and one quality control sample submitted to TestAmerica North Canton by MACTEC Engineering & Consulting, Inc. from the TK - Louisville Site, project number 6122-09-0322,02. The samples were received April 23, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Rhonda Quinn on May 07, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Alesia M. Danford, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.0°C.

GC/MS VOLATILES

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 0125429. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available ~~upon request.~~
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit

EXECUTIVE SUMMARY - Detection Highlights

A0D230511

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SEEP G 04/21/10 15:30 001				
cis-1,2-Dichloroethene	7.7	2.5	ug/L	SW846 8260B
Trichloroethene	7.8	5.0	ug/L	SW846 8260B
SEEP C 04/21/10 13:30 004				
cis-1,2-Dichloroethene	12	12	ug/L	SW846 8260B
1,1-Dichloroethene	64	12	ug/L	SW846 8260B
1,1,1-Trichloroethane	28	12	ug/L	SW846 8260B
Trichloroethene	500	12	ug/L	SW846 8260B
SEEP H 04/21/10 14:10 005				
cis-1,2-Dichloroethene	26	2.5	ug/L	SW846 8260B
1,1-Dichloroethene	6.0	5.0	ug/L	SW846 8260B
Trichloroethene	38	5.0	ug/L	SW846 8260B
SEEP K 04/22/10 10:05 009				
cis-1,2-Dichloroethene	5.3	2.5	ug/L	SW846 8260B
Trichloroethene	5.8	5.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0D230511

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

A0D230511

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 8260B	Timothy J. Lavey	001903

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0D230511

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L0FG8	001	SEEP G	04/21/10	15:30
L0FHC	002	MB #16	04/21/10	16:20
L0FHE	003	SEEP D	04/21/10	15:55
L0FHH	004	SEEP C	04/21/10	13:30
L0FHL	005	SEEP H	04/21/10	14:10
L0FHM	006	SEEP #2	04/21/10	17:30
L0FHN	007	MB #15	04/21/10	16:40
L0FHQ	008	SEEP J	04/22/10	10:30
L0FHT	009	SEEP K	04/22/10	10:05
L0FHX	010	MB #14	04/22/10	08:50
L0FH0	011	SEEP I	04/22/10	11:05
L0FH1	012	TRIP BLANK 42210	04/22/10	17:00
L0FH3	013	DUP-01	04/22/10	12:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP G

GC/MS Volatiles

Lot-Sample #...: A0D230511-001 **Work Order #...:** L0FG81AA **Matrix.....:** WG
Date Sampled...: 04/21/10 15:30 **Date Received..:** 04/23/10
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	**7.7**	**2.5**	**ug/L**
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP G

GC/MS Volatiles

Lot-Sample #...: A0D230511-001 **Work Order #...:** L0FG81AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	**7.8**	**5.0**	**ug/L**
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(78 - 115)
1,2-Dichloroethane-d4	106	(77 - 120)
Toluene-d8	102	(78 - 111)
4-Bromofluorobenzene	95	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: MB #16

GC/MS Volatiles

Lot-Sample #...: A0D230511-002 **Work Order #...:** L0FHC1AA **Matrix.....:** WG
Date Sampled...: 04/21/10 16:20 **Date Received..:** 04/23/10
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MB #16

GC/MS Volatiles

Lot-Sample #...: A0D230511-002 **Work Order #...:** L0FHC1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(78 - 115)
1,2-Dichloroethane-d4	105	(77 - 120)
Toluene-d8	101	(78 - 111)
4-Bromofluorobenzene	93	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP D

GC/MS Volatiles

Lot-Sample #...: A0D230511-003 **Work Order #...:** L0FHE1AA **Matrix.....:** WG
Date Sampled...: 04/21/10 15:55 **Date Received..:** 04/23/10
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP D

GC/MS Volatiles

Lot-Sample #...: A0D230511-003 **Work Order #...:** L0FHE1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	113	(78 - 115)
1,2-Dichloroethane-d4	104	(77 - 120)
Toluene-d8	102	(78 - 111)
4-Bromofluorobenzene	91	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP C

GC/MS Volatiles

Lot-Sample #...: A0D230511-004 **Work Order #...:** L0FHH1AA **Matrix.....:** WG
Date Sampled...: 04/21/10 13:30 **Date Received..:** 04/23/10
Prep Date.....: 05/05/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0125429
Dilution Factor: 2.5 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	12	ug/L
Bromobenzene	ND	12	ug/L
Bromochloromethane	ND	12	ug/L
Bromodichloromethane	ND	12	ug/L
Bromoform	ND	12	ug/L
Bromomethane	ND	25	ug/L
n-Butylbenzene	ND	12	ug/L
sec-Butylbenzene	ND	12	ug/L
tert-Butylbenzene	ND	12	ug/L
Carbon tetrachloride	ND	12	ug/L
Chlorobenzene	ND	12	ug/L
Chlorodibromomethane	ND	12	ug/L
Chloroethane	ND	25	ug/L
Chloroform	ND	12	ug/L
Chloromethane	ND	25	ug/L
2-Chlorotoluene	ND	12	ug/L
4-Chlorotoluene	ND	12	ug/L
1,2-Dibromo-3-chloro-propane	ND	25	ug/L
1,2-Dibromoethane	ND	12	ug/L
Dibromomethane	ND	12	ug/L
1,2-Dichlorobenzene	ND	12	ug/L
1,3-Dichlorobenzene	ND	12	ug/L
1,4-Dichlorobenzene	ND	12	ug/L
Dichlorodifluoromethane	ND	25	ug/L
1,1-Dichloroethane	ND	12	ug/L
1,2-Dichloroethane	ND	12	ug/L
cis-1,2-Dichloroethene	**12**	**12**	**ug/L**
trans-1,2-Dichloroethene	ND	12	ug/L
1,1-Dichloroethene	**64**	**12**	**ug/L**
1,2-Dichloropropane	ND	12	ug/L
1,3-Dichloropropane	ND	12	ug/L
2,2-Dichloropropane	ND	12	ug/L
1,1-Dichloropropene	ND	12	ug/L
1,4-Dioxane	ND	620	ug/L
Ethylbenzene	ND	12	ug/L
Hexachlorobutadiene	ND	12	ug/L
Isopropylbenzene	ND	12	ug/L
p-Isopropyltoluene	ND	12	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP C

GC/MS Volatiles

Lot-Sample #...: A0D230511-004 **Work Order #...:** L0FHH1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	12	ug/L
Naphthalene	ND	12	ug/L
n-Propylbenzene	ND	12	ug/L
Styrene	ND	12	ug/L
1,1,1,2-Tetrachloroethane	ND	12	ug/L
1,1,2,2-Tetrachloroethane	ND	12	ug/L
Tetrachloroethene	ND	12	ug/L
Toluene	ND	12	ug/L
1,2,3-Trichlorobenzene	ND	12	ug/L
1,2,4-Trichloro-benzene	ND	12	ug/L
1,1,1-Trichloroethane	**28**	**12**	**ug/L**
1,1,2-Trichloroethane	ND	12	ug/L
Trichloroethene	**500**	**12**	**ug/L**
Trichlorofluoromethane	ND	25	ug/L
1,2,3-Trichloropropane	ND	12	ug/L
1,2,4-Trimethylbenzene	ND	12	ug/L
1,3,5-Trimethylbenzene	ND	12	ug/L
Vinyl chloride	ND	12	ug/L
m-Xylene & p-Xylene	ND	12	ug/L
o-Xylene	ND	12	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(78 - 115)
1,2-Dichloroethane-d4	107	(77 - 120)
Toluene-d8	106	(78 - 111)
4-Bromofluorobenzene	92	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP H

GC/MS Volatiles

Lot-Sample #...: A0D230511-005 **Work Order #...:** L0FHL1AA **Matrix.....:** WG
Date Sampled...: 04/21/10 14:10 **Date Received..:** 04/23/10
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	**26**	**2.5**	**ug/L**
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	**6.0**	**5.0**	**ug/L**
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP H

GC/MS Volatiles

Lot-Sample #...: A0D230511-005 **Work Order #...:** L0FHL1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	**38**	**5.0**	**ug/L**
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	113	(78 - 115)
1,2-Dichloroethane-d4	105	(77 - 120)
Toluene-d8	102	(78 - 111)
4-Bromofluorobenzene	92	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP #2

