400238

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SITE ASSESSMENT
REMEDIATION &
REVITALIZATION

Soil Assessment Work Plan Addendum TCE AST Pad

for

Honea Path Plant
415 Brick Mill Road
Honea Path, South Carolina 29654

Site ID No. 400238

AEM Project No. 1320-1602

May 30, 2017

Prepared For:

Ingersoll Rand
800-E Beaty Street
Davidson, North Carolina 28036

Prepared By:

ATLANTA ENVIRONMENTAL MANAGEMENT, INC.
Environmental Consulting, Engineering, Hydrogeologic Services
2580 Northeast Expressway • Atlanta, Georgia 30345
Office (404) 329-9006 • Fax (404) 329-2057

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Atlanta Environmental Management, Inc.
Environmental Consulting, Engineering, Hydrogeologic Services

May 30, 2017

Jan Trent
Hydrogeologist
State Remediation Section
Site Assessment, Remediation &
Revitalization Division
Bureau of Land and Waste Management
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Re: Soil Assessment Work Plan Addendum TCE AST Tank Pad
Honea Path Plant (BLWM ID# 400238)
415 Brick Mill Road, Honea Path, South Carolina
AEM Project No. 1320-1602

Dear Ms. Trent:

On behalf of Ingersoll Rand, please find enclosed one electronic copy (on computer disc) and one hardcopy of the Soil Assessment Work Plan for the TCE AST Tank Pad located at the Ingersoll Rand facility in Honea Path, South Carolina.

If you need anything else or have any questions, please call us at (404) 329-9006.

Sincerely,

Atlanta Environmental Management, Inc.

Leona Miles, CHMM
Senior Project Manager

Michael Brock
Vice President

/krf

cc: Michael Goldstein (via e-mail)
Janet Hart (AEM)

Enclosures

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Soil Assessment
Work Plan Addendum
TCE AST Pad

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SECTION 1.0
INTRODUCTION

This *Soil Assessment Work Plan Addendum* (Work Plan) has been developed in accordance with the South Carolina Department of Health and Environmental Control (DHEC) request for additional soil assessment, dated March 21, 2017, to define the extent of soil contamination near the former trichloroethene (TCE) aboveground storage tank (AST) pad located at the Honea Path Plant. The Honea Path Plant is located at 415 Brick Mill Road, Honea Path, South Carolina (see Attachment A).

1.1 SITE DESCRIPTION

The Honea Path Plant is located on approximately 466 acres in a semi-rural area typically composed of woods and farm land (see Figure 1). Significant features include the gullies and intermittent drainage ditches located on the northeastern and northwestern property boundaries (see Figure 2).

1.2 BACKGROUND

TCE was reported at 93,000 micrograms per kilogram (µg/kg) in the 10- to 12-foot sample collected from historical soil boring SB-05 in 2006. This concentration exceeds both the U.S. Environmental Protection Agency (EPA) Industrial Soil Screening Level (SSL), which is 6,000 µg/kg, and the Maximum Contaminant Level (MCL) risk–based SSL, which is 1.8 µg/kg. During a subsequent 2016 investigation near SB-05, TCE was reported at 57,000 µg/kg in the 10-foot sample collected from boring B-01 (see Figure 3).

DHEC requested that additional soil assessment be conducted in correspondence dated March 21, 2017. Therefore, Ingersoll Rand proposes the following soil investigation to further evaluate the soil impacts near the former TCE tank pad and borings SB-05 and B-01. This will allow for a more comprehensive, effective evaluation of remedial alternatives around the former TCE AST pad.

SECTION 2.0
PROPOSED SCOPE OF WORK

Field activities will be performed under the supervision of a South Carolina–Licensed Professional Geologist. Boring installation activities will be performed by a South Carolina–Licensed Drilling Contractor and sample analyses will be completed by a South Carolina–Certified Laboratory.

Preliminary tasks to be implemented prior to beginning field sampling activities include the following: (1) mark proposed soil boring locations and temporary well locations, (2) ensure that there is available access to proposed sample locations, and clear locations as needed, (3) submit a soil boring application to DHEC, (4) notify the South Carolina utilities protection center (SC 811) within 72 hours of scheduled drilling activities and schedule a private utility clearance, (5) schedule a drilling contractor, and (6) order sample containers. The final soil sample locations may be repositioned to address site conditions.

