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April 20, 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

RE: Responses to March 12, 2018 EPD Comments
Thermo King Corporation - Louisville, Jefferson County, Georgia
HSI Site No. 10702 Tax Parcel 0090-024
Wood Project 6122-09-0322

Dear Ms. Daniels:

Wood Environment & Infrastructure Solutions, Inc., on behalf of Thermo King Corporation, is hereby submitting the attached Responses to the March 12, 2018 EPD Comments for the Thermo King Corporation in Louisville, Jefferson County, Georgia (HSI Site No. 10702, Tax Parcel 0090-024). The March 2018 comments are on the January 31, 2018 responses to the November 30, 2017 comments on the site's Voluntary Remediation Program Compliance Status Report. The response to the current comments are below and the requested soil investigation Work Plan is provided in Appendix A.

Comment #1: EPD Comment #1.a.: EPD is deferring evaluation of the revised compliance status certification statement(s) for soil until the soil investigation referenced in Comment #2 below has been completed and a revised Operation and Maintenance (O&M) Plan for proposed engineering controls has been submitted and approved by EPD. The groundwater compliance status certification statement(s) is acceptable.

Response to Comment #1:
The compliance status certification statement(s) will be revised after completion of the soil investigation.

Comment #2: EPD Comment #6: Wood's response to this EPD Comment, "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 Type 1 to 4 RRSs." EPD concurs with Ingersoll-Rand's decision to conduct an additional soil investigation. However:

a. The current proposed area of soil investigation does not address the detection of trichloroethene (TCE) in soil at concentrations exceeding the Type 1 through 4 RRS near the former south settling pond, at boring SB-112 [18-19 ft below ground surface (bgs)]. In addition, there are insufficient analytical results for 1,4-dioxane to verify compliance with applicable RRS in the same area. This is because: 1) the reported laboratory "detection limit" for 1,4-dioxane in the referenced SB-112 soil sample is greater than the applicable Type 1 through 4 RRS, and 2) many soil samples collected near the SB-112 location were not analyzed for 1,4-dioxane.

b. A milestone schedule for conducting the proposed investigation was not provided in the responses to EPD comments. Based on a conversation between Ms. Carolyn Daniels of EPD and Ms. Rhonda Quinn of Wood on March 6, 2018, it is EPD's understanding that Ingersoll-Rand and Wood are awaiting EPD's comments regarding the subject submittals before proceeding with the proposed soil investigation. Please contact Ms. Carolyn L. Daniels, P.G. of my office at your earliest convenience to arrange a time for a face-to-face meeting or conference call for this purpose. A short written work-plan with large scale figures showing close up views of the areas to be investigated should be submitted to EPD via email at least one week before the proposed meeting or conference call. The figures should clearly identity:

- *Existing site features (building walls, extent of concrete building slabs and /or asphalt/concrete pavement, etc.),*
- *Potential source locations such as former degreaser locations, settling ponds, etc.,*
- *Historical soil sampling locations with analytical results for 1,4-dioxane and TCE posted immediately adjacent to their associated sampling locations, and*
- *Proposed soil sampling locations.*

i. Please note when selecting soil sampling locations for the proposed investigation: Non-detections of 1,4-dioxane and/or TCE in soil that are based on laboratory reporting limits greater than the applicable Type 1 through 4 RRS are not acceptable for determining the presence of the referenced substances, nor may they be used to delineate the extent of the areas where compliance with Type 5 RRS is to be maintained through the use of engineering controls. EPD noted that the following soil samples, based on a preliminary review of Figures 2.3-1 A and -1 B submitted with your responses to EPD comments, had elevated laboratory reporting limits greater than applicable Type 1-4 RRSs:

- *1,4-Dioxane: SO-AOC3-2 (0-2 ft and 8-10 ft), HA-6 (1.2-2.0 ft), HA-7 (3-5 ft), Kd-8 (9 ft), Kd-9 (7, 9, and 10 ft), Kd-10 (3, 9, and 15 ft), Kd-11 (4 and 6 ft), and SB-112 (18-19 ft); and*
- *TCE: HA-2 (0.35-2.1 ft), Kd-1 (2 ft),and Kd-11 (4 ft)*

ii. EPD recommends that the proposed investigation be completed in sufficient time to submit a revised O&M Plan for EPD review by no later than June 29. 2018.

Response to Comment #2:
The primary issues raised by EPD in the March 12, 2018 letter relates to completing those tasks necessary so that a certification for compliance of site soils to Type 5 RRS

can be approved. Specifically, the March letter presents those issues that should be considered in the preparation of a work plan for additional soil sampling to identify areas where soil constituent concentrations exceed Types 1 through 4 RRS and; therefore, will be designated as a Type 5 RRS area requiring an engineering control (barrier) to prevent exposure to those soils and a revised O & M Plan to assure the integrity of the barrier is maintained.

Two areas were identified as potential concerns relative to certification of soil compliance. The first area is the central portion of the manufacturing building where solvent-based degreasers were used until 1997 to clean manufactured parts. The second area is identified as the former south settling pond where facility wastewaters were directed from 1970 to 1983.

Supplemental Investigation in Former Degreaser Area Inside the Building

A Work Plan to conduct additional soil sampling in the former degreasers area so as to identify the limits of the area where soil concentrations exceed Types 1 through 4 RRS and; therefore, will require an engineering control barrier to prevent exposure to these soils is presented in Appendix A. As noted in EPD's March letter, non-detections of 1,4-dioxane and/or TCE in soils that are based on laboratory reporting limits greater than the applicable Type 1 through Type 4 RRS will not be acceptable for determining the presence of the referenced constituents, nor may these results be used to delineate the extent of the areas where compliance with Type 5 RRS is to be maintained through the use of engineering controls.

As shown on Figures 2.3-1A and 2.3-1B in the January 31, 2018 responses, a relatively minor portion of the currently defined Type 5 RRS compliant area extends to existing paved areas adjacent to the exterior east and west sides of the building and a little to the north of the building into a grassed area. This Type 5 RRS area will require expansion of the engineering control into these areas. The objective of the proposed supplemental investigation will be to collect data that will reduce the overall area of the Type 5 RRS footprint and limit to the extent possible the Type 5 RRS covered area to within the building footprint.

