

Enclosure 1

Final Modified Permit

Bohler-Uddeholm Corporation

EPA ID No. VAD089022685

August 31, 2017

FACILITY SITE-WIDE CORRECTIVE ACTION PERMIT

BOHLER-UDDEHOLM CORPORATION

EPA ID NUMBER VAD089022685

ISSUED DATE: 1-20-16

MODIFIED 9-8-2017

Bohler-Uddeholm South Boston Plant

HAZARDOUS WASTE MANAGEMENT
FACILITY SITE-WIDE CORRECTIVE ACTION PERMIT

TABLE OF CONTENTS

MODULE I - STANDARD CONDITIONS.....	I-1
I.A. EFFECT OF PERMIT	I-1
I.B. PERMIT ACTIONS.....	I-1
I.C. SEVERABILITY	I-1
I.D. DEFINITIONS.....	I-1
I.E. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIRECTOR	I-4
I.F. SIGNATORY REQUIREMENTS.....	I-5
I.G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY SITE.....	I-5
I.H. DUTIES AND REQUIREMENTS.....	I-5
I.I. PERMIT DURATION	I-10
I.J. REVIEW AND APPROVAL OF SUBMISSIONS.....	I-10
 MODULE II - FACILITY (SITE WIDE) CORRECTIVE ACTION	II-1
II.A. CORRECTIVE ACTION FOR CONTINUING RELEASES; PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT.....	II-1
II.B. POST-CLOSURE CARE REQUIREMENTS.....	II-1
II.C. CORRECTIVE MEASURES IMPLEMENTATION	II-1
II.D. EVALUATION OF THE SELECTED REMEDY	II-3
II.E. EMERGENCY RESPONSE; RELEASE REPORTING	II-3
II.F. GUIDANCE DOCUMENTS.....	II-4
II.G. SOLID WASTE MANAGEMENT UNIT (SWMU) ASSESSMENT.....	II-5
II.H. FINANCIAL ASSURANCE	II-6
II.I. RECORDKEEPING	II-6
II.J. ACCESS FOR CORRECTIVE ACTION OVERSIGHT.....	II-6
II.K. COMPLETION OF REMEDY.....	II-7
 Attachment A - Facility Description and Corrective Action Background	A-1
 Attachment B - POST-CLOSURE PLAN: CLOSED SURFACE IMPOUNDMENTS.....	B-1

LIST OF ATTACHMENTS

The following Attachments are incorporated, in their entirety, by reference into this Permit. These incorporated attachments are enforceable conditions of this Permit. The Department has, as deemed necessary, modified specific language from the permit application. Additional modifications are prescribed in the permit conditions (Modules I and II), and thereby supersede the language of the Attachments.

Attachment A	Facility Description and Corrective Action Background
Attachment B-	Post-Closure Care Requirements for Closed Surface Impoundments

MODULE I - STANDARD CONDITIONS

This Site-Wide Corrective Action Permit (the Permit) has been developed for Bohler-Uddeholm Corporation (Formerly the Bohler-Uddeholm Specialty Metals, Inc.) (hereinafter referred to as the Permit and the Permittee or the “Facility”), to complete site-wide Corrective Action (CA).

The CA obligations contained in this Permit shall continue regardless of whether the Permittee continues to operate or ceases operation and closes the facility. The Permittee is obligated to complete site-wide CA under the conditions of a RCRA Permit regardless of the operational status of the facility. The Permittee must submit an application for a new Permit at least 180-days before this Permit expires pursuant to 40 CFR § 270.10(h), unless the Permit has been modified to terminate the CA schedule of compliance and the Permittee has been released from the requirements for financial assurance for corrective action.

I.A. EFFECT OF PERMIT

This Permit authorizes only the management of hazardous waste expressly described in this Permit and does not authorize any other management of hazardous waste. Compliance with this permit generally constitutes compliance, for the purposes of enforcement, with Chapter 14, Section 10.1-1426, Code of Virginia (1950), as amended. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, an invasion or other private rights, or any infringement of State or local laws or regulations. Compliance with the terms of this permit may not constitute a defense to any action brought under Chapter 14, Section 10.1-1455, Code of Virginia (1950), as amended, or any other law governing protection of the public or the environment.

I.B. PERMIT ACTIONS

This Permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR 124.5, 40 CFR 270.30(f), 270.41, 270.42, and 270.43. The filing of a request for permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

I.C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

I.D. DEFINITIONS

For the purpose of this Permit, terms used herein shall have the same meaning as those in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and 9 VAC 20-60-12, 9 VAC 20-60-14, 9 VAC 20-60-17, unless this Permit specifically states otherwise. Where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. Some important items are defined in the following.

- a. *All citations* to 40 CFR Parts 124, 260, 261, 262, 263, 264, 265, 266, 268, 270, 273, and 279 are as adopted by reference in the VHWMR at 9 VAC 20-60-124, -260, -261, -262, -263, -264, -265, -266, -268, -270, -273, and -279.
- b. *Area of Concern (AOC)* -
Pursuant to 40 CFR 270.32(a), an area at the Facility or an off-site area, which is not at this time known to be a solid waste management unit, where hazardous waste and/or hazardous constituents are present or are suspected to be present as a result of a release from the Facility.
- c. *Days* -
Except as otherwise provided, calendar days.
- d. *Department or DEQ* -
The Virginia Department of Environmental Quality or the Department (with the address as specified in **Permit Condition I.E.4.**).
- e. *Director* -
Director of the Virginia Department of Environmental Quality, his designee or authorized representative.
- f. *Exceedance* -
Any measured concentration greater than an established standard. May be verified by resampling.
- g. *Facility or site* -
All contiguous property under the control of the owner or operator seeking a permit (except for Permit Condition I.B.), for which the definition in 40 CFR Part 260.10 shall apply. For the purposes of this permit this includes all Bohler-Uddeholm South Boston Plant property that was identified in the physical description (including structures, appurtenances, and improvements) as set forth in Permit Module II.
- h. *Hazardous Constituent* -
Any constituent identified in Appendix IX of 40 CFR Part 264.
- i. *Hazardous Waste Management Unit (HWMU)* -
Contiguous area of land on which or in which hazardous waste is placed, or the largest area in which there is a significant likelihood of mixing hazardous waste constituents in

the same area.