GC/MS Volatiles

Lot-Sample #...: A0D230511-006 **Work Order #...:** L0FHM1AA **Matrix.....:** WG
Date Sampled...: 04/21/10 17:30 **Date Received..:** 04/23/10
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP #2

GC/MS Volatiles

Lot-Sample #...: A0D230511-006 **Work Order #...:** L0FHM1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(78 - 115)
1,2-Dichloroethane-d4	106	(77 - 120)
Toluene-d8	101	(78 - 111)
4-Bromofluorobenzene	92	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: MB #15

GC/MS Volatiles

Lot-Sample #...: A0D230511-007 Work Order #...: L0FHN1AA Matrix.....: WG
Date Sampled...: 04/21/10 16:40 Date Received..: 04/23/10
Prep Date.....: 05/04/10 Analysis Date..: 05/04/10
Prep Batch #...: 0124369
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MB #15

GC/MS Volatiles

Lot-Sample #...: A0D230511-007 **Work Order #...:** L0FHN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	114	(78 - 115)
1,2-Dichloroethane-d4	105	(77 - 120)
Toluene-d8	101	(78 - 111)
4-Bromofluorobenzene	90	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP J

GC/MS Volatiles

Lot-Sample #...: A0D230511-008 Work Order #...: L0FHQ1AA Matrix.....: WG
Date Sampled...: 04/22/10 10:30 Date Received..: 04/23/10
Prep Date.....: 05/04/10 Analysis Date..: 05/04/10
Prep Batch #...: 0124369
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP J

GC/MS Volatiles

Lot-Sample #...: A0D230511-008 **Work Order #...:** L0FHQ1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(78 - 115)
1,2-Dichloroethane-d4	112	(77 - 120)
Toluene-d8	101	(78 - 111)
4-Bromofluorobenzene	91	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP K

GC/MS Volatiles

Lot-Sample #...: A0D230511-009 **Work Order #...:** L0FHT1AA **Matrix.....:** WG
Date Sampled...: 04/22/10 10:05 **Date Received..:** 04/23/10
Prep Date.....: 05/04/10 **Analysis Date..:** 05/04/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	**5.3**	**2.5**	**ug/L**
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP K

GC/MS Volatiles

Lot-Sample #...: A0D230511-009 **Work Order #...:** L0FHT1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	**5.8**	**5.0**	**ug/L**
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	115	(78 - 115)
1,2-Dichloroethane-d4	109	(77 - 120)
Toluene-d8	101	(78 - 111)
4-Bromofluorobenzene	89	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: MB #14

GC/MS Volatiles

Lot-Sample #...: A0D230511-010 **Work Order #...:** L0FHX1AA **Matrix.....:** WG
Date Sampled...: 04/22/10 08:50 **Date Received..:** 04/23/10
Prep Date.....: 05/04/10 **Analysis Date..:** 05/04/10
Prep Batch #...: 0124369
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MB #14

GC/MS Volatiles

Lot-Sample #...: A0D230511-010 **Work Order #...:** L0FHX1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	115	(78 - 115)
1,2-Dichloroethane-d4	109	(77 - 120)
Toluene-d8	102	(78 - 111)
4-Bromofluorobenzene	94	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP I

GC/MS Volatiles

Lot-Sample #...: A0D230511-011 **Work Order #...:** L0FH01AA **Matrix.....:** WG
Date Sampled...: 04/22/10 11:05 **Date Received..:** 04/23/10
Prep Date.....: 05/05/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0125429
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP I

GC/MS Volatiles

Lot-Sample #...: A0D230511-011 **Work Order #...:** L0FH01AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(78 - 115)
1,2-Dichloroethane-d4	103	(77 - 120)
Toluene-d8	104	(78 - 111)
4-Bromofluorobenzene	90	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK 42210

GC/MS Volatiles

Lot-Sample #...: A0D230511-012 **Work Order #...:** L0FH11AA **Matrix.....:** WQ
Date Sampled...: 04/22/10 17:00 **Date Received..:** 04/23/10
Prep Date.....: 05/05/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0125429
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: TRIP BLANK 42210

GC/MS Volatiles

Lot-Sample #...: A0D230511-012 **Work Order #...:** L0FH11AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(78 - 115)
1,2-Dichloroethane-d4	108	(77 - 120)
Toluene-d8	105	(78 - 111)
4-Bromofluorobenzene	90	(80 - 114)

MACTEC Engineering and Consulting Inc

Client Sample ID: DUP-01

GC/MS Volatiles

Lot-Sample #...: A0D230511-013 **Work Order #...:** L0FH31AA **Matrix.....:** WG
Date Sampled...: 04/22/10 12:00 **Date Received..:** 04/23/10
Prep Date.....: 05/05/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0125429
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chlorodibromomethane	ND	5.0	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	10	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	2.5	ug/L
trans-1,2-Dichloroethene	ND	2.5	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
1,4-Dioxane	ND	250	ug/L
Ethylbenzene	ND	5.0	ug/L
Hexachlorobutadiene	ND	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
p-Isopropyltoluene	ND	5.0	ug/L

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: DUP-01

GC/MS Volatiles

Lot-Sample #...: A0D230511-013 **Work Order #...:** L0FH31AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	ND	5.0	ug/L
Naphthalene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
1,2,3-Trichlorobenzene	ND	5.0	ug/L
1,2,4-Trichloro-benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	10	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
Vinyl chloride	ND	2.0	ug/L
m-Xylene & p-Xylene	ND	5.0	ug/L
o-Xylene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(78 - 115)
1,2-Dichloroethane-d4	107	(77 - 120)
Toluene-d8	105	(78 - 111)
4-Bromofluorobenzene	88	(80 - 114)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L00X01AA **Matrix.....:** WATER
MB Lot-Sample #: A0E040000-369

Prep Date.....: 05/03/10
Analysis Date..: 05/03/10 **Prep Batch #...:** 0124369
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/L	SW846 8260B
Bromobenzene	ND	5.0	ug/L	SW846 8260B
Bromochloromethane	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	5.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	5.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	5.0	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
Chloromethane	ND	10	ug/L	SW846 8260B
2-Chlorotoluene	ND	5.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	5.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	ug/L	SW846 8260B
1,2-Dibromoethane	ND	5.0	ug/L	SW846 8260B
Dibromomethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	5.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	5.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	5.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	10	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	2.5	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	5.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	5.0	ug/L	SW846 8260B
1,4-Dioxane	ND	250	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	5.0	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Naphthalene	ND	5.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L00X01AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
n-Propylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	5.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	10	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	5.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	5.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	5.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	5.0	ug/L	SW846 8260B
o-Xylene	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(78 - 115)
1,2-Dichloroethane-d4	107	(77 - 120)
Toluene-d8	100	(78 - 111)
4-Bromofluorobenzene	93	(80 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L03TG1AA **Matrix.....:** WATER
MB Lot-Sample #: A0E050000-429