2.1 SOIL INVESTIGATION–FORMER TCE AST PAD

Atlanta Environmental Management, Inc. (AEM) proposes to collect an estimated 33 direct push technology (DPT) soil samples from six soil borings to be field screened for volatile organic compound (VOC) vapors with a photoionization detector (PID) as described in Section 3.2. If the water table is encountered at shallower depths than expected, then the borings will be terminated at the water table and fewer samples may be collected. The following provides rationale for soil boring locations based on historical soil sample data (see Figures 3 and 4):

- B-7, south of tank pit and SB-05 and B-01 to define the lateral and vertical extent of VOCs to the south. Historical sample SB-06 to the east of the former tank pit did not contain VOCs at 11.3–13 feet and defines the lateral extent of VOCs.
- B-8 located east of SB-05 and B-01 to define the lateral extent to the east.
- B-9 located north of SB-05 and B-01 to define the lateral extent to the north.
- B-10 located southwest of SB-05 and B-01 and north of SH-01 to define the lateral extent to the southwest. Historical boring SH-01 located to the south did not contain VOCs 10–11 feet.
- B-11 located west of SB-05 and B-01 and north of B-10 to define the lateral extent to the west.
- B-12 located south of SB-05 and B-01 and south of proposed boring B-7 to define the lateral extent of VOCs to the south if boring B-7 contains VOCs. Soil samples will be collected from B-12 but will not be analyzed for VOCs unless VOCs are detected in boring B-7.

Soil samples will be collected from six borings, B-7 through B-12, at depths ranging from 0 to 25 feet below land surface (bls) at 5-foot intervals (see Figure 4). AEM will collect up to six soil samples per location and will analyze up to three soil samples per boring as described in

Section 3.2. The remaining samples will be held pending the initial laboratory results. Upon completion of the sampling effort the boreholes will be abandoned as described in Section 3.8.

2.2 WORK SCHEDULE

A proposed soil sampling schedule is provided below. The estimated start time for the proposed schedule will correspond to the DHEC approval date for this work plan. Within 30 days of the work plan approval, the soil assessment field activities will be initiated. It is anticipated that the field work will be completed in 2 to 3 days. The laboratory data will be available within 15 days of sample submittal. The findings of the soil assessment will be provided to DHEC with 75 days of the receipt of the laboratory results.

Tasks	Days to Complete	Comments
DHEC Approval of the *Soil Assessment Work Plan Addendum*	0	Begin Timeline
Preliminary Project Set-Up	30	Mark and clear sample locations; boring installation application (DHEC); notify SC 811; schedule drilling contractor and order sample containers
Soil Sampling	3	DPT soil sampling activities
Receive Sample Laboratory Results	15	Sample Analysis
Submit *Soil Assessment Addendum Report*	75	Summarize analytical data and the extent of impacted soil; propose recommendations

SECTION 3.0
SAMPLING METHODOLOGIES

Soil boring installation and sampling activities will be performed in accordance with the U.S. EPA Region 4 Science and Ecosystem Support Division (SESD) Guidance and Operating Procedure documents. An application to complete the soil borings will be submitted to DHEC prior to implementing the field effort. The South Carolina utilities protection center (SC 811) will be contacted within 72 hours of scheduled drilling activities to obtain a work permit. Field activities will be implemented under the supervision of a South Carolina–Licensed Professional Geologist.

3.1 SOIL BORING PROCEDURES

Soil boring activities will be conducted in accordance with SESD Operating Procedure SESDPROC-300-R3 titled *Soil Sampling* and dated August 21, 2014. Soil borings will be advanced using DPT.

3.1.1 Direct Push Technology

A Geoprobe® mounted DPT track rig in conjunction with a duel-tube Macro-Core® soil sampler will be used to advance boreholes and to collect subsurface soil samples. Dedicated cellulose acetate butyrate (CAB) liners will be used inside the Macro-Core sample-spoons to extract soil core samples. CAB liners are typically 1-inch diameter and 5 feet long. Using the dual-tube Macro-Core soil sampler allows discrete (grab) soil samples to be collected as required by SESD Operating Procedure guidelines.