j. Independent Samples -

Samples collected after a new volume of water has passed through the filter pack.
Sampling interval is calculated based upon aquifer characteristics.

k. Permit -

The Permit issued by the Virginia Department of Environmental Quality, pursuant to Chapter 14, Article 4, Title 10.1, Code of Virginia (1950), as amended, and the Virginia Hazardous Waste Regulations (9 VAC 20-60).

l. Permitted Hazardous Waste Management Unit (PHWMU) -

The portion of the facility consisting of the former hazardous waste landfill including all contiguous areas of land on which or in which hazardous waste may have been placed, or the largest area in which there is a significant likelihood of mixing hazardous waste constituents in the same area.

m. Permittee -

Bohler-Uddeholm Corporation (Formerly Bohler-Uddeholm Specialty Metals, Inc.) is the Permittee.

n. Regulated Unit -

Any hazardous waste management unit for treatment storage or disposal regulated under the Virginia Hazardous Waste Management Regulations. The surface impoundments closed as a landfill comprise the regulated unit for the purposes of this permit.

o. Release -

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

p. Solid Waste Management Unit (SWMU)-

Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

q. All definitions contained in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and 9 VAC 20-60-12 are hereby incorporated by reference into this Permit. Any of the definitions used above, (a) through (s), shall supersede any definition given in 40 CFR Sections 124.2, 260.10, 270.2, 264.141, and 9 VAC 20-60-12. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

I.E. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIRECTOR

- I.E.1. The DEQ will review the plans, reports, schedules and other documents (hereinafter collectively referred to as "submission") submitted which require the DEQ's approval. The DEQ will notify the Permittee in writing of the DEQ's approval or disapproval of each submission.
- I.E.2. Each submission required under a schedule of compliance or required by this permit (with the exception of data reports) is, upon approval by the Director, incorporated into this permit. Any noncompliance with approved submissions shall be deemed noncompliance with this Permit.
- I.E.3. In the event of the DEQ's disapproval in whole or in part of any submission, the Director shall specify the deficiencies in writing. Such disapproval shall not be subject to the Dispute Resolution provision set forth in **Permit Condition I.L.** The Permittee shall modify the submission to address the specified deficiencies within the time period established by the Director taking into account the tasks to be performed, and submit the revisions to the DEQ for approval. If the revised submission is not approved, the DEQ will notify the Permittee of the deficiencies in writing and specify a schedule for the Permittee to correct the deficiencies and resubmit the submission to the DEQ. The Permittee shall correct the deficiencies as directed by the DEQ and forward the revised submission to the DEQ within the time period specified. In the event the Permittee disagrees with the DEQ's disapproval of the revised submission, the Permittee shall notify the DEQ in writing and the disagreement shall be resolved in accordance with the Dispute Resolution provision in **Permit Condition I.L.**
- I.E.4 Two (2) complete copies of all reports, notifications or other submissions which are required by this permit to be sent or given to the Director of the Virginia Department of Environmental Quality (DEQ) shall be sent certified mail or be hand-delivered to:

**Director
Department of Environmental Quality
Team Leader – RCRA Corrective Action/Groundwater
Office of Remediation Programs
P. O. Box 1105
Richmond, VA 23218
(804) 698-4129**

Street address:
**629 East Main Street
Richmond, Virginia 23219**

and one (1) copy to:

**Director
Blue Ridge Regional Office
7705 Timberlake Road
Lynchburg, VA 24502
(434) 582-5120**

I.F. SIGNATORY REQUIREMENTS

All reports or other information requested by the Director shall be signed and certified as specified by 40 CFR 270.11 or 9 VAC 20-60-270.11.

I.G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY SITE

I.G.1. The Permittee shall maintain at the facility, until post-closure care is completed and certified by the owner/operator and an independent professional engineer registered in Virginia, the following documents (as amended, revised and/or modified):

- a. Personnel training documents and records required by 40 CFR 264.16 and this permit.
- b. Annually adjusted cost estimate for facility post-closure care required by 40 CFR 264.142(b).
- c. Operating record required by 40 CFR 264.73.
- d. Inspection schedules and logs required by 40 CFR 264.15(d).
- e. Groundwater sampling and analysis plan required by 40 CFR 264.92 and this permit.
- f. Groundwater monitoring results required by 40 CFR 264.73(b)(6) and this permit.
- g. All other documents required by **Permit Sections I.H.9. and I.H.13. through 15.**

I.H. DUTIES AND REQUIREMENTS

I.H.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit (see 40 CFR 270.61). Any other permit noncompliance constitutes a violation of Title 10.1, Code of Virginia (1950), as amended, and regulations promulgated thereunder, and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

I.H.2. Permit Expiration.

This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application in accordance with 40 CFR 270.10(h) and through no fault of the Permittee, the Director has not issued a new permit as set forth in 9 VAC 20-60-270 B 5.

I.H.3. Duty to Reapply.

If the Permittee wishes to or is required to continue an activity regulated by this permit after the expiration date of this permit, the Permittee shall apply for and obtain a new permit as specified below.

- a. The Permittee shall submit a new and complete application for a new permit at least 180 days before the permit expires, unless a later date has been approved by the Director.
- b. Pursuant to 40 CFR 270.10(h), the Director shall not grant permission for an application to be submitted later than the existing permit's expiration date.

