January 31, 2018

Ms. Carolyn L. Daniels, P.G.
Georgia Environmental Protection Division
Response & Remediation Program
Land Protection Branch
2 Martin Luther King Jr. Drive, SE
Suite 1054 East Floyd Tower
Atlanta, Georgia 30334-9000

Subject: **Response to November 30, 2017 EPD Comments on VRP Compliance Status Report**
Thermo King Corporation - Louisville, Jefferson County, Georgia
HSI Site No. 10702 Tax Parcel 0090-024
Amec Foster Wheeler Project 6122-09-0322

Dear Ms. Daniels:

Amec Foster Wheeler Environment & Infrastructure, Inc., on behalf of Thermo King Corporation, is hereby submitting the attached Response to November 30, 2017 EPD Comments on the VRP Compliance Status Report for the Thermo King Corporation in Louisville, Jefferson County, Georgia (HSI Site No. 10702, Tax Parcel 0090-024).

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.

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

A. David Alcott
Senior Associate Engineer

Enclosures

cc: Michael Goldstein – Ingersoll Rand Company
Frank Kozel – Thermo King Corporation
Dave Sordi – BSI Group

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Response to November 30, 2017 EPD Comments on the
Voluntary Remediation Program Compliance Status Report
Thermo King Corporation – Louisville, Georgia
HSI Site No. 10702/Tax Parcel 0090-024
Amec Foster Wheeler Project 6122-09-0322

January 31, 2018

Professional Ground Water Scientist Certification

I certify that I am a qualified ground-water scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in ground-water hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding ground-water monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.

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

RESPONSE TO NOVEMBER 30, 2017 EPD COMMENTS ON THE THERMO-KING (FORMER) FACILITY, LOUISVILLE, JEFFERSON COUNTY, GA, HSI 10702 SITE VOLUNTARY REMEDIATION PROGRAM COMPLIANCE STATUS REPORT, DATED MARCH 10, 2016

Comment #1: Please revise your certification of compliance statement in the subject CSR to be consistent with the requirements outlined in both the Rules and the Act.

Comment #1a: Pursuant to §391-3-19-.07(9)(a) of the Rules, "To comply with Type 4 standards, all source materials must be removed or decontaminated to Type 4 media criteria." As two regulated substances impacting soil and one or more regulated substances impacting groundwater at concentrations exceeding approved Type 1 through 4 Risk Reduction Standards (RRS) will remain in place at the subject VRP site while relying on one or more engineering and/or institutional controls used to prevent unacceptable exposure to established potential receptors, compliance with Type 4 RRS cannot be certified for said substances in soil and groundwater. For those substances that exceed the Type 1 through 4 RRS that are to remain in-situ with engineering and/or institutional controls used to maintain compliance, certification to 5 RRS, as defined in §391-3-19-.07(10) of the Rules, is appropriate.

Response to Comment #1a:
The
Certification of Compliance Statement has been revised and is attached.

Comment #1b: Based on Table 2.3-5 of the CSR and assuming the analytical detection limits referenced on the table are equal to or less than standard analytical method practical quantitation limits, soil is in compliance with residential (Type 1 and or Type 2) RRS for all detected regulated substances except for 1,4-dioxane and trichloroethene (TCE) for which Type 5 RRS are the appropriate RRS for certification. Please submit the following with your revised soil certification statement:

> *i: A revised Table 2.3-5 of the CSR with the "ND" term in the "Maximum Detected Concentrations (mg/kg)" column replaced with "<X.XX", where the X.XX is equivalent to the maximum detection limit reported by the laboratory.*
>
> *ii: A revised Figure 2.3-1 of the CSR separated into two figures with one representing surface soil conditions and the other representing subsurface soil conditions based on the following:*
>
> - *Analytical results should not be posted as total concentrations for "groups" of substances (e.g., total VOCs, etc.). Please post the analytical results representing each individual detected regulated substance immediately adjacent to its relevant sampling location even if not detected. Non-detections should be represented as "X.XX" as referenced above. Results for substances not detected in any environmental matrix at the site should not be included on the figures.*

- *Please construct and superimpose the following isoconcentration contour lines (isocons) on the revised figures: 1) one representative of the delineation standard (concentration) showing the aerial extent of each specific COC, 2) one representative of the general residential cleanup standard (the greater of Type 1 and Type 2 concentration), 3) one representing the concentration associated with the general non-residential (the greater concentration between Type 3 and Type 4) RRS, and 4) one that defines extent of the area(s) where compliance with Type 5 RRS will be maintained through the use of an engineered surface cap (see Comment #6.a.i).*

Note: Isocon locations may not be interpolated between sampling locations; rather they should be drawn to intersect those locations that represent analytical results that are less than or equal to applicable delineation (or cleanup) standards.

Response to Comment 1.b:
Table 2.3.5 has been revised and is attached.
Figure 2.3-1 has been revised and is now presented as Figure 2.3-1A for surface soil data and Figure 2.3-1B for subsurface soil. The table and figures are attached.

Comment 1c: It should be noted that although Type 5 RRS may be used as the cleanup standards for groundwater at the site, several of the regulated substances detected in groundwater may be in compliance with non-residential (Type 3 or 4) RRS, or even residential (Type 1 or 2 RRS). EPD recommends that Ingersoll-Rand consider revising their groundwater compliance certification statement for said substances to reflect the most conservative RRS the substances are currently in compliance with and limit the extent of the implemented engineering and institutional controls used to maintain compliance with Type 5 RRS (see Part a of this Comment) to those substances not in compliance with any of the Type 1 through 4 RRS for groundwater. Please provide the following to justify your revised certification statement for groundwater:

i. A table similar to the requested revised Table 2.3-5 of the subject CSR (see Comment #1 above) that compares the approved Type 1 through 4 RRS values against the maximum concentrations of each regulated (do not included non-regulated) substance detected in groundwater over the time period referenced above. Each of the impacted aquifer zones should be addressed separately.

ii. Figures 2.3-2 and 2.3-3 should be revised to include isocons as described in the second bullet of Comment #1.b.ii above. Please note: Analytical results for groundwater samples collected from temporary monitoring locations such as soil borings or temporary monitoring wells (including DPT borings) cannot be used to demonstrate achievement of they cannot be replicated over time. Said results should not be posted on the referenced figures, nor should they be used in constructing the requested isocons.

Response to Comment 1c:
The groundwater section of the Certification of Compliance Statement has been revised and is attached.
Table 2.3-6 (Uppermost Water-Bearing Zone) and Table 2.3-7 (Intermediate Water-Bearing Zone) have been added to compare the approved Types 1 through 4 RRS values against the recent maximum concentrations of each regulated groundwater constituents detected in the

Uppermost and Intermediate water-bearing zones. The tables are attached. Figures 2.3-2 and 2.3-3 have been revised and are attached.

Comment #2: "Background levels" are acceptable criteria for determining contaminant delineation standards for impacted soil and groundwater at the site; however, Ingersoll-Rand may wish to re-evaluate their choice of background concentrations as the criteria for selecting said standards. Alternative criteria defined in §12-8-108(1) of the Act and §391-3-19-.06(3)(b)2 and 3 of the Rules, may result in higher standards for one or more of the regulated substances released to soil and groundwater at the site.

Response to Comment 2:
Volatile organic compounds (VOCs) are the constituents of concern at the Thermo King site. As VOCs are not naturally occurring, their background value is non-detect. Per EPD's recommendation, Ingersoll Rand is using the Type 1 RRS for soil and groundwater per §12-8-108(1) of the VRP Act for delineation of VOCs in soil and groundwater. The delineation criteria are shown on Tables 2.3-1 (surface soil), 2.3-2 (subsurface soil), 2.3-3A (uppermost zone groundwater), and 2.3-3B (intermediate zone groundwater) which are attached.

Comment #3: Please revise Tables 2.3-1, 2.3-2 and 2.3-3 of the CSR to:

a. Include numeric concentration values representative of background concentrations (or alternative delineation standards) and cleanup standards for each of the detected regulated substances.

b. Replace the "ND" notations as referenced in Comment #1.b.i above. Laboratory reporting limits are not always the same as standard practical quantitation limits (the Rule-defined detection limits) for the analytical method used [see §391-3-19-.2(2)(d) of the Rules],

c. Remove references to non-regulated substances (not listed in Appendix I of the Rules). Analytical results for detected non-regulated substances may be summarized on a separate table if Ingersoll-Rand wishes to report them, and

d. Group groundwater analytical results (Tables 2.3-2 and 2.3-3) according to the separate aquifer zones represented rather than by sampling location ID numbers, as was done on Figures 2.3-2 and 2.3-3 of the CSR.

Response to Comment 3:
Tables 2.3-1 (surface soil), 2.3-2 (subsurface soil) and 2.3-3 (groundwater) have been revised to remove the "ND" notations and the non-regulated substances. The tables also show the a) delineation criteria, b) the higher of Type 1 and Type 2 Residential RRS, and c) the higher of the Type 3 and Type 4 Non-Residential RRS. Table 2.3-3 is now presented as Table 2.3-3A for groundwater results from the Uppermost water-bearing zone monitoring wells and Table 2.3-3B groundwater results from the Intermediate water-bearing zone monitoring wells. The non-regulated substances were removed from the tables and figures.

Comment #4: Please revise Figures 2.3-2 and 2.3-3 of the CSR in accordance with Comment #3a above. Only the most recent (within the last two to three years of monitoring) analytical results should be posted.

Response to Comment #4:
Figures 2.3-2 (groundwater in the uppermost zone) and 2.3-3 (groundwater in the intermediate zone) now contain the most recent groundwater analytical results for the permanent monitoring wells MW-1 to MW-28. Per the VRP Remediation Plan, ten wells (MW-3, MW-5, MW-10, MW-14, MW-19, MW-20, MW-22, MW-25, MW-27, and MW-28) of the total 28 site monitoring wells were monitored until December 2015. The other 18 wells were last sampled in June 2010. The groundwater analytical results of the soil borings and DPT temporary wells have been removed from the figures and tables. The figures are attached.

Comment #5: Although EPD does not necessarily concur with how each model input parameter was derived, etc., we can concur that the model results demonstrate that groundwater does not pose an unacceptable threat to the applicable receptors.

Response to Comment #5:
Noted.

Comment #6: Proposed Future Actions:

a. ***Concrete/Asphalt Cap:*** *A preliminary review by EPD of the soil analytical results currently available and posted on Figure 2.3-1 of the CSR does not support limiting the surface cap area subject to inspection and used to demonstrate compliance with Type 5 RRS for soil to that area shown on the Site Plan in the December 16, 2016 Post-VRP CSR Monitoring Report. It appears that the area subject to engineering controls should extend beyond the walls of the main building in at least one direction. Ingersoll-Rand may choose to: 1) increase the areal extent of the "paved" area used as an "engineered" cap, to be inspected on a regular basis, to match the area justified by the requested isocon/posted soil analytical results on the referenced CSR figure (see #1.b.ii), or 2) acquire additional soil analytical data to justify the aerial extent of the currently proposed inspection area as shown in the December 16, 2016 submittal.*

Response to Comment #6a:
To reduce the size of the footprint and to bring the Type 5 RRS area footprint to mostly inside of the building, Ingersoll Rand proposes to conduct additional soil sampling inside the building to the north, west, and south of the former degreaser locations, areas where soil constituent concentrations exceed Types 1 to 4 RRSs. Once this additional data are obtained, revised figures of the surface and subsurface soils showing the extent of the engineered cap will be submitted to EPD.

b. Seep Monitoring: *Please continue with seep and surface water monitoring as proposed in Section 6.4 of the VRP CSR.*

Response to Comment #6b: Seep and surface water monitoring will continue on an annual basis for the next 3 years. The CSR proposed 5 years of post-CSR monitoring, two of the five years were completed in 2016 and 2017.

c. Groundwater Monitoring *(Section 3.1 of Post-VRP CSR Monitoring Report): EPD concurs with Ingersoll-Rand's request to cease groundwater monitoring at the site. Please proceed with decommissioning of existing monitoring wells associated with the site in accordance with the Georgia Water Well Standards Act of 1985. EPD prefers that decommissioning procedures be conducted in accordance with Section 2.8 of the United Stated Environmental Protection Agency, Region 4, Science and Ecosystem Support Division Guidance SESDGUID-101-Rl (Guidance: Design and Installation of Monitoring Wells, Effective January 29, 2013). The regularly scheduled annual inspection and monitoring report for the site due on or before December 31, 2017 should include either the documentation of monitoring well decommissioning activities or a proposed schedule for conducting said activities and submittal of a report documenting said activities.*

Response to Comment #6c:
Ingersoll Rand appreciates EPD approving the proposed cessation of groundwater monitoring. Ingersoll Rand proposes to abandon most of the monitoring wells while keeping seven wells for the purpose of future due diligence if the property is sold, re-developed, or demolished. Ingersoll Rand will re-evaluate the need to abandon the seven wells after two years.

The following wells are proposed for abandonment:

Uppermost Zone:

MW-1	MW-2	MW-3	MW-4	MW-6	MW-7
MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
MW-15	MW-16				

Alluvial/Colluvial Zone:

MW-26	MW-27	MW-28

Intermediate Zone:

MW-17	MW-18	MW-21	MW-23

These monitoring wells are proposed to be retained and maintained.

Uppermost Zone:

MW-5	MW-19

Intermediate Zone:

MW-14	MW-20	MW-22	MW-25

Lower Zone:
MW-24

As EPD requested the wells will be decommissioned in accordance with SESDGUID–101-R1. In accordance with this guidance, “the borehole should be sealed in such a manner that the wells cannot act as a conduit for migration of contaminants from the ground surface to the water table or between aquifers. Due to the historic absence of constituents in samples collected from the 21 wells, proposed to be abandoned and due to the 10- to 15-foot downward gradient between the Uppermost and Intermediate Water-Bearing Zones, Ingersoll Rand proposes to decommission the wells by pressure-grouting them in-place with a bentonite/cement grout. The

well pads would then be removed, the area around the casings excavated, and the casings removed down to a depth of approximately three feet below the ground surface.

Comment #7: Based on the type of proposed future actions and the cost estimate provided in the May 1, 2017 Financial Assurance (FA) Instrument Update Letter, EPD will not require that a financial assurance instrument be maintained for corrective action at the subject site. Therefore, Ingersoll- Rand may cancel the current instrument. The Director will return EPD's copy of the current instrument, to Ingersoll-Rand under separate cover. The issuer of the FA instrument must also notify the Director of EPD in writing, care of Ms. Amy Mussier at the letterhead address, of their intent to cancel the instrument.

Response to Comment #7:
Ingersoll Rand's issuer of the FA instrument will notify the Director of EPD in writing, of their intent to cancel the instrument and the date when the instrument is cancelled.

Attachments:
Revised Certification of Compliance Statement

Table 2.3-1 Summary of Detected Constituents in Surface Soils
Table 2.3-2 Summary of Detected Constituents in Subsurface Soils
Table 2.3-3A Summary of Detected Constituents in Groundwater Samples from Uppermost Water-Bearing Zone
Table 2.3-3B Summary of Detected Constituents in Groundwater Samples from Intermediate Water-Bearing Zone
Table 2.3-5 Risk Reduction Standards Types 1 through 4 for Soil
Table 2.3-6 Risk Reduction Standards Types 1 through 4 for Groundwater in Uppermost Water-Bearing Zone
Table 2.3-7 Risk Reduction Standards Types 1 through 4 for Groundwater Intermediate Water-Bearing Zone

Figure 2.3-1A Distribution and Extent of Detected Constituents in Surface Soil
Figure 2.3-1B Distribution and Extent of Detected Constituents in Subsurface Soil
Figure 2.3-2 Distribution and Extent of Detected Constituents in Groundwater in Uppermost Water-Bearing Zone
Figure 2.3-3 Distribution and Extent of Detected Constituents in Groundwater in Intermediate Water-Bearing Zone

Certification on of Compliance With Risk Reduction Standards

I certify under penalty of law that this report and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on 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.