Prep Date.....: 05/05/10
Analysis Date..: 05/05/10 **Prep Batch #...:** 0125429
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/L	SW846 8260B
Bromobenzene	ND	5.0	ug/L	SW846 8260B
Bromochloromethane	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	5.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	5.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Chlorodibromomethane	ND	5.0	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
Chloromethane	ND	10	ug/L	SW846 8260B
2-Chlorotoluene	ND	5.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	5.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	ug/L	SW846 8260B
1,2-Dibromoethane	ND	5.0	ug/L	SW846 8260B
Dibromomethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	5.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	5.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	5.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	10	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	2.5	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	2.5	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	5.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	5.0	ug/L	SW846 8260B
1,4-Dioxane	ND	250	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	5.0	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Naphthalene	ND	5.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L03TG1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
n-Propylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	5.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	10	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	5.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	5.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	5.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	5.0	ug/L	SW846 8260B
o-Xylene	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	112	(78 - 115)
1,2-Dichloroethane-d4	104	(77 - 120)
Toluene-d8	103	(78 - 111)
4-Bromofluorobenzene	91	(80 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L00X01AC **Matrix.....:** WATER
LCS Lot-Sample#: A0E040000-369
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**98**	**(79 - 116)**	**SW846 8260B**
Chlorobenzene	**96**	**(81 - 115)**	**SW846 8260B**
1,1-Dichloroethene	**117**	**(65 - 119)**	**SW846 8260B**
Toluene	**99**	**(76 - 119)**	**SW846 8260B**
Trichloroethene	**110**	**(80 - 122)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(78 - 115)
1,2-Dichloroethane-d4	105	(77 - 120)
Toluene-d8	103	(78 - 111)
4-Bromofluorobenzene	102	(80 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L03TG1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A0E050000-429 L03TG1AD-LCSD
Prep Date.....: 05/05/10 **Analysis Date..:** 05/05/10
Prep Batch #...: 0125429
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**100**	**(79 - 116)**			**SW846 8260B**
	102	**(79 - 116)**	**2.1**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**100**	**(81 - 115)**			**SW846 8260B**
	104	**(81 - 115)**	**3.2**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**114**	**(65 - 119)**			**SW846 8260B**
	117	**(65 - 119)**	**2.8**	**(0-20)**	**SW846 8260B**
Toluene	**101**	**(76 - 119)**			**SW846 8260B**
	105	**(76 - 119)**	**3.8**	**(0-20)**	**SW846 8260B**
Trichloroethene	**112**	**(80 - 122)**			**SW846 8260B**
	113	**(80 - 122)**	**1.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(78 - 115)
	113	(78 - 115)
1,2-Dichloroethane-d4	109	(77 - 120)
	109	(77 - 120)
Toluene-d8	104	(78 - 111)
	107	(78 - 111)
4-Bromofluorobenzene	97	(80 - 114)
	98	(80 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0D230511 **Work Order #...:** L0FG81AC-MS **Matrix.....:** WG
MS Lot-Sample #: A0D230511-001 L0FG81AD-MSD
Date Sampled...: 04/21/10 15:30 **Date Received..:** 04/23/10
Prep Date.....: 05/03/10 **Analysis Date..:** 05/03/10
Prep Batch #...: 0124369
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**100**	**(73 - 123)**			**SW846 8260B**
	96	**(73 - 123)**	**4.8**	**(0-11)**	**SW846 8260B**
Chlorobenzene	**99**	**(70 - 122)**			**SW846 8260B**
	97	**(70 - 122)**	**2.5**	**(0-14)**	**SW846 8260B**
1,1-Dichloroethene	**115**	**(57 - 138)**			**SW846 8260B**
	117	**(57 - 138)**	**1.1**	**(0-15)**	**SW846 8260B**
Toluene	**99**	**(67 - 129)**			**SW846 8260B**
	97	**(67 - 129)**	**2.2**	**(0-14)**	**SW846 8260B**
Trichloroethene	**112**	**(58 - 141)**			**SW846 8260B**
	110	**(58 - 141)**	**1.1**	**(0-17)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	115	(78 - 115)
	112	(78 - 115)
1,2-Dichloroethane-d4	105	(77 - 120)
	109	(77 - 120)
Toluene-d8	104	(78 - 111)
	107	(78 - 111)
4-Bromofluorobenzene	101	(80 - 114)
	99	(80 - 114)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Chain of Custody Record

TestAmerica Laboratory location: N. Canton

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: MACTEC	Rhonda Quinn	Terrell Parker	Becky Strait	
Address: 3200 Town Point Dr, Suite 100	Telephone: 770-421-3400	Telephone: 770-421-3368	Telephone:	1 of 2 COCs
City/State/Zip: Kennesaw, GA 30144	Email: RMQuinn@mactec.com			
Phone: 770-421-3400		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: TK-Louisville	Method of Shipment/Carrier: FEDEX			
Project Number: 6122-09-0322,02	Shipping/Tracking No: 7363 3627 6915			
PO# 2010055123				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Preservation: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	8260B - Site specific compounds	Temp. °C - Cooler	Analyses	Sample Specific Notes / Special Instructions:
SEEP G	4-21-10	15:30		✓						3					N	G	X	
MB #16	4-21-10	16:20		✓						3					N	G	X	
SEEP D	4-21-10	15:55		✓						3					N	G	X	
SEEP C	4-21-10	13:30		✓						3					N	G	X	
SEEP H	4-21-10	14:10		✓						3					N	G	X	
SEEP #7	4-21-10	17:30		✓						3					N	G	X	
MB #15	4-21-10	16:40		✓						3					N	G	X	
SEEP J	4-22-10	10:30		✓						3					N	G	X	
SEEP K	4-22-10	10:05		✓						3					N	G	X	
MB # 14	4-22-10	08:50		✓						3					N	G	X	

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

CUSTODY SEAL #S: 718611 + 718612

Relinquished by: TO FEDEX	Company: MACTEC	Date/Time: 4-22-10 / 1730	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 4/23/10 9:16

©2008, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

Chain of Custody Record

TestAmerica Laboratory location: N. Canton

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: MACTEC	Rhonda Quinn	Terrell Parker	Becky Strait	
Address: 3200 Town Point Dr Suite 100	Telephone: 770-421-3400	Telephone: 770-421-3368	Telephone:	2 of 2 COCs
City/State/Zip: Kennesaw, GA 30144	Email: RNQuinn@macteccom			
Phone: 770-421-3400		TAT if different from below: ☑ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: IK-Louisville	Method of Shipment/Carrier: FEDEX			
Project Number: 6122-09-0322, 02	Shipping/Tracking No: 7363 3627 6915			
PO# 20100552				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Total # of Containers	8260B Compounds	8260B Compounds	Sample Specific Notes / Special Instructions:
SEEP I	4-22-10	11:05		✓						3					2	G	X	
TRIP Blank 42210	4-22-10	17:00		✓						2					2	G	X	
Dup-01	4-22-10	12:00		✓						3					2	G	X	
Temperature Blank	4-22-10	—		✓						1					2	G		X

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☑ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seal #s: 718611 & 718612

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
To FEDEX	MACTEC	4-22-10 / 17:30			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TAL	4/23/10 9:10

©2008. TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: ADD230517

Client Mactec Project _____ By: _____ (Signature)

Cooler Received on 4-22-10 Opened on 4-23-10

FedEx [X] UPS [ ] DHL [ ] FAS [ ] Stetson [ ] Client Drop Off [ ] TestAmerica Courier [ ] Other _____

TestAmerica Cooler # _____ Multiple Coolers [ ] Foam Box [ ] Client Cooler [X] Other _____

1. Were custody seals on the outside of the cooler(s)? Yes [X] No [ ] Intact? Yes [ ] No [ ] NA [ ]
   If YES, Quantity 2 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes [X] No [ ] NA [ ]
   Were custody seals on the bottle(s)? Yes [X] No [ ] NA [ ]
   If YES, are there any exceptions? Yes [ ] No [X]
2. Shippers' packing slip attached to the cooler(s)? Yes [X] No [ ]
3. Did custody papers accompany the sample(s)? Yes [X] No [ ] Relinquished by client? Yes [X] No [ ]
4. Were the custody papers signed in the appropriate place? Yes [X] No [ ]
5. Packing material used: Bubble Wrap [X] Foam [ ] None [ ] Other _____
6. Cooler temperature upon receipt 1.0 °C See back of form for multiple coolers/temps [ ]
   METHOD: IR [X] Other [ ] _____
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
8. Could all bottle labels be reconciled with the COC? Yes [X] No [ ]
9. Were sample(s) at the correct pH upon receipt? Yes [X] No [ ] NA [X]
10. Were correct bottle(s) used for the test(s) indicated? Yes [X] No [ ]
11. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [ ] NA [X]
12. Sufficient quantity received to perform indicated analyses? Yes [X] No [ ]
13. Was a trip blank present in the cooler(s)? Yes [X] No [ ] Were VOAs on the COC? Yes [X] No [ ]

Contacted PM _____ Date _____ by _____ via Verbal [ ] Voice Mail [ ] Other [ ]

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 121709-HNO_3; Sulfuric Acid Lot# 121709-H_2SO_4; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-$(CH_3COO)_2ZN/NaOH$.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: NORTH CANTON

Regulatory program: ☐ DW ☐ NPDES ■ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: MACTEC	Client Project Manager: Greg Wrenn	Site Contact: Terrell Parker	Lab Contact: ~~MARK LOCKARD~~ BECKY DAMFORD 6-2-10	COC No: 060110
Address: 3200 Town Point Dr, Suite 100	Telephone: 770-421-3400	Telephone: 404-934-8970	Telephone: 330-966-9387	3 of 4 COCs
City/State/Zip: Kennesaw, GA 30144	Email:			
Phone: 770-421-3400		TAT if different from below: ■ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: TK-Louisville	Method of Shipment/Carrier: FEDEX			
Project Number: 6122-09-0322,01	Shipping/Tracking No: 8566 3051 9668			
PO#				