3.1.2 Concrete Coring

To access the residuum beneath paved surfaces, select drilling locations may require concrete paving coring. Where needed, a 4-inch-diameter concrete core-bit will be used to core through concrete. Geoprobe carbide-tipped drill bits will be used at locations where the paving consists of either asphalt or thinner concrete. Surface paving will be patched using similar materials (concrete/asphalt) following the abandonment of each borehole.

3.1.3 Field Soil Screening

Soil recovered from each CAB liner will be field screened for VOC vapors using a PID. A portion of each soil sample will be placed in a sealed plastic sample bag and the head-space within the bag tested with the PID after the sample bag has been set aside for 10 to 15 minutes to allow VOCs to volatize to the sample bag head-space. The tip of the PID probe will then be inserted (punched) into the bag to collect the VOC concentration reading. The PID meter utilized will be field calibrated daily in accordance with manufacturer specifications. PID results will be provided on the lithologic soil boring logs for each boring.

3.2 SOIL SAMPLING PROCEDURES

Soil sampling activities will be completed in accordance with SESD Operating Procedure for *Soil Sampling* (SESDPROC-300-R3 dated August 21, 2014). A dual-tube, CAB-lined Macro-Core sampler will be used to collect discrete soil samples at 5-foot intervals starting at land surface from each soil boring. Each soil boring will be advanced from land surface to the water table, which is expected to be approximately 25 feet bls, or to probe refusal.

Soil samples are anticipated to be collected at 0–1 ft bls, 4–5 ft bls, 9–10 ft bls, 14–15 ft bls, 19–20 ft bls, and 24–25 ft bls unless the water table or probe refusal is encountered at shallower depths. The following sample intervals for each soil boring will be submitted for laboratory analysis:

- B-7: 5- and 10-foot samples to define the lateral and vertical extent of VOCs previously reported in B-5 at 10–12 feet bls. One additional soil sample may be submitted for analysis based on the soil sample PID screening values.
- B-8: 5- and 10-foot samples to define the lateral and vertical extent of VOCs previously reported in B-5 at 10–12 feet bls. One additional soil sample may be submitted for analysis based on the soil sample PID screening values.
- B-9: 5-, 10-, and 15-foot samples to define the lateral and vertical extent of VOCs previously reported in B-5 at 10–12 feet bls. One additional soil sample may be submitted for analysis based on the soil sample PID screening values.
- B-10: 5- and 10-foot samples to define the lateral and vertical extent of VOCs previously reported in B-5 at 10–12 feet bls. One additional soil sample may be submitted for analysis based on the soil sample PID screening values.
- B-11: 5-, 10-, and 15-foot samples to define the lateral and vertical extent of VOCs previously reported in B-5 at 10–12 feet bls. One additional soil sample may be submitted for analysis based on the soil sample PID screening values.
- B-12: **Optional** 0–1- and 5-foot samples. B-12 soil samples will only be analyzed if sample samples from B-7 contain VOCs above the MCL risk–based soil screening level.

Soil samples results are expected in 5 to 7 days. Soil samples not selected for immediate analysis will be held by the laboratory for possible analysis after receiving the sample results from the first soil samples. The VOC soil sample holding time is 14 days. Soil samples collected from below the water table will not be submitted for laboratory analysis. Soil samples will be collected in pre-labeled, laboratory-supplied glass containers (preserved 40 milliliter [mL] septum-capped vials and unpreserved 4-ounce jars). The samples will be stored in iced coolers pending transport to the laboratory. After review of the VOC data the locations and depths to be used for these analyses will be determined.

3.3 QUALITY CONTROL

Quality Control (QC) procedures will be conducted in accordance with U.S. EPA SESD Operating Procedure *Field Sampling Quality Control* (SESDPROC-001-R4, dated February 5,

2013). To ensure that data of known and acceptable quality are provided, the following QC samples will be collected:

Trip Blanks—Laboratory-supplied trip blanks will accompany each VOC sample container (cooler) provided by the laboratory. The trip blanks will be returned, along with the soil and/or groundwater samples and quality assurance (QA) samples, to assess whether cross-contamination has resulting from improper sample handling procedures.

3.4 SAMPLE ANALYTICAL PROCEDURES

Soil and QC samples will be either shipped (via Federal Express) or hand-delivered under appropriate chain-of-custody to Analytical Environmental Services (AES) of Atlanta, Georgia. Sample analyses will be performed by AES in accordance with current U.S. EPA SW846 laboratory protocols. Soil and QA samples will be submitted for VOC analyses by method SW846-8260B.