I.H.4. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense in an enforcement action to argue that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

I.H.5. Duty to Mitigate.

In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit, and shall carry out such measures as are reasonable to prevent significant adverse impacts.

I.H.6. Proper Operation and Maintenance.

The Permittee shall at all times properly operate and maintain all facilities and systems of the treatment and controls (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls; including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to maintain compliance with the conditions of the permit.

I.H.7. Duty to Provide Information.

The Permittee shall furnish the Director within a reasonable time, any relevant information the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish the Director, upon request, copies of records required by this permit.

I.H.8. Inspection and Entry.

The Permittee shall allow the Director or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- a. Enter at reasonable times upon the Permittee's premise where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records kept under conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by 9 VAC 20-60, any substance or parameters at any location.

I.H.9. Monitoring and Records.

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I to Part 261 of 40 CFR or an equivalent method

approved by the EPA. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846 (3rd edition, Third Update, 1998, as updated).

- b. The Permittee shall retain at the facility or a designated repository, records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for any continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for the duration of the post-closure period. The Permittee shall maintain records from all groundwater monitoring wells and associated static water level surface elevations for the duration of the post-closure care period. These periods may be extended by the Director at any time and are automatically extended during the course of any unresolved enforcement actions.
- c. Records of monitoring information shall specify:
 - i. the date, exact place, and time of sampling or measurements;
 - ii. the individual(s) who performed the sampling or measurements;
 - iii. the date(s) the analyses were performed;
 - iv. the individual(s) who performed the analyses;
 - v. the analytical techniques or methods used; and
 - vi. the results of such analyses.

I.H.10. Reporting Planned Changes.

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. This notice shall include a detailed description of all incidents of noncompliance reasonably expected to result from the proposed changes.

I.H.11. Anticipated Noncompliance.

The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements.

I.H.12. Twenty-four Hour Reporting.

The Permittee shall report to the Director any non-compliance which may endanger human health or the environment. Information shall be provided orally within 24-hours of the Permittee becoming aware of the circumstances. Information specified in **Permit Conditions I.H.12 a** and **b** below shall be reported verbally within 24 hours:

- a. Information concerning the release of any hazardous waste that may endanger public water supplies.
- b. Any information of a release or discharge of hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health. The description of the occurrence and its cause shall include at least the following:
 - i. Name, address, and telephone number of owner/operator;
 - ii. Facility name, address, and telephone number;
 - iii. Date, time, and type of incident;
 - iv. Name and quantity of material(s) involved;
 - v. The extent of injuries, if any;
 - vi. Assessment of actual or potential hazard to human health and the environment outside the facility; and
 - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission shall also be provided to the Director within five (5) days of the Permittee becoming aware of the circumstances. The written submission shall contain at a minimum the following:
 - i. description of the noncompliance and cause;
 - ii. the periods of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated duration of the noncompliance; and
 - iii. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Permittee need not comply with the 5-day written notice requirement only if

the Director waives that requirement following verbal notification (**Permit Section I.H.12.**) and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

I.H.13. Other Noncompliance.

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports are submitted. The reports shall contain at a minimum the information listed in **Permit Section I.H.12.**

I.H.14. Transfer of Permits.

This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 40 CFR 124.5, 40 CFR 270.30, 40 CFR 270.40, 40 CFR 270.41, 40 CFR 270.42, and 40 CFR 270.61. Before transferring ownership or operation of the facility during the Post-closure Care Period, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR 264 and 40 CFR 270.41.

I.H.15. Other Information.

Whenever the Permittee becomes aware that they failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

I.I. PERMIT DURATION

This permit shall be in effect for ten (10) years from the date of issuance.

I.J. REVIEW AND APPROVAL OF SUBMISSIONS

In response to a Notice of Deficiency concerning a submission, the Permittee shall modify the submission to address the specified deficiencies within the time period established by the Director taking into account the tasks to be performed, and submit the revisions to the Department for approval.

If the revised submission is not approved, the Director will notify the Permittee of the deficiencies in writing and specify a schedule for the Permittee to correct the deficiencies and resubmit the submission to the Department. The Permittee shall correct the deficiencies as directed by the Director and forward the revised submission to the Department within the time period specified.

In the event the Permittee disagree with the Director's disapproval of the revised submission, the Permittee shall notify the Department in writing of its objections, and the basis therefore, within fourteen (14) days of receipt of the Department's disapproval. Such notice shall set forth the specific matters in dispute, the position the Permittee assert should be adopted as consistent with the requirements of the Permit, the basis for the Permittee's position and any matters considered necessary for the Director's determination.

The Department and the Permittee shall have an additional fourteen (14) days from receipt of the notification to meet or confer to resolve any disagreement. In the event agreement is reached, the Permittee shall submit the revised submission and implement the same in accordance with such agreement. If agreement is not reached within the 14-day period, the Department will notify the Permittee in writing of its decision on the dispute.

Facility Site-Wide Corrective Action Permit
Bohler-Uddeholm
South Boston Plant

EPA ID No.: VAD089022685
Renewal Date: January 22, 2016

MODULE II - FACILITY (SITE WIDE) CORRECTIVE ACTION

II.A. CORRECTIVE ACTION FOR CONTINUING RELEASES; PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

- II.A.1.** Section 3004(u) of RCRA, 42 U.S.C. § 6924(u), and regulations codified at 40 C.F.R. §264.101, provide that all permits issued after November 8, 1984 must require corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of when waste was placed in the unit.
- II.A.2.** Under Section 3004(v) of RCRA, 42 U.S.C. § 6924(v), and 40 CFR §264.101(c), the Department may require that corrective action at a permitted facility be taken beyond the facility boundary where necessary to protect human health and the environment, unless the owner or operator of the facility concerned demonstrates to the satisfaction of the Department that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action.
- II.A.3.** Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), and VHWMR Part XI, § 9 VAC 20-60-1080(B) and 40 C.F.R. § 270.32(b) provide that each permit shall contain such terms and conditions as the Department determines necessary to protect human health and the environment.