The Work Plan in Appendix A presents procedures for drilling the proposed new borings; for soil sampling and analysis (constituents and procedures), location surveys, and boring abandonment.

Former South Settling Pond

- General Information

The former south settling pond ("pond") and the locations of borings drilled in this area to investigate the presence of constituents in surface and subsurface soils in the former pond area are shown on Figure 1. The pond was field-located by referencing its location to site features shown on a 1981 aerial photograph. The pond location as shown on Figure 1 is considered to be approximate because the pond was abandoned in 1983 and had been filled/covered by the time environmental investigations began in 2000. Documentation of pond construction details, pond closure, or the specific contents of the wastewater piped to the pond are unavailable. However, it is noted that the pond was in operation from 1970 until 1983 and that the primary solvent used at the site during this period was TCE. In 1988, five years after the pond was closed, the facility switched from TCE being the primary degreasing solvent to using TCA and its stabilizer 1,4-dioxane.

Ten borings were drilled in 2000 and 2003 as a part of investigations conducted in the vicinity of the pond. These were GW-E-13, SB-1 through SB-6, and SB-112, SB-113, and SB-116 (see Figure 1). Sixteen soil samples were collected at depths ranging from 0 – 2 feet to 40 – 42 feet. Five of the samples were collected from depths greater than 10 feet. The soils were analyzed for volatile organic compounds by 8260B; 1,4-dioxane was not reported as a site constituent until 2003.

- Results of Investigation in Former South Settling Pond Area

  The results of the analyses of samples collected from the former pond area are presented on Table 1.

- TCE

  In only one of the 16 soil samples (collected from SB-112 at a depth of 18-19 feet) was the Type 1 RRS of a constituent exceeded (560 µg/kg versus 500 µg/kg). The TCE concentration did comply with the Type 2 RRS (1800 µg/kg). The next highest TCE concentration was 130 (estimated) µg/kg, detected in boring SB-1. The median TCE concentration was 16 µg/kg. Considering the number and relatively close proximity of other pond area borings to SB-112 (Figure 1), it is considered unlikely that TCE is more than sporadically present in the former pond area at concentrations exceeding its Type 1 through Type 4 RRS and that the SB-112 result is atypical of the area. As such, it is Thermo King's opinion that since: 1) the presence of TCE at concentrations exceeding its Type1 through 4 RRS is atypical of soils in the former pond area and 2) the facility's Environmental Covenant requires that a risk assessment must be performed at the site prior to conducting soil disturbing activities, neither additional investigations in this area nor construction of an engineering control are necessary to provide for protection of human health or the environment.

- 1,4-Dioxane

  1,4-Dioxane was reported as being <u>non-detect</u> in the analyses of the 10 samples collected from the former pond area at detection limits ranging from <200 to <26,000 µg/kg. 1,4-Dioxane in only one sample (the 18-19-foot sample from boring SB-112) was reported as being non-detect at a concentration exceeding the Type 1 through Type 4 RRS (<26,000 µg/kg). 1,4-Dioxane was not analyzed in the six samples (SB-1 through SB-6) collected in early 2000, before site studies included the analysis for 1,4-dioxane. No constituents were detected in these six samples at concentrations exceeding Type 1 through Type 4 RRS. Considering that 1,4-dioxane is a stabilizer in TCA and that TCA was not used as a solvent cleaner at the site until 1988, five years after south pond operations were terminated, it is Thermo King's opinion that the absence of TCA and 1,4-dioxane in samples collected from the pond area is consistent with the history of their use at the site and that additional sampling for 1,4-dioxane is not warranted.

<u>Comment #3: EPD Comment #6c</u>: The response to this EPD comment is acceptable. Please ensure that monitoring well decommissioning and/or inspection activities are documented in future post-CSR monitoring/O&M reports that cover the time period(s) during which said activities are conducted.

Response to Comment #3:
Thermo King proposes to abandon the wells outlined in the January 31, 2018 responses during the second half of 2018 and will document in the subsequent annual report.

Comment #4: EPD Comment #7: EPD has not received a notification of intent to cancel the existing Financial Assurance instrument referenced in Wood's response to the original EPD Comment. The date for renewal of the existing instrument is May 5, 2018. The FA instrument itself states that said notification of intent to cancel should be provided to the Director no less than 120 days before the stated automatic renewal date. Please inform EPD of the status of the cancellation or renewal of the existing FA instrument.

Response to Comment #4:
Thermo King/Ingersoll Rand's financial institution submitted a letter to EPD, dated March 23, 2018, notifying EPD of the cancellation of the financial assurance for the Louisville facility.

Post-VRP CSR Monitoring Report
Comment #5: The inspection area for the engineering control used to maintain soil compliance with Type 5 RRS for 1,4-dioxane and TCE is not supported by existing soil analytical results (see Comment #2 above).

Response to Comment #5:
The inspection area for the engineering control used to maintain soil compliance with Type 5 RRS for 1,4-dioxane and TCE for the degreaser area will be revised based on the results of the proposed soil investigation. The revised inspection area will be shown in the revised O&M Plan and the 2018 annual monitoring and inspection report

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

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

A. David Alcott
Senior Associate Engineer

Attachments:
Table 1: Summary of Detected Constituents in South Pond Area
Figure 1: Former South Settling Pond Area
Appendix A: Work Plan for Soil Investigation at the Main Building to Better Define the Type 5 Risk Reduction Standards Area