Analyses

Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Cupres	Other:	8260B 1,4-Dioxane by SIM	8260B 1,4-Dioxane by SIM	Carbon Temp °C										Sample Specific Notes / Special Instructions:
MW-15	6-2-10	10153		X						3					N	G	X										
MW-11	6-2-10	11:25		X						3					N	G	X										
MW-12	6-2-10	11:40		X						3					N	G	X										
MW-13	6-2-10	12:00		X						3					N	G	X										
TRIP Blank 060110	6-1-10	12:00		X						1					N	G	X										
Temp Blank	6-2-10	—		X									1					X									
MW-5 Purged	6-2-10	16:22		X						4					N	G		X									
MW-20 Purged	6-2-10	17:30		X						4					N	G		X									
SEEP C	6-2-10	17:33		X						3					N	G	X										
MANSON Branch #2	6-2-10	17:50		X						3					N	G	X										

Possible Hazard Identification: ■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

James T. Parker to FEDEX

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
James T. Parker	MACTEC	6-3-2010/1950			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TAL NC	6/4/10 915

©2008, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: NORTH CANTON

Regulatory program: ☐ DW ☐ NPDES ■ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: MACTEC	Client Project Manager: Greg Wrenn	Site Contact: Terrell Parker	Lab Contact: Alicia Danford	COC No: 060110
Address: 3200 Town Point Dr Suite 100	Telephone: 770-421-3400	Telephone: 404-934-8970	Telephone: 330-966-9387	4 of 4 COCs
City/State/Zip: Kennesaw, GA 30144	Email:			
Phone: 770-421-3400		TAT if different from below: ■ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: TK-Louisville	Method of Shipment/Carrier: FEDEX			
Project Number: 6122-09-0322.01	Shipping/Tracking No: 8566 3051 9668			
PO #				

Analyses: 8260B +1,4-dioxane; 8260B +1,4-dioxane by SIM

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Preservation: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample	Perform MS/MSD	8260B	8260B +1,4-dioxane by SIM	Sample Specific Notes / Special Instructions:
SEEP H	6-3-10	14:25		X						3					N	G	X		
MW-10 Purge	6-3-10	10:00		X						4					N	G		X	
MW-3 Purged	6-3-10	11:25		X						4					N	G		X	
MW-14 Purge	6-3-10	13:15		X						4					N	G		X	
MW-19 Purged	6-3-10	13:45		X						4					N	G		X	
SEEP L	6-3-10	16:00		X						3					N	G	X		

6-3-2010

Possible Hazard Identification: ■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ■ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments: James T. Parker to FEDEX

Relinquished by:	Company: MACTEC	Date/Time: 6-3-2010 19:50	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Alicia Mangum	Company: TAL NC	Date/Time: 6/4/10 915

©2006, TestAmerica Laboratories, Inc. All rights reserved.
TestAmerica & Design ™ are trademarks of TestAmerica Laboratories, Inc.

TAL-0018 (1008)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP C

GC/MS Volatiles

Lot-Sample #...: A0E040435-028 **Work Order #...:** L2F6W1AA **Matrix.....:** WG
Date Sampled...: 06/02/10 17:33 **Date Received...:** 06/04/10
Prep Date.....: 06/16/10 **Analysis Date..:** 06/16/10
Prep Batch #...: 0168150
Dilution Factor: 2.5
Analyst ID.....: 001904 **Instrument ID..:** UX16
Method.....: SW846 8260B SIM

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	5.0	ug/L	0.82

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(61 - 128)

MACTEC Engineering and Consulting Inc

Client Sample ID: MANSON BRANCH #2

GC/MS Volatiles

Lot-Sample #...: A0E040435-029 Work Order #...: L2F601AA Matrix.....: WG
Date Sampled...: 06/02/10 17:50 Date Received..: 06/04/10
Prep Date.....: 06/09/10 Analysis Date..: 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 50
Analyst ID.....: 001904 Instrument ID..: UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	50	ug/L	6.5
Benzene	ND	50	ug/L	6.5
Bromochloromethane	ND	50	ug/L	14
Bromodichloromethane	ND	50	ug/L	7.5
Bromoform	ND	50	ug/L	32
Bromomethane	ND	50	ug/L	20
n-Butylbenzene	ND	50	ug/L	6.0
sec-Butylbenzene	ND	50	ug/L	6.5
tert-Butylbenzene	ND	50	ug/L	6.5
Carbon tetrachloride	ND	50	ug/L	6.5
Chlorobenzene	ND	50	ug/L	7.5
Chlorodibromomethane	ND	50	ug/L	9.0
Chloroethane	ND	50	ug/L	14
Chloroform	ND	50	ug/L	8.0
Chloromethane	ND	50	ug/L	15
2-Chlorotoluene	ND	50	ug/L	5.5
4-Chlorotoluene	ND	50	ug/L	9.0
1,2-Dibromo-3-chloropropane (DBCP)	ND	100	ug/L	34
1,2-Dibromoethane	ND	50	ug/L	12
Dibromomethane	ND	50	ug/L	14
1,2-Dichlorobenzene	ND	50	ug/L	6.5
1,3-Dichlorobenzene	ND	50	ug/L	7.0
1,4-Dichlorobenzene	ND	50	ug/L	6.5
Dichlorodifluoromethane	ND	50	ug/L	16
1,1-Dichloroethane	ND	50	ug/L	7.5
1,2-Dichloroethane	ND	50	ug/L	11
cis-1,2-Dichloroethene	**180**	**50**	**ug/L**	**8.5**
trans-1,2-Dichloroethene	ND	50	ug/L	9.5
1,1-Dichloroethene	**160**	**50**	**ug/L**	**9.5**
1,2-Dichloropropane	ND	50	ug/L	9.0
1,3-Dichloropropane	ND	50	ug/L	8.0
2,2-Dichloropropane	ND	50	ug/L	6.5
1,1-Dichloropropene	ND	50	ug/L	6.5
1,4-Dioxane	ND	2500	ug/L	950
Ethylbenzene	ND	50	ug/L	8.5
Hexachlorobutadiene	ND	50	ug/L	15

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: MANSON BRANCH #2

GC/MS Volatiles

Lot-Sample #...: A0F040435-029 **Work Order #...:** L2F601AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	50	ug/L	6.0
Methylene chloride	ND	50	ug/L	16
Naphthalene	ND	50	ug/L	12
n-Propylbenzene	ND	50	ug/L	7.0
Styrene	ND	50	ug/L	5.5
1,1,1,2-Tetrachloroethane	ND	50	ug/L	12
1,1,2,2-Tetrachloroethane	ND	50	ug/L	9.0
Tetrachloroethene	ND	50	ug/L	14
Toluene	ND	50	ug/L	6.5
1,2,3-Trichlorobenzene	ND	50	ug/L	8.5
1,2,4-Trichloro-benzene	ND	50	ug/L	7.5
1,1,1-Trichloroethane	**61**	**50**	**ug/L**	**11**
1,1,2-Trichloroethane	ND	50	ug/L	14
Trichloroethene	**1700**	**50**	**ug/L**	**8.5**
Trichlorofluoromethane	ND	50	ug/L	10
1,2,3-Trichloropropane	ND	50	ug/L	22
1,2,4-Trimethylbenzene	ND	50	ug/L	6.0
1,3,5-Trimethylbenzene	ND	50	ug/L	4.8
Vinyl chloride	ND	50	ug/L	11
m-Xylene & p-Xylene	ND	100	ug/L	12
o-Xylene	ND	50	ug/L	7.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP H