II.B. POST-CLOSURE CARE REQUIREMENTS

The Permittee shall inspect and maintain the final cover and security measures at the closed surface impoundment in accordance with the final remedy as described in Section C Corrective Measures Implementation of Module II of this Permit and comply with all other applicable requirements of 40 CFR 264.110, 40 CFR 264.310, and corrective measures implementation period in accordance with 40 CFR 264.117 (c). A Post Closure Care Plan is included as Attachment B.

II.C. CORRECTIVE MEASURES IMPLEMENTATION

II.C.1. *Corrective actions are applicable to the Facility.*

II.C.2. *Final Remedy Selection*

- a. Based on the findings of historical investigations and the approved CMS the Department concluded that historical releases have impacted soil in select locations of the facility. Constituents detected in soil consist of select metals. Documentation for completion of investigation reports and studies have been compiled by the Department, entitled Administrative

Record. Based on the investigation results and the Administrative Record, the Final Remedy for the Facility was developed and is described in the Statement of Basis. The requirements of this Permit provide for the implementation and operation and maintenance of the remedy described in the Statement of Basis.

- b. The goal of the remedy for corrective action is to ensure protection of human health and the environment. The details of the final remedy are summarized below and are described in detail in the Administrative Record and Statement of Basis. Minor modifications in the activities, studies, techniques, procedures, and designs or schedules utilized in carrying out the requirements of this Permit and necessary for the completion of the remedy may be made by written agreement from the Department. Under this final remedy, the Department is requiring the following actions:
 - 1. Maintain existing engineering controls such as the RCRA cap and asphalt cover at closed RCRA impoundment and the SWMU, identified on Attachment A, Figures 2 and 3. Conduct routine inspection and maintenance of the controls, and place and maintain notification signs at the perimeter of the capped/covered areas.
 - 2. Develop and maintain compliance with land use restrictions and institutional controls. Institutional controls will include:
 - o The designated restriction areas, identified in Attachment A, Figures 2 and 3, shall not be used for residential purposes or for children's (under the age of 16) daycare facilities, schools, or playground purposes.
 - o Excavation and disturbance in RCRA capped and asphalt areas shall be prohibited unless conducted in accordance with an agency approved Materials Management Plan.
 - o Future modifications at the property that could be reasonably understood to adversely affect or interfere with the integrity or protectiveness of the final remedy will be evaluated to identify and address those potential impacts or interferences. No removal, disturbance, or alteration shall occur to any corrective action components installed at the property without agency approval.

II.C.3. Final Remedy Implementation

- a. The Permittee shall implement Institutional Controls through an environmental covenant pursuant to the Virginia Uniform Environmental

Covenants Act (UECA), VA Code, §10.1-1238, et seq. and to be recorded with the deed for the property. A declaration of restrictive covenants or similar instrument consistent with applicable requirements under the laws of the Commonwealth of Virginia will be recorded with the real property records such that prospective purchasers of the property will have constructive notice of land use restrictions. The declaration of restrictive covenants will contain the land use controls described above and will be recorded with the land records in the office of the clerk of the circuit court for the jurisdiction in which the property is located. The current owner and future owners of the property will be obligated to comply with the recorded restrictive covenant since the covenant will run with the land.

- b. The Permittee shall, at a minimum, provide the Department with metes and bounds descriptions or coordinate surveys for applicable land use restrictions that meet the following requirements:
 - i. Define the boundary of each use restriction as a polygon
 - ii. Establish the longitude and latitude of each polygon vertex as follows:
 - o Decimal degrees format
 - o At least seven decimal places
 - o Negative sign for west longitude
 - o WGS 1984 datum

II.D. EVALUATION OF THE SELECTED REMEDY

Commencing one year from the submittal date of this modified Permit, the Permittee shall submit an initial progress report by March 1 of the following year on the remedy performance. Subsequent progress reports shall be submitted every 5 years. If Department determines that the selected remedy will not comply with the media clean-up requirements, the Department may require the Permittee to perform additional studies and/or perform modifications to the existing Corrective Action remedy. If necessary, the Department or the Permittee may seek modification of this Permit pursuant to 40 C.F.R. § 270.41 or § 270.42 and § 124.5 to implement modifications to the existing Corrective Measures Remedy.

II.E. EMERGENCY RESPONSE; RELEASE REPORTING

II.E.1. Emergencies

If, at any time during the term of this Permit, the Permittee discovers that a release of hazardous waste or hazardous constituents at or from the Facility is presenting or may present an imminent and substantial endangerment to human health or the environment, and such release is not subject to

Contingency Plan and Emergency Procedures as defined in the portion of the RCRA Permit issued by the Department, the Permittee shall:

- a. Notify the Department as soon as practicable of the source, nature, extent, location and amount of such release, the endangerment posed by such release and the actions taken and/or to be taken, to the extent known, to address such release. Such notification shall be confirmed in writing within three (3) days of discovery of such release.
- b. Unless otherwise directed by the Department, immediately take such actions as are necessary and appropriate to address such release.

II.E.2. Releases

The Permittee shall notify Department in writing of the nature, source, extent, location of a release of hazardous waste or hazardous constituents at or from the Facility within seven (7) days of discovery of such release which:

- a. Is not being addressed by corrective measures pursuant to Permit Module II at the time of such discovery.
- b. Is not being addressed pursuant to **Permit Condition IV.E.1., Emergencies**.
- c. Is not subject to the Contingency Plan and Emergency Procedures as set forth in the portion of the RCRA Permit issued by the Department.