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

TABLE

TABLE 1: SUMMARY OF DETECTED CONSTITUENTS IN SOUTH POND AREA

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 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	GW-E-13	GW-E-13
	Sample ID				SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SO-E-13	SO-E-13
	Sample Depth (ft. bgs)				10'-11'	1.5'-3.5'	5'-6'	8'-9'	8'-9'	0'-10'	0'-4'	14'-16'
	Date Sampled				2/3/2000	2/3/2000	2/3/2000	2/3/2000	2/3/2000	2/3/2000	10/9/2000	10/9/2000
Volatile Organic Compounds - SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<6.8	<5.1
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<6.8	<5.1
1,1-Dichloroethene		700	720	6,800	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<6.8	<5.1
1,4-Dioxane		500	500	500	NA	NA	NA	NA	NA	NA	<340	<260
Chloroform		3800	3,800	8,000	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<6.8	<5.1
cis-1,2-Dichloroethene		7,000	7,000	7,000	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<3.4	<2.6
Ethylbenzene		70,000	70,000	70,000	<5.9	<5.7	**360**	<6.2	<5.9	<5.7	<6.8	<5.1
Isopropylbenzene		22,000	22,000	62,000	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<6.8	<5.1
Naphthalene		100,000	100,000	100,000	<5.9	<5.7	<300	<6.2	<5.9	<5.7	<6.8	<5.1
Tetrachloroethene		500	500	500	**11**	**13**	<300	<6.2	**10**	**8.4**	<6.8	<5.1
Trichloroethene		500	1,800	1,800	**160 E**	**15**	<300	<6.2	**12**	**9.7**	<6.8	<5.1
m+p-Xylene		1,000,000	1,000,000	1,000,000	<5.9	<5.7	**1400**	**9.6**	<5.9	<5.7	<6.8	<5.1
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1: SUMMARY OF DETECTED CONSTITUENTS IN SOUTH POND AREA

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 Subsurface and Type 4 Non-Residential Risk Reduction Standards (ug/kg)	GW-E-13	SB-112	SB-112	SB-112	SB-113	SB-113	SB-113	SB-116
	Sample ID				SO-E-13	SB-112	SB-112	SB-112	SB-113	SB-113	SB-113	SB-116
	Sample Depth (ft. bgs)				38'-40'	0'-2'	18'-19'	38'-39'	0'-2'	4'-6'	40'-42'	0'-2'
	Date Sampled				10/9/2000	1/23/2003	1/23/2003	1/23/2003	2/3/2003	2/5/2003	2/5/2003	3/12/2003
Volatile Organic Compounds - SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
1,1,1-Trichloroethane		20,000	20,000	170,000	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
1,1-Dichloroethene		700	720	6,800	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
1,4-Dioxane		500	500	500	<460	<260	<26000	<270	<240	<250	<280	<220
Chloroform		3800	3,800	8,000	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
cis-1,2-Dichloroethene		7,000	7,000	7,000	<4.6	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
Ethylbenzene		70,000	70,000	70,000	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
Isopropylbenzene		22,000	22,000	62,000	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
Naphthalene		100,000	100,000	100,000	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
Tetrachloroethene		500	500	500	<9.2	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4
Trichloroethene		500	1,800	1,800	<9.2	**23**	**560**	**17**	<4.8	**9.4**	<5.7	<4.4
m+p-Xylene		1,000,000	1,000,000	1,000,000	<9.2	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	<5.1	<260	<5.4	<4.8	<5.1	<5.7	<4.4

Notes:

AOC	Area of Concern
E	Estimated concentration; result exceeds the calibration range
NA	Not analyzed for this constituent
µg/kg	micrograms per kilogram
ft. bgs	feet below ground surface
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

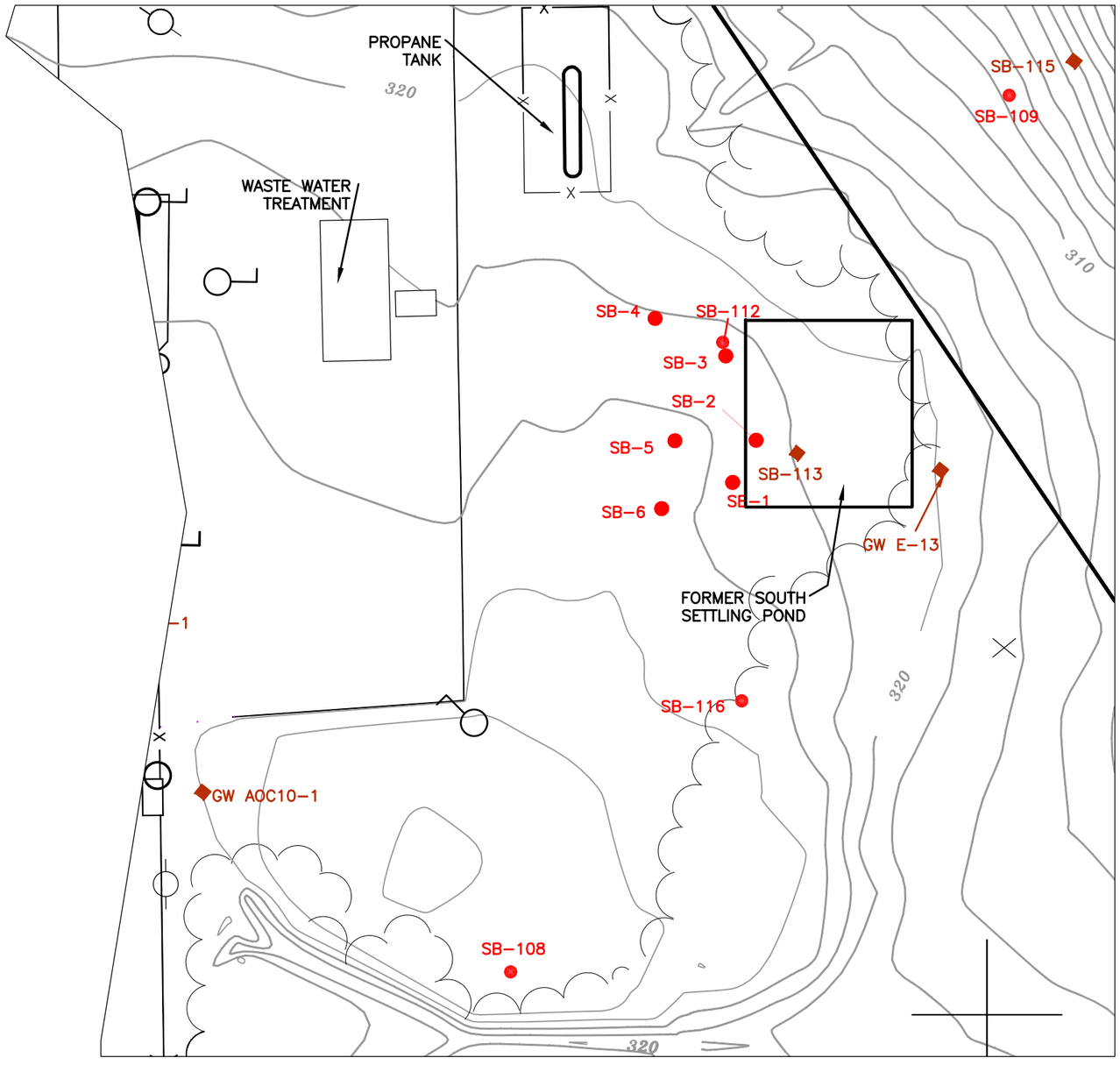
BOLD = Indicates detected concentration above the laboratory practical quantitation limit