GC/MS Volatiles

Lot-Sample #...: A0F040435-030 **Work Order #...:** L2F611AA **Matrix.....:** WG
Date Sampled...: 06/03/10 14:25 **Date Received..:** 06/04/10
Prep Date.....: 06/09/10 **Analysis Date..:** 06/09/10
Prep Batch #...: 0161174
Dilution Factor: 2
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	2.0	ug/L	0.26
Benzene	ND	2.0	ug/L	0.26
Bromochloromethane	ND	2.0	ug/L	0.58
Bromodichloromethane	ND	2.0	ug/L	0.30
Bromoform	ND	2.0	ug/L	1.3
Bromomethane	ND	2.0	ug/L	0.82
n-Butylbenzene	ND	2.0	ug/L	0.24
sec-Butylbenzene	ND	2.0	ug/L	0.26
tert-Butylbenzene	ND	2.0	ug/L	0.26
Carbon tetrachloride	ND	2.0	ug/L	0.26
Chlorobenzene	ND	2.0	ug/L	0.30
Chlorodibromomethane	ND	2.0	ug/L	0.36
Chloroethane	ND	2.0	ug/L	0.58
Chloroform	ND	2.0	ug/L	0.32
Chloromethane	ND	2.0	ug/L	0.60
2-Chlorotoluene	ND	2.0	ug/L	0.22
4-Chlorotoluene	ND	2.0	ug/L	0.36
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	ug/L	1.3
1,2-Dibromoethane	ND	2.0	ug/L	0.48
Dibromomethane	ND	2.0	ug/L	0.56
1,2-Dichlorobenzene	ND	2.0	ug/L	0.26
1,3-Dichlorobenzene	ND	2.0	ug/L	0.28
1,4-Dichlorobenzene	ND	2.0	ug/L	0.26
Dichlorodifluoromethane	ND	2.0	ug/L	0.62
1,1-Dichloroethane	ND	2.0	ug/L	0.30
1,2-Dichloroethane	ND	2.0	ug/L	0.44
cis-1,2-Dichloroethene	**63**	**2.0**	**ug/L**	**0.34**
trans-1,2-Dichloroethene	ND	2.0	ug/L	0.38
1,1-Dichloroethene	**12**	**2.0**	**ug/L**	**0.38**
1,2-Dichloropropane	ND	2.0	ug/L	0.36
1,3-Dichloropropane	ND	2.0	ug/L	0.32
2,2-Dichloropropane	ND	2.0	ug/L	0.26
1,1-Dichloropropene	ND	2.0	ug/L	0.26
1,4-Dioxane	ND	100	ug/L	38
Ethylbenzene	ND	2.0	ug/L	0.34
Hexachlorobutadiene	ND	2.0	ug/L	0.60

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP H

GC/MS Volatiles

Lot-Sample #...: A0F040435-030 **Work Order #...:** L2F611AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.66
Naphthalene	ND	2.0	ug/L	0.48
n-Propylbenzene	ND	2.0	ug/L	0.28
Styrene	ND	2.0	ug/L	0.22
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	0.46
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.36
Tetrachloroethene	ND	2.0	ug/L	0.58
Toluene	ND	2.0	ug/L	0.26
1,2,3-Trichlorobenzene	ND	2.0	ug/L	0.34
1,2,4-Trichloro-benzene	ND	2.0	ug/L	0.30
1,1,1-Trichloroethane	ND	2.0	ug/L	0.44
1,1,2-Trichloroethane	ND	2.0	ug/L	0.54
Trichloroethene	**41**	**2.0**	**ug/L**	**0.34**
Trichlorofluoromethane	ND	2.0	ug/L	0.42
1,2,3-Trichloropropane	ND	2.0	ug/L	0.86
1,2,4-Trimethylbenzene	ND	2.0	ug/L	0.24
1,3,5-Trimethylbenzene	ND	2.0	ug/L	0.19
Vinyl chloride	ND	2.0	ug/L	0.44
m-Xylene & p-Xylene	ND	4.0	ug/L	0.48
o-Xylene	ND	2.0	ug/L	0.28

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP L

GC/MS Volatiles

Lot-Sample #...: A0F040435-035 **Work Order #...:** L2F7A1AA **Matrix.....:** WG
Date Sampled...: 06/03/10 16:00 **Date Received..:** 06/04/10
Prep Date.....: 06/08/10 **Analysis Date..:** 06/08/10
Prep Batch #...: 0159358
Dilution Factor: 1
Analyst ID.....: 001904 **Instrument ID..:** UX10
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Bromobenzene	ND	1.0	ug/L	0.13
Benzene	ND	1.0	ug/L	0.13
Bromochloromethane	ND	1.0	ug/L	0.29
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
n-Butylbenzene	ND	1.0	ug/L	0.12
sec-Butylbenzene	ND	1.0	ug/L	0.13
tert-Butylbenzene	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chlorodibromomethane	ND	1.0	ug/L	0.18
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.11
4-Chlorotoluene	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
Dibromomethane	ND	1.0	ug/L	0.28
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,1-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
1,3-Dichloropropane	ND	1.0	ug/L	0.16
2,2-Dichloropropane	ND	1.0	ug/L	0.13
1,1-Dichloropropene	ND	1.0	ug/L	0.13
1,4-Dioxane	ND	50	ug/L	19
Ethylbenzene	ND	1.0	ug/L	0.17
Hexachlorobutadiene	ND	1.0	ug/L	0.30

(Continued on next page)

MACTEC Engineering and Consulting Inc

Client Sample ID: SEEP L

GC/MS Volatiles

Lot-Sample #...: A0F040435-035 **Work Order #...:** L2F7A1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
p-Isopropyltoluene	ND	1.0	ug/L	0.12
Methylene chloride	ND	1.0	ug/L	0.33
Naphthalene	ND	1.0	ug/L	0.24
n-Propylbenzene	ND	1.0	ug/L	0.14
Styrene	ND	1.0	ug/L	0.11
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.23
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.17
1,2,4-Trichloro-benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,2,3-Trichloropropane	ND	1.0	ug/L	0.43
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.12
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.096
Vinyl chloride	ND	1.0	ug/L	0.22
m-Xylene & p-Xylene	ND	2.0	ug/L	0.24
o-Xylene	ND	1.0	ug/L	0.14

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

TOTAL ORGANIC CARBON IN SOIL

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 28, 2010

Rhonda Quinn
Mactec Engineering and Consulting, Inc.
3200 Town Point Dr.
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: Thermo King

Dear Rhonda Quinn: Order No: 1010H39

Analytical Environmental Services, Inc. received 2 samples on 10/21/2010 10:25:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
-AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

James Forrest
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1010H39

Date: 10-19-10 Page 1 of

COMPANY:	ADDRESS:
MACTEC	3200 Town Point Dr, Ste100 Kennesaw, GA 30144
PHONE: 770-421-3400	FAX: 770-421-3486
SAMPLED BY: Jeff Moore	SIGNATURE: Jeff Moore

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) H	ANALYSIS REQUESTED Total Organic Carbon	REMARKS	No # of Containers
1	HMW26-2-3-101910	10-19-10	1119	✓		SO	1			1
2	HMW27-3-4-101910	10-19-10	1145	✓		SO	1			1
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Jeff Moore	10-20-10 5:00	1: Mary Jo	10/21/10 10:25
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION
PROJECT NAME: Thermo King
PROJECT #: 6122-09-0322
SITE ADDRESS: Louisville, GA
SEND REPORT TO: Rhonda Quinn
INVOICE TO: (IF DIFFERENT FROM ABOVE) MACTEC-Alpharetta
QUOTE #: 41716 PO#: Call For #

RECEIPT
Total # of Containers

Turnaround Time Request
- ● Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ○ Same Day Rush (auth req.)
- ○ Other

STATE PROGRAM (if any):
E-mail? (Y) N; Fax? Y / N
DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW26-2-3-101910
Project:	Thermo King	**Collection Date:**	10/19/2010 11:19:00 AM
Lab ID:	1010H39-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon SW9060A Modified					**(SW9060 Modified)**			
Total Organic Carbon (TOC)	1110	500		mg/Kg-dry	137190	1	10/27/2010 14:24	ME

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value		

Analytical Environmental Services, Inc **Date:** 28-Oct-10

Client:	Mactec Engineering and Consulting, Inc.	**Client Sample ID:**	HMW27-3-4-101910
Project:	Thermo King	**Collection Date:**	10/19/2010 1:45:00 PM
Lab ID:	1010H39-002	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon SW9060A Modified					**(SW9060 Modified)**			
Total Organic Carbon (TOC)	2710	500		mg/Kg-dry	137190	1	10/27/2010 15:23	ME

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value		

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Mactec Work Order Number 1010H39

Checklist completed by Mad 10/21/10
Signature Date

Carrier name: FedEx ✓ UPS __ Courier __ Client __ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes ✓ No __ Not Present __

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.8°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted ✓ Yes __ No __

Water - pH acceptable upon receipt? Yes __ No __ Not Applicable ✓

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Analytical Environmental Services, Inc

Date: 28-Oct-10

Client: Mactec Engineering and Consulting, Inc.
Project: Thermo King
Lab Order: 1010H39

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1010H39-001A	HMW26-2-3-101910	10/19/2010 11:19:00AM	Soil	Total Organic Carbon		10/22/2010	10/27/2010
1010H39-002A	HMW27-3-4-101910	10/19/2010 1:45:00PM	Soil	Total Organic Carbon		10/22/2010	10/27/2010