II.E.3. Based on the information submitted, the Department may require the SWMU/AOC to be included in an ongoing RCRA Facility Investigation or may require **Interim Measures** .

II.E.4. Nothing in this Permit shall limit the Department's authority to undertake or require any person to undertake response action or corrective action under any law, including but not limited to, Sections 104 or 106 of **CERCLA**, 42 U.S.C. §§ 9604 or 9606, and Section 7003 of **RCRA**, 42 U.S.C. § 6973. Nothing in this Permit shall relieve the Permittee of any obligation it may have under any law, including, but not limited to, Section 103 of **CERCLA**, to report releases of hazardous waste, hazardous constituents or hazardous substances to, at or from the Facility.

II.F. GUIDANCE DOCUMENTS

Any corrective action performed at the Facility shall be in accordance with applicable EPA Corrective Action Guidance available at:

<https://www.epa.gov/hwcorrectiveactionsites/corrective-action-resources-specific-epas-region-3%20>

II.G. SOLID WASTE MANAGEMENT UNIT (SWMU) ASSESSMENT

- II.G.1.** The Permittee shall notify the Department and the EPA Region 3, in writing, of any newly identified SWMU at the Facility, no later than thirty (30) days after the date of discovery. The notification shall include, but not be limited to, the following known information:
- a. A description of the SWMUs type, function, dates of operation, location (including a map), design criteria, dimensions, materials of construction, capacity, ancillary systems (e.g., piping), release controls, alterations made to the unit, engineering drawings, and all closure and post-closure information available, particularly whether wastes were left in place.
 - b. A description of the composition and quantities of solid wastes processed by the units with emphasis on hazardous wastes and hazardous constituents.
 - c. A description of any release (or suspected release) of hazardous waste or hazardous constituents originating from the unit. Include information on the date of release, type of hazardous waste or hazardous constituents, quantity released, nature of the release, extent of release migration, and cause of release (e.g., overflow, broken pipe, tank leak, etc.). Also, provide any available data that quantifies the nature and extent of environmental contamination, including the results of soil and/or groundwater sampling and analysis efforts. Likewise, submit any existing monitoring information that indicates releases of hazardous waste or hazardous constituents has not occurred or is not occurring. The Permittee may refer to information regarding releases previously submitted to the Department.
 - d. A discussion of the need for and feasibility of implementing interim measures immediately.
- II.G.2.** Upon receipt of the notification of any newly identified SWMU, the Department will determine the need for corrective action at such SWMU. If corrective action is necessary to protect human health or the environment, the Department will determine whether a RCRA Facility Investigation will be performed and the need for and scope of any **Interim Measures**.
- II.G.3.** Within sixty (60) days after receipt of the Director's determination that a RCRA Facility Investigation or Interim Measures is necessary, the Permittee shall submit a RCRA Facility Investigation Work Plan or Interim Measures

Work Plan that meets the applicable guidance. The Department's determination shall either specify the media and/or parameters to be investigated or shall require the Permittee to propose and justify the selection of media and/or parameters.

II.G.4. Within the time specified in the approved RCRA Facility Investigation Plan, the Permittee shall submit the RCRA Facility Investigation Report or Interim Measures Report. The reports will provide all data necessary for the Department to determine whether a Corrective Measures Study or additional Interim Measures Work Plan is required.

II.G.5. In lieu of a separate RCRA Facility Investigation, the Permittee may propose either to incorporate any newly identified SWMU into an ongoing RCRA Facility Investigation or to submit a proposal for the performance of corrective measures. Any such proposal shall be submitted to the Department along with notification of the discovery of the SWMUs.

II.H. FINANCIAL ASSURANCE

The Department evaluated whether financial assurance for corrective action is necessary to implement the final remedy at the Facility. Given that the final remedy does not require any further engineering actions to remediate soil, groundwater, or indoor air contamination at this time and given that the costs for implementing institutional controls at the Facility will be de minimus, financial assurance is not required.

II.I. RECORDKEEPING

Upon completion of closure of any SWMU, the Permittee shall maintain in the Facility operating record, documentation of the closure measures taken.

II.J. ACCESS FOR CORRECTIVE ACTION OVERSIGHT

The Department and its authorized representatives shall have access to the Facility at all reasonable times for the purpose of monitoring compliance with the provisions of this Permit. The Permittee shall use its best efforts to obtain access to property beyond the boundaries of the Facility at which corrective action is required by this Permit (see Section 3004(v) of RCRA, 42 U.S.C. § 6924(v) and 40 CFR 264.101(c)); (1) for itself and any contractor of the Permittee for the purpose of taking corrective action required by this Permit, and (2) for Department and its authorized representatives for the purposes described in this paragraph.

II.K. COMPLETION OF REMEDY

Upon completion of the remedy or as needed in the interim, the Permittee shall request approval for abandonment of all monitoring wells, observation wells, and remediation wells from the Department prior to implementing well abandonment activities. All wells that are to be abandoned shall be plugged and abandoned in general accordance with 12VAC 5-630-420 and 12VAC 5-630-450. Chlorination of each well is not required. An effort to remove the well casing and associated materials shall be made at each well prior to abandonment. A report including methods and certification shall be submitted to the Department within thirty (30) days following the completion of abandonment. The Permittee may propose alternate methods for well abandonment and must obtain approval from the Department prior to implementation.

Within ten (10) days of receipt of notification by the Department that the remedy is complete, the Permittee shall submit a written certification to the Department registered mail stating that the remedy has been completed in accordance with the requirements of this Permit Modification. The certification must be signed by the Permittee and by an independent registered professional engineer registered in the Commonwealth of Virginia.

