

Georgia Department of Natural Resources

Environmental Protection Division-Land Protection Branch

2 Martin Luther King Jr., Dr., Suite 1054 East, Atlanta, Georgia 30334

(404) 657-8600; Fax (404) 657-0807

Judson H. Turner, Director

February 3, 2016

VIA US MAIL and EMAIL

Ingersoll-Rand Company

c/o Mr. Mike Goldstein

Global Remediation and Transaction Manager

800-E Beaty Street

Davidson, NC 28036

Re: Voluntary Remediation Program (VRP) Progress Reports #3 through #9 (dated September 10, 2012 through September 9, 2015)/Responses to the July 16, 2012 EPD Comments (in Progress Report #3)
Thermo King Corporation Site, HSI Site No. 10702, Tax Parcel 0090-024
Louisville, Jefferson County, Georgia

Dear Mr. Goldstein:

The Georgia Environmental Protection Division (EPD) has reviewed the subject submittals prepared and submitted by Amec Foster Wheeler Environment & Infrastructure, Inc., (Amec) and its predecessors on behalf of Thermo King Corporation (Thermo King) and/or Ingersoll-Rand Company (Ingersoll-Rand), the current owner of the property. EPD has the following comments:

RESPONSES TO JULY 16, 2012 EPD COMMENTS (APPENDIX A OF PROGRESS REPORT #3):

EPD addressed the responses to Comments #3, 8 through 12, and 15 of the July 16, 2012 letter in an email sent to your attention on January 28, 2016. Furthermore, EPD has no comments at this time regarding the responses to Comments #1, 4, 6, 13, 14, and 17 in the July 16, 2012 EPD letter. However, please find EPD's comments regarding the responses to the remaining July 16, 2012 comments below which reference the July 2012 comments by the numbers assigned at that time:

1. **Response to EPD Comment #2:** The requested revised cross-section and close-up portion of the cross-section were provided in Progress Report #3. However, some important information was not shown and should be included on cross-sections provided in future submittals:
 - a. Analytical results for groundwater, seep water, and surface water samples collected during the most recent monitoring event.
 - b. Isoconcentration contour lines depicting the "delineated" and non-compliant [in relation to appropriate human and ecological cleanup standards] areal extents of impacted groundwater (depicted by individual impacted aquifer zone), seep water, and surface water as appropriate.
 - c. Soil boring and sample intervals intersected by the line of cross-section. Ideally, soil analytical results should be posted as well. Analytical results representing soil no longer *in-situ* should be clearly identified as such. Soil sample analytical results should also be compared to appropriate delineation and cleanup standards.
 - d. Source areas intersected by the cross-sections including settling ponds, degreasing areas, *etc.*
 - e. Points of exposure and receptors as relevant (*e.g.*, hypothetical drinking water well, *etc.*).
2. **Response to EPD Comment #5:** EPD concurs with the revised Type 2 and 4 Risk Reduction Standards (RRS) for *cis*-1,2-Dichloroethene (*cis*-1,2-DCE) and chloroform in soil as presented on Table B-1 provided in Progress Report #3. EPD previously concurred with the remainder of the RRS for soil as summarized on the referenced table. The Compliance Status Report (CSR) to be submitted in March 2016 should include the following to justify proposed remedial actions, including the dimensions and locations of areas for which engineering and/or institutional controls

are to be implemented:

- a. A figure showing all historical soil sampling locations with: 1) analytical results for soil samples representing *in-situ* conditions at the site (this includes historical data that does not have later confirmation data) and 2) isoconcentration lines representing the delineation standards, those areas not in compliance with residential RRS (highest values between Type 1 and Type 2 RRS), and those areas not in compliance with non-residential RRS (highest values between Type 3 and Type 4 RRS).
 - b. A table similar to Table 6.1 in the December 22, 2010 Addendum to the VRP Application which compares: 1) historical maximum contaminant concentrations detected in soil and 2) maximum contaminant concentrations for soil samples representing current *in-situ* soil conditions if remedial actions such as excavation have occurred with subsequent confirmation samples.
3. **Response to EPD Comment #7:** This comment has been adequately addressed with the most recent version of the environmental covenant submitted on October 30, 2015 for the Director's signature. The covenant will be further addressed under separate cover if necessary.
 4. **Response to EPD Comment #16:** The depth to pump intake was not recorded on several of the field sampling logs provided in the subject progress reports. Please ensure that this information is recorded on field sampling logs provided in future submittals. Furthermore, the information referenced in Comment #7.a of this letter should also be included on future field sampling logs.

PROGRESS REPORTS #3 THROUGH 9:

5. **Conceptual Site Model (CSM):** A complete, updated CSM should be included with the CSR to be submitted in March 2016. The CSM should summarize all the information (including figures and tables) required by §391-3-19-.06(3)(b)2. and 3. of the Georgia Rules for Hazardous Site Response (the Rules) and the following:
 - a. Cross-sections provided in the Voluntary Investigation and Remediation Plan should be updated to include new information acquired since their last submittal.
 - b. Figures summarizing the most recent soil, groundwater, seep water, and surface water analytical results separated according to environmental media. Groundwater results should be separated according to water-bearing zones. Seep water and surface water results should be included with the Upper Water-Bearing Zone (UWBZ) groundwater results. Isoconcentration contours indicating the current: 1) delineated extent of contamination, 2) delineated extent of contamination greater than residential RRS, and 3) delineated extent of contamination greater than non-residential RRS should be superimposed on the soil and groundwater analytical summary figures. Surface water and seep water analytical results exceeding the Georgia In-Stream Water Quality Standards (if any), should be clearly identified on the UWBZ isoconcentration groundwater map.
 - c. Tables summarizing the final approved delineation standards and cleanup standards with the criteria for selection clearly identified.
 - d. A figure depicting the closest potential receptors in relation to the contamination at the site.
6. **Monitoring and Maintenance Plan:** Pursuant to §391-3-19-.07(10)(b) of the Rules, compliance with Type 5 RRS requires long-term monitoring and maintenance, as appropriate for implemented remedial measures. The CSR due in March 2016 should include a proposed monitoring and maintenance (M&M) plan. The M&M plan should include provisions for monitoring and maintenance of engineering controls (including the building slab and rip-rap blanket), groundwater/seep monitoring, and reporting to EPD.