Client: Mactec Engineering and Consulting, Inc.
Project Name: Thermo King
Workorder: 1010H39

ANALYTICAL QC SUMMARY REPORT

BatchID: 137190

Sample ID: **MB-137190**	Client ID:					Units: **mg/Kg-dry**		Prep Date: **10/22/2010**		Run No: **183296**	
SampleType: **MBLK**	TestCode: **Total Organic Carbon SW9060A Modified**					BatchID: **137190**		Analysis Date: **10/27/2010**		Seq No: **3816383**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	BRL	500	0	0	0	0	0	0	0	0	

Sample ID: **LCS-137190**	Client ID:					Units: **mg/Kg-dry**		Prep Date: **10/22/2010**		Run No: **183296**	
SampleType: **LCS**	TestCode: **Total Organic Carbon SW9060A Modified**					BatchID: **137190**		Analysis Date: **10/27/2010**		Seq No: **3816385**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	2416	500	2420	0	99.8	70	130	0	0	0	

Sample ID: **1010H39-001ADUP**	Client ID: **HMW26-2-3-101910**					Units: **mg/Kg-dry**		Prep Date: **10/22/2010**		Run No: **183296**	
SampleType: **DUP**	TestCode: **Total Organic Carbon SW9060A Modified**					BatchID: **137190**		Analysis Date: **10/27/2010**		Seq No: **3816387**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	1124	500	0	0	0	0	0	1110	1.25	50	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

FIELD SAMPLING DATA

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322) 61

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW GA 30144
PHONE (770) 421-3400 / FAX (770) 421-3486

WELL ID: MW-1 DEPTH TO PRODUCT: DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 15:50

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 46.22' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 15:21 PURGE VOLUME: WELL DIAMETER (inches): 2-IN

Initial PID =

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 15:52		3.89	25.0	0.01	0.40	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Partly Cloudy, 89°F, humid		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-2 DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 14.42 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 37.60' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 14:35 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.29	27.7	0.03	1.45	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION	
WEATHER:	Partly Cloudy, 85°F
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: JTP	OBSERVER: DLH

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-3 PDB DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 08:12

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 40.70' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 07:58 PURGE VOLUME: WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = 0 Lenght to PDB Rope ATTACHMENT=56.25' using WL meter

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 08:15		4.39	24.9	0.01	0.48	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION		
WEATHER:	Clear, Sunny, 68°F	
SHIPPED VIA:	FedEX	
SHIPPED TO:	Test America-North Canton, OH	
SAMPLER: T. Parker	OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX (770) 421-3486

WELL ID: **MW-3 Purge** DEPTH TO PRODUCT: N/A DATE: 6-3-10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 11:25

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 40.70' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

INTAKE PT 56.25' TOTAL DEPTH: 60.0 Ft. 19.3' H WATER Column

Arrived at: 08:02 PURGE VOLUME: 9.4 X 0.163 = 3.15 GAL. X3 WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = 0 ~~Dist. from Cap to ~~ST~~ Ring = 38.55' btoc~~ 6-2-2010

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 08:28						( )	~~40.76~~
08:33	0.1 gal	5.02	23.2	0.07	12.7	125 ml/min	40.88
08:45	0.5 gal	4.89	23.1	0.06	4.52	180 ml/min	40.94'
09:09	1.5	4.92	22.9	0.06	2.38	215 ml/min	40.96'
09:14	2.5	4.97	23.0	0.06	1.01	215 ml/min	40.97'
09:54	~~3.5~~ 4.0	5.17	23.3	0.07	0.54	215 ml/min	40.95'
10:14	5.0	5.24	23.5	0.07	0.66	195 ml/min	40.96' ↑ to 230 ml/min
10:30	6.0	5.26	23.3	0.07	0.27	235 ml/min	41.01'
10:43	7.0	5.27	23.3	0.07	0.27	235	41.01'
11:00	8.0	5.30	23.4	0.08	0.26	235	41.01'
11:15	9.0	5.30	23.4	0.08	-0.23	235	41.01'
11:22	9.4	5.31	23.4	0.08	0.13	235	41.01'

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION

WEATHER:	mostly cloudy, humid, 74°F, light breeze
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. PARKER	OBSERVER: D. HOWARD

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-4 DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 08:38

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 39.29' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 08:28 PURGE VOLUME: WELL DIAMETER (inches):
Initial PID = N/A 2-IN
Bailing PID = ↓

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 08:40		4.33	26.4	0.00	0.86	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, 70°F, humid		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. HOWARD	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-5 PDB DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 17:10 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 39.18' DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: _____

Arrived at: 16:48 PURGE VOLUME: _____ WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = ↓

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 17:15		3.88	26.5	0.00	2.23	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION	
WEATHER:	Partly Cloudy, 86°F, humid
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. PARKER	OBSERVER: D. Howard

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-5 Purge DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 14:22

SAMPLE METHOD: Bailer 39.29 AFTER PUMP INSTALL GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 39.18' (6-1-2010) DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 54

Arrived at: 14:10 PURGE VOLUME: 7.2 gal. WELL DIAMETER (inches): 2-IN

Initial PID =

Bailing PID =

Water Column: 14.82' x 0.163 = 2.42 x 3 = 7.2 gal

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 14:25			24			270 ( )	
14:42	1.0	5.64	24.3	0.12	0.90	230	39.45'
14:53	2.0	5.60	22.3	0.11	1.48	230	39.45'
15:00	2.5	5.62	22.3	0.11	1.14	230	39.45'
15:11	3.0	5.62	22.1	0.11	0.83	230	39.45'
15:30	4.0	5.62	22.2	0.11	0.92	230	39.45'
15:46	5.0	5.62	22.2	0.11	1.30	235	39.45'
16:01	6.0	5.64	21.8	0.10	1.10	235	39.45'
16:15	7.0	5.64	22.0 22.0	0.10	1.13	235	39.45'
16:18	7.2	5.64	21.8	0.10	1.11	235	39.45'
				AFTER Sample Bag		→	39.13'

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION			
WEATHER:	Partly cloudy mostly sunny. 85°F, humid, light breeze		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-6 DEPTH TO PRODUCT: N/A DATE: 6-1-10

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 14:22 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 30.74' DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: _____

Arrived at: 1408 PURGE VOLUME: _____ WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1425		4.67	28.7°	0.01	1.28	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
				BOTTLE LOT # 0112001 U

GENERAL INFORMATION	
WEATHER:	Partly Cloudy,
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. Parker	OBSERVER: D. Howard

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-7 DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 16:37 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 34.31' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 16:17 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N/A

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 16:43		4.11	27.6	0.01	0.82	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Partly cloudy, 86°F, light breeze, humid		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0327

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE (770) 421-3400 / FAX (770) 421-3486

WELL ID: MW-8 DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 16:10 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 4.63' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 16:02 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = ↓

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 16:14		4.46	25.6	0.00	1.38	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION	
WEATHER:	Partly Cloudy, light breeze, 88°F, humid
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: L. Parker	OBSERVER: D. Howard

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-9 DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 15:17 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 37.21' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: _____

Arrived at: 14:54 PURGE VOLUME: _____ WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = 4

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 15:20		4.06	26.0	0.03	0.92	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION		
WEATHER:	Partly Cloudy, Hot, humid	
SHIPPED VIA:	FedEX	
SHIPPED TO:	Test America-North Canton, OH	
SAMPLER: T. Parker	OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-10 PDB DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress ;Pump Or Bailer TIME: 09:48

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 27.96' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: _____ _____

Arrived at: 09:35 PURGE VOLUME: _____ WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N/A Dist. to 1st Ringharac = 37.85'

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 09:50		4.49	24.2	0.00	0.82	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION

WEATHER:	Clear, Sunny, 75°F, light brise SE
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. PARKER	OBSERVER: D. HOWARD

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO. 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE, SUITE 100, KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-10 Purge DEPTH TO PRODUCT: N/A DATE: 6-3-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 1000

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 27.96' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 45.2

WATER Column HT = 17.24' x 0.163 = 2.8 gal x 3 = 8.4 Gal.