In cases where no other Permit conditions remain, the Permit may be modified not only to reflect the determination that remedy controls are no longer necessary, but also to change the expiration date of the Permit to allow for earlier Permit expiration in accordance with 40 CFR §124, §270.41, and §270.42 as applicable.

ATTACHMENT A - FACILITY DESCRIPTION AND CORRECTIVE ACTION BACKGROUND

Corrective Action Permit

**BÖHLER-UDDEHOLM SPECIALTY METALS, INC.
(FORMERLY TELEDYNE ALLVAC / FORMERLY C-K COMPANY)
EPA ID NO. VAD089022685**

SOUTH BOSTON, VIRGINIA

FACILITY DESCRIPTION AND BACKGROUND

Böhler-Uddeholm Specialty Metals, Inc. is located at 2306 Eastover Drive, South Boston, Virginia 24592. The facility consists of approximately 43 acres. The main facility building houses office space and metal manufacturing operations. A process waste water treatment plant and a former impoundment are also located at the facility. The facility is primarily a finisher of specialty steels for use by the tool and die industries (drill bits, saw blades, cutting tools and similar applications). The steel finishing operation consists of grinding, drawing, and cleaning the steel to meet customer specifications. The process includes treating metals in a solution of potassium permanganate and potassium hydroxide and pickling steel in a hydrochloric acid solution. Periodically these solutions are changed or sludges are removed from the tanks.

During facility operations, from 1972 until 1985, lime stabilized spent pickle liquor solutions were temporarily stored in the former impoundment before being discharged into Wood's Creek. Discharge from the impoundment was performed in accordance with the facility's National Pollution Discharge Elimination System (NPDES) Permit (VA0051047).

The Facility and surrounding area are on a public water supply system. Surface waters in the vicinity include Rocky Branch and Wood's Creek. Rocky Branch is located approximately 250 feet downgradient and west of the Facility. Wood's Creek is located approximately 500 feet east/southeast of the Facility. The confluence of Rocky Branch and Woods Creek is located 1,200 feet south of the Facility. There are no identified or documented intake or discharge structures, nor withdrawal or injection wells, and no drinking water wells or springs in close proximity to the subject site. The intake for South Boston's water supply from the Dan River/Kerr Reservoir is approximately 1.6 miles upstream of the confluence of Wood's Creek and the Dan River. No other springs, creeks, ponds or wetlands are located nearby.

SUMMARY OF ENVIRONMENTAL HISTORY

Based on a review of files maintained by the DEQ and EPA Region 3, a single hazardous waste management unit (HWMU) and a single solid waste management unit (SWMU) were identified at the Facility. A site layout map is included as Figure 1 showing the location of the units. The

following table lists the units followed by a summary of the Facility's environmental investigations and activities.

HWMU and SWMU Identification Table

Identification	HWMU/SWMU Name
HWMU	Former RCRA Hazardous Waste Impoundment
SWMU	Metal Grinding Sludge Waste Pile

RCRA Closure Activities

The former RCRA hazardous waste impoundment was taken out of service in 1985. All liquids that had collected in the impoundment were removed in accordance with the NPDES Permit. Based on approved closure activities, the remaining waste, approximately 590 cubic yards of sludge, was closed in place and covered by a protective cap. Closure certification was successfully completed on June 21, 1989. The former impoundment has been closed as a landfill and is currently being managed under the current RCRA Hazardous Waste Management Permit. The location and extent of the former impoundment is depicted on Figure 2.

RCRA Facility Investigation Activities

The SWMU is a metal grinding sludge waste pile generated from past facility processing operations. The SWMU is located on the southwestern side of the main building approximately 240 feet south of the facility office area entrance. During the 1970s, the SWMU area was bare soil immediately beyond the margin of a smaller asphalt paved parking area. A portion of this area has since been developed as additional paved parking for the BUSMI facility. It was indicated by Bohler staff that the grinding sludge material was placed on this portion of the site in the 1970s and this activity ceased prior to 1980. The location and extent of the SWMU is depicted on Figure 3.

Soil

The Facility's consultant, ECS Mid-Atlantic, LLC (ECS) conducted an initial limited soil assessment of the SWMU in 2006, where thirteen (13) borings for soil sampling were advanced with a Geoprobe direct push drill rig in the areas indicated by BUSMI personnel. The soil borings were advanced to depths ranging from 7 to 12 feet below ground surface (bgs) and arrayed in general north-south and east-west perpendicular lines in an effort to delineate the extents of the potentially impacted soils in the vicinity of the SWMU on the southwestern portion of the BUSMI facility. Soil samples were obtained continuously from the surface to the termination depth of the soil borings. The soil samples were observed for visible discoloration or noticeable odors. Each sample was screened in the field using an organic vapor analyzer (OVA). Soil samples indicating suspect visual impact or elevated OVA readings were selected for laboratory testing. A distinctive layer of fine black material, which exhibited the highest OVA

readings, was encountered at depths ranging from 3.5 feet to 7 feet bgs in several borings across the subject area. A total of five soil samples were selected, based on visual and olfactory observations and OVA readings, for laboratory analysis.

The analytical results indicated mostly metals with the highest concentrations in samples where the sludge was visibly present. Low levels of VOCs were indicated in samples with sludge. The indicated VOC constituents are primarily associated with petroleum compounds of grinding oils. Antimony, Arsenic, Barium, Chromium, Cobalt, Copper, Iron, Manganese, Molybdenum, Nickel, Selenium, Silver, Tungsten, Vanadium and Bis(2-chloroethyl)ether were present in the soil samples obtained and were found at higher concentrations within the identified grinding sludge material layer.