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

FIGURE



LEGEND

- HA-1 / SB-105 — HAND-AUGER BORING OR DIRECT-PUSH BORING FOR SOIL SAMPLE FOR DELINEATION PURPOSES
- GW AOC3-1 — DIRECT-PUSH BORING FOR SOIL AND GROUNDWATER SAMPLING FOR DELINEATION PURPOSES

SCALE IN FEET

0 80 160

THERMO KING
LOUISVILLE, GEORGIA

wood. Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Road
Kennesaw, Georgia 30144 (770) 421-3400

FORMER SOUTH SETTLING POND AREA

JOB NO. 6122090322 FIGURE 1

PREPARED BY/DATE TG 3/27/2018
CHECKED BY/DATE ADA 3/27/2018

APPENDIX A
WORK PLAN FOR SOIL INVESTIGATION AT THE MAIN BUILDING TO BETTER DEFINE THE TYPE 5 RISK REDUCTION STANDARDS AREA

WORK PLAN FOR SOIL INVESTIGATION AT THE MAIN BUILDING TO BETTER DEFINE THE TYPE 5 RISK REDUCTION STANDARDS AREA

Thermo King Corporation
Louisville, Jefferson County, Georgia
HSI Site No. 10702

Prepared for:

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

Date: April 20, 2018

Prepared by:
Wood Environment & Infrastructure Solutions, Inc.
1075 Big Shanty Road NW, Suite 100, Kennesaw, Georgia 30144

Project No.: 6122-09-0322

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1.0 PROFESSIONAL GROUNDWATER 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 P.G. #1031

4-20-2018
Date

2.0 INTRODUCTION AND BACKGROUND

On March 10, 2011, the Thermo King facility was accepted into the Voluntary Remediation Program (VRP). Corrective measures conducted under the VRP consisted of:

- the installation of a rip-rap blanket over seeps where VOC concentrations exceeded In-Stream Water Quality Criteria (ISWQC),
- groundwater contaminant fate and transport modeling to demonstrate no off-property migration of impacted groundwater above drinking water standards,
- five years of groundwater monitoring to validate the model predictions,
- designation and subsequent inspection/maintenance of the floor slab as an exposure barrier to underlying soil impacts, and
- execution of an environmental covenant as an institutional control to limit potential exposure to contaminants.

A VRP CSR was prepared and submitted to EPD on March 10, 2016. EPD provided comments on the VRP CSR in correspondence dated November 30, 2017. A response to the November 30, 2017 comments was submitted to EPD on January 31, 2018 and included revised tables, figures and RRS certification and a proposed plan for well abandonment. On March 12, 2018, EPD issued comments on the January 31, 2018 responses. The March 12, 2018 letter requested a Work Plan for additional soil sampling in areas to be investigated, a schedule, and a proposed date and time for either a conference call or meeting to discuss the plan.

This Work Plan was prepared to present sampling locations and procedures for conducting an investigation of soils to better define the area compliant with the Type 5 Risk Reduction Standards (RRS). Soils in the vicinity of the three former degreasers located inside the building had soil concentrations above the Types 1 through 4 RRS, but were compliant with Type 5 RRS. Based on the soils data through 2005, the Type 5 RRS area is defined on Figures 2.3-1A and 2.3-1B in the January 31, 2018 responses to the November 30, 2017 EPD comment letter and is delineated by lines drawn to intersect existing locations with analytical results that are less than or equal Types 1 through 4 RRS. The Type 5 RRS area, as currently defined, covers the former degreaser areas and extends outside of the building to the north, west, and east (Figures 2.3-1A and 2.3-1B). To better define this Type 5 area and potentially reduce its footprint, additional soil samples will be collected and analyzed.

3.0 SOIL INVESTIGATION

Three degreasers were operated inside of the central portion of the manufacturing building from the 1960s to 1997. Trichloroethene (TCE) and later 1,1,1-trichloroethane (TCA) were the solvents used in degreasing operations. 1,4-Dioxane was added to the TCA as a stabilizer and is more persistent in soils than is the TCA. Soils in the vicinity of the degreasers were impacted with TCE, TCA, and 1,4-dioxane (Table A-1). The purpose of the proposed soil investigation is to collect data to better define and reduce the footprint of the limits of VOC-impacted soils with constituent concentrations compliant with the Type 5 RRS concentrations in areas associated with the former degreaser operations. A Type 5 RRS area requires an engineering control barrier to prohibit exposure to the soils and an O & M Plan to provide for annual inspections, maintenance and documentation of the continued integrity of the barrier. The following sections describe the proposed locations and sampling procedures to conduct the soil investigation.

3.1 Sampling Locations and Rationale for Selection

Previous sampling locations shown on Figure A-1 where constituents were detected at concentrations exceeding Types 1 through Type 4 RRS, or were reported as being non-detect at elevated detection limits, are designated in red. Conversely, sampling locations where constituents concentrations met the Type 1 through Type 4 RRS or were reported as being non-detect with detection limits meeting the Type 1 through 4 RRS are in green. The proposed sampling locations were elected to obtain data to reduce the size of the Type 5 RRS soil footprint. Prior to implementing new borings, the previous soil borings locations will be identified and marked. A surveyor will be used to locate the previous boring locations using previous surveyed coordinates.