Laboratory analyses will be conducted in a manner that ensures that all data and resulting decisions are technically sound, reliable, statistically valid, and properly documented. The laboratory QA/QC program includes analysis for precision, accuracy, completeness, and comparability as specified by EPA. The laboratory will abide by a comprehensive QA program based on the program outlined in the U.S. EPA's *Handbook for Analytical Quality Control in Water and Wastewater Laboratories* (U.S. EPA, 1979). A copy of the complete QA/QC program is available through the laboratory.

Laboratory QC (matrix spike/matrix spike duplicate and surrogates) extract recoveries as well as QC method blanks will be analyzed as needed to demonstrate acceptable control limits as well as data validation by the laboratory for QC and reporting purposes.

3.5 EQUIPMENT DECONTAMINATION PROCEDURES

Stainless steel soil sampling equipment (DPT sample rods and/or spoons) will be decontaminated in the field in accordance with SESD Operating Procedure *Field Equipment Cleaning and Decontamination* (SESDPROC-206-R3 dated December 18, 2015). Geoprobe drilling equipment will be decontaminated between borehole locations. Sample rods, spoons, and drive-points will be scrubbed with Liqui-Nox® and rinsed with distilled water. The remaining dedicated sampling equipment (CAB liners, soil-core catchers, tubing, etc.) does not require cleaning.

3.6 SAMPLE HANDLING AND FIELD DOCUMENTATION PROCEDURES

Information obtained in the field will be recorded in bound, non-perforated field notebooks in accordance with SESD Operating Procedure *Logbooks* (SESDPROC-010-R5 dated May 30, 2013). Field documentation will include the following: date, time, and location of activity; equipment used; personnel present; and weather conditions. Recorded sampling data will include the following: sample locations, sample depths, sample recovery, sample

parameters, and sample containers and preservatives. Soil lithologic description from each soil boring completed will be documented in the field logbooks.

Once samples are collected and placed in appropriate laboratory glass containers, the containers will be placed in small plastic bags to prevent cross-contamination and then stored in iced coolers for hand delivery to the laboratory. Chain-of-custody (CoC) documentation will accompany all sample coolers.

3.7 INVESTIGATION-DERIVED WASTE MANAGEMENT

The storage and handling of Investigation-Derived Waste (IDW) will be conducted in accordance with SESD Operating Procedure *Management of Investigation Derived Waste* (SESDPROC-202-R3 dated July 3, 2014). DPT drill cuttings (soil) generated at the investigation areas, as part of this field investigation, will be placed back in the soil boring in accordance with U.S. EPA regulatory guidelines.

General waste (CAB liners, latex gloves, plastic sheeting, etc.) will be collected, bagged, and placed in dumpsters at the facility for disposal. IDW generated from the purging of temporary wells and decontamination of the soil sampling equipment will be discharged to the facility's VOC groundwater treatment system.

3.8 BOREHOLE ABANDONMENT PROCEDURES

Soil boring abandonment procedures will be completed in accordance with U.S. EPA–approved guidance documents. Soil borings will be backfilled with the soil cuttings and then grouted with slurry consisting of neat-cement or a mixture of Portland Type I cement and 5-percent high-grade bentonite powder. The boreholes will be grouted from the bottom up (tremmied) to the native soil surface or to just below the base of the surface paving. The concrete or asphalt core holes will be repaired (patched) with similar material to the original surface elevations.

SECTION 4.0
DELIVERABLES

Documentation of soil sampling activities will be presented in a *Soil Assessment Addendum Report*. At a minimum, the report will include soil analytical data summary tables, lithologic soil boring logs, a well location figure, and copies of the laboratory analytical data and CoC forms. Likewise, recommendations for additional soil delineation samples, if necessary, will be included within the report.

SECTION 5.0
REFERENCES

Advent. February 1993. Minutes of February 17, 1993 Meeting with DHEC.

—. 1995. *Site Assessment Report. The Torrington Company, Honea Path, South Carolina.* May 15, 1995.

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U.S. EPA Region 4. 1979. *U.S. EPA Handbook for Analytical Quality Control in Water and Wastewater Laboratories*. March 1979.