Based on the results of the limited soil assessment, the VDEQ requested that additional assessment be conducted, in the form of a RCRA Facility Investigation (RFI). ECS completed an RFI at the SWMU in 2010. The objective of this RFI was to provide additional assessment of contamination associated with the SWMU by drilling soil borings and installing groundwater monitoring wells, identify human health/safety risks and environmental receptors, and identify the need for additional remedial actions, if any.

As part of the RFI, ECS advanced soil borings utilizing a Geoprobe at fifteen (15) locations, with the exception of the background sample locations which were advanced by hand auger. Soil and groundwater samples were submitted for laboratory analysis.

The soil data were compared to the November 2014 EPA Region III Residential and Industrial Regional Screening Levels (RSLs). Arsenic, barium, cobalt, iron, molybdenum, and vanadium were noted at concentrations that exceed residential RSLs in one or more locations. Antimony, arsenic, cobalt, iron, and molybdenum concentrations exceeded industrial RSLs at one or more locations.

The SWMU size was estimated to be approximately 55 feet wide by 75 feet long. Data collected during the RFI indicates that it ranges in thickness from 0.3 feet to 2.5 feet at depths from 3.5 to 7.0 feet bgs. The variance in thickness is due to the SWMU being located on an approximate 1:2 slope. The metal grinding sludge is buried under fill material, which ranges in thickness from one (1) to seven (7) feet deep. Due to the varying thicknesses of the material, the exact volume cannot be determined; however, the estimated volume is approximately 382 cubic yards of metal sludge grindings.

Groundwater

Multiple soil borings during the 2010 SWMU investigation were converted to groundwater monitoring wells to allow for sampling and analyses of groundwater. Groundwater sampling was conducted in these wells in 2010 and again in 2013. Due to concerns that metals concentrations detected in groundwater samples during these events were possibly attributable to the presence of suspended sediment in the low yield monitoring wells, rather than being representative of true groundwater quality, VDEQ granted approval for rehabilitation of the monitoring wells followed

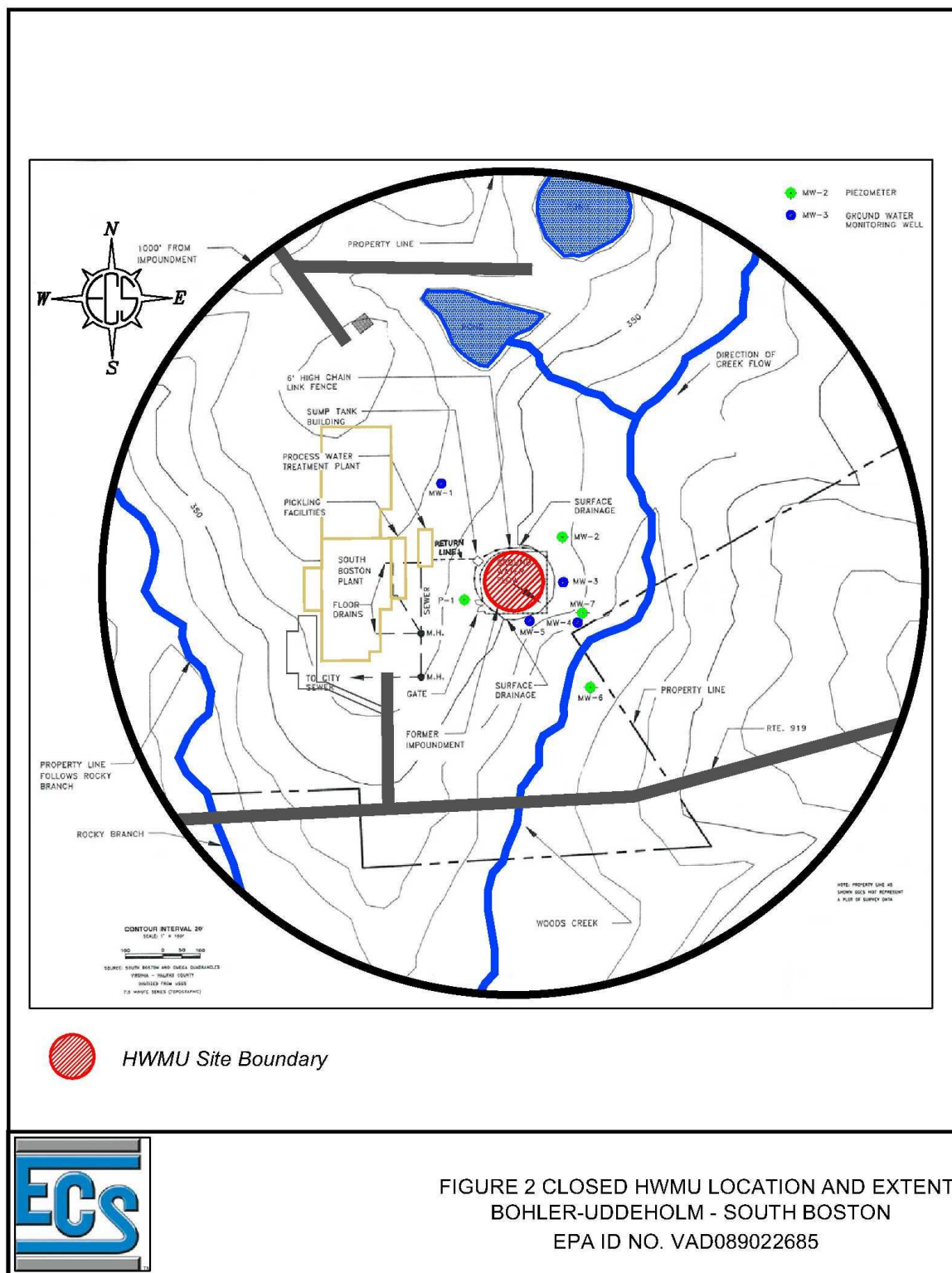
by a round of low-flow sampling in an effort to reduce turbidity and to provide a representative characterization of site groundwater. The data collected by ECS in June and July 2014 indicated past metal exceedances in the area of the SWMU were likely caused by turbid samples resulting from a combination of inadequate purge volumes from the low yield wells prior to sample collection and inadequate well development following installation.