Based on a review of the existing soils data, Thermo King proposes to drill and sample 8 soil borings, at the locations shown on Figure A-1. Five of the eight borings will be inside of the building. These five borings will be used to better define and reduce the limits the Type 5 RRS area to the north, west, and south of the degreaser areas.

Previous soil samples (Kd-9 to Kd-11) were collected adjacent to the interior east building wall and had VOC concentrations greater than the Types 1 through 4 RRS. The current delineation of the Type 5 RRS soils area extends about 65 feet outside of the building on the east side. Three borings will be drilled and sampled on the east exterior side of the building (Figure A-1) to collect data to allow the eastern limits of the Type 5 RRS to be moved to a point adjacent to the exterior of the building wall.

Each soil boring will be drilled to a total depth of 15 feet below ground surface. The boring depths were selected based on previous data indicating little to very limited impact to soils at a depth of 15 feet or deeper. Soil samples will be collected on a continuous basis from ground surface to boring termination. Soil samples for laboratory analysis will be collected at depths of 0 to 2 feet, 5 feet, 10 feet, and 15 feet.

3.2 Sampling Procedures and Analysis

A direct-push technology (DPT) rig will be used to advance the soil borings and to collect soil samples. Soil sampling will be conducted in general accordance with procedures described in USEPA Region IV SESDPROC-300-R3. Soil samples will be collected at each location using DPT methods employing core barrels with disposable acetate liners, as used in previous soil sampling

conducted at the site. Using the DPT sampling rig, the core barrel samplers will be advanced to the desired depth. The sample cores will be retrieved, opened, and the soil samples collected from the disposable liner using laboratory supplied containers (either EnCore® sample containers, or disposable syringes followed by extruding into pre-preserved VOC vials in accordance with USEPA method 5035). Additional volume of soil will be collected for moisture analysis as required by USEPA method 5035.

The soils will be inspected visually for staining or discoloration, the presence or absence of an odor will be noted, and the lithology of the soil samples will be described. The soil samples will also be screened with a photoionization detector (PID). All measurements and observations will be recorded on the appropriate field forms or logbooks. Field personnel will identify the location and depth of the sample and document the date and time the sample was obtained. If field screening results, elevated PID readings, staining and/or odor, indicate a VOC-impact, which may have VOC concentrations above the Type 1 through 4 RRS concentrations, the sampling locations will be stepped out and a new boring drilled and sampled.

The soil samples will be packaged with ice and shipped under chain-of-custody protocol to the laboratory for analysis. Laboratory analysis will be performed using SW-846 Method 8260B for the site-specific list of volatile organic compounds, including 1,4-dioxane (Table A-2) and moisture determination (for soil).

Upon completion of soil sampling, those borings will be abandoned by backfilling with bentonite chips and hydrating. The down-hole sampling tools will be decontaminated between sample locations. Investigation-derived waste (soils and decontamination fluids) will be contained in drums, labeled, profiled, and disposed of properly off-site.

The new boring locations will be surveyed by a licensed surveyor for horizontal location and ground surface elevation. The surveyed borings will be added to existing site maps.

4.0 REPORTING

A data report will be prepared describing the work performed. The report will include a description of the activities conducted, a summary of the field and laboratory analytical data, an evaluation of the results, and laboratory analytical reports and figures presenting the revised Type 5 RRS area.

The Operation and Maintenance (O&M) Plan presented in the VRP Compliance Status Report will be revised to show the new Type 5 RRS soils area. If required, the revised O&M Plan will include activities necessary to inspect and maintain the paved area delineated by the soil investigation as the new Type 5 RRS soils area on the exterior east side of the building.

The report and revised O&M Plan will be submitted to EPD, following Thermo King's review and approval.

5.0 SCHEDULE

Figure A-2 shows the proposed schedule for implementing the soil investigation. Implementation of the soil investigation will be initiated upon EPD's approval of this Work Plan and subcontractor availability, and dependent on weather conditions and access considerations.

TABLES

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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-AOC 1-1	GW-AOC 1-1	GW-AOC 1-1	GW-AOC 3-1	GW-AOC 3-1	GW-AOC 3-1	GW-AOC 3-2	GW-AOC 3-2
	Sample ID				SO-AOC 1-1	SO-AOC 1-1	SO-AOC 1-1	SO-AOC 3-1	SO-AOC 3-1	SO-AOC 3-1	SO-AOC 3-2	SO-AOC 3-2
	Sample Depth (ft. bgs)				0'-2'	29'-31'	38'-40'	0'-2'	29'-31'	38'-40'	0'-2'	8'-10'
	Date Sampled				10/31/2000	10/31/2000	10/31/2000	10/30/2000	11/1/2000	11/1/2000	10/30/2000	10/30/2000
Volatile Organic Compounds SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
1,1,1-Trichloroethane		20,000	20,000	170,000	<210	**86**	**85**	<230	<5.3	<5.2	<220	<200
1,1-Dichloroethene		700	720	6,800	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
1,4-Dioxane		500	500	500	**250,000**	<360	<260	**12,000**	<260	<260	<11000	<10000
Chloroform		3800	3,800	8,000	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
cis-1,2-Dichloroethene		7,000	7,000	7,000	<100	<3.6	<2.6	<120	<2.6	<2.6	**600**	**190**
Ethylbenzene		70,000	70,000	70,000	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
Isopropylbenzene		22,000	22,000	62,000	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
Naphthalene		100,000	100,000	100,000	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
Tetrachloroethene		500	500	500	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
Trichloroethene		500	1,800	1,800	<210	<7.2	<5.2	<230	<5.3	<5.2	**4100**	**980**
m+p-Xylene		1,000,000	1,000,000	1,000,000	<210	<7.2	<5.2	<230	<5.3	<5.2	<220	<200
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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-AOC 3-2	GW-AOC 8-1	GW-AOC 8-1	GW-AOC 8-1	GW-AOC 8-2	GW-AOC 8-2	GW-AOC 8-2	HA-1
	Sample ID				SO-AOC 3-2	SO-AOC-8-1	SO-AOC-8-1	SO-AOC-8-1	SO-AOC 8-2	SO-AOC 8-2	SO-AOC 8-2	HA-1
	Sample Depth (ft. bgs)				38'-40'	0'-2'	14'-16'	38'-40'	0'-2'	18'-20'	38'-40'	0.4'-2.1'
	Date Sampled				10/30/2000	10/11/2000	10/11/2000	10/11/2000	10/12/2000	10/12/2000	10/12/2000	3/27/2003
Volatile Organic Compounds SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
1,1,1-Trichloroethane		20,000	20,000	170,000	<5.2	<4.6	**5.4**	<6.6	<4.1	<4.4	<5.7	**24**
1,1-Dichloroethene		700	720	6,800	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
1,4-Dioxane		500	500	500	<260	<230	<240	<330	<200	<220	<280	<290
Chloroform		3800	3,800	8,000	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
cis-1,2-Dichloroethene		7,000	7,000	7,000	<2.6	<2.3	**5.6**	<3.3	<2.0	**4.0**	<2.8	<5.9
Ethylbenzene		70,000	70,000	70,000	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
Isopropylbenzene		22,000	22,000	62,000	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
Naphthalene		100,000	100,000	100,000	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
Tetrachloroethene		500	500	500	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	<5.9
Trichloroethene		500	1,800	1,800	<5.2	**49**	**78**	<6.6	**12**	**31**	<5.7	**22**
m+p-Xylene		1,000,000	1,000,000	1,000,000	<5.2	<4.6	<4.8	<6.6	<4.1	<4.4	<5.7	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	<5.9