—. 1991. *Closure Plan for Wastewater Treatment Lagoons*. November 1991.

—. 2013a. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures —Logbooks* (SESDPROC-010-R5), dated May 30, 2013.

—. 2013b. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures —Groundwater Sampling* (SESDPROC-301-R3), dated March 6, 2013.

—. 2013c. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures —Field Sampling Quality Control* (SESDPROC-001-R4), dated February 5, 2013.

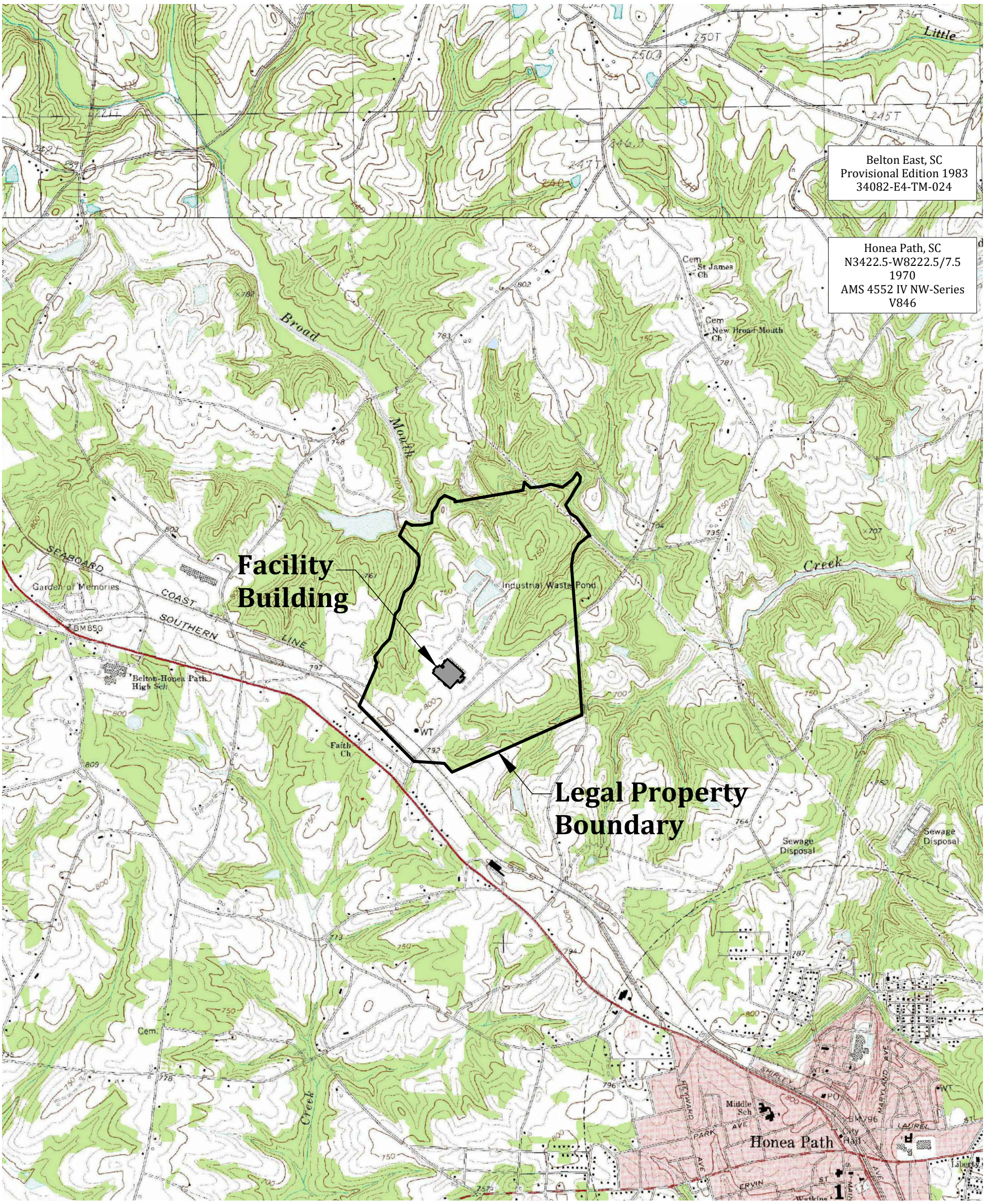
—. 2013d. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures —Design and Installation of Monitoring Wells* (SESDGUID-101-R1), dated January 29, 2013.