Based on my review of the findings of this report with respect to the Rules for Hazardous Site Response, Rule 391-3-19.07 and in compliance with the provision, purposes, standards, and policies of the Voluntary Remediation Program Statue 12-8-108, I have determined that the areas of the property affected by releases comply with the following risk reduction standards (RRS):

- The surface and subsurface soils on the subject property comply with Type 1 RRS for VOCs, except for 1,4-dioxane and trichloroethene. The subject property soils beneath and adjacent to the building floor slab comply with the Type 5 RRS for 1,4-dioxane and trichloroethene and are subject to an engineering control and an Environmental Covenant.

- The uppermost groundwater-bearing zone on the subject property complies with Type 1 RRS for VOCs, except for trichloroethene and hexachlorobutadiene. The subject property uppermost groundwater-bearing zone complies with the Type 4 RRS for hexachlorobutadiene. The subject property uppermost groundwater-bearing zone complies with the Type 5 RRS for trichloroethene and is subject to an engineering control over the seeps exceeding in-stream water quality standards and an Environmental Covenant.

- The intermediate groundwater-bearing zone on the subject property complies with Type 1 RRS for VOCs, except for 1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride. The subject property intermediate groundwater-bearing zone complies with the Type 2 RRS for 1,1-dichloroethene. The subject property intermediate groundwater-bearing zone complies with the Type 5 RRS for cis-1,2-dichloroethene, trichloroethene, and vinyl chloride and is subject to an Environmental Covenant.

Certified By:

1/31/2018

Michael Goldstein Date:
Global Remediation and Transaction Manager
Ingersoll Rand Company

TABLES

TABLE 2.3-1: SUMMARY OF DETECTED CONSTITUENTS IN SURFACE SOILS

Constituent	Boring Number	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Surface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	GW-E-1	GW-E-4	GW-E-13	GW-AOC 1-1	GW-AOC 2-1	GW-AOC 3-1	GW-AOC 3-2	GW-AOC 8-1	GW-AOC 8-2	GW-AOC 9-1	GW-AOC 9-2	GW-AOC 10-1	HA-1
	Sample ID				SO-E-1	SO-E-4	SO-E-13	SO-AOC 1-1	SO-AOC 2-1	SO-AOC 3-1	SO-AOC 3-2	SO-AOC-8-1	SO-AOC 8-2	SO-AOC 9-1	SO-AOC 9-2	SO-AOC 10-1	HA-1
	Sample Depth (ft. bgs)				0'-2'	0'-2'	0'-4'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0.4'-2.1'
	Date Sampled				9/25/2000	9/27/2000	10/9/2000	10/31/2000	10/17/2000	10/30/2000	10/30/2000	10/11/2000	10/12/2000	10/19/2000	10/20/2000	10/12/2000	3/27/2003
Volatile Organic Compounds SW8260B - (µg/kg)																	
1,1,2-Trichloroethane		500	500	500	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9
1,1,1-Trichloroethane		20,000	20,000	170,000	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	**24**
1,1-Dichloroethene		700	720	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
1,4-Dioxane		500	500	500	<240	<210	<340	**250,000**	<230	**12,000**	<11000	<230	<200	<290	<230	<230	<290
cis-1,2-Dichloroethene		7,000	7,000	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
Ethylbenzene		70,000	70,000	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
Isopropylbenzene		22,000	22,000	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
m+p-Xylene		1,000,000	1,000,000	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
Tetrachloroethene		500	500	500	<4.9	<4.2	<6.8	<210	<4.6	<230	<220	<4.6	<4.1	<5.8	<4.6	<4.6	<5.9
Trichloroethene		500	1,800	1,800	<4.9	<4.2	<6.8	<210	<4.6	<230	**4100**	**49**	**12**	<5.8	<4.6	<4.6	**22**
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.9
Volatile Organic Compounds SW8260B - (µg/L)																	
1,4-Dioxane - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-1: SUMMARY OF DETECTED CONSTITUENTS IN SURFACE SOILS

Constituent	Boring Number	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Surface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	HA-2	HA-3	HA-4	HA-5	HA-6	HA-7	HA-8	SB-2	SB-101	SB-102	SB-103	SB-104	SB-105	SB-106
	Sample ID				HA-2	HA-3	HA-4	HA-5	HA-6	HA-7	HA-8	SB-2	SB-101	SB-102	SB-103	SB-104	SB-105	SB-106
	Sample Depth (ft. bgs)				0.35'-2.1'	0.35'-2.05'	0.42'-1.95'	0.4'-2.2'	1.2'-2.0'	3.0'-5.0'	0.0'-0.5'	1.5'-3.5'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'
	Date Sampled				3/27/2003	3/27/2003	3/27/2003	3/27/2003	3/27/2003	3/27/2003	3/27/2003	2/3/2000	2/6/2003	1/21/2003	2/6/2003	1/21/2003	1/22/2003	1/23/2003
Volatile Organic Compounds SW8260B - (µg/kg)																		
1,1,2-Trichloroethane		500	500	500	<1800	**26**	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
1,1,1-Trichloroethane		20,000	20,000	170,000	<1800	**180**	**46**	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
1,1-Dichloroethene		700	720	6,800	<1800	**23**	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8	<4.5	**9.4**	<4.8
1,4-Dioxane		500	500	500	**1,500,000**	**14,000 E**	**1,900**	<200	<11000	<14000	<290	NA	<240	<240	<240	<220	<260	<240
cis-1,2-Dichloroethene		7,000	7,000	7,000	<1800	<6.8	<5.2	**6**	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
Ethylbenzene		70,000	70,000	70,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
Isopropylbenzene		22,000	22,000	62,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.7	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	<5.7	NA	NA	NA	NA	NA	NA
Tetrachloroethene		500	500	500	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	**13**	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
Trichloroethene		500	1,800	1,800	<1800	**120**	**47**	**110**	**660**	**800**	<5.9	**15**	<4.8	<4.7	<4.8	<4.5	**10**	<4.8
Total Xylenes		1,000,000	1,000,000	1,000,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	NA	<4.8	<4.7	<4.8	<4.5	<5.2	<4.8
Volatile Organic Compounds SW8260B - (µg/L)																		
1,4-Dioxane - SPLP					120000	NA	NA	NA	<200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride - SPLP					<1.0	NA	NA	NA	7.1 B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene - SPLP					<1.0	NA	NA	NA	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-1: SUMMARY OF DETECTED CONSTITUENTS IN SURFACE SOILS

Constituent	Boring Number	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Surface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	SB-107	SB-108	SB-109	SB-110	SB-111	SB-112	SB-113	SB-113	SB-114	SB-115	SB-116	SB-117	SB-118	Kd-1	Kd-4
	Sample ID				SB-107	SB-108	SB-109	SB-110	SB-111	SB-112	SB-113	SPLP SB-113	SB-114	SB-115	SB-116	SB-117	SB-118	Kd-1	Kd-4
	Sample Depth (ft. bgs)				0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	0'-2'	2'	2'
	Date Sampled				2/7/2003	1/24/2003	1/23/2003	2/10/2003	1/22/2003	1/23/2003	2/3/2003	2/5/2003	2/5/2003	3/13/2003	3/12/2003	3/12/2003	3/26/2003	4/12/2005	4/12/2005
Volatile Organic Compounds SW8260B - (µg/kg)																			
1,1,2-Trichloroethane		500	500	500	<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	<2600	**6**
1,1,1-Trichloroethane		20,000	20,000	170,000	<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	<2600	**130**
1,1-Dichloroethene		700	720	6,800	<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	<2600	**19**
1,4-Dioxane		500	500	500	<220	<240	<260	<230	<450	<260	<240	NA	<240	<260	<220	<220	<260	**3,600,000**	**650**
cis-1,2-Dichloroethene		7,000	7,000	7,000	<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	<2600	<5.5
Ethylbenzene		70,000	70,000	70,000	<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	<2600	<5.5
Isopropylbenzene		22,000	22,000	62,000	<4.3	<4.8	<5.1	<4.6	<4.5	<5.1	<4.8	NA	<4.8	**16**	<4.4	<4.4	<5.1	<2600	<5.5
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene		500	500	500	<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	<2600	<5.5
Trichloroethene		500	1,800	1,800	<4.3	<4.8	<5.1	<4.6	<4.5	**23**	<4.8	NA	**130**	<5.2	<4.4	<4.4	<5.1	<2600	**140**
Total Xylenes		1,000,000	1,000,000	1,000,000	<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	<2600	<5.5
Volatile Organic Compounds SW8260B - (µg/L)																			
1,4-Dioxane - SPLP					NA	NA	NA	NA	NA	NA	NA	<400	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	6.6 B	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene - SPLP					NA	NA	NA	NA	NA	NA	NA	<2.0	NA	NA	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 USEPA Method 1312
	VOCs analyzed by USEPA method 5035/8260B
RRS	Risk Reduction Standard
	The Type 1 RRS for Soils is used as the Delineation Criteria

<5.1 Constituent not detected above laboratory practical quantitation limit shown

BOLD = Indicates detected concentration above the laboratory practical quantitation limit

Concentration Exceeds VRP Delineation Criteria

Concentration Exceeds the Higher of the Type 1 and Type 2 Residential RRS

Concentration Exceeds the Higher of the Type 3 Surface and Type 4 Non-Residential RRS