7. **Field Procedures:** The following comments refer to field methods described specifically in Progress Report #9; however, many of these comments are also applicable to those field methods described and documented in the remaining subject submittals.
- a. Section 3.1.2 of the Progress Report #9 states, “*Low flow/low stress purging methodology employing bladder pumps and a peristaltic pump was used to purge and sample the monitoring wells in general accordance with USEPA Region 4 Science and Ecosystem Support Division (SESD) Groundwater Sampling Procedure SESDPROC-301-R3*”. EPD assumes that the referenced purging method is the Traditional Multiple Volume Purge Method. Please confirm the purging method used as described by *SESDPROC-301-R3*. Future field sampling logs should include the additional information referenced below:
 - i. **Pump Type:** The narrative of the report states that either a bladder pump or peristaltic pump was used at each sampling location. However, the specific type of pump used at each location was not indicated on the associated field sampling logs.
 - ii. **Sample Collection Method:** A description of the method by which the final water samples were withdrawn from the wells and placed into sample containers (i.e., peristaltic pump with vacuum jug, peristaltic pump using the “straw method”, pumped directly into containers using a downhole pump, etc.).
 - iii. **Composition of sampling equipment:** Note that volatile organic compound (VOC) analytical results for groundwater samples not collected with Teflon®, Teflon®-lined, or properly decontaminated stainless steel equipment may not be used to demonstrate achievement of contaminant plume delineation and/or compliance with RRS. Furthermore, if sampling with a bladder pump, the pump bladder composition should also be specified and should be consistent with the composition of the tubing.
 - b. The “low flow/low stress” purge method typically requires the placement of the pump or pump intake immediately below the measured water level with the intake lowered as necessary during purging. The placement of the pump intake near the middle of the submerged portion of the screened interval when utilizing the referenced purge method is acceptable only if water levels are maintained within ± 0.3 ft during purging and sample collection methods do not require stopping the pump and removing the tubing and/or pump after purging before sampling.
 - c. Future submittals should include a description of field equipment decontamination procedures implemented before and after use. If location-dedicated equipment (e.g., disposable tubing and bladders, etc.) are used, it should be stated within the narrative and associated field logs.
8. **Laboratory Certifications:** Please provide documentation (including effective dates) of laboratory certifications for the analysis of soil, groundwater, seep water, and surface water samples.
9. **Document Submittal Format:** Please refer to the enclosed document submittal format guidelines for future submittals. Notably, electronic copies should be submitted on two labeled compact disks in jewel cases and a signed certification page should be included stating that the electronic copy is complete, identical to the paper copy, and virus free.

In addition to the comments above, EPD provided feedback regarding the: 1) environmental covenant received October 30, 2015, 2) May 4, 2015 letter regarding financial assurance for remedial efforts, and 3) Amec’s groundwater modeling efforts during a conference call on January 21, 2016. Additional comments regarding groundwater modeling were provided *via* email on January 28, 2016 as stated earlier in this letter. The comments provided by EPD should be addressed in the CSR which is due by March 10, 2016.

Please contact Ms. Carolyn L. Daniels, P.G. of my office at 404-657-8646 if you have any questions regarding this letter.

Sincerely,



David Hayes
Acting Unit Coordinator
Response and Remediation Program

c: Rhonda Quinn and Gregory Wrenn, Amec (email)
Encl: RRP Document Submittal Format
File: 199-0010 (VRP)

Response and Remediation Program Document Submittal Format

All documents more than 25 pages in length shall be submitted as one paper copy and two compact disc (CD) copies with the documents in searchable (i.e., tagged) Portable Document Format (PDF). A signed certification page must be included in the CD copies. The certification page states that the electronic copy is complete, identical to the paper copy, and virus free.

All documents currently in electronic format should be converted into the searchable PDF format. All documents not available electronically and pages that contain signatures, initials, or other information not in the electronic copy should be scanned into a searchable PDF format including the signed certification page. Scanning should be at 200 dpi with any documents requiring color being scanned in color.

The document should be broken down into multiple searchable PDF files along the following guidelines with the file name referenced in the table of content.

Table of Contents

Signature / Certification pages

Main body of document

Each Attachment (Appendices, Tables, Figures, Reports, etc.)

For ease of posting on EPD's web page, all Voluntary Remediation Program CD submittals should also contain the entire document in a single PDF file, identical to the paper copy, in addition to the multiple searchable PDF files listed above.

The CDs shall be enclosed in a jewel case. The CD shall be labeled with the following information written on the CD in indelible ink or affixed to the CD with an adhesive CD label.

Site Name

Site Address

HSI Number

City

County

Document Name

Document Date