Arrived at: 0815 PURGE VOLUME: 8.4 WELL DIAMETER (inches): 2-IN

Initial PID =

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 0835		4.95	20.3	0.03	2.16	400 (ml)	
0850	2.0	5.12	20.2	0.03	1.51	350	29.95
0910	4.0	5.38	20.3	0.05	0.32	350	29.84
0920	5.0	5.50	20.4	0.06	0.67	350	29.35
0930	6.0	5.48	20.4	0.05	0.90	350	29.60
0940	7.0	5.56	20.4	0.06	0.72	350	29.70
0950	8.0	5.59	20.5	0.06	0.53	350	29.76
0955	8.5	5.62	20.5	0.06	0.54	350	29.76
1000	Sample	Time					

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION		
WEATHER:	Overcast, Humid, temp 75°F	
SHIPPED VIA:	FedEX	
SHIPPED TO:	Test America-North Canton, OH	
SAMPLER: Daniel Howard	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC
3200 TOWN POINT DRIVE, SUITE 100, KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-11 DEPTH TO PRODUCT: N/A DATE: 6-2-10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 11:25

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 49.66' DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: _____

Arrived at: 11:16 PURGE VOLUME: _____ WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = ↓

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.77	26.2	0.100	1.04	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, Light breeze, 76°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-12 DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 11:40

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 47.29 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 11:35 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.64	25.6	0.00	0.92	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Clear Sunny, light breeze, 77°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. HOWARD	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-13 DEPTH TO PRODUCT: N/A DATE: 6-2-10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 12:00

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 8.25' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 11:00 PURGE VOLUME: WELL DIAMETER (inches):
Initial PID = N/A 2-IN
Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.13	25.9	0.00	1.18	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, humid, 84°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-14 PDB DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 09:15

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 64.66' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 08:48 PURGE VOLUME: WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = N Depth to first Ring = 73.25'

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.79	23.5	0.00	0.92	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, 74°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. HOWARD	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW,GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: **MW-14 Purge** DEPTH TO PRODUCT: N/A DATE: 6/3/10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 1315

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 64.66' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 86.5'

Arrived at: 1110 WATER Column Ht: 21.84' x 0.163 = 3.56gal X3 = 10.7 gal

Initial PID = NA PURGE VOLUME: 10.7gal. WELL DIAMETER (inches): 2-IN

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1125		7.16	20.4	0.45	0.30	400 (ml)	
1145	2.0	7.15	19.8	0.46	0.58	400	64.66
1205	4.0	7.16	20.1	0.46	0.80	400	64.66
1225	6.0	7.16	20.0	0.46	0.00	400	64.66
1245	8.0	7.17	20.0	0.46	0.00	400	64.66
1255	9.0	7.15	20.1	0.46	0.0	400	64.66
1305	10.0	7.18	20.1	0.46	0.0	400	64.66
1312	10.7	7.17	20.2	0.46	0.0	400	64.66
1315	Sample	Time					

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION	
WEATHER:	Partly Sunny, Humid, Temp 85°F
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: Daniel Howard	OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

2.5.5

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX (770) 421-3486

WELL ID: MW-15 DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 10:53

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 4.71' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: _____

Arrived at: 10:44 PURGE VOLUME: _____ WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.40	26.8	0.00	1.66	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, 76°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER:	T. PARKER	OBSERVER:	D. Howard

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE (770) 421-3400 / FAX (770) 421-3486

WELL ID: MW-16 DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 10:25

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 4.30' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 10:22 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/P 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 10:30		4.22	21.8	0.00	1.11	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION	
WEATHER:	Clear, Sunny, 74°F
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. PARKER	OBSERVER: D. HOWARD

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE, SUITE 100, KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-17 DEPTH TO PRODUCT: DATE: 8-2-10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 10:40

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 11.90' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 10:35 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N/A

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 10:45		4.43	25.5	0.00	1.58	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny 77°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. HOWARD	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO. 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-18 DEPTH TO PRODUCT: N/A DATE: 6-2-2010 (SD 6-2-2010)

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: ~~10:17~~ 10:15

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 5.80 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 10:08 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 10:19		4.33	22.8	0.01	1.11	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION	
WEATHER:	Clear, Sunny, 75°F
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. Parker	OBSERVER: D. Howard

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-19 PDB DEPTH TO PRODUCT: N/A DATE: 6-2-2010

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 09:00

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 31.37' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 08:48 PURGE VOLUME: WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = N Dist. from Cap to 1st Rng = 38.55'

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.57	24.3°C	0.03	0.8	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, 74°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO.: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: **MW-19 Purge** DEPTH TO PRODUCT: N/A DATE: 6-3-10

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 13:45

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 31.37' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

PUMP INTAKE @ 38.55' btoc TOTAL DEPTH: 46.5'

WATER Column HT: 15.13' x 0.163 2.47 gal x 3 = 7.4 GAL.

Arrived at: 11:55 PURGE VOLUME: 7.4 gal. WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 12:10		Begin Purging MW-19				( )	
12:25	1.0	5.35	21.8	0.08	2.92	315	31.75'
12:37	2.5	5.81	20.2	0.10	0.18	320	31.74'
13:00	4.0	6.08	20.4	0.14	0.12	320	31.74'
13:12	5.0	6.13	20.3	0.15	0.10	320	31.75'
13:27	6.0	6.22	20.3	0.15	0.12	320	31.74'
13:38	7.0	6.24	20.4	0.16	0.10	325	31.75'
13:44	7.4	6.25	20.4	0.16	0.10	325	31.75'

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION			
WEATHER:	Clear, Sunny, Hot, 89°F, humid		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-20 PDB DEPTH TO PRODUCT: _____ DATE: 6/1/10

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 13:47 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 79.97' DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: ~~79.97'~~ 6-1-10

Arrived at: 13:30 PURGE VOLUME: N/A WELL DIAMETER (inches): 2-IN

Initial PID = N/A

Bailing PID = 0 MEASUREMENT TO FIRST PDB BAG ATTACHMENT = 93.4'

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		4.59	27.6	0.03 mS/cm	1.69	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B ✓	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM ✓	14 Dioxane
				BOTTLE LOT # 0412001LK

GENERAL INFORMATION			
WEATHER:	Partly Cloudy - 80°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. PARKER		OBSERVER: D. HOWARD	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-20 Purge DEPTH TO PRODUCT: _____ DATE: 6/2/10

PURGE METHOD: Low Flow/Low Stress Pump Or Bailer TIME: 1730

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 80.08 DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: 107

Arrived at: 1420 PURGE VOLUME: 26.92 x 0.163 = 4.39 gal x 3 = 13.2 gal WELL DIAMETER (inches): 2-IN

Initial PID = NA

Bailing PID = NA

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1500		6.91	23.0	0.46	3.71	300 ( )	
1525	1.75	7.00	22.3	0.47	1.70	300	80.25
1550	4.5	7.00	21.8	0.47	1.34	400	80.23
1615	6.75	7.00	21.8	0.47	3.36	400	80.25
1635	9.0	7.01	21.8	0.47	3.13	400	80.23
1700	11.25	6.98	21.8	0.47	1.48	400	80.25
1725	13.25	6.98	21.9	0.47	1.41	400	80.22
1730	Sample	Time					

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION	
WEATHER:	Hot + Humid, temp 90°F
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: Daniel Howard	OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE, SUITE 100, KENNESAW, GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-21 DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 16:25 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 25.52' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: _____

Arrived at: 16:17 PURGE VOLUME: _____ WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N/A

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 16:32		4.28	25.5	0.03	2.0	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Partly Cloudy, light breeze, 86°F, humid		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 // FAX: (770) 421-3486

WELL ID: MW-22 DEPTH TO PRODUCT: N/A DATE: 6-1-10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 15:35 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 89.64' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 15:21 PURGE VOLUME: WELL DIAMETER (inches):
Initial PID = N/A 2-IN
Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	6-1-10 SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:		5.34	25.8	0.000.01	0.40	( )	

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION

WEATHER:	Partly cloudy, 89°F, Hot humid
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH
SAMPLER: T. Parker	OBSERVER: D. Howard

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-23 DEPTH TO PRODUCT: _____ DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 15:02 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 79.11' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: _____ _____

Arrived at 14:54 PURGE VOLUME: _____ WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 14:10		4.52	26.6	0.03	1.22	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Partly Cloudy, 87°F many gnats		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: JTP/DLH		OBSERVER: DLH	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-24 DEPTH TO PRODUCT: N/A DATE: 6-1-2010

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 16:58 ✓

SAMPLE METHOD: Bailer Or Passive Diffusion Bag GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 85.33' DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:

Arrived at: 16:48 PURGE VOLUME: WELL DIAMETER (inches):