Prepared by/Date: NJM 3/2/16

Checked by/Date: RNQ 1/15/18

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/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
Volatile Organic Compounds - SW8260B - (µg/kg)														
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0
1,1,2-Trichloroethane		500	500	500	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0
1,1-Dichloroethene		700	720	6,800	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0
1,4-Dioxane		500	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	<200
Chloroform		3800	3,800	8,000	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<5.0
cis-1,2-Dichloroethene		7,000	7,000	7,000	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<2.0
Ethylbenzene		70,000	70,000	70,000	<5.9	**360**	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0
m+p-Xylene		1,000,000	1,000,000	1,000,000	<5.9	**1400**	**9.6**	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		100,000	100,000	100,000	<5.9	<300	<6.2	<5.9	<5.7	<5.6	<5.8	<5.7	<5.6	<4.0
Tetrachloroethene		500	500	500	**11**	<300	<6.2	**10**	**8.4**	**10**	**8.2**	**9.3**	**9.4**	<4.0
Trichloroethene		500	1,800	1,800	**160 E**	<300	<6.2	**12**	**9.7**	**14**	**9.3**	**11**	**11**	<4.0
Volatile Organic Compounds - SW8260B - (µg/L)														
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	GW-E-4 / SO-E-4 / 40'-42' / 9/27/2000	GW-E-13 / SO-E-13 / 14'-16' / 10/9/2000	GW-E-13 / SO-E-13 / 38'-40' / 10/9/2000	GW-AOC 1-1 / SO-AOC 1-1 / 29'-31' / 10/31/2000	GW-AOC 1-1 / SO-AOC 1-1 / 38'-40' / 10/31/2000	GW-AOC 2-1 / SO-AOC 2-1 / 18'-20' / 10/17/2000	GW-AOC 2-1 / SO-AOC 2-1 / 38'-40' / 10/17/2000	GW-AOC 3-1 / SO-AOC 3-1 / 29'-31' / 11/1/2000	GW-AOC 3-1 / SO-AOC 3-1 / 38'-40' / 11/1/2000
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<9.6	<5.1	<9.2	**86**	**85**	<4.4	<5.5	<5.3	<5.2
1,1,2-Trichloroethane		500	500	500	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
1,1-Dichloroethene		700	720	6,800	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
1,4-Dioxane		500	500	500	<480	<260	<460	<360	<260	<220	<280	<260	<260
Chloroform		3800	3,800	8,000	<5.0	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
cis-1,2-Dichloroethene		7,000	7,000	7,000	<4.8	<2.6	<4.6	<3.6	<2.6	<2.2	<2.8	<2.6	<2.6
Ethylbenzene		70,000	70,000	70,000	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
m+p-Xylene		1,000,000	1,000,000	1,000,000	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		100,000	100,000	100,000	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
Tetrachloroethene		500	500	500	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
Trichloroethene		500	1,800	1,800	<9.6	<5.1	<9.2	<7.2	<5.2	<4.4	<5.5	<5.3	<5.2
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	GW-AOC 3-2 / SO-AOC 3-2 / 8'-10' / 10/30/2000	GW-AOC 3-2 / SO-AOC 3-2 / 38'-40' / 10/30/2000	GW-AOC 8-1 / SO-AOC-8-1 / 14'-16' / 10/11/2000	GW-AOC 8-1 / SO-AOC-8-1 / 38'-40' / 10/11/2000	GW-AOC 8-2 / SO-AOC 8-2 / 18'-20' / 10/12/2000	GW-AOC 8-2 / SO-AOC 8-2 / 38'-40' / 10/12/2000	GW-AOC 9-1 / SO-AOC 9-1 / 4'-6' / 10/19/2000	GW-AOC 9-1 / SO-AOC 9-1 / 34'-36' / 10/19/2000	GW-AOC 9-2 / SO-AOC 9-2 / 4'-6' / 10/20/2000
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<200	<5.2	**5.4**	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
1,1,2-Trichloroethane		500	500	500	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
1,1-Dichloroethene		700	720	6,800	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
1,4-Dioxane		500	500	500	<10000	<260	<240	<330	<220	<280	<330	<240	<340
Chloroform		3800	3,800	8,000	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
cis-1,2-Dichloroethene		7,000	7,000	7,000	**190**	<2.6	**5.6**	<3.3	**4.0**	<2.8	<3.3	<2.4	<3.4
Ethylbenzene		70,000	70,000	70,000	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
m+p-Xylene		1,000,000	1,000,000	1,000,000	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene		100,000	100,000	100,000	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
Tetrachloroethene		500	500	500	<200	<5.2	<4.8	<6.6	<4.4	<5.7	<6.6	<4.8	<6.7
Trichloroethene		500	1,800	1,800	**980**	<5.2	**78**	<6.6	**31**	<5.7	<6.6	<4.8	<6.7
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	GW-AOC 9-2 / SO-AOC 9-2 / 32'-34' / 10/20/2000	GW-AOC 10-1 / SO-AOC 10-1 / 18'-20' / 10/12/2000	GW-AOC 10-1 / SO-AOC 10-1 / 38'-40' / 10/12/2000	SB-101 / SB-101 / 12'-14' / 2/6/2003	SB-101 / SB-101 / 36'-38' / 2/6/2003	SB-102 / SB-102 / 5'-6' / 1/21/2003	SB-102 / SB-102 / 35'-36 / 1/21/2003	SB-103 / SB-103 / 26'-28' / 2/6/2003	SB-103 / SB-103 / 46'-48' / 2/6/2003
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
1,1,2-Trichloroethane		500	500	500	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
1,1-Dichloroethene		700	720	6,800	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
1,4-Dioxane		500	500	500	<260	<220	<390	<240	<300	<240	<310	<250	<290
Chloroform		3800	3,800	8,000	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
cis-1,2-Dichloroethene		7,000	7,000	7,000	<2.6	<2.2	<3.9	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
Ethylbenzene		70,000	70,000	70,000	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
m+p-Xylene		1,000,000	1,000,000	1,000,000	<5.1	<4.4	<7.8	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
Naphthalene		100,000	100,000	100,000	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
Tetrachloroethene		500	500	500	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
Trichloroethene		500	1,800	1,800	<5.1	<4.4	<7.8	<4.9	<6.0	<4.9	<6.2	<5.1	<5.7
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	SB-104 / SB-104 / 21'-22' / 1/21/2003	SB-104 / SB-104 / 40'-42' / 1/21/2003	SB-105 / SB-105 / 11'-12' / 1/22/2003	SB-105 / SB-105 / 37'-38' / 1/22/2003	SB-106 / SB-106 / 29'-30' / 1/23/2003	SB-106 / SB-106 / 42'-43' / 1/23/2003	SB-107 / SB-107 / 14'-16' / 2/7/2003	SB-107 / SB-107 / 38'-40' / 2/10/2003	SB-108 / SB-108 / 29'-30' / 1/24/2003
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.7	<5.4	**43**	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
1,1,2-Trichloroethane		500	500	500	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
1,1-Dichloroethene		700	720	6,800	<5.7	<5.4	**31**	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
1,4-Dioxane		500	500	500	<290	<270	<250	<290	<230	<270	<240	<240	<240
Chloroform		3800	3,800	8,000	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
cis-1,2-Dichloroethene		7,000	7,000	7,000	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
Ethylbenzene		70,000	70,000	70,000	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
Naphthalene		100,000	100,000	100,000	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
Tetrachloroethene		500	500	500	<5.7	<5.4	<5.0	<5.8	<4.6	<5.4	<4.7	<4.7	<4.8
Trichloroethene		500	1,800	1,800	<5.7	<5.4	**53**	<5.8	<4.6	<5.4	<4.7	<4.7	**9.0**
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	SB-108 / SB-108 / 45'-46' / 1/24/2003	SB-109 / SB-109 / 11'-12' / 1/23/2003	SB-109 / SB-109 / 27'-28' / 1/23/2003	SB-110 / SB-110 / 4'-6' / 2/10/2003	SB-110 / SB-110 / 32'-34' / 2/10/2003	SB-111 / SB-111 / 21'-22' / 1/22/2003	SB-111 / SB-111 / 32'-33' / 1/22/2003	SB-112 / SB-112 / 18'-19' / 1/23/2003	SB-112 / SB-112 / 38'-39' / 1/23/2003
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
1,1,2-Trichloroethane		500	500	500	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
1,1-Dichloroethene		700	720	6,800	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
1,4-Dioxane		500	500	500	<290	<220	<240	<240	<260	<500	<270	<26000	<270
Chloroform		3800	3,800	8,000	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
cis-1,2-Dichloroethene		7,000	7,000	7,000	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
Ethylbenzene		70,000	70,000	70,000	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
Naphthalene		100,000	100,000	100,000	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
Tetrachloroethene		500	500	500	<5.8	<4.5	<4.8	<4.8	<5.2	<5.0	<5.3	<260	<5.4
Trichloroethene		500	1,800	1,800	**7.0**	**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	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	SB-113 / SB-113 / 4'-6' / 2/5/2003	SB-113 / SB-113 / 40'-42' / 2/5/2003	SB-114 / SB-114 / 22'-24' / 2/5/2003	SB-114 / SB-114 / 42'-44' / 2/5/2003	SB-115 / SB-115 / 11'-13' / 3/13/2003	SB-115 / SB-115 / 18'-20' / 3/13/2003	SB-117 / SB-117 / 12'-14' / 3/12/2003	SB-117 / SB-117 / 44'-46' / 3/12/2003	SB-118 / SB-118 / 4'-5' / 3/26/2003
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
1,1,2-Trichloroethane		500	500	500	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
1,1-Dichloroethene		700	720	6,800	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
1,4-Dioxane		500	500	500	<250	<280	<250	<260	<250	<270	<230	<290	<260
Chloroform		3800	3,800	8,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
cis-1,2-Dichloroethene		7,000	7,000	7,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
Ethylbenzene		70,000	70,000	70,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
Naphthalene		100,000	100,000	100,000	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
Tetrachloroethene		500	500	500	<5.1	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
Trichloroethene		500	1,800	1,800	**9.4**	<5.7	<4.9	<5.2	<4.9	<5.5	<4.7	<5.9	<5.1
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	3.4 B	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	HA-7 / HA-7 / 3'-5' / 3/27/2003	Kd-1 / Kd-1 / 4' / 4/12/2005	Kd-2 / Kd-2 / 8' / 4/12/2005	Kd-3 / Kd-3 / 3' / 4/12/2005	Kd-3 / Kd-3 / 4' / 4/12/2005	Kd-4 / Kd-4 / 11' / 4/12/2005	Kd-5 / Kd-5 / 3' / 4/12/2005	Kd-7 / Kd-7 / 3' / 4/13/2005	Kd-8 / Kd-8 / 9' / 4/13/2005
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<290	<2600	**2300**	**320**	**1100**	**410 E**	**250 E**	<5.3	<260
1,1,2-Trichloroethane		500	500	500	<290	<2600	<250	<280	<260	**15**	**6.4**	<5.3	<260
1,1-Dichloroethene		700	720	6,800	<290	<2600	<250	<280	<260	**50**	**51**	<5.3	<260
1,4-Dioxane		500	500	500	<14000	**2,800,000**	**270,000**	**290,000**	**220,000**	<240	**8,600**	<260	<13000
Chloroform		3800	3,800	8,000	<290	<2600	<250	<280	<260	<4.8	<6.1	<5.3	<260
cis-1,2-Dichloroethene		7,000	7,000	7,000	<290	<2600	<250	<280	<260	**8.1**	<6.1	**8.3**	<260
Ethylbenzene		70,000	70,000	70,000	<290	<2600	<250	<280	<260	<4.8	<6.1	<5.3	<260
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<290	<2600	<250	<280	<260	<4.8	<6.1	<5.3	<260
Naphthalene		100,000	100,000	100,000	<290	<2600	**310**	<280	<260	<4.8	<6.1	<5.3	<260
Tetrachloroethene		500	500	500	<290	<2600	<250	<280	<260	<4.8	<6.1	<5.3	<260
Trichloroethene		500	1,800	1,800	**800**	<2600	**2600**	**280**	**890**	**240 E**	**200**	**56**	**460**
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	Kd-9 / Kd-9 / 7' / 4/13/2005	Kd-9 / Kd-9 / 9' / 4/13/2005	Kd-9 / Kd-9 / 10' / 4/13/2005	Kd-10 / Kd-10 / 3' / 4/13/2005	Kd-10 / Kd-10 / 9' / 4/13/2005	Kd-10 / Kd-10 / 13' / 4/13/2005	Kd-10 / Kd-10 / 15' / 4/13/2005	Kd-10 / Kd-10 / 17' / 4/13/2005	Kd-11 / Kd-11 / 4' / 4/13/2005
Volatile Organic Compounds - SW8260B - (µg/kg)													
1,1,1-Trichloroethane		20,000	20,000	170,000	<260	<260	<300	<290	<290	**14**	<260	**13**	<280
1,1,2-Trichloroethane		500	500	500	<260	<260	<300	<290	<290	<5.9	<260	<5.3	<280
1,1-Dichloroethene		700	720	6,800	<260	<260	<300	<290	<290	**11**	<260	**6.1**	<280
1,4-Dioxane		500	500	500	<13000	<13000	<15000	<14000	<15000	<300	<13000	<270	<14000
Chloroform		3800	3,800	8,000	<260	<260	<300	<290	<290	**11**	<260	<5.3	<280
cis-1,2-Dichloroethene		7,000	7,000	7,000	<260	<260	<300	**380**	**300**	**150**	<260	**41**	<280
Ethylbenzene		70,000	70,000	70,000	<260	<260	<300	<290	<290	<5.9	<260	<5.3	<280
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<260	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Naphthalene		100,000	100,000	100,000	<260	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Tetrachloroethene		500	500	500	<260	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Trichloroethene		500	1,800	1,800	**780**	**1000**	**650**	**1800**	**1800**	**810 E**	**830**	**340 E**	**1700**
Volatile Organic Compounds - SW8260B - (µg/L)													
Methylene Chloride - SPLP					NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2.3-2: SUMMARY OF DETECTED CONSTITUENTS IN SUBSURFACE SOILS

Constituent	Boring Number / Sample ID / Sample Depth (ft. bgs) / Date Sampled	VRP Delineation Criteria 12-8-108(1)(A) (ug/kg)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/kg)	Higher of Type 3 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	Kd-11 Kd-11 6' 4/13/2005	Kd-12 Kd-12 9' 4/13/2005	Kd-12 Kd-12 10' 4/13/2005
Volatile Organic Compounds - SW8260B - (µg/kg)							
1,1,1-Trichloroethane		20,000	20,000	170,000	<360	**6.1**	<5.9
1,1,2-Trichloroethane		500	500	500	<360	<5	<5.9
1,1-Dichloroethene		700	720	6,800	<360	<5	<5.9
1,4-Dioxane		500	500	500	<18000	<250	<290
Chloroform		3800	3,800	8,000	<360	<5	<5.9
cis-1,2-Dichloroethene		7,000	7,000	7,000	<360	**18**	**7.7**
Ethylbenzene		70,000	70,000	70,000	<360	<5	<5.9
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<360	<5	<5.9
Naphthalene		100,000	100,000	100,000	<360	<5	<5.9
Tetrachloroethene		500	500	500	<360	<5	<5.9
Trichloroethene		500	1,800	1,800	**730**	**380 E**	**170**
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
µg/L	micrograms per liter
ft. bgs	feet below ground surface
SPLP	Synthetic Precipitation Leaching Procedure USEPA Method 1312
RRS	Risk Reduction Standard
	VOCs analyzed by USEPA method 5035/8260B
	The Type 1 RRS for Soils is used as the Delineation Criteria

<5.1 Constituent not detected above laboratory practical quantitation limit shown

BOLD = Indicates detected concentration above the laboratory practical quantitation limit

Concentration Exceeds VRP Delineation Criteria

Concentration Exceeds the Higher of the Type 1 and Type 2 Residential RRS

Concentration Exceeds the Higher of the Type 3 Subsurface and Type 4 Non-Residential RRS

Prepared by/Date: NJM 3/2/16
Checked by/Date: RNQ 1/15/18

TABLE 2.3-3A: SUMMARY OF CONSTITUENTS DETECTED IN RECENT GROUNDWATER SAMPLES FROM UPPERMOST WATER-BEARING ZONE MONITORING WELLS

Sample ID	**VRP Delineation Criteria 12-8-108(1)(A) (ug/L)**	**Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/L)**	**Higher of Type 3 and Type 4 Non-Residential Risk Reduction Standards (ug/L)**	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10
Date Sampled				6/1/2010	6/1/2010	12/15/2015	6/2/2010	12/16/2015	6/1/2010	6/1/2010	6/1/2010	6/1/2010	12/15/2015
Constituent													
Volatile Organic Compounds - SW8260B - (µg/L)													
1,1,1,2-Tetrachloroethane	70	70	70	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	2700	25,000	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	100	950	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	70	70	70	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane	2	8.5	29	<50	<50	<150	<1.0	<2.0	<50	<50	<50	<50	<150
Chloroform	80	80	80	**4.9**	**2.1**	**3.9**	<1.0	**2.6**	**1.2**	**4.1**	**1.0**	<1.0	**1.3**
cis-1,2-Dichloroethene	70	70	200	<1.0	<1.0	<1.0	<1.0	**1.9J**	<1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene	1	2.3	6.2	<1.0	<1.0	<1.0	<1.0	**4.8**	<1.0	<1.0	<1.0	<1.0	<1.0
Naphthalene	20	20	20	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5	5	5	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	1000	1000	6,400	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	5	6	59	<1.0	<1.0	<1.0	<1.0	**237**	<1.0	<1.0	<1.0	<1.0	**1.7**
Vinyl Chloride	2	2	4	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
m&p-xylenes	10,000	10,000	10,000	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-xylene	10,000	10,000	10,000	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylenes	10,000	10,000	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)	2	8.5	29	NA	NA	NA	NA	<2.0	NA	NA	NA	NA	NA

TABLE 2.3-3A: SUMMARY OF CONSTITUENTS DETECTED IN RECENT GROUNDWATER SAMPLES FROM UPPERMOST WATER-BEARING ZONE MONITORING WELLS

Sample ID	VRP Delineation Criteria 12-8-108(1)(A) (ug/L)	Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/L)	Higher of Type 3 and Type 4 Non-Residential Risk Reduction Standards (ug/L)	MW-11	MW-12	MW-13	MW-15	MW-16	MW-19	MW-26	MW-27	MW-28
Date Sampled				6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	12/16/2015	6/9/2011	12/15/2015	12/15/2015
Constituent												
Volatile Organic Compounds - SW8260B - (µg/L)												
1,1,1,2-Tetrachloroethane	70	70	70	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	200	2700	25,000	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	100	950	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	**2.5**	**3.1**
1,2,4-Trichlorobenzene	70	70	70	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
1,4-Dioxane	2	8.5	29	<50	<50	<50	<50	<50	<20	NA	NA	NA
Chloroform	80	80	80	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	70	70	200	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	**26.6**	**26.6**
Hexachlorobutadiene	1	2.3	6.2	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
Naphthalene	20	20	20	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<5.0	<1.0	<1.0
Tetrachloroethene	5	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
Toluene	1000	1000	6,400	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
Trichloroethene	5	6	59	<1.0	<1.0	<1.0	<1.0	<1.0	**1,720**	<1.0	**8.2**	**6.3**
Vinyl Chloride	2	2	4	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
m&p-xylenes	10,000	10,000	10,000	<2.0	<2.0	<2.0	<2.0	<2.0	<40	<2.0	<2.0	<2.0
o-xylene	10,000	10,000	10,000	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0	<1.0
Total Xylenes	10,000	10,000	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)	2	8.5	29	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0

Notes:
NA = Constituent not analyzed
µg/L = Micrograms per liter
<1.0 Constituent not detected above laboratory practical quantitation limit shown
VOCs analyzed by USEPA method 8260B
The Type 1 RRS for Groundwater is used as the Delineation Criteria
BOLD = Indicates detected concentration above the laboratory practical quantitation limit
Concentration Exceeds VRP Delineation Criteria
Concentration Exceeds the Higher of the Type 1 and Type 2 Residential RRS
Concentration Exceeds the Higher of the Type 3 and Type 4 Non-Residential RRS

Prepared by/Date: NJM 3/2/16
Checked by/Date: RNQ 1/15/18

TABLE 2.3-3B: SUMMARY OF CONSTITUENTS DETECTED IN RECENT GROUNDWATER SAMPLES FROM INTERMEDIATE WATER-BEARING ZONE MONITORING WELLS