—. 2014a. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures —Soil Sampling* (SESDPROC-300-R3), dated August 21, 2014.

—. 2014b. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures —Management of Investigation Derived Waste* (SESDPROC-202-R3), dated July 3, 2014.

—. 2015. *U.S. EPA Region 4 SESD Field Branch Quality System and Technical Procedures— Field Equipment Cleaning and Decontamination* (SESDPROC-205-R4), dated December 18, 2015.

FIGURES



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Honea Path Plant
415 Brick Mill Road
Honea Path, South Carolina

Facility Location
Belton East, SC and Honea Path, SC Quadrangles

Figure
1

G:\DWG\1320-1602 Honea Path\04\SAP2\01 Topo

Legend

- Site Boundary
- Topographic Contour (ft. AMSL) Contour Interval = 50 ft.
- Topographic Contour (ft. AMSL) Contour Interval = 10 ft.
- Fenceline
- Creek
- Intermittent Stream
- Railroad
- Trail

Pond

Cross-Country Transmission Line

pH Stabilization and Flow Meter

Former Polishing Pond

Former Sanitary Lagoon (Never Used)

Former Sanitary Lagoon

Former Industrial Lagoon

Wastewater Pre-Treatment Plant

Groundwater Treatment System

Former Grit Chambers

Pump Station

Parking

Manufacturing Building

Parking

Parking

Parking

Athletic Field

Water Tower

Brick Mill Road (S4-751)

Johnson Road

N

Graphic Scale

300 0 150 300 600

1 inch = 300 ft.
Contour Interval = 10 ft.
(Topographic Contour Source: Anderson County, SC GIS Website)

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Honea Path Plant
415 Brick Mill Road
Honea Path, South Carolina

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Site Plan

Figure 2

G:\DWG\1320-1602 Honea Path\04\SAP2\02 Site Plan

Legend

- Previous Soil Boring (2016)
- Previous Soil Boring (1993)
- Previous Soil Boring (2006)
- Residuum Aquifer Zone Monitoring Well
- Residuum Aquifer Zone Monitoring Well (Abandoned) (MW-30 Abandoned on February 28, 2012)
- Residuum Aquifer Zone Recovery Well
- Partially Weathered Rock Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Observation Well
- Partially Weathered Rock Aquifer Zone Recovery Well
- Bedrock Aquifer Zone Monitoring Well (Former Soil Test Boring)
- Recovery Well (Screened Across Three Zones)
- Surface Water Sample Location
- Site Boundary
- Fenceline
- Creek
- Intermittent Stream
- Piping (With Flow Direction)
- Railroad

Pond
Discharge Point to Broad Mouth Creek
Cross-Country Transmission Line
Treated Groundwater Discharge Pipeline
pH Stabilization and Flow Meter
Phase III Groundwater Pipeline
Former Phase III Groundwater Pipeline (2" PVC)
Phase I/II Groundwater Pipeline
Phase III Groundwater Pipeline
Phase II Groundwater Pipeline
Phase IV Groundwater Pipeline
Wastewater Pre-Treatment Plant
Groundwater Treatment System
TCE Isoconcentration Contours June 2015 (µg/L)
Former Water Drain Outfall Area
Former Access Roadway and Pallet Storage
Former Above Ground TCE Tank Pad
Former Industrial Drain Cleanout Area
Former UST
Former Spent TCE Drum Staging Area
Former Construction Debris Area
Former Interior Degreaser Pit
Former Grit Chamber Area
Area Near MW-7 and MW-7A
Pump Station
Manufacturing Building
Parking
Athletic Field
Water Tower
Brick Mill Road (S4-751)
Johnson Road

SB-04 (12-14 Feet)	7/11/2006
VOCs	NonDetect

A3SB2 (2-3 Feet)	7/21/1993
VOCs	NonDetect

B-04 (0-1 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.2
Trichloroethene, µg/kg	**29**
cis-1,2-Dichloroethene, µg/kg	<6.3
B-04 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.6
Trichloroethene, µg/kg	**100**
cis-1,2-Dichloroethene, µg/kg	<6.6