Initial PID = N/A 2-IN

Bailing PID = N

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 17:02		4.32	26.5	0.00	1.33	( )	
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Partly cloudy, humid, 86°F		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH		
SAMPLER: T. Parker		OBSERVER: D. Howard	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: **MW-25 Purge** DEPTH TO PRODUCT: NE DATE: 6/24/10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME:

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 75,27 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 107,0

Arrived at: 1235 PURGE VOLUME: 5,39 X 3 = 16,18 WELL DIAMETER (inches): 2-IN

Initial PID =

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1300	0,25	8,53	25,78	0,421	130,4	250 ( )	75,47
1316	1,0	7,25	24,22	0,443	49,4	250	75,66
1332	2,0	7,20	22,56	0,440	30,6	250	75,66
1348	3,0	7,22	22,72	~~0,443~~ 0,436	16,4	250	75,66
1404	4,0	7,21	22,38	0,436	13,1	250	75,66
1420	5,0	7,22	22,51	0,436	12,9	250	75,66
1436	6,0	7,20	22,14	0,435	11,3	250	75,66
1452	7,0	7,20	22,04	0,435	13,6	250	75,66
1508	8,0	7,19	21,88	0,436	12,6	250	75,66
1524	9,0	7,19	21,88	0,435	12,2	250	75,66
1540	10,0	7,20	22,58	0,432	11,9	250	75,66
1556	11,0	7,19	22,32	0,436	11,0	250	75,66
1612	12,0	7,19	22,37	0,436	10,7	250	75,66
1628	13,0	7,18	22,63	0,436	9,3	250	75,66
1644	14,0	7,18	22,73	0,437	8,8	250	75,66
COMMENTS:							

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION		
WEATHER:		
SHIPPED VIA:	FedEX	
SHIPPED TO:	Test America-North Canton, OH	
SAMPLER:		OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

2 of 2

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: **MW-25 Purge** DEPTH TO PRODUCT: NE DATE: 6/24/10

PURGE METHOD: Low Flow/Low Stress :Pump Or Bailer TIME: 1720

SAMPLE METHOD: Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 75.27 DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: 107.0

Arrived at: 1235 PURGE VOLUME: 5.39X3=16.18 WELL DIAMETER (inches): 2-IN

Initial PID = _____

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial:							
1700	15.0	7.18	22.68	0.436	8.8	250	75.66
1716	16.0	7.17	22.73	0.438	8.7	250	75.66
1720	Collect	Sample					

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane
40 mL	1	HCL to pH<2	SIM	14 Dioxane

GENERAL INFORMATION		
WEATHER:	HOT - HUMID	
SHIPPED VIA:	FedEX	
SHIPPED TO:	Test America-North Canton, OH	
SAMPLER: EVER GUILLEN	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: HMW-26 DEPTH TO PRODUCT: NA DATE: 10-20-10

PURGE METHOD: Low Flow/Low Stress Pump TIME: 12:52

SAMPLE METHOD: Pump GRAB (x) COMPOSITE ( )

DUP./REP. OF: NA DEPTH TO WATER: 7'BTOC = 3.1'BGS DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 6'BGS NA

Arrived at: NA PURGE VOLUME: .035(1) WELL DIAMETER (inches):

Initial PID = NA ~~2 IN~~ 3/4

Bailing PID = NA [HAND AUGER WELL]

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level	TDS(ppt)
Initial: 12:35	2Gal Development	6.27	18.8	0.25	22.7	250 (5)	Nm	0.12
12:40	.1	6.32	19.0	0.25	11.2	" "	Nm	0.12
12:45	.3	6.35	19.1	0.26	6.67	" "	Nm	0.13
12:50	.5	6.34	19.1	0.26	3.74	" "	Nm	0.13

COMMENTS: 12:52 TAKe Sample HMW26-102010

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	12	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Cloudy & Showers 70°		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH or AES - Atlanta, GA		
SAMPLER:	Jeff Moore	OBSERVER:	Thurmond Neal

~~[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]~~ X.0123

2.9

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC.
3200 TOWN POINT DRIVE SUITE 100, KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: ~~H~~MW-27 DEPTH TO PRODUCT: NA DATE: 10-20-10

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 11:12

SAMPLE METHOD: Pump GRAB (x) COMPOSITE ( )

DUP./REP. OF: NA DEPTH TO WATER: 6.84 BTOC = 4.04 BGS DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 7.2 BGS NA

Arrived at: NA PURGE VOLUME: .049 (1vol) WELL DIAMETER (inches):

Initial PID = NA ~~2 IN~~ 3/4 in

Bailing PID = NA [HAND AUGER WELL]

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level	TDS (ppt)
Initial: 10:55	1.2 For Development	5.42	18.9	.07	111	240 (7)	Nm	.07
11:00	0.1	5.44	18.9	.07	42	" "	Nm	.03
11:05	0.3	5.44	19	.07	14	" "	Nm	.03
11:10	0.5	5.44	19	.07	4.8	" "	Nm	.03

COMMENTS: 11:12 Sample HMW27-102010

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	3 2	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION	
WEATHER:	Cloudy Chance Rain 70°
SHIPPED VIA:	FedEX
SHIPPED TO:	Test America-North Canton, OH or AES - Atlanta, GA
SAMPLER: Jeff Moore	OBSERVER: Thurmond Neal

~~[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]~~ .0123 x water column

6.84
2.80
4.04

TK LOUISVILLE FIELD SAMPLING REPORT

PROJECT NO: 6122-09-0322

MACTEC ENGINEERING AND CONSULTING OF GEORGIA, INC
3200 TOWN POINT DRIVE SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: ~~H~~MW-28 DEPTH TO PRODUCT: NA DATE: 10-20-10

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 10:17

SAMPLE METHOD: Pump GRAB (x) COMPOSITE ( )

DUP./REP. OF: NA DEPTH TO WATER: 2.69 BGS = 5.59 BTOC DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 7.1' BGS NA

Arrived at: NA PURGE VOLUME: 0.054 WELL DIAMETER (inches):

Initial PID = NA ~~2~~ 3/4 in

Bailing PID = NA [HAND AUGER WELL]

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	Pump Rate ml/min. (& pump setting)	New Water Level	TDS (PPT)
Initial: 10:00	5 For Development	5.60	18.6	0.11	72	300 (5')	NM	.06
10:05	.5	5.68	18.7	0.10	9.65	" "	NM	.05
10:10	1.5	5.68	18.7	0.10	4.69	" "	NM	.05
10:15	2.5	5.68	18.7	0.10	3.42	" "	NM	.05

COMMENTS: 10-17-Sample HMW28-102010

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
40 mL	~~3~~ 2	HCL to pH<2	8260B	site-specific Volatiles +1,4 dioxane

GENERAL INFORMATION			
WEATHER:	Cloudy & mild 70°		
SHIPPED VIA:	FedEX		
SHIPPED TO:	Test America-North Canton, OH or AES - Atlanta, GA		
SAMPLER: Jeff Moore		OBSERVER: Thurmond Neal	

~~[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]~~ $V = \pi r^2 h = 0.0123 \times$ water column height

Name of Document: Addendum to Voluntary Remediation Program Application			
Document Date: December 22, 2010			
Date Submitted to EPD: December 27, 2010			
Name and Address	**Date Sent**	**Number of Copies**	**Shipping Method**
Ms. Alexander Cleary Program Manager Hazardous Sites Response Program Georgia Environmental Protection Division 2 Martin Luther King, Jr. Drive, SE Suite 1462 East Floyd Tower Atlanta, Georgia 30334	12/23/2010	3	FedEx 1-paper copy 2-PDF format on CD
Mr. David Sordi, P.E. Manager Environmental Engineering IR Corporate Center 722 Davis Hill Road, Center Conway, NH 03813		1	US Mail 1- PDF format on CD
Mr. Aaron Kleinbaum, P.E., Esq Vice President – Environment, Health and Safety and Deputy General Counsel Ingersoll Rand Company One Centennial Avenue Piscataway, NJ 08854		1	US Mail 1- paper copy
Mr. David Kolb Operations Manager Thermo King Corporation 1430 Highway 24 East Louisville, Georgia 30434		1	US Mail 1- paper copy 1-PDF format on CD
<u>File Copy:</u> MACTEC Engineering and Consulting 3200 Town Point Drive Kennesaw, GA 30144		1	In house 1- paper copy 1- PDF format on CD