Sample ID	**VRP Delineation Criteria 12-8-108(1)(A) (ug/L)**	**Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/L)**	**Higher of Type 3 and Type 4 Non-Residential Risk Reduction Standards (ug/L)**	MW-14	MW-17	MW-18	MW-20	MW-21
Date Sampled				12/16/2015	6/2/2010	6/2/2010	12/15/2015	6/1/2010
Constituent								
Volatile Organic Compounds - SW8260B - (µg/L)								
1,1,1,2-Tetrachloroethane	70	70	70	<20	<1.0	<1.0	<4.0	<1.0
1,1,1-Trichloroethane	200	2700	25,000	<20	<1.0	<1.0	<4.0	<1.0
1,1-Dichloroethene	7	100	950	**45.4**	<1.0	<1.0	**6.4**	<1.0
1,2,4-Trichlorobenzene	70	70	70	<20	<1.0	<1.0	<4.0	<1.0
1,4-Dioxane	2	8.5	29	<20	<50	<50	<2.0	<50
Chloroform	80	80	80	<20	<1.0	<1.0	<4.0	<1.0
cis-1,2-Dichloroethene	70	70	200	**249**	<1.0	<1.0	**414**	<1.0
Hexachlorobutadiene	1	2.3	6.2	<20	<1.0	<1.0	<4.0	<1.0
Naphthalene	20	20	20	<20	<1.0	<1.0	<4.0	<1.0
Tetrachloroethene	5	5	5	<20	<1.0	<1.0	<4.0	<1.0
Toluene	1000	1000	6,400	<20	<1.0	<1.0	<4.0	<1.0
Trichloroethene	5	6	59	**1,940**	<1.0	<1.0	<4.0	<1.0
Vinyl Chloride	2	2	4	<20	<1.0	<1.0	**5**	<1.0
m&p-xylenes	10,000	10,000	10,000	<40	<2.0	<2.0	<8.0	<2.0
o-xylene	10,000	10,000	10,000	<20	<1.0	<1.0	<4.0	<1.0
Total Xylenes	10,000	10,000	10,000	NA	NA	NA	NA	NA
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)	2	8.5	29	<2.0	NA	NA	<2.0	NA

TABLE 2.3-3B: SUMMARY OF CONSTITUENTS DETECTED IN RECENT GROUNDWATER SAMPLES FROM INTERMEDIATE WATER-BEARING ZONE MONITORING WELLS

Sample ID	**VRP Delineation Criteria 12-8-108(1)(A) (ug/L)**	**Higher of Type 1 and Type 2 Residential Risk Reduction Standards (ug/L)**	**Higher of Type 3 and Type 4 Non-Residential Risk Reduction Standards (ug/L)**	MW-22	MW-23	MW-24	MW-25
Date Sampled				12/15/2015	6/1/2010	6/1/2010	12/16/2015
Constituent							
Volatile Organic Compounds - SW8260B - (µg/L)							
1,1,1,2-Tetrachloroethane	70	70	70	<1.0	<1.0	<1.0	<25
1,1,1-Trichloroethane	200	2700	25,000	<1.0	<1.0	<1.0	<25
1,1-Dichloroethene	7	100	950	<1.0	<1.0	<1.0	**27**
1,2,4-Trichlorobenzene	70	70	70	<1.0	<1.0	<5.0	<25
1,4-Dioxane	2	8.5	29	<150	<50	<50	<25
Chloroform	80	80	80	<1.0	<1.0	<1.0	<25
cis-1,2-Dichloroethene	70	70	200	<1.0	<1.0	<1.0	**798**
Hexachlorobutadiene	1	2.3	6.2	<1.0	<1.0	<1.0	<25
Naphthalene	20	20	20	<1.0	<1.0	<1.0	<25
Tetrachloroethene	5	5	5	<1.0	<1.0	<1.0	<25
Toluene	1000	1000	6,400	<1.0	<1.0	<1.0	<25
Trichloroethene	5	6	59	<1.0	<1.0	<1.0	**3,670**
Vinyl Chloride	2	2	4	<1.0	<1.0	<1.0	<25
m&p-xylenes	10,000	10,000	10,000	<2.0	<2.0	<2.0	<50
o-xylene	10,000	10,000	10,000	<1.0	<1.0	<1.0	<25
Total Xylenes	10,000	10,000	10,000	NA	NA	NA	NA
1,4-Dioxane - Selective Ion Monitoring SW8260B (ug/L)	2	8.5	29	NA	NA	NA	<2.0

Notes:
NA = Constituent not analyzed
µg/L = Micrograms per liter
<1.0 Constituent not detected above laboratory practical quantitation limit shown
BOLD = Indicates detected concentration above the laboratory practical quantitation limit
VOCs analyzed by USEPA method 8260B
The Type 1 RRS for Groundwater is used as the Delineation Criteria
Concentration Exceeds VRP Delineation Criteria
Concentration Exceeds the Higher of the Type 1 and Type 2 Residential RRS
Concentration Exceeds the Higher of the Type 3 and Type 4 Non-Residential RRS

Prepared by/Date: NJM 3/2/16
Checked by/Date: RNQ 1/15/18

TABLE 2.3-5: RISK REDUCTION STANDARDS TYPES 1 THROUGH 4 FOR SOIL

			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	***	0.032	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**	0.035	Leaching	**E**	0.5	GW x 100	**E**	0.5	GW x 100	**E**	0.12	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	<0.004	0.36	70	GW x 100	C	16	Leaching	***	70	GW x 100	***	70	GW x 100	***	16	G	***
Isopropylbenzene	0.016	<0.004	22	Appendix I	C	6.9	Leaching	***	22	Appendix I	***	22	Appendix I	***	62	G	***
Napthalene	<0.004	0.31	100	Appendix I	C	1.3	Leaching	***	100	Appendix I	***	100	Appendix I	***	1.3	G	***
m+p Xylene	<0.004	1.4	1000	GW x 100	C	200	Leaching	***	1000	GW x 100	***	1000	GW x 100	***	200	G	***
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	***
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	<0.004	0.011	3.8	GW x 100	C	0.94	Leaching	***	4.9	Risk-Based	***	8	GW x 100	***	4.9	G	***

Notes:
mg/kg = milligram per kilogram
Reference = Reference for the RRS
<0.004 = Constituent concentration was not detected above laboratory practical quantitation limit shown.
(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).
Risk-Based = RRS based on the risk-based soil concentration.
(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: LWC 8/25/11
Checked by: LMS 8/25/11
Updated by: LMS 8/3/12

TABLE 2.3-6: RISK REDUCTION STANDARDS FOR UPPERMOST WATER-BEARING ZONE GROUNDWATER

HSRA-Regulated Substance	Recent Maximum Detected Concentrations (mg/L)	Location (Date)	Risk Reduction Standards (RRS) (mg/L)					
			Types 1 and 3		Type 2		Type 4	
			RRS	Status	RRS	Status	RRS	Status
Volatile Organic Compounds - SW8260B								
1,1,1,2-Trichloroethane	<0.001		0.07	C	0.0069	***	0.018	***
1,1,1-Trichloroethane	<0.001		0.2	C	2.7	***	25	***
1,1-Dichloroethene	0.0031	MW-28 (12/15/2015)	0.007	C	0.1	***	0.95	***
1,2,4-Trichlorobenzene	<0.001		0.07	C	0.07	***	0.07	***
Chloroform	0.0049	MW-1 (6/1/2010)	0.08	C	0.0020	***	0.0066	***
cis-1,2-Dichloroethene	0.0266	MW-27 and MW-28 (12/15/2015)	0.07	C	0.031	***	0.2	***
Hexachlorobutadiene	0.0048	MW-5 (12/16/2015)	0.001	**E**	0.0023	**E**	0.0062	**C**
Naphthalene	<0.001		0.02	C	0.0014	***	0.0048	***
Tetrachloroethene	<0.001		0.005	C	0.0013	***	0.0044	***
Toluene	<0.001		1.0	C	0.88	***	6.4	***
Trichloroethene	1.72	MW-19 (12/16/2015)	0.005	**E**	0.006	**E**	0.059	**E**
Vinyl chloride	<0.001		0.002	C	0.0011	***	0.004	***
1,4-Dioxane	<0.050/<0.002		0.002	C	0.0085	***	0.029	***
m&p-xylenes	<0.002		10	C	0.059	***	0.57	***
o-xylene	<0.001		10	C	0.059	***	0.57	***

Notes:
mg/L = milligram per liter
*** Substance concentrations complies with a lower RRS
C = Substance concentration meets the respective RRS
E = Substance concentration exceeds the respective RRS
<0.001 Constituent concentration was not detected above laboratory practical quantitation limit shown
Bold Substance concentrations exceeds Types 1/3, 2, and 4 RRS

Prepared by: RPR 12/03/10
Revised by: LWC 8/25/11
Checked by: LMS 8/25/11

TABLE 2.3-7: RISK REDUCTION STANDARDS FOR INTERMEDIATE WATER-BEARING ZONE GROUNDWATER

HSRA-Regulated Substance	Recent Maximum Detected Concentrations (mg/L)	Location (Date)	Risk Reduction Standards (RRS) (mg/L)					
			Types 1 and 3		Type 2		Type 4	
			RRS	Status	RRS	Status	RRS	Status
Volatile Organic Compounds - SW8260B								
1,1,1,2-Trichloroethane	<0.001		0.07	C	0.0069	***	0.018	***
1,1,1-Trichloroethane	<0.001		0.2	C	2.7	***	25	***
1,1-Dichloroethene	0.0454	MW-14 (12/16/2015)	0.007	**E**	0.1	C	0.95	***
1,2,4-Trichlorobenzene	<0.001		0.07	C	0.07	***	0.07	***
Chloroform	<0.001		0.08	C	0.0020	***	0.0066	***
cis-1,2-Dichloroethene	0.798	MW-25 (12/16/2015)	0.07	**E**	0.031	**E**	0.2	**E**
Hexachlorobutadiene	<0.001		0.001	C	0.0023	***	0.0062	***
Naphthalene	<0.001		0.02	C	0.0014	***	0.0048	***
Tetrachloroethene	<0.001		0.005	C	0.0013	***	0.0044	***
Toluene	<0.001		1.0	C	0.88	***	6.4	***
Trichloroethene	3.67	MW-25 (12/16/2015)	0.005	**E**	0.006	**E**	0.059	**E**
Vinyl chloride	0.005	MW-20 (12/15/2015)	0.002	**E**	0.0011	**E**	0.004	**E**
1,4-Dioxane	<0.050/<0.002		0.002	C	0.0085	***	0.029	*******
m&p-xylenes	<0.002		10	C	0.059	***	0.57	***
o-xylene	<0.001		10	C	0.059	***	0.57	***

Notes:
mg/L = milligram per liter
*** Substance concentrations complies with a lower RRS
C = Substance concentration meets the respective RRS
E = Substance concentration exceeds the respective RRS
<0.001 Substance concentration was not detected above laboratory practical quantitation limit shown
Bold Substance concentrations exceeds Types 1/3, 2, and 4 RRS

Prepared by: RPR 12/03/10
Revised by: LWC 8/25/11
Checked by: LMS 8/25/11

FIGURES

SB-103 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.8
1,1,1-Trichloroethane	<4.8
1,1-Dichloroethene	<4.8
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<4.8
Isopropylbenzene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	<4.8
Total Xylenes	<4.8

HA-2 (0.35-2.1 ft)	(µg/kg)
1,1,2-Trichloroethane	<1800
1,1,1-Trichloroethane	<1800
1,1-Dichloroethene	<1800
1,4-Dioxane	**1,500,000**
cis-1,2-Dichloroethene	<1800
Ethylbenzene	<1800
Isopropylbenzene	<1800
Tetrachloroethene	<1800
Trichloroethene	<1800
Total Xylenes	<1800

Kd-4 (2 ft)	(µg/kg)
1,1,2-Trichloroethane	**6**
1,1,1-Trichloroethane	**130**
1,1-Dichloroethene	**19**
1,4-Dioxane	**650**
cis-1,2-Dichloroethene	<5.5
Ethylbenzene	<5.5
Isopropylbenzene	<5.5
Tetrachloroethene	<5.5
Trichloroethene	**140**
Total Xylenes	<5.5

SB-104 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.5
1,1,1-Trichloroethane	<4.5
1,1-Dichloroethene	<4.5
1,4-Dioxane	<220
cis-1,2-Dichloroethene	<4.5
Ethylbenzene	<4.5
Isopropylbenzene	<4.5
Tetrachloroethene	<4.5
Trichloroethene	<4.5
Total Xylenes	<4.5

HA-1 (0.4-2.1 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.9
1,1,1-Trichloroethane	**24**
1,1-Dichloroethene	<5.9
1,4-Dioxane	<290
cis-1,2-Dichloroethene	<5.9
Ethylbenzene	<5.9
Isopropylbenzene	<5.9
Tetrachloroethene	<5.9
Trichloroethene	**10**
Total Xylenes	<5.9

SB-105 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.2
1,1,1-Trichloroethane	<5.2
1,1-Dichloroethene	**9.4**
1,4-Dioxane	<260
cis-1,2-Dichloroethene	<5.2
Ethylbenzene	<5.2
Isopropylbenzene	<5.2
Tetrachloroethene	<5.2
Trichloroethene	**10**
Total Xylenes	<5.2

HA-4 (0.42-1.95 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.2
1,1,1-Trichloroethane	**46**
1,1-Dichloroethene	<5.2
1,4-Dioxane	**1,900**
cis-1,2-Dichloroethene	<5.2
Ethylbenzene	<5.2
Isopropylbenzene	<5.2
Tetrachloroethene	<5.2
Trichloroethene	**47**
Total Xylenes	<5.2

SB-106 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.8
1,1,1-Trichloroethane	<4.8
1,1-Dichloroethene	<4.8
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<4.8
Isopropylbenzene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	<4.8
Total Xylenes	<4.8

HA-8 (0.0-0.5 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.9
1,1,1-Trichloroethane	<5.9
1,1-Dichloroethene	<5.9
1,4-Dioxane	<290
cis-1,2-Dichloroethene	<5.9
Ethylbenzene	<5.9
Isopropylbenzene	<5.9
Tetrachloroethene	<5.9
Trichloroethene	<5.9
Total Xylenes	<5.9

SO-AOC 3-1 GW-AOC 3-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<230
1,1,1-Trichloroethane	<230
1,1-Dichloroethene	<230
1,4-Dioxane	**12,000**
cis-1,2-Dichloroethene	<120
Ethylbenzene	<230
Isopropylbenzene	<230
m+p-Xylene	<230
Tetrachloroethene	<230
Trichloroethene	<230

SB-102 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.7
1,1,1-Trichloroethane	<4.7
1,1-Dichloroethene	<4.7
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.7
Ethylbenzene	<4.7
Isopropylbenzene	<4.7
Tetrachloroethene	<4.7
Trichloroethene	<4.7
Total Xylenes	<4.7

HA-5 (0.4'-2.2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.0
1,1,1-Trichloroethane	<4.0
1,1-Dichloroethene	<4.0
1,4-Dioxane	<200
cis-1,2-Dichloroethene	**6**
Ethylbenzene	<4.0
Isopropylbenzene	<4.0
Tetrachloroethene	<4.0
Trichloroethene	**110**
Total Xylenes	<4.0

SB-101 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.8
1,1,1-Trichloroethane	<4.8
1,1-Dichloroethene	<4.8
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<4.8
Isopropylbenzene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	<4.8
Total Xylenes	<4.8

HA-6 (1.2-2.0 ft)	(µg/kg)
1,1,2-Trichloroethane	<230
1,1,1-Trichloroethane	<230
1,1-Dichloroethene	<230
1,4-Dioxane	<11000
cis-1,2-Dichloroethene	<230
Ethylbenzene	<230
Isopropylbenzene	<230
Tetrachloroethene	<230
Trichloroethene	**660**
Total Xylenes	<230

SO-E-1 GW-E-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.9
1,1,1-Trichloroethane	<4.9
1,1-Dichloroethene	<4.9
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<2.4
Ethylbenzene	<4.9
Isopropylbenzene	<4.9
m+p-Xylene	<4.9
Tetrachloroethene	<4.9
Trichloroethene	<4.9