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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-105
	Sample ID				HA-2	HA-3	HA-4	HA-5	HA-6	HA-7	HA-8	SB-105
	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'	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	1/22/2003
Volatile Organic Compounds SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<1800	**26**	<5.2	<4.0	<230	<290	<5.9	<5.2
1,1,1-Trichloroethane		20,000	20,000	170,000	<1800	**180**	**46**	<4.0	<230	<290	<5.9	<5.2
1,1-Dichloroethene		700	720	6,800	<1800	**23**	<5.2	<4.0	<230	<290	<5.9	**9.4**
1,4-Dioxane		500	500	500	**1,500,000**	**14,000 E**	**1,900**	<200	<11000	<14000	<290	<260
Chloroform		3800	3,800	8,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.2
cis-1,2-Dichloroethene		7,000	7,000	7,000	<1800	<6.8	<5.2	**6**	<230	<290	<5.9	<5.2
Ethylbenzene		70,000	70,000	70,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.2
Isopropylbenzene		22,000	22,000	62,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.2
Naphthalene		100,000	100,000	100,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.2
Tetrachloroethene		500	500	500	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.2
Trichloroethene		500	1,800	1,800	<1800	**120**	**47**	**110**	**660**	**800**	<5.9	**10**
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<1800	<6.8	<5.2	<4.0	<230	<290	<5.9	<5.2

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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-105	SB-105	SB-114	SB-114	SB-114	Kd-1	Kd-1	Kd-2
	Sample ID				SB-105	SB-105	SB-114	SB-114	SB-114	Kd-1	Kd-1	Kd-2
	Sample Depth (ft. bgs)				11'-12'	37'-38'	0'-2'	22'-24'	42'-44'	2'	4'	8'
	Date Sampled				1/22/2003	1/22/2003	2/5/2003	2/5/2003	2/5/2003	4/12/2005	4/12/2005	4/12/2005
Volatile Organic Compounds SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
1,1,1-Trichloroethane		20,000	20,000	170,000	**43**	<5.8	<4.8	<4.9	<5.2	<2600	<2600	**2300**
1,1-Dichloroethene		700	720	6,800	**31**	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
1,4-Dioxane		500	500	500	<250	<290	<240	<250	<260	**3,600,000**	**2,800,000**	**270,000**
Chloroform		3800	3,800	8,000	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
cis-1,2-Dichloroethene		7,000	7,000	7,000	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
Ethylbenzene		70,000	70,000	70,000	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
Isopropylbenzene		22,000	22,000	62,000	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
Naphthalene		100,000	100,000	100,000	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	**310**
Tetrachloroethene		500	500	500	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250
Trichloroethene		500	1,800	1,800	**53**	<5.8	**130**	<4.9	<5.2	<2600	<2600	**2600**
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<5.0	<5.8	<4.8	<4.9	<5.2	<2600	<2600	<250

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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)	Kd-3	Kd-3	Kd-4	Kd-4	Kd-5	Kd-7	Kd-8	Kd-9
	Sample ID				Kd-3	Kd-3	Kd-4	Kd-4	Kd-5	Kd-7	Kd-8	Kd-9
	Sample Depth (ft. bgs)				3'	4'	2'	11'	3'	3'	9'	7'
	Date Sampled				4/12/2005	4/12/2005	4/12/2005	4/12/2005	4/12/2005	4/13/2005	4/13/2005	4/13/2005
Volatile Organic Compounds SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<280	<260	**6**	**15**	**6.4**	<5.3	<260	<260
1,1,1-Trichloroethane		20,000	20,000	170,000	**320**	**1100**	**130**	**410 E**	**250 E**	<5.3	<260	<260
1,1-Dichloroethene		700	720	6,800	<280	<260	**19**	**50**	**51**	<5.3	<260	<260
1,4-Dioxane		500	500	500	**290,000**	**220,000**	**650**	<240	**8,600**	<260	<13000	<13000
Chloroform		3800	3,800	8,000	<280	<260	<5.5	<4.8	<6.1	<5.3	<260	<260
cis-1,2-Dichloroethene		7,000	7,000	7,000	<280	<260	<5.5	**8.1**	<6.1	**8.3**	<260	<260
Ethylbenzene		70,000	70,000	70,000	<280	<260	<5.5	<4.8	<6.1	<5.3	<260	<260
Isopropylbenzene		22,000	22,000	62,000	<280	<260	<5.5	<4.8	<6.1	<5.3	<260	<260
Naphthalene		100,000	100,000	100,000	<280	<260	<5.5	<4.8	<6.1	<5.3	<260	<260
Tetrachloroethene		500	500	500	<280	<260	<5.5	<4.8	<6.1	<5.3	<260	<260
Trichloroethene		500	1,800	1,800	**280**	**890**	**140**	**240 E**	**200**	**56**	**460**	**780**
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<280	<260	<5.5	<4.8	<6.1	<5.3	<260	<260