B-03 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.1
Trichloroethene, µg/kg	**30**
cis-1,2-Dichloroethene, µg/kg	<5.1
B-03 (15 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.2
Trichloroethene, µg/kg	**39**
cis-1,2-Dichloroethene, µg/kg	<6.2

B-02 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.8
Trichloroethene, µg/kg	**370**
cis-1,2-Dichloroethene, µg/kg	**150**
B-02 (15 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.5
Trichloroethene, µg/kg	**60**
cis-1,2-Dichloroethene, µg/kg	**18**

A4SB1 (8-10 Feet)	7/21/1993
VOCs	NonDetect

SB-05 (10-12 Feet)	7/11/2006
Tetrachloroethene, µg/kg	**1,300**
Trichloroethene, µg/kg	**93,000**
cis-1,2-Dichloroethene, µg/kg	**1,600**

B-01 (0-1 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.9
Trichloroethene, µg/kg	**89**
cis-1,2-Dichloroethene, µg/kg	<5.9
B-01 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.0
Trichloroethene, µg/kg	**540**
cis-1,2-Dichloroethene, µg/kg	**27**
B-01 (10 Feet)	10/07/16
Tetrachloroethene, µg/kg	**870**
Trichloroethene, µg/kg	**57,000**
cis-1,2-Dichloroethene, µg/kg	**340**
B-01 (20 Feet)	10/07/16
Tetrachloroethene, µg/kg	<300
Trichloroethene, µg/kg	**3,000**
cis-1,2-Dichloroethene, µg/kg	<300

SB-06 (11.3-13 Feet)	7/11/2006
VOCs	NonDetect

SH-01 (10-11.9 Feet)	7/11/2006
VOCs	NonDetect

N

Graphic Scale
300 0 150 300 600
1 inch = 300 ft.

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Honea Path Plant
415 Brick Mill Road
Honea Path, South Carolina

Historical Soil and Groundwater Sample Locations

Figure 3

PROJECT #:	1320-1602	DATE:	May 26, 2017
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G:\DWG\1320-1602 Honea Path\04\SAP2\03 Historical Sampling

Legend

- Proposed Delineation Soil Sample
- Soil Boring (2016)
- Previous Soil Boring (1993)
- Previous Soil Boring (2006)
- Residuum Aquifer Zone Monitoring Well
- Partially Weathered Rock Aquifer Zone Recovery Well
- µg/kg - Micrograms per Kilogram
- <5.9 - Constituent not Detected; Value is Laboratory Reported Detection Limit
- Analyte Exceeding EPA Region IX Industrial Regional Screening Level
- Fenceline
- Piping (With Flow Direction)
- P - Overhead Power Line
- SS - Sanitary Sewer Line
- IW - Industrial Waste Line
- Trail

RW-7
MW-18A
B-05
B-06
A9SB1
A5SB2
MW-13
SB-03
A8SB1
SB-02
MW-7A
MW-7
SB-01
MW-21A
A5SB1
MW-19A
B-02
B-9
Former Above Ground TCE Tank Pad
A4SB1
SB-05
B-01
B-8
SB-06
A6SB1
Former Industrial Drain Cleanout Area
SB-04
A3SB2
A2SB2
A2SB1
B-11
Former Spent TCE Drum Staging Area
B-7
B-10
B-03
SH-01
B-12
Former UST
SH-03
SH-02
B-04
Manufacturing Building
A3SB1
TCE Groundwater Isoconcentration Contours June 2015 (µg/L)
STB-1
A1SB2
SH-04
SB-08
SB-09
A1SB1
SB-07
MW-6
STB-2

B-02 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.8
Trichloroethene, µg/kg	**370**
cis-1,2-Dichloroethene, µg/kg	**150**

B-02 (15 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.5
Trichloroethene, µg/kg	**60**
cis-1,2-Dichloroethene, µg/kg	**18**

A4SB1 (8-10 Feet)	7/21/1993
VOCs	NonDetect

A3SB2 (2-3 Feet)	7/21/1993
VOCs	NonDetect

SB-04 (12-14 Feet)	7/11/2006
VOCs	NonDetect

SB-05 (10-12 Feet)	7/11/2006
Tetrachloroethene, µg/kg	**1,300**
Trichloroethene, µg/kg	**93,000**
cis-1,2-Dichloroethene, µg/kg	**1,600**