SB-111 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.5
1,1,1-Trichloroethane	<4.5
1,1-Dichloroethene	<4.5
1,4-Dioxane	<450
cis-1,2-Dichloroethene	<4.5
Ethylbenzene	<4.5
Isopropylbenzene	<4.5
Tetrachloroethene	<4.5
Trichloroethene	<4.5
Total Xylenes	<4.5

SB-110 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.6
1,1,1-Trichloroethane	<4.6
1,1-Dichloroethene	<4.6
1,4-Dioxane	<230
cis-1,2-Dichloroethene	<4.6
Ethylbenzene	<4.6
Isopropylbenzene	<4.6
Tetrachloroethene	<4.6
Trichloroethene	<4.6
Total Xylenes	<4.6

SB-115 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.2
1,1,1-Trichloroethane	<5.2
1,1-Dichloroethene	<5.2
1,4-Dioxane	<260
cis-1,2-Dichloroethene	<5.2
Ethylbenzene	<5.2
Isopropylbenzene	**16**
Tetrachloroethene	<5.2
Trichloroethene	<5.2
Total Xylenes	<5.2

SB-118 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.1
1,1,1-Trichloroethane	<5.1
1,1-Dichloroethene	<5.1
1,4-Dioxane	<260
cis-1,2-Dichloroethene	<5.1
Ethylbenzene	<5.1
Isopropylbenzene	<5.1
Tetrachloroethene	<5.1
Trichloroethene	<5.1
Total Xylenes	<5.1

SB-109 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.1
1,1,1-Trichloroethane	<5.1
1,1-Dichloroethene	<5.1
1,4-Dioxane	<260
cis-1,2-Dichloroethene	<5.1
Ethylbenzene	<5.1
Isopropylbenzene	<5.1
Tetrachloroethene	<5.1
Trichloroethene	<5.1
Total Xylenes	<5.1

SB-112 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.1
1,1,1-Trichloroethane	<5.1
1,1-Dichloroethene	<5.1
1,4-Dioxane	<260
cis-1,2-Dichloroethene	<5.1
Ethylbenzene	<5.1
Isopropylbenzene	<5.1
Tetrachloroethene	<5.1
Trichloroethene	**23**
Total Xylenes	<5.1

SB-2 (1.5-3.5 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.7
1,1,1-Trichloroethane	<5.7
1,1-Dichloroethene	<5.7
1,4-Dioxane	NA
cis-1,2-Dichloroethene	<5.7
Ethylbenzene	<5.7
Isopropylbenzene	<5.7
m+p-Xylene	<5.7
Tetrachloroethene	**13**
Trichloroethene	**15**

SB-113 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.8
1,1,1-Trichloroethane	<4.8
1,1-Dichloroethene	<4.8
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<4.8
Isopropylbenzene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	<4.8
Total Xylenes	<4.8

SO-E-13 GW-E-13 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<6.8
1,1,1-Trichloroethane	<6.8
1,1-Dichloroethene	<6.8
1,4-Dioxane	<340
cis-1,2-Dichloroethene	<3.4
Ethylbenzene	<6.8
Isopropylbenzene	<6.8
m+p-Xylene	<6.8
Tetrachloroethene	<6.8
Trichloroethene	<6.8

SO-AOC 8-1 GW-AOC 8-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.6
1,1,1-Trichloroethane	<4.6
1,1-Dichloroethene	<4.6
1,4-Dioxane	<230
cis-1,2-Dichloroethene	<2.3
Ethylbenzene	<4.6
Isopropylbenzene	<4.6
m+p-Xylene	<4.6
Tetrachloroethene	<4.6
Trichloroethene	**49**

SB-116 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.4
1,1,1-Trichloroethane	<4.4
1,1-Dichloroethene	<4.4
1,4-Dioxane	<220
cis-1,2-Dichloroethene	<4.4
Ethylbenzene	<4.4
Isopropylbenzene	<4.4
Tetrachloroethene	<4.4
Trichloroethene	<4.4
Total Xylenes	<4.4

SO-AOC 8-2 GW-AOC 8-2 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.1
1,1,1-Trichloroethane	<4.1
1,1-Dichloroethene	<4.1
1,4-Dioxane	<200
cis-1,2-Dichloroethene	<2.0
Ethylbenzene	<4.1
Isopropylbenzene	<4.1
m+p-Xylene	<4.1
Tetrachloroethene	<4.1
Trichloroethene	**12**

SO-AOC 10-1 GW-AOC 10-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.6
1,1,1-Trichloroethane	<4.6
1,1-Dichloroethene	<4.6
1,4-Dioxane	<230
cis-1,2-Dichloroethene	<2.3
Ethylbenzene	<4.6
Isopropylbenzene	<4.6
m+p-Xylene	<4.6
Tetrachloroethene	<4.6
Trichloroethene	<4.6

SB-108 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.8
1,1,1-Trichloroethane	<4.8
1,1-Dichloroethene	<4.8
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<4.8
Isopropylbenzene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	<4.8
Total Xylenes	<4.8

SB-114 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.8
1,1,1-Trichloroethane	<4.8
1,1-Dichloroethene	<4.8
1,4-Dioxane	<240
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<4.8
Isopropylbenzene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	**130**
Total Xylenes	<4.8

Kd-1 (2 ft)	(µg/kg)
1,1,2-Trichloroethane	<2600
1,1,1-Trichloroethane	<2600
1,1-Dichloroethene	<2600
1,4-Dioxane	**3,600,000**
cis-1,2-Dichloroethene	<2600
Ethylbenzene	<2600
Isopropylbenzene	<2600
Tetrachloroethene	<2600
Trichloroethene	<2600
Total Xylenes	<2600

SO-AOC 1-1 GW-AOC 1-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<210
1,1,1-Trichloroethane	<210
1,1-Dichloroethene	<210
1,4-Dioxane	**250,000**
cis-1,2-Dichloroethene	<100
Ethylbenzene	<210
Isopropylbenzene	<210
m+p-Xylene	<210
Tetrachloroethene	<210
Trichloroethene	<210

HA-3 (0.35-2.05 ft)	(µg/kg)
1,1,2-Trichloroethane	**26**
1,1,1-Trichloroethane	**180**
1,1-Dichloroethene	**23**
1,4-Dioxane	**14,000 E**
cis-1,2-Dichloroethene	<6.8
Ethylbenzene	<6.8
Isopropylbenzene	<6.8
m+p-Xylene	<6.8
Tetrachloroethene	<6.8
Trichloroethene	**120**
Total Xylenes	<6.8

SO-AOC 3-2 GW-AOC 3-2 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<220
1,1,1-Trichloroethane	<220
1,1-Dichloroethene	<220
1,4-Dioxane	<11000
cis-1,2-Dichloroethene	**600**
Ethylbenzene	<220
Isopropylbenzene	<220
m+p-Xylene	<220
Tetrachloroethene	<220
Trichloroethene	**4100**

SB-107 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.3
1,1,1-Trichloroethane	<4.3
1,1-Dichloroethene	<4.3
1,4-Dioxane	<220
cis-1,2-Dichloroethene	<4.3
Ethylbenzene	<4.3
Isopropylbenzene	<4.3
Tetrachloroethene	<4.3
Trichloroethene	<4.3
Total Xylenes	<4.3

SO-AOC 9-2 GW-AOC 9-2 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.6
1,1,1-Trichloroethane	<4.6
1,1-Dichloroethene	<4.6
1,4-Dioxane	<250
cis-1,2-Dichloroethene	<2.3
Ethylbenzene	<4.6
Isopropylbenzene	<4.6
m+p-Xylene	<4.6
Tetrachloroethene	<4.6
Trichloroethene	<4.6

SO-AOC 9-1 GW-AOC 9-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.8
1,1,1-Trichloroethane	<5.8
1,1-Dichloroethene	<5.8
1,4-Dioxane	<290
cis-1,2-Dichloroethene	<2.9
Ethylbenzene	<5.8
Isopropylbenzene	<5.8
m+p-Xylene	<5.8
Tetrachloroethene	<5.8
Trichloroethene	<5.8

SO-AOC 2-1 GW-AOC 2-1 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.6
1,1,1-Trichloroethane	<4.6
1,1-Dichloroethene	<4.6
1,4-Dioxane	<230
cis-1,2-Dichloroethene	<2.3
Ethylbenzene	<4.6
Isopropylbenzene	<4.6
m+p-Xylene	<4.6
Tetrachloroethene	<4.6
Trichloroethene	<4.6

SO-E-4 GW-E-4 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.2
1,1,1-Trichloroethane	<4.2
1,1-Dichloroethene	<4.2
1,4-Dioxane	<210
cis-1,2-Dichloroethene	<2.1
Ethylbenzene	<4.2
Isopropylbenzene	<4.2
m+p-Xylene	<4.2
Tetrachloroethene	<4.2
Trichloroethene	<4.2

SB-117 (0-2 ft)	(µg/kg)
1,1,2-Trichloroethane	<4.4
1,1,1-Trichloroethane	<4.4
1,1-Dichloroethene	<4.4
1,4-Dioxane	<220
cis-1,2-Dichloroethene	<4.4
Ethylbenzene	<4.4
Isopropylbenzene	<4.4
Tetrachloroethene	<4.4
Trichloroethene	<4.4
Total Xylenes	<4.4

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

NS — NOT SAMPLED

0-2 FT — SAMPLE DEPTH IN FEET BELOW GROUND SURFACE

110 — CONSTITUENT CONCENTRATION IN ug/kg

<5.2 — CONSTITUENT CONCENTRATION NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT SHOWN

E — ESTIMATED CONCENTRATION; RESULT EXCEEDS THE CALIBRATION RANGE

NA — NOT ANALYZED

BOLDED INDICATED DETECTION ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT

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

EXTENT OF VOCs IN SURFACE SOILS (0-2 FEET) VOCS DELINEATED BASED ON THE LOWEST TYPE I RRS VALUES [(TRICHLOROETHENE (500 UG/KG) AND 1,4-DIOXANE (500 UG/KG)]

EXTENT OF VOCs IN SURFACE SOILS BASED ON THE HIGHEST OF TYPE 1 AND TYPE 2 RESIDENTIAL RRS

EXTENT OF VOCs IN SURFACE SOILS BASED ON THE HIGHEST OF TYPE 3 (SURFACE) AND TYPE 4 NON-RESIDENTIAL RRS

SOILS COMPLIANT WITH TYPE 5 RRS

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.

Delineation Criteria Type 1 RRS for Soil in ug/kg	
1,1,2-Trichloroethane	500
1,1,1-Trichloroethane	20,000
1,1-Dichloroethene	700
1,4-Dioxane	500
cis-1,2-Dichloroethene	7,000
Ethylbenzene	70,000
Isopropylbenzene	22,000
m+p-Xylene	1,000,000
Tetrachloroethene	500
Trichloroethene	500
Total Xylenes	1,000,000

SCALE IN FEET
0 200 400

DESIGNED	R. QUINN
DRAWN	T. GLADSTONE
CHECKED	R. QUINN
IN CHARGE	D. ALCOTT
DATE	1/15/2018

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

AMEC FOSTER WHEELER
ENVIRONMENT & INFRASTRUCTURE, INC.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

amec foster wheeler

DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN IN SURFACE SOIL

FIGURE 2.3-1A

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

J:\Thermo King\JANUARY 2018\DISTRIBUT AND EXTENT IN SURFACE SOIL.dwg - Layout1 01/25/2018 10:41am daniel.silver

SB-103	(26-28 ft) (ug/kg)	(46-48 ft) (ug/kg)
1,1,1-Trichloroethane	<5.1	<5.7
1,1,2-Trichloroethane	<5.1	<5.7
1,1-Dichloroethene	<5.1	<5.7
1,4-Dioxane	<250	<290
Chloroform	<5.1	<5.7
cis-1,2-Dichloroethene	<5.1	<5.7
Ethylbenzene	<5.1	<5.7
Total Xylenes	<5.1	<5.7
Naphthalene	<5.1	<5.7
Tetrachloroethene	<5.1	<5.7
Trichloroethene	<5.1	<5.7

SB-102	(5-6 ft) (ug/kg)	(35-36 ft) (ug/kg)
1,1,1-Trichloroethane	<4.9	<6.2
1,1,2-Trichloroethane	<4.9	<6.2
1,1-Dichloroethene	<4.9	<6.2
1,4-Dioxane	<240	<310
Chloroform	<4.9	<6.2
cis-1,2-Dichloroethene	<4.9	<6.2
Ethylbenzene	<4.9	<6.2
Total Xylenes	<4.9	<6.2
Naphthalene	<4.9	<6.2
Tetrachloroethene	<4.9	<6.2
Trichloroethene	<4.9	<6.2

SB-101	(12-14 ft) (ug/kg)	(36-38 ft) (ug/kg)
1,1,1-Trichloroethane	<4.9	<6.0
1,1,2-Trichloroethane	<4.9	<6.0
1,1-Dichloroethene	<4.9	<6.0
1,4-Dioxane	<240	<300
Chloroform	<4.9	<6.0
cis-1,2-Dichloroethene	<4.9	<6.0
Ethylbenzene	<4.9	<6.0
Total Xylenes	<4.9	<6.0
Naphthalene	<4.9	<6.0
Tetrachloroethene	<4.9	<6.0
Trichloroethene	<4.9	<6.0

SB-7 (7-8 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.6
1,1,2-Trichloroethane	<5.6
1,1-Dichloroethene	<5.6
1,4-Dioxane	NA
Chloroform	<5.6
cis-1,2-Dichloroethene	<5.6
Ethylbenzene	<5.6
m+p-Xylene	<5.6
Naphthalene	<5.6
Tetrachloroethene	**10**
Trichloroethene	**14**

GW-E-1 SO-E-1 (32-34 ft)	(ug/kg)
1,1,1-Trichloroethane	<4.0
1,1,2-Trichloroethane	<4.0
1,1-Dichloroethene	<4.0
1,4-Dioxane	<200
Chloroform	<5.0
cis-1,2-Dichloroethene	<2.0
Ethylbenzene	<4.0
m+p-Xylene	<4.0
Naphthalene	<4.0
Tetrachloroethene	<4.0
Trichloroethene	<4.0

SB-9 (8-9 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.7
1,1,2-Trichloroethane	<5.7
1,1-Dichloroethene	<5.7
1,4-Dioxane	NA
Chloroform	<5.7
cis-1,2-Dichloroethene	<5.7
Ethylbenzene	<5.7
m+p-Xylene	<5.7
Naphthalene	<5.7
Tetrachloroethene	**9.3**
Trichloroethene	**11**

SB-10 (5-6 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.6
1,1,2-Trichloroethane	<5.6
1,1-Dichloroethene	<5.6
1,4-Dioxane	NA
Chloroform	<5.6
cis-1,2-Dichloroethene	<5.6
Ethylbenzene	<5.6
m+p-Xylene	<5.6
Naphthalene	<5.6
Tetrachloroethene	**9.4**
Trichloroethene	**11**

SB-111	(21-22 ft) (ug/kg)	(32-33 ft) (ug/kg)
1,1,1-Trichloroethane	<5.0	<5.3
1,1,2-Trichloroethane	<5.0	<5.3
1,1-Dichloroethene	<5.0	<5.3
1,4-Dioxane	<500	<270
Chloroform	<5.0	<5.3
cis-1,2-Dichloroethene	<5.0	<5.3
Ethylbenzene	<5.0	<5.3
Total Xylenes	<5.0	<5.3
Naphthalene	<5.0	<5.3
Tetrachloroethene	<5.0	<5.3
Trichloroethene	<5.0	<5.3