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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)	Kd-9	Kd-9	Kd-10	Kd-10	Kd-10	Kd-10	Kd-10	Kd-11
	Sample ID				Kd-9	Kd-9	Kd-10	Kd-10	Kd-10	Kd-10	Kd-10	Kd-11
	Sample Depth (ft. bgs)				9'	10'	3'	9'	13'	15'	17'	4'
	Date Sampled				4/13/2005	4/13/2005	4/13/2005	4/13/2005	4/13/2005	4/13/2005	4/13/2005	4/13/2005
Volatile Organic Compounds SW8260B - (µg/kg)												
1,1,2-Trichloroethane		500	500	500	<260	<300	<290	<290	<5.9	<260	<5.3	<280
1,1,1-Trichloroethane		20,000	20,000	170,000	<260	<300	<290	<290	**14**	<260	**13**	<280
1,1-Dichloroethene		700	720	6,800	<260	<300	<290	<290	**11**	<260	**6.1**	<280
1,4-Dioxane		500	500	500	<13000	<15000	<14000	<15000	<300	<13000	<270	<14000
Chloroform		3800	3,800	8,000	<260	<300	<290	<290	**11**	<260	<5.3	<280
cis-1,2-Dichloroethene		7,000	7,000	7,000	<260	<300	**380**	**300**	**150**	<260	**41**	<280
Ethylbenzene		70,000	70,000	70,000	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Isopropylbenzene		22,000	22,000	62,000	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Naphthalene		100,000	100,000	100,000	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Tetrachloroethene		500	500	500	<260	<300	<290	<290	<5.9	<260	<5.3	<280
Trichloroethene		500	1,800	1,800	**1000**	**650**	**1800**	**1800**	**810 E**	**830**	**340 E**	**1700**
m+p-Xylene		1,000,000	1,000,000	1,000,000	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes		1,000,000	1,000,000	1,000,000	<260	<300	<290	<290	<5.9	<260	<5.3	<280

TABLE A-1: SUMMARY OF DETECTED CONSTITUENTS IN DEGREASER AREA

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)	Kd-11	Kd-12	Kd-12
	Sample ID				Kd-11	Kd-12	Kd-12
	Sample Depth (ft. bgs)				6'	9'	10'
	Date Sampled				4/13/2005	4/13/2005	4/13/2005
Volatile Organic Compounds SW8260B - (µg/kg)							
1,1,2-Trichloroethane		500	500	500	<360	<5	<5.9
1,1,1-Trichloroethane		20,000	20,000	170,000	<360	**6.1**	<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
Isopropylbenzene		22,000	22,000	62,000	<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**
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

Notes:

AOC	Area of Concern
E	Estimated Concentration; result exceeds the calibration range
GW	Ground Water
NA	Not analyzed for this constituent.
µg/kg	micrograms per kilogram
ft. bgs	feet below ground surface
	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

TABLE A-2: LIST OF SITE-SPECIFIC VOLATILE ORGANIC COMPOUNDS

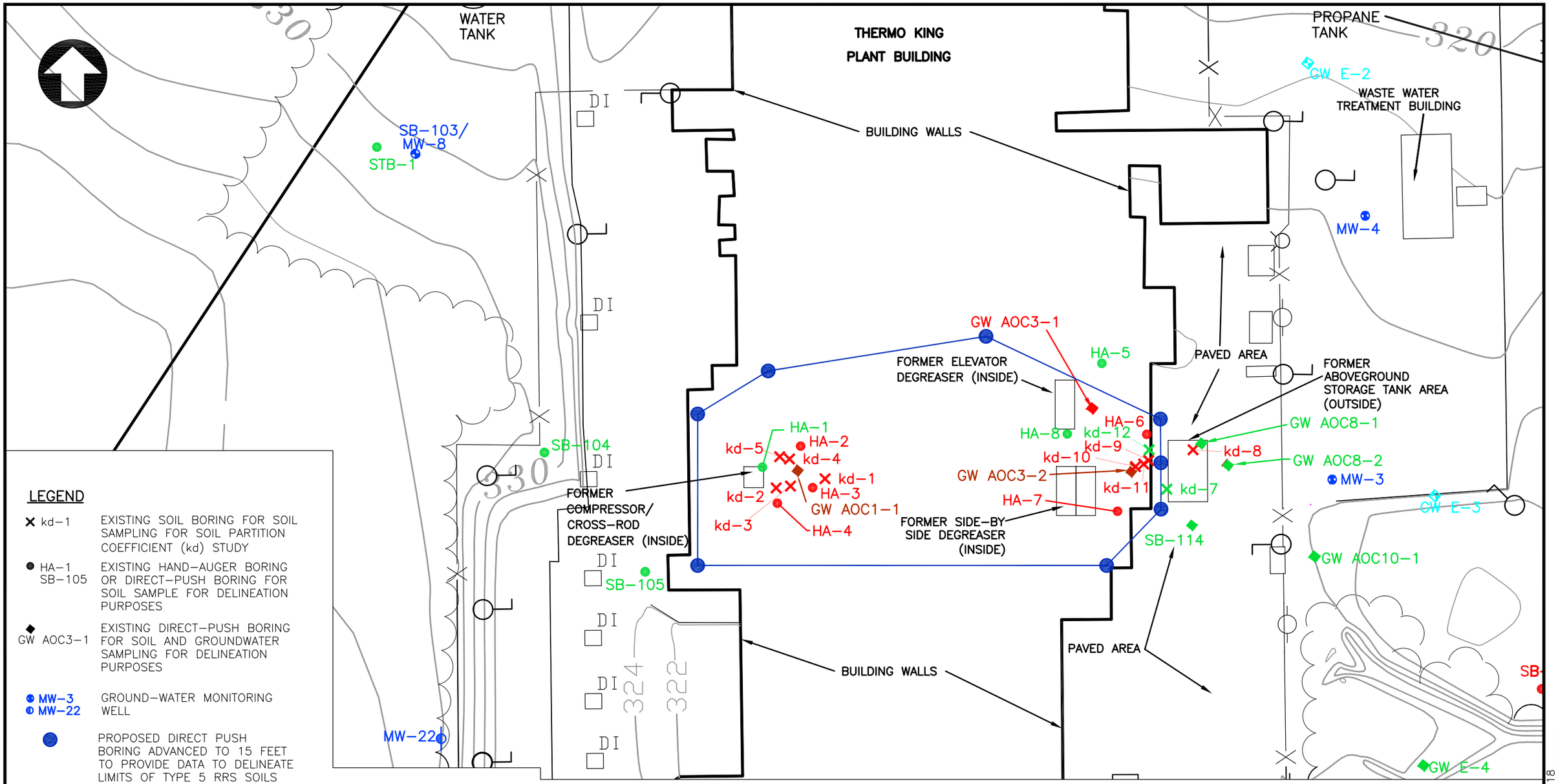
VOLATILE ORGANIC COMPOUNDS (VOCs) USEPA Method 8260B	Laboratory Practical Quantitation Limit (ug/KG)
Benzene	5
Bromobenzene	5
Bromochloromethane	5
Bromodichloromethane	5
Bromoform	5
Bromomethane	10
n-Butylbenzene	5
sec-Butylbenzene	5
tert-Butylbenzene	5
Carbon tetrachloride	5
Chlorobenzene	5
Chlorodibromomethane (Dibromochloromethane)	5
Chloroethane	10
Chloroform	5
Chloromethane	10
2-Chlorotoluene	5
4-Chlorotoluene	5
1,2-Dibromo-3-chloro-propane	5
1,2-Dibromoethane	5
Dibromomethane	5
1,2-Dichlorobenzene	5
1,3-Dichlorobenzene	5
1,4-Dichlorobenzene	5
Dichlorodifluoromethane	10
1,1-Dichloroethane	5
1,2-Dichloroethane	5
1,1,-Dichloroethene	5
cis-1,2-Dichloroethene	5
trans-1,2-Dichloroethene	5
1,2-Dichloropropane	5
1,3-Dichloropropane	5
2,2-Dichloropropane	5
1,1-Dichloropropene	5
Ethylbenzene	5
Hexachlorobutadiene	5
Isopropylbenzene	5
p-Isopropyltoluene	5
Methylene chloride	20
Naphthalene	5
n-propylbenzene	5
Styrene	5
1,1,1,2-Tetrachloroethane	5