B-01 (0-1 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.9
Trichloroethene, µg/kg	**89**
cis-1,2-Dichloroethene, µg/kg	<5.9

B-01 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.0
Trichloroethene, µg/kg	**540**
cis-1,2-Dichloroethene, µg/kg	**27**

B-01 (10 Feet)	10/07/16
Tetrachloroethene, µg/kg	**870**
Trichloroethene, µg/kg	**57,000**
cis-1,2-Dichloroethene, µg/kg	**340**

B-01 (20 Feet)	10/07/16
Tetrachloroethene, µg/kg	<300
Trichloroethene, µg/kg	**3,000**
cis-1,2-Dichloroethene, µg/kg	<300

SB-06 (11.3-13 Feet)	7/11/2006
VOCs	NonDetect

B-04 (0-1 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.2
Trichloroethene, µg/kg	**29**
cis-1,2-Dichloroethene, µg/kg	<6.3

B-04 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.6
Trichloroethene, µg/kg	**100**
cis-1,2-Dichloroethene, µg/kg	<6.6

SH-01 (10-11.9 Feet)	7/11/2006
VOCs	NonDetect

B-03 (5 Feet)	10/07/16
Tetrachloroethene, µg/kg	<5.1
Trichloroethene, µg/kg	**30**
cis-1,2-Dichloroethene, µg/kg	<5.1

B-03 (15 Feet)	10/07/16
Tetrachloroethene, µg/kg	<6.2
Trichloroethene, µg/kg	**39**
cis-1,2-Dichloroethene, µg/kg	<6.2

Graphic Scale
60 0 30 60 120
1 inch = 60 ft.

N

Atlanta Environmental Management, Inc.
Environmental Consulting, Engineering, Hydrogeologic Services
2580 Northeast Expressway • Atlanta, Georgia 30345
Phone: 404.329.9006 • Fax: 404.329.2057

Honea Path Plant
415 Brick Mill Road
Honea Path, South Carolina 29654

PROJECT #:	1320-1602-4	DATE:	May 26, 2017
DRAWN BY:	TL	REVISED:	----
CHECKED BY:	LM	SCALE:	1"=60'
PROJECT MGR:	MB	PRINTED:	5/30/2017 1:38 PM

Proposed Soil Boring Sample Locations

Figure 4

G:\DWG\1320-1602 Honea Path\04\SAP2\04 05 Sample Areas

ATTACHMENT A

DHEC Additional Assessment Request Correspondence Dated March 21, 2017

dhec
Healthy People. Healthy Communities.

MAR 29 2017

March 21, 2017

Mr. Mike Goldstein
Ingersoll Rand
800-E. Beaty St.
Davidson, NC 28036

Re: Limited Source Area Assessment (AEM; November 22, 2016)
Ingersoll Rand- Honea Path Plant
Anderson County
Consent Agreement 01-045-W
BLWM File # 400238

Dear Mr. Goldstein:

The South Carolina Department of Health and Environmental Control (the Department) has reviewed and approved the Limited Source Area Assessment report submitted by AEM. The following comments were generated by this review.

1: The EPA Risk-based SSL (soil screening levels) for protection of groundwater or the MCL (maximum contaminant level)–based SSL should be used, if available to define the extent of the soil contamination.

2: The Department concurs that additional sampling and data collection in warranted prior to submittal of a Feasibility Study (FS). Please note, a FS should include all media impacted i.e. soil, groundwater, and surface water.

Please submit the proposed work plan for additional source area investigation to my attention on or before May 30, 2017. On all correspondence regarding this site, please reference BLWM File # 400238. If you have questions concerning this correspondence, or would like to submit additional information, contact Jan Trent, the project manager, at (803) 898-0723 or email me at trentjc@dhec.sc.gov.

Sincerely,

Jan Trent, Project Manager
State Voluntary Cleanup Program
Site Assessment, Remediation & Revitalization Division
Bureau of Land and Waste Management

cc: Lucas Berresford, Manager, BLWM
Chris McClusky, Area Director, Upstate BEHS- Anderson
Leona Mile, AEM, 2580 Northeast Expressway; Atlanta, GA 30345
Technical File #400238