SB-8 (7-8 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.8
1,1,2-Trichloroethane	<5.8
1,1-Dichloroethene	<5.8
1,4-Dioxane	NA
Chloroform	<5.8
cis-1,2-Dichloroethene	<5.8
Ethylbenzene	<5.8
m+p-Xylene	<5.8
Naphthalene	<5.8
Tetrachloroethene	**8.2**
Trichloroethene	**9.3**

SB-110	(4-6 ft) (ug/kg)	(32-34 ft) (ug/kg)
1,1,1-Trichloroethane	<4.8	<5.2
1,1,2-Trichloroethane	<4.8	<5.2
1,1-Dichloroethene	<4.8	<5.2
1,4-Dioxane	<240	<260
Chloroform	<4.8	<5.2
cis-1,2-Dichloroethene	<4.8	<5.2
Ethylbenzene	<4.8	<5.2
Total Xylenes	<4.8	<5.2
Naphthalene	<4.8	<5.2
Tetrachloroethene	<4.8	<5.2
Trichloroethene	<4.8	<5.2

SB-115	(11-13 ft) (ug/kg)	(18-20 ft) (ug/kg)
1,1,1-Trichloroethane	<4.9	<5.5
1,1,2-Trichloroethane	<4.9	<5.5
1,1-Dichloroethene	<4.9	<5.5
1,4-Dioxane	<250	<270
Chloroform	<4.9	<5.5
cis-1,2-Dichloroethene	<4.9	<5.5
Ethylbenzene	<4.9	<5.5
Total Xylenes	<4.9	<5.5
Naphthalene	<4.9	<5.5
Tetrachloroethene	<4.9	<5.5
Trichloroethene	<4.9	<5.5

SB-118 (4-5 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.1
1,1,2-Trichloroethane	<5.1
1,1-Dichloroethene	<5.1
1,4-Dioxane	<250
Chloroform	<5.1
cis-1,2-Dichloroethene	<5.1
Ethylbenzene	<5.1
Total Xylenes	<5.1
Naphthalene	<5.1
Tetrachloroethene	<5.1
Trichloroethene	<5.1

SB-109	(11-12 ft) (ug/kg)	(27-28 ft) (ug/kg)
1,1,1-Trichloroethane	<4.5	<4.8
1,1,2-Trichloroethane	<4.5	<4.8
1,1-Dichloroethene	<4.5	<4.8
1,4-Dioxane	<220	<240
Chloroform	<4.5	<4.8
cis-1,2-Dichloroethene	<4.5	<4.8
Ethylbenzene	<4.5	<4.8
Total Xylenes	<4.5	<4.8
Naphthalene	<4.5	<4.8
Tetrachloroethene	<4.5	<4.8
Trichloroethene	**19**	<4.8

SB-4 (8-9 ft)	(ug/kg)
1,1,1-Trichloroethane	<6.2
1,1,2-Trichloroethane	<6.2
1,1-Dichloroethene	<6.2
1,4-Dioxane	NA
Chloroform	<6.2
cis-1,2-Dichloroethene	<6.2
Ethylbenzene	<6.2
m+p-Xylene	**9.6**
Naphthalene	<6.2
Tetrachloroethene	<6.2
Trichloroethene	<6.2

SB-112	(18-19 ft) (ug/kg)	(38-39 ft) (ug/kg)
1,1,1-Trichloroethane	<260	<5.4
1,1,2-Trichloroethane	<260	<5.4
1,1-Dichloroethene	<260	<5.4
1,4-Dioxane	<26000	<270
Chloroform	<260	<5.4
cis-1,2-Dichloroethene	<260	<5.4
Ethylbenzene	<260	<5.4
Total Xylenes	<260	<5.4
Naphthalene	<260	<5.4
Tetrachloroethene	<260	<5.4
Trichloroethene	**560**	**17**

SB-3 (5-6 ft)	(ug/kg)
1,1,1-Trichloroethane	<300
1,1,2-Trichloroethane	<300
1,1-Dichloroethene	<300
1,4-Dioxane	NA
Chloroform	<300
cis-1,2-Dichloroethene	<300
Ethylbenzene	**360**
m+p-Xylene	**1400**
Naphthalene	<300
Tetrachloroethene	<300
Trichloroethene	<300

SB-5 (8-9 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.9
1,1,2-Trichloroethane	<5.9
1,1-Dichloroethene	<5.9
1,4-Dioxane	NA
Chloroform	<5.9
cis-1,2-Dichloroethene	<5.9
Ethylbenzene	<5.9
m+p-Xylene	<5.9
Naphthalene	<5.9
Tetrachloroethene	**10**
Trichloroethene	**12**

SB-2 (1.5'-3.5 ft)	(µg/kg)
1,1,2-Trichloroethane	<5.7
1,1,1-Trichloroethane	<5.7
1,1-Dichloroethene	<5.7
1,4-Dioxane	NA
cis-1,2-Dichloroethene	<5.7
Ethylbenzene	<5.7
Isopropylbenzene	<5.7
m+p-Xylene	<5.7
Tetrachloroethene	**13**
Trichloroethene	**15**

SB-113	(4-6 ft) (ug/kg)	(40-42 ft) (ug/kg)
1,1,1-Trichloroethane	<5.1	<5.7
1,1,2-Trichloroethane	<5.1	<5.7
1,1-Dichloroethene	<5.1	<5.7
1,4-Dioxane	<250	<280
Chloroform	<5.1	<5.7
cis-1,2-Dichloroethene	<5.1	<5.7
Ethylbenzene	<5.1	<5.7
Total Xylenes	<5.1	<5.7
Naphthalene	<5.1	<5.7
Tetrachloroethene	<5.1	<5.7
Trichloroethene	**9.4**	<5.7

GW-E-13 SO-E-13	(14-16 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<5.1	<9.2
1,1,2-Trichloroethane	<5.1	<9.2
1,1-Dichloroethene	<5.1	<9.2
1,4-Dioxane	<260	<460
Chloroform	<5.1	<9.2
cis-1,2-Dichloroethene	<2.6	<4.6
Ethylbenzene	<5.1	<9.2
m+p-Xylene	<5.1	<9.2
Naphthalene	<5.1	<9.2
Tetrachloroethene	<5.1	<9.2
Trichloroethene	<5.1	<9.2

SB-1 (10-11 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.9
1,1,2-Trichloroethane	<5.9
1,1-Dichloroethene	<5.9
1,4-Dioxane	NA
Chloroform	<5.9
cis-1,2-Dichloroethene	<5.9
Ethylbenzene	<5.9
m+p-Xylene	<5.9
Naphthalene	<5.9
Tetrachloroethene	**11**
Trichloroethene	**160 E**

SB-6 (0-10 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.7
1,1,2-Trichloroethane	<5.7
1,1-Dichloroethene	<5.7
1,4-Dioxane	NA
Chloroform	<5.7
cis-1,2-Dichloroethene	<5.7
Ethylbenzene	<5.7
m+p-Xylene	<5.7
Naphthalene	<5.7
Tetrachloroethene	**8.4**
Trichloroethene	**9.7**

GW-AOC 8-1 SO-AOC-8-1	(14-16 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	**5.4**	<6.6
1,1,2-Trichloroethane	<4.8	<6.6
1,1-Dichloroethene	<4.8	<6.6
1,4-Dioxane	<240	<330
Chloroform	<4.8	<6.6
cis-1,2-Dichloroethene	**5.6**	<3.3
Ethylbenzene	<4.8	<6.6
m+p-Xylene	<4.8	<6.6
Naphthalene	<4.8	<6.6
Tetrachloroethene	<4.8	<6.6
Trichloroethene	**78**	<6.6

GW-AOC 8-2 SO-AOC 8-2	(18-20 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<4.4	<5.7
1,1,2-Trichloroethane	<4.4	<5.7
1,1-Dichloroethene	<4.4	<5.7
1,4-Dioxane	<220	<280
Chloroform	<4.4	<5.7
cis-1,2-Dichloroethene	**4**	<2.8
Ethylbenzene	<4.4	<5.7
m+p-Xylene	<4.4	<5.7
Naphthalene	<4.4	<5.7
Tetrachloroethene	<4.4	<5.7
Trichloroethene	**31**	<5.7

Kd-7 (3 ft)	(ug/kg)
1,1,1-Trichloroethane	<5.3
1,1,2-Trichloroethane	<5.3
1,1-Dichloroethene	<5.3
1,4-Dioxane	<260
Chloroform	<5.3
cis-1,2-Dichloroethene	**8.3**
Ethylbenzene	<5.3
Total Xylenes	<5.3
Naphthalene	<5.3
Tetrachloroethene	<5.3
Trichloroethene	**56**

GW-AOC 10-1 SO-AOC 10-1	(18-20 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<4.4	<7.8
1,1,2-Trichloroethane	<4.4	<7.8
1,1-Dichloroethene	<4.4	<7.8
1,4-Dioxane	<220	<390
Chloroform	<4.4	<7.8
cis-1,2-Dichloroethene	<2.2	<3.9
Ethylbenzene	<4.4	<7.8
m+p-Xylene	<4.4	<7.8
Naphthalene	<4.4	<7.8
Tetrachloroethene	<4.4	<7.8
Trichloroethene	<4.4	<7.8

SB-108	(29-30 ft) (ug/kg)	(45-46 ft) (ug/kg)
1,1,1-Trichloroethane	<4.8	<5.8
1,1,2-Trichloroethane	<4.8	<5.8
1,1-Dichloroethene	<4.8	<5.8
1,4-Dioxane	<240	<290
Chloroform	<4.8	<5.8
cis-1,2-Dichloroethene	<4.8	<5.8
Ethylbenzene	<4.8	<5.8
Total Xylenes	<4.8	<5.8
Naphthalene	<4.8	<5.8
Tetrachloroethene	<4.8	<5.8
Trichloroethene	**9.0**	**7.0**

SB-117	(12-14 ft) (ug/kg)	(44-46 ft) (ug/kg)
1,1,1-Trichloroethane	<4.7	<5.9
1,1,2-Trichloroethane	<4.7	<5.9
1,1-Dichloroethene	<4.7	<5.9
1,4-Dioxane	<230	<290
Chloroform	<4.7	<5.9
cis-1,2-Dichloroethene	<4.7	<5.9
Ethylbenzene	<4.7	<5.9
Total Xylenes	<4.7	<5.9
Naphthalene	<4.7	<5.9
Tetrachloroethene	<4.7	<5.9
Trichloroethene	<4.7	<5.9

SB-114	(22-24 ft) (ug/kg)	(42-44 ft) (ug/kg)
1,1,1-Trichloroethane	<4.9	<5.2
1,1,2-Trichloroethane	<4.9	<5.2
1,1-Dichloroethene	<4.9	<5.2
1,4-Dioxane	<250	<260
Chloroform	<4.9	<5.2
cis-1,2-Dichloroethene	<4.9	<5.2
Ethylbenzene	<4.9	<5.2
Total Xylenes	<4.9	<5.2
Naphthalene	<4.9	<5.2
Tetrachloroethene	<4.9	<5.2
Trichloroethene	<4.9	<5.2

GW-E-4 SO-E-4 (40-42 ft)	(ug/kg)
1,1,1-Trichloroethane	<9.6
1,1,2-Trichloroethane	<9.6
1,1-Dichloroethene	<9.6
1,4-Dioxane	<480
Chloroform	<5.0
cis-1,2-Dichloroethene	<4.8
Ethylbenzene	<9.6
m+p-Xylene	<9.6
Naphthalene	<9.6
Tetrachloroethene	<9.6
Trichloroethene	<9.6

Kd-12	(9 ft) (ug/kg)	(10 ft) (ug/kg)
1,1,1-Trichloroethane	**6.1**	<5.9
1,1,2-Trichloroethane	<5	<5.9
1,1-Dichloroethene	<5	<5.9
1,4-Dioxane	<250	<290
Chloroform	<5	<5.9
cis-1,2-Dichloroethene	**18**	**7.7**
Ethylbenzene	<5	<5.9
Total Xylenes	<5	<5.9
Naphthalene	<5	<5.9
Tetrachloroethene	<5	<5.9
Trichloroethene	**380 E**	**170**

Kd-11	(4 ft) (ug/kg)	(6 ft) (ug/kg)
1,1,1-Trichloroethane	<280	<360
1,1,2-Trichloroethane	<280	<360
1,1-Dichloroethene	<280	<360
1,4-Dioxane	<14000	<18000
Chloroform	<280	<360
cis-1,2-Dichloroethene	<280	<360
Ethylbenzene	<280	<360
Total Xylenes	<280	<360
Naphthalene	<280	<360
Tetrachloroethene	<280	<360
Trichloroethene	**1700**	**730**

GW-AOC 2-1 SO-AOC 2-1	(18-20 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<4.4	<5.5
1,1,2-Trichloroethane	<4.4	<5.5
1,1-Dichloroethene	<4.4	<5.5
1,4-Dioxane	<220	<280
Chloroform	<4.4	<5.5
cis-1,2-Dichloroethene	<2.2	<2.8
Ethylbenzene	<4.4	<5.5
m+p-Xylene	<4.4	<5.5
Naphthalene	<4.4	<5.5
Tetrachloroethene	<4.4	<5.5
Trichloroethene	<4.4	<5.5

GW-AOC 9-1 SO-AOC 9-1	(4-6 ft) (ug/kg)	(34-46 ft) (ug/kg)
1,1,1-Trichloroethane	<6.6	<4.8
1,1,2-Trichloroethane	<6.6	<4.8
1,1-Dichloroethene	<6.6	<4.8
1,4-Dioxane	<330	<240
Chloroform	<6.6	<4.8
cis-1,2-Dichloroethene	<3.3	<2.4
Ethylbenzene	<6.6	<4.8
m+p-Xylene	<6.6	<4.8
Naphthalene	<6.6	<4.8
Tetrachloroethene	<6.6	<4.8
Trichloroethene	<6.6	<4.8

GW-AOC 9-2 SO-AOC 9-2	(4-6 ft) (ug/kg)	(32-34 ft) (ug/kg)
1,1,1-Trichloroethane	<6.7	<5.1
1,1,2-Trichloroethane	<6.7	<5.1
1,1-Dichloroethene	<6.7	<5.1
1,4-Dioxane	<340	<260
Chloroform	<6.7	<5.1
cis-1,2-Dichloroethene	<3.4	<2.6
Ethylbenzene	<6.7	<5.1
m+p-Xylene	<6.7	<5.1
Naphthalene	<6.7	<5.1
Tetrachloroethene	<6.7	<5.1
Trichloroethene	<6.7	<5.1

GW-AOC 3-2 SO-AOC 3-2	(8-10 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<200	<5.2
1,1,2-Trichloroethane	<200	<5.2
1,1-Dichloroethene	<200	<5.2
1,4-Dioxane	<10000	<260
Chloroform	<200	<5.2
cis-1,2-Dichloroethene	**190**	<2.6
Ethylbenzene	<200	<5.2
m+p-Xylene	<200	<5.2
Naphthalene	<200	<5.2
Tetrachloroethene	<200	<5.2
Trichloroethene	**980**	<5.2

SB-107	(14-16 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<4.7	<4.7
1,1,2-Trichloroethane	<4.7	<4.7
1,1-Dichloroethene	<4.7	<4.7
1,4-Dioxane	<240	<240
Chloroform	<4.7	<4.7
cis-1,2-Dichloroethene	<4.7	<4.7
Ethylbenzene	<4.7	<4.7
Total Xylenes	<4.7	<4.7
Naphthalene	<4.7	<4.7
Tetrachloroethene	<4.7	<4.7
Trichloroethene	<4.7	<4.7