TABLE A-2: LIST OF SITE-SPECIFIC VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANIC COMPOUNDS (VOCs) USEPA Method 8260B	Laboratory Practical Quantitation Limit (ug/KG)
1,1,2,2-Tetrachloroethane	5
Tetrachloroethene	5
Toluene	5
1,2,3-Trichlorobenzene	5
1,2,4-Trichlorobenzene	5
1,1,1-Trichloroethane	5
1,1,2-Trichloroethane	5
Trichloroethene	5
Trichlorofluoromethane	5
1,2,3-Trichloropropane	5
1,2,4-Trimethylbenzene	5
1,3,5-Trimethylbenzene	5
Vinyl Chloride	10
Total Xylenes	10
1,4-Dioxane	150

FIGURES

J:\Thermo King\MARCH 2018\PROPOSED SITE MAP 1a.dwg – Layout1 04/20/2018 8:40am Tonya.Gladstone



LEGEND

× kd–1	EXISTING SOIL BORING FOR SOIL SAMPLING FOR SOIL PARTITION COEFFICIENT (kd) STUDY
● HA–1 SB–105	EXISTING HAND–AUGER BORING OR DIRECT–PUSH BORING FOR SOIL SAMPLE FOR DELINEATION PURPOSES
◆ GW AOC3–1	EXISTING DIRECT–PUSH BORING FOR SOIL AND GROUNDWATER SAMPLING FOR DELINEATION PURPOSES
⊕ MW–3 ◐ MW–22	GROUND–WATER MONITORING WELL
●	PROPOSED DIRECT PUSH BORING ADVANCED TO 15 FEET TO PROVIDE DATA TO DELINEATE LIMITS OF TYPE 5 RRS SOILS
●	LOCATION WHERE ONE OR MORE CONSTITUENTS EXCEED TYPE 1 THROUGH TYPE 4 RRS
●	LOCATION WHERE ALL CONSTITUENTS ARE COMPLIANT WITH TYPE 1 THROUGH TYPE 4 RRS

SCALE IN FEET

0 80 160

THERMO KING
LOUISVILLE, GA.

wood. Environment & Infrastructure Solutions, Inc.

1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421–3400

PROPOSED SOIL BORING LOCATIONS – INVESTIGATION FOR TYPE 5 RRS COMPLIANCE

JOB NO. 6122090322 FIGURE A–1

PREPARED BY/DATE TG 3/27/2018
CHECKED BY/DATE ADA 3/27/2018

FIGURE A-2: ESTIMATED SCHEDULE

Activity	Duration	Estimated Start	Estimated Completion	Months	MAY									JUNE										JULY									
				Weeks	1	5	6	#	#	#	#	#	#	1	2	3	9	#	#	#	#	#	#	1	7	8	#	#	#	#	#	#	#
Pre-mobilization	2-3 weeks	Upon EPD's approval of this Work Plan			X																											
Location and marking of previous soil sampling locations	1 day	About 5/14/2018	5/15-16/2018																													
Utility locating and marking	1 day	About 5/14/2018	5/15-16/2018																													
Drilling and sampling soil borings	2-3 days	About 5/15/2018	5/15-17/2018																													
Surveying new borings	1 day	5/18/2018 or week following	5/25/2018																													
Laboratory analysis	2-3 weeks	5/18/2018	6/11/2018																													
Data Evaluation and Report Preparation and Revision of O&M Plan for Engineering Controls	4 weeks	6/11/2018	7/13/2018																							X						

Notes:
Dates shown are weeks starting on Sundays and ending on Saturdays
X = milestones for beginning and ending activities
Implementation of the soil investigation will be initiated upon EPD's approval of this Work Plan and subcontractor availability, and dependent on weather conditions and access considerations.