HA-7 (3-5 ft)	(ug/kg)
1,1,1-Trichloroethane	<290
1,1,2-Trichloroethane	<290
1,1-Dichloroethene	<290
1,4-Dioxane	<14000
Chloroform	<290
cis-1,2-Dichloroethene	<290
Ethylbenzene	<290
Total Xylenes	<290
Naphthalene	<290
Tetrachloroethene	<290
Trichloroethene	**800**

Kd-10	(3 ft) (ug/kg)	(9 ft) (ug/kg)	(13 ft) (ug/kg)	(15 ft) (ug/kg)	(17 ft) (ug/kg)
1,1,1-Trichloroethane	<290	<290	**14**	<260	**13**
1,1,2-Trichloroethane	<290	<290	<5.9	<260	<5.3
1,1-Dichloroethene	<290	<290	**11**	<260	**6.1**
1,4-Dioxane	<14000	<15000	<300	<13000	<270
Chloroform	<290	<290	**11**	<260	<5.3
cis-1,2-Dichloroethene	**380**	**300**	**150**	<260	**41**
Ethylbenzene	<290	<290	<5.9	<260	<5.3
Total Xylenes	<290	<290	<5.9	<260	<5.3
Naphthalene	<290	<290	<5.9	<260	<5.3
Tetrachloroethene	<290	<290	<5.9	<260	<5.3
Trichloroethene	**1800**	**1800**	**810 E**	**830**	**340 E**

SB-106	(29-30 ft) (ug/kg)	(42-43 ft) (ug/kg)
1,1,1-Trichloroethane	<4.6	<5.4
1,1,2-Trichloroethane	<4.6	<5.4
1,1-Dichloroethene	<4.6	<5.4
1,4-Dioxane	<230	<270
Chloroform	<4.6	<5.4
cis-1,2-Dichloroethene	<4.6	<5.4
Ethylbenzene	<4.6	<5.4
Total Xylenes	<4.6	<5.4
Naphthalene	<4.6	<5.4
Tetrachloroethene	<4.6	<5.4
Trichloroethene	<4.6	<5.4

Kd-1 (4 ft)	(ug/kg)
1,1,1-Trichloroethane	<2600
1,1,2-Trichloroethane	<2600
1,1-Dichloroethene	<2600
1,4-Dioxane	**2,800,000**
Chloroform	<2600
cis-1,2-Dichloroethene	<2600
Ethylbenzene	<2600
Total Xylenes	<2600
Naphthalene	<2600
Tetrachloroethene	<2600
Trichloroethene	<2600

SB-105	(11-12 ft) (ug/kg)	(37-38 ft) (ug/kg)
1,1,1-Trichloroethane	**43**	<5.8
1,1,2-Trichloroethane	<5.0	<5.8
1,1-Dichloroethene	**31**	<5.8
1,4-Dioxane	<250	<290
Chloroform	<5.0	<5.8
cis-1,2-Dichloroethene	<5.0	<5.8
Ethylbenzene	<5.0	<5.8
Total Xylenes	<5.0	<5.8
Naphthalene	<5.0	<5.8
Tetrachloroethene	<5.0	<5.8
Trichloroethene	**53**	<5.8

Kd-3	(3 ft) (ug/kg)	(4 ft) (ug/kg)
1,1,1-Trichloroethane	**320**	**1100**
1,1,2-Trichloroethane	<280	<260
1,1-Dichloroethene	<280	<260
1,4-Dioxane	**290,000**	**220,000**
Chloroform	<280	<260
cis-1,2-Dichloroethene	<280	<260
Ethylbenzene	<280	<260
Total Xylenes	<280	<260
Naphthalene	<280	<260
Tetrachloroethene	<280	<260
Trichloroethene	**280**	**890**

Kd-2 (8 ft)	(ug/kg)
1,1,1-Trichloroethane	**2300**
1,1,2-Trichloroethane	<250
1,1-Dichloroethene	<250
1,4-Dioxane	**270,000**
Chloroform	<250
cis-1,2-Dichloroethene	<250
Ethylbenzene	<250
Total Xylenes	<250
Naphthalene	**310**
Tetrachloroethene	<250
Trichloroethene	**2600**

GW-AOC 1-1 SO-AOC 1-1	(29-31 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	**86**	**85**
1,1,2-Trichloroethane	<7.2	<5.2
1,1-Dichloroethene	<7.2	<5.2
1,4-Dioxane	<360	<260
Chloroform	<7.2	<5.2
cis-1,2-Dichloroethene	<3.6	<2.6
Ethylbenzene	<7.2	<5.2
m+p-Xylene	<7.2	<5.2
Naphthalene	<7.2	<5.2
Tetrachloroethene	<7.2	<5.2
Trichloroethene	<7.2	<5.2

Kd-4 (11 ft)	(ug/kg)
1,1,1-Trichloroethane	**410 E**
1,1,2-Trichloroethane	**15**
1,1-Dichloroethene	**50**
1,4-Dioxane	<240
Chloroform	<4.8
cis-1,2-Dichloroethene	**8.1**
Ethylbenzene	<4.8
Total Xylenes	<4.8
Naphthalene	<4.8
Tetrachloroethene	<4.8
Trichloroethene	**240 E**

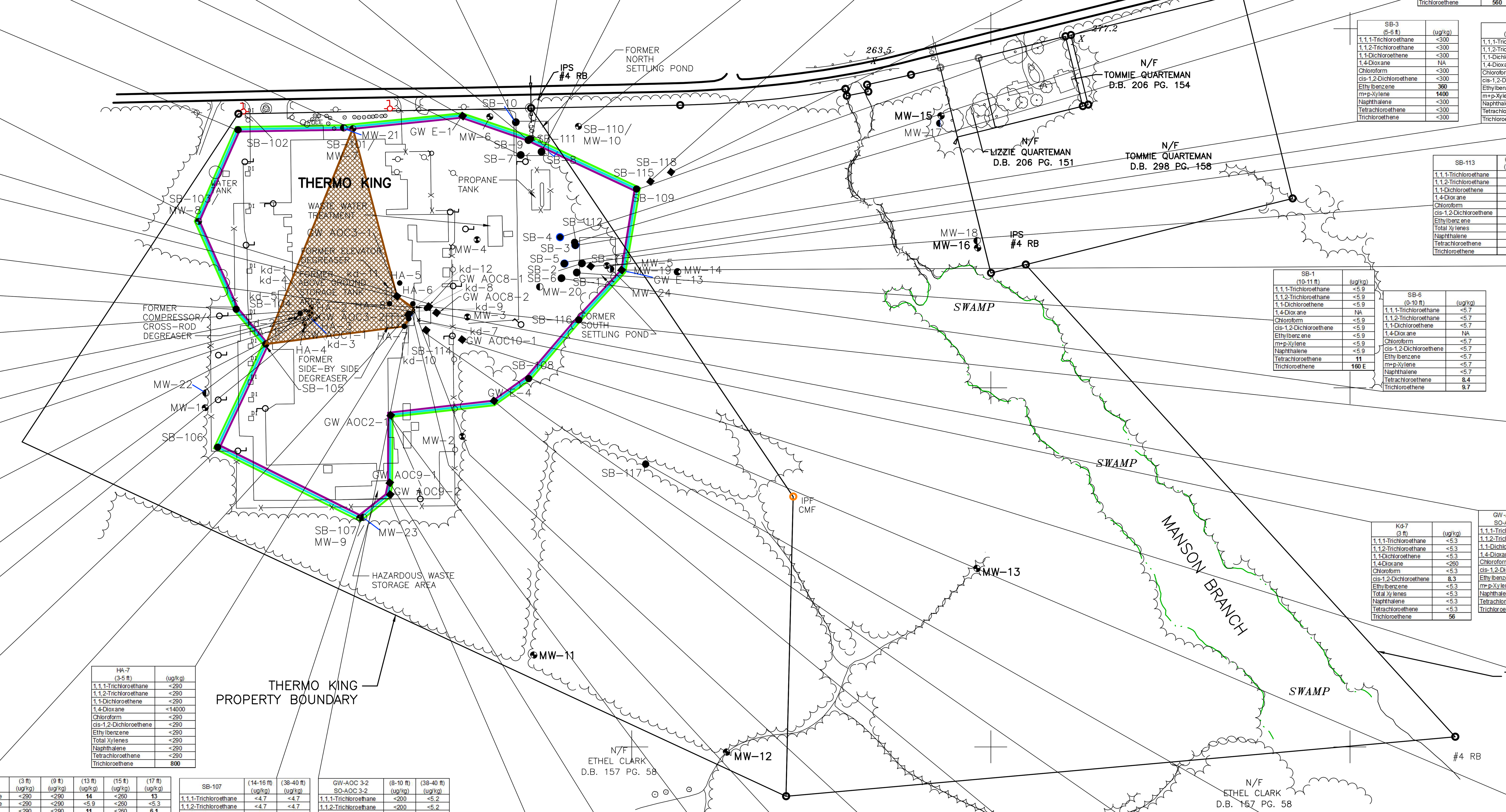
Kd-5 (3 ft)	(ug/kg)
1,1,1-Trichloroethane	**250 E**
1,1,2-Trichloroethane	**6.4**
1,1-Dichloroethene	**51**
1,4-Dioxane	**8,600**
Chloroform	<6.1
cis-1,2-Dichloroethene	<6.1
Ethylbenzene	<6.1
Total Xylenes	<6.1
Naphthalene	<6.1
Tetrachloroethene	<6.1
Trichloroethene	**200**

SB-104	(21-22 ft) (ug/kg)	(40-42 ft) (ug/kg)
1,1,1-Trichloroethane	<5.7	<5.4
1,1,2-Trichloroethane	<5.7	<5.4
1,1-Dichloroethene	<5.7	<5.4
1,4-Dioxane	<290	<270
Chloroform	<5.7	<5.4
cis-1,2-Dichloroethene	<5.7	<5.4
Ethylbenzene	<5.7	<5.4
Total Xylenes	<5.7	<5.4
Naphthalene	<5.7	<5.4
Tetrachloroethene	<5.7	<5.4
Trichloroethene	<5.7	<5.4

Kd-9 (9 ft)	(7 ft) (ug/kg)	(9 ft) (ug/kg)	(10 ft) (ug/kg)
1,1,1-Trichloroethane	<260	<260	<300
1,1,2-Trichloroethane	<260	<260	<300
1,1-Dichloroethene	<260	<260	<300
1,4-Dioxane	<13000	<13000	<15000
Chloroform	<260	<260	<300
cis-1,2-Dichloroethene	<260	<260	<300
Ethylbenzene	<260	<260	<300
Total Xylenes	<260	<260	<300
Naphthalene	<260	<260	<300
Tetrachloroethene	<260	<260	<300
Trichloroethene	**780**	**1000**	**650**

GW-AOC 3-1 SO-AOC 3-1	(29-31 ft) (ug/kg)	(38-40 ft) (ug/kg)
1,1,1-Trichloroethane	<5.3	<5.2
1,1,2-Trichloroethane	<5.3	<5.2
1,1-Dichloroethene	<5.3	<5.2
1,4-Dioxane	<260	<260
Chloroform	<5.3	<5.2
cis-1,2-Dichloroethene	<2.6	<2.6
Ethylbenzene	<5.3	<5.2
m+p-Xylene	<5.3	<5.2
Naphthalene	<5.3	<5.2
Tetrachloroethene	<5.3	<5.2
Trichloroethene	<5.3	<5.2

Kd-8 (9 ft)	(ug/kg)
1,1,1-Trichloroethane	<260
1,1,2-Trichloroethane	<260
1,1-Dichloroethene	<260
1,4-Dioxane	<13000
Chloroform	<260
cis-1,2-Dichloroethene	<260
Ethylbenzene	<260
Total Xylenes	<260
Naphthalene	<260
Tetrachloroethene	<260
Trichloroethene	**460**



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
NS	NOT SAMPLED
0-2 FT	SAMPLE DEPTH IN FEET BELOW GROUND SURFACE
110	CONSTITUENT CONCENTRATION; ug/kg
<5.2	CONSTITUENT CONCENTRATION NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT SHOWN
E	ESTIMATED CONCENTRATION; RESULT EXCEEDS THE CALIBRATION RANGE
NA	NOT ANALYZED

BOLDED INDICATES DETECTION ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT

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

EXTENT OF VOCs IN SURFACE SOILS (2 FEET AND DEEPER). VOCS DELINEATED BASED ON THE LOWEST TYPE 1 RRS VALUES [(TRICHLOROETHENE (500 UG/KG) AND 1,4-DIOXANE(500 UG/KG)]

EXTENT OF VOCs IN SURFACE SOILS BASED ON THE HIGHEST OF TYPE 1 AND TYPE 2 RESIDENTIAL RRS.

EXTENT OF VOCs IN SURFACE SOILS BASED ON THE HIGHEST OF TYPE 3 AND TYPE 4 NON-RESIDENTIAL RRS.

SOILS COMPLIANT WITH TYPE 5 RRS

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.

Delineation Criteria	
Type 1 RRS for Soil in ug/kg	
1,1,1-Trichloroethane	20,000
1,1,2-Trichloroethane	500
1,1-Dichloroethene	700
1,4-Dioxane	500
Chloroform	3,800
cis-1,2-Dichloroethene	7,000
Ethylbenzene	70,000
m+p-Xylene	1,000,000
Total Xylenes	1,000,000
Naphthalene	100,000
Tetrachloroethene	500
Trichloroethene	500

SCALE IN FEET 0 200 400

DESIGNED	R. QUINN
DRAWN	T. GLADSTONE
CHECKED	R. QUINN
IN CHARGE	D. ALCOTT
DATE	1/15/2018

THERMO KING CORPORATION
LOUISVILLE, GEORGIA

AMEC FOSTER WHEELER
ENVIRONMENT & INFRASTRUCTURE, INC.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

amec foster wheeler

DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN IN SUBSURFACE SOIL

FIGURE 2.3-1B

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

J:\Thermo King\JANUARY 2018\DISTRIBUT AND EXTENT IN SURFACE SOIL B.dwg - Layout1 01/25/2018 10:44am daniel.silver

Sample ID	MW-4
Date Sampled	6/2/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-7
Date Sampled	6/1/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**4.1**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-5
Date Sampled	12/16/2015
1,1,1-Trichloroethane	<2.0
1,1-Dichloroethane	<2.0
1,1-Dichloroethene	<2.0
Chloroform	**2.6**
Chloromethane	<2.0
cis-1,2-Dichloroethene	<2.0
Hexachlorobutadiene	**4.8**
Toluene	<2.0
Trichloroethene	**237**
Vinyl Chloride	<2.0

Sample ID	MW-6
Date Sampled	6/1/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**1.2**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-10
Date Sampled	12/15/2015
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**1.3**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	**1.7**
Vinyl Chloride	<1.0

Sample Identification	Seep B	Seep B
Sample Date	12/15/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	Dry
1,1-Dichloroethane	<1.0	
1,1-Dichloroethene	<1.0	
Chloroform	<1.0	
Chloromethane	<1.0	
cis-1,2-Dichloroethene	**7.9**	
Hexachlorobutadiene	<1.0	
Toluene	**1.7**	
Trichloroethene	**1.5**	
Vinyl Chloride	<1.0	

Sample ID	MW-15
Date Sampled	6/2/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-26
Date Sampled	6/9/2011
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<4.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample Identification	Manson Branch #15 (MB#15)	Manson Branch #15 (MB#15)
Sample Date	12/16/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	<1.0	<1.0
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	<1.0
Vinyl Chloride	<1.0	<1.0

Sample ID	MW-19
Date Sample	12/16/2015
1,1,1-Trichlor	<20
1,1-Dichloroe	<20
1,1-Dichloroe	<20
Chloroform	<20
Chlororetha	<20
cis-1,2-Dichl	<20
Hexachlorobu	<20
Toluene	<20
Trichloroethe	**1720**
Vinyl Chloride	<20

Sample Identification	Manson Branch #16 (MB#16)	Manson Branch #16 (MB#16)
Sample Date	12/15/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	<1.0	<1.0
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	<1.0
Vinyl Chloride	<1.0	<1.0

Sample ID	MW-2
Date Sampled	6/1/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**2.1**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-3
Date Sampled	12/15/2015
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**3.9**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-8
Date Sampled	6/1/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**1.0**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-1
Date Sampled	6/1/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	**4.9**
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample Identification	Seep I	Seep I
Sample Date	12/16/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	**1.1**	<1.0
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	<1.0
Vinyl Chloride	<1.0	<1.0

Sample ID	MW-9
Date Sampled	6/1/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-11
Date Sampled	6/2/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-12
Date Sampled	6/2/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-13
Date Sampled	6/2/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-16
Date Sampled	6/2/2010
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	<1.0
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	<1.0
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	<1.0
Vinyl Chloride	<1.0

Sample ID	MW-27
Date Sampled	12/15/2015
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	**2.5**
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	**26.6**
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	**8.2**
Vinyl Chloride	<1.0

Sample Identification	Manson Branch #3 (MB#3)	Manson Branch #3 (MB#3)
Sample Date	12/16/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	<1.0	<1.0
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	<1.0
Vinyl Chloride	<1.0	<1.0

Sample Identification	Seep G	Seep G
Sample Date	12/15/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	**1.2**	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	**1.7**
cis-1,2-Dichloroethene	**11**	**2.0**
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	<1.0
Vinyl Chloride	<1.0	<1.0

Sample Identification	Manson Branch #2 (MB#2)	Manson Branch #2 (MB#2)
Sample Date	12/15/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	**3.1**	<1.0
1,1-Dichloroethene	<1.0	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	**6.8**	**14.3**
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	**6.2**
Vinyl Chloride	**30.6**	**6.3**

Sample ID	MW-28
Date Sampled	12/15/2015
1,1,1-Trichloroethane	<1.0
1,1-Dichloroethane	<1.0
1,1-Dichloroethene	**3.1**
Chloroform	<1.0
Chloromethane	<1.0
cis-1,2-Dichloroethene	**26.6**
Hexachlorobutadiene	<1.0
Toluene	<1.0
Trichloroethene	**6.3**
Vinyl Chloride	<1.0

Sample Identification	Seep H	Seep H
Sample Date	12/15/2015	11/13/2017
1,1,1-Trichloroethane	**3.1**	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	**30.7**	**19.5**
Chloroform	**1.5**	**1.5**
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	**40.1**	**87.6**
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	**275**	**218**
Vinyl Chloride	<1.0	<1.0

Sample Identification	Seep L	Seep L	Seep L
Sample Date	12/16/2015	11/17/2016	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0	Dry
1,1-Dichloroethane	<1.0	<1.0	
1,1-Dichloroethene	<1.0	<1.0	
Chloroform	<1.0	<1.0	
Chloromethane	<1.0	<1.0	
cis-1,2-Dichloroethene	<1.0	<1.0	
Hexachlorobutadiene	<1.0	<1.0	
Toluene	<1.0	<1.0	
Trichloroethene	<1.0	<1.0	
Vinyl Chloride	<1.0	<1.0	

Sample Identification	Manson Branch #5 (MB#5)	Manson Branch #5 (MB#5)
Sample Date	12/16/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	<1.0	<1.0
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	<1.0	<1.0
Vinyl Chloride	<1.0	<1.0

Sample Identification	Manson Branch Seep West #2 (Seep #2)	Manson Branch Seep West #2 (Seep #2)
Sample Date	12/15/2015	11/13/2017
1,1,1-Trichloroethane	<1.0	<1.0
1,1-Dichloroethane	<1.0	<1.0
1,1-Dichloroethene	**1.0**	**1.1**
Chloroform	<1.0	<1.0
Chloromethane	<1.0	<1.0
cis-1,2-Dichloroethene	**8.1**	**15.3**
Hexachlorobutadiene	<1.0	<1.0
Toluene	<1.0	<1.0
Trichloroethene	**6.9**	**2.8**
Vinyl Chloride	<1.0	<1.0

Delineation Criteria	
Type 1 RRS for Detected VOCs in Groundwater (ug/L)	
1,1,1-Trichloroethane	200
1,1-Dichloroethane	4000
1,1-Dichloroethene	7
Chloroform	80
Chloromethane	3
cis-1,2-Dichloroethene	70
Hexachlorobutadiene	1
Toluene	1000
Trichloroethene	5
Vinyl Chloride	2

LEGEND

- MW-1 — GROUNDWATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (ESC 2000, MW-1 TO MW-6)
- MW-7 — GROUNDWATER 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 — GROUNDWATER 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 — GROUNDWATER MONITORING WELL INSTALLED IN LOWER WATER-BEARING ZONE (MACTEC 2004: MW-24)
- GW-E-2 — DIRECT-PUSH TECHNOLOGY BORING FOR ONE-TIME GROUND-WATER SAMPLING (LAW 2000: GW E-1 TO GW E-19, UPPERMOST WATER-BEARING ZONE)
- GW-E-1 — SOIL BORING FOR SOIL AND ONE-TIME GROUNDWATER 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)
- ug/L — MICROGRAMS PER LITER
- CONSTITUENT CONCENTRATIONS IN GROUNDWATER DO NOT MEET TYPES 1/3 OR 2 OR 4 RISK REDUCTION STANDARDS (MOST RECENT GROUND-WATER ANALYTICAL RESULTS PER LOCATION USED)

- CONSTITUENT CONCENTRATION IN SEEP ARE GREATER THAN IN-STREAM WATER QUALITY CRITERIA (ISWQC)
- 27 — CONSTITUENT CONCENTRATION IN ug/L
- <1 — CONSTITUENT CONCENTRATION NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT SHOWN
- (POD) — POINT OF DEMONSTRATION WELL
- BUSH
- BUSHLINE
- TREE
- TREELINE
- HEDGE
- WATER
- X — FENCE
- DI — DROP INLET
- PROPERTY BOUNDARY
- EXTENT OF VOCs IN UPPERMOST WATER BEARING ZONE BASED ON THE TYPE 1 RRS FOR GROUNDWATER
- EXTENT OF VOCs IN UPPERMOST WATER BEARING ZONE BASED ON THE HIGHEST OF TYPE 1 AND TYPE 2 RESIDENTIAL RRS
- EXTENT OF VOCs IN UPPERMOST WATER BEARING ZONE BASED ON THE HIGHEST OF TYPE 3 AND TYPE 4 NON-RESIDENTIAL RRS
- EXTENT OF VOCs IN THE UPPERMOST WATER BEARING ZONE COMPLIANT WITH TYPE 5 RRS

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

DESIGNED	N. MCMILLAN
DRAWN	T. GLADSTONE
CHECKED	R. QUINN
IN CHARGE	D. ALCOTT
DATE	1/10/2018

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DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN GROUNDWATER IN THE UPPERMOST WATER-BEARING ZONE

FIGURE 2.3-2

SCALE	AS SHOWN
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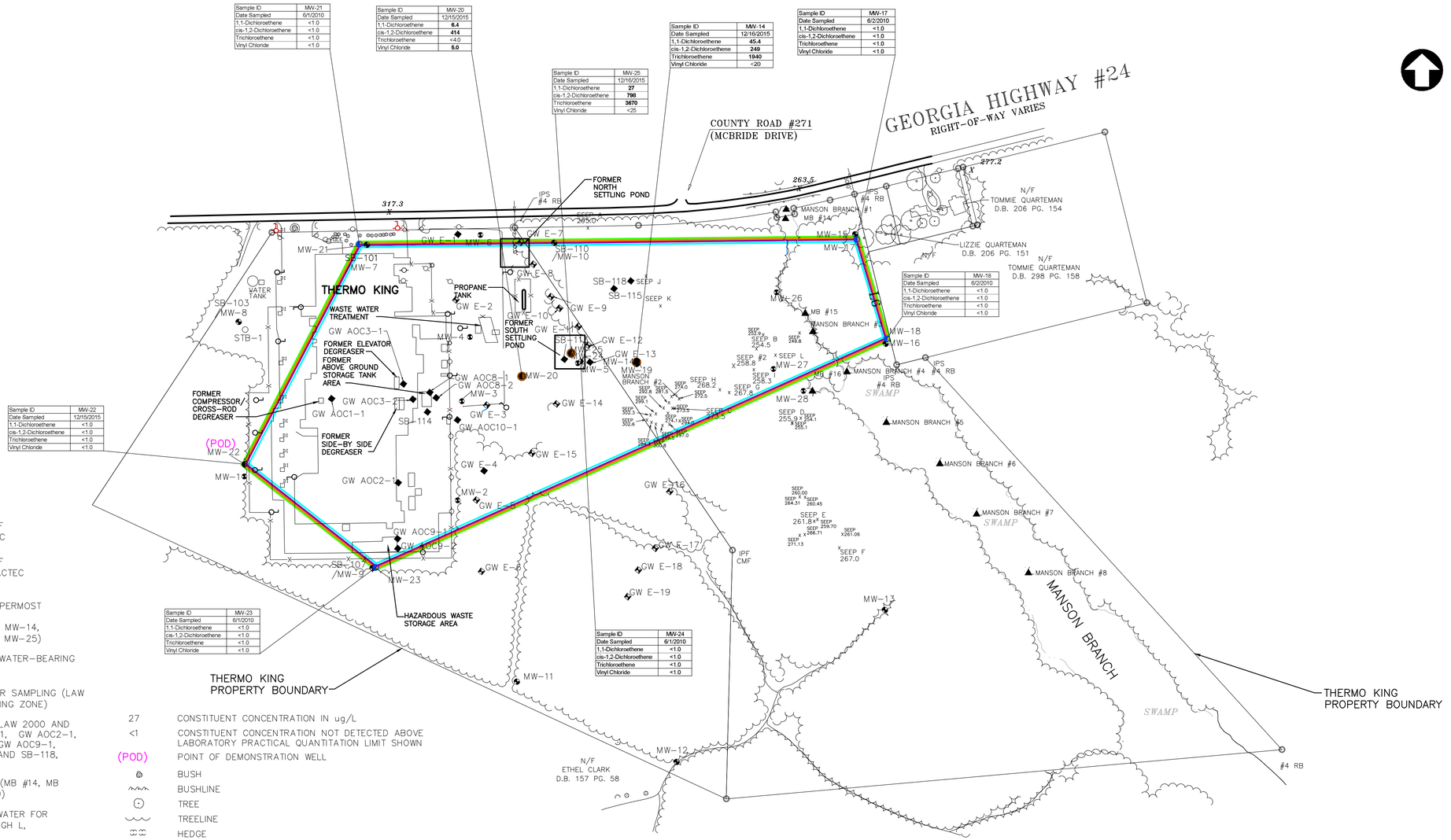

LEGEND

- MW-1 — GROUNDWATER MONITORING WELL INSTALLED TO TOP OF TWIGGS CLAY [UPPERMOST WATER-BEARING ZONE] (ESC 2000, MW-1 TO MW-6)
- MW-7 — GROUNDWATER 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 — GROUNDWATER 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 — GROUNDWATER 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 GROUNDWATER 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)
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- ug/L — MICROGRAMS PER LITER
- CONSTITUENT CONCENTRATIONS IN GROUND WATER DO NOT MEET TYPES 1/3 OR 2 OR 4 RISK REDUCTION STANDARDS (MOST RECENT GROUNDWATER ANALYTICAL RESULTS PER LOCATION USED)

- 27 — CONSTITUENT CONCENTRATION IN ug/L
- <1 — CONSTITUENT CONCENTRATION NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT SHOWN
- (POD) — POINT OF DEMONSTRATION WELL
- BUSH
- BUSHLINE
- TREE
- TREELINE
- HEDGE
- WATER
- FENCE
- DI — DROP INLET
- PROPERTY BOUNDARY
- EXTENT OF VOCs IN INTERMEDIATE WATER-BEARING ZONE BASED ON TYPE 1 RRS FOR GROUNDWATER
- EXTENT OF VOCs IN THE INTERMEDIATE WATER BEARING ZONE BASED ON THE HIGHER OF TYPE 1 AND TYPE 2 RESIDENTIAL RRS
- EXTENT OF VOCs IN THE INTERMEDIATE WATER BEARING ZONE BASED ON THE HIGHER OF TYPE 3 AND TYPE 4 NON-RESIDENTIAL RRS
- EXTENT OF VOCs IN THE INTERMEDIATE WATER BEARING ZONE COMPLIANT WITH TYPE 5 RRS

Delineation Criteria Type 1 RRS for Detected VOCs in Groundwater (ug/L)	
1,1-Dichloroethene	7
cis-1,2-Dichloroethene	70
Trichloroethene	5
Vinyl Chloride	2

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.

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DISTRIBUTION AND EXTENT OF DETECTED CONSTITUENTS IN GROUNDWATER IN THE INTERMEDIATE WATER-BEARING ZONE

FIGURE 2.3-3

SCALE	AS SHOWN
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DWG. NO.	
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Georgia Environmental Protection Division
Land Protection Branch
Response and Remediation Program
Response Development Units 1 – 3

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Phone: 404-657-8600

Document Submittal Form

Instructions: This form should be completed and included with any document submitted to the Response and Remediation Program, Response Development Units 1 – 3, that is greater than 25 pages in length or that contains paper sizes larger than 11"x17". This includes Release Notifications and documents related to Hazardous Site Inventory and Voluntary Remediation Program sites. Contact Brownfield Unit staff for Brownfield submittal guidelines. Your cooperation helps to ensure that documents are filed correctly, completely, and efficiently.

Name of Document:	Response to November 30, 2017 EPD Comments
Date of Document:	January 31, 2018
Site Name:	Thermo King Corporation – Louisville, Georgia
Site ID Number:	HSI 10702/Parcel 0090-024

Document Submittal Checklist. Please certify that the submittal includes the following by checking each box as appropriate. Items 1 – 3 should be checked / included / certified for each submittal:

☒ 1. One paper copy of the document (double-sided is preferred)

☒ 2. Two compact discs (CDs), each containing an electronic copy of the document as a single, searchable, Portable Document Format (PDF) file. Only one CD is needed for Release Notifications. CDs should be labeled at a minimum with the following: 1) Name of Document, 2) Date of Document, 3) Site Name, and 4) Site Number. Any scanned images should have a resolution of at least 300 dpi and should be in color if applicable.

☒ 3. The electronic copies are complete, virus free, and identical to the paper copy except as described in Item 4 below.

☐ 4. (Optional) To reduce the size of the paper copy, certain voluminous information has been omitted from the paper copy and is included only with the electronic copies:

- ☐ laboratory data sheets
- ☐ manifests
- ☐ other: NA

I certify that the information I am submitting is, to the best of my knowledge and belief, true, accurate, and complete.

Signature: 

Name (printed): Rhonda N. Quinn

Date: 1/31/2017

Organization: Amec Foster Wheeler

Phone: 770-421-3400

Email: rhonda.quinn@amecfw.com

Receipt Date
(for EPD use only)