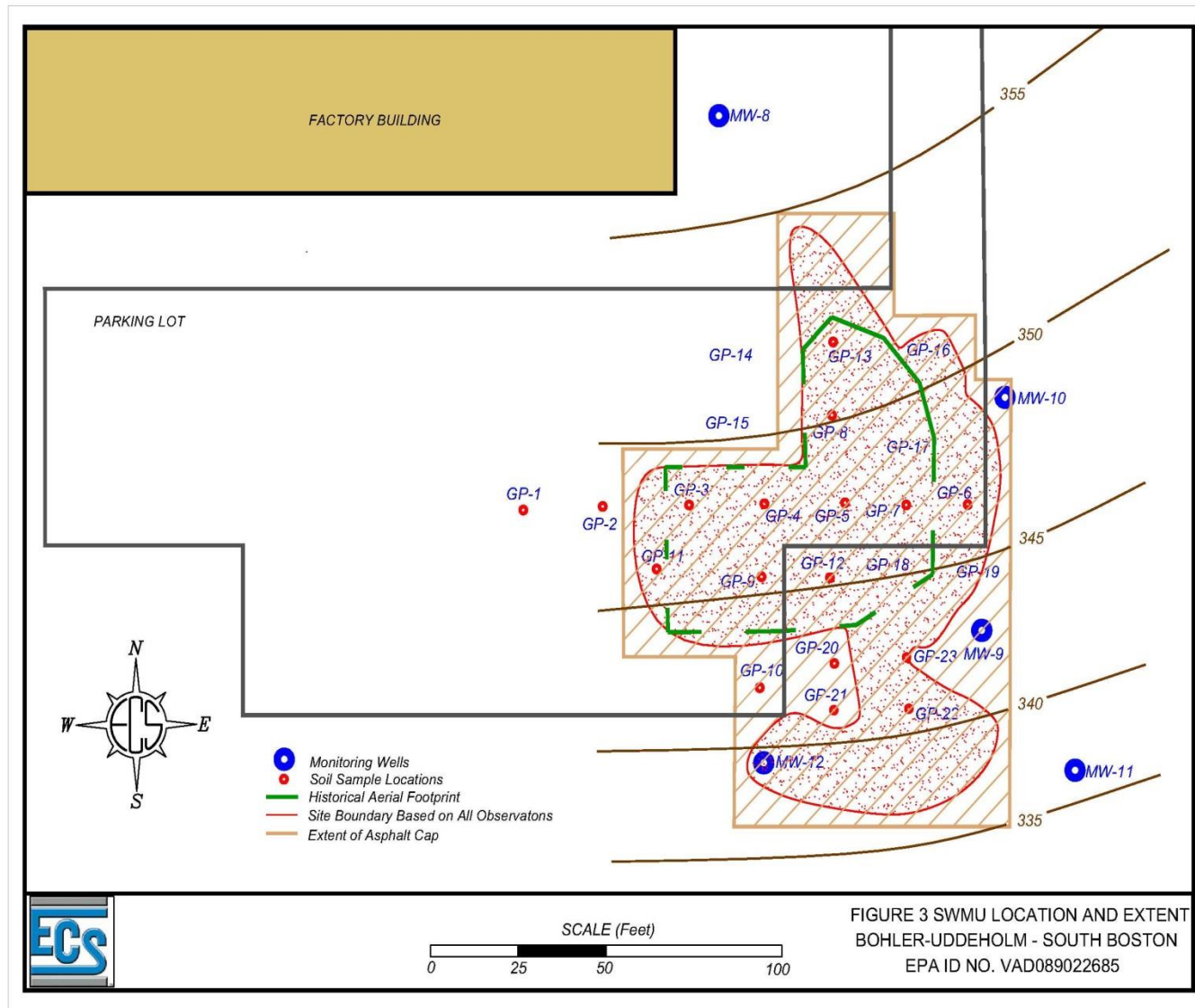
Additional groundwater monitoring was proposed to fully demonstrate that groundwater was not impacted by metals from the SWMU. ECS conducted two additional rounds of groundwater sampling in October 2015 and February 2016. Samples were collected using low flow methods to minimize turbidity in the samples. In April 2016, ECS completed a final groundwater sampling event and reported the collective results. Analytical results were compared to the Alternate Concentration Limits (ACLs; updated February 15, 2016), Maximum Concentration Limits (MCLs) or EPA Tapwater Screening Level, and Facility Groundwater Protection Standards (GWPS), as applicable. In addition, groundwater analytical results extending back to March 2010 were also included for comparison. Based on the data, ECS concluded that the SWMU was not significantly impacting groundwater in an April 2016 monitoring report. On August 8, 2016, VDEQ issued a letter concurring with the findings that groundwater at the facility does not appear to be impacted above applicable EPA Region 3 risk screening levels by the SWMU.

Corrective Measures Study

ECS completed a Corrective Measures Study (CMS) document dated December 30, 2014. The CMS included corrective measures objectives for the SWMU, and identified and screened various technologies. The CMS evaluated multiple corrective measures alternatives. The alternatives were evaluated with respect to criteria specified in the RCRA Permit and threshold and balancing criteria for evaluating corrective measures alternatives found in Section IV Part E of the RCRA Corrective Plan guidance document (EPA 1994). The selected alternative will effectively achieve the corrective measures objectives and consists of capping of the SWMU and a deed restriction. On August 25, 2016, VDEQ approved the CMS.







ATTACHMENT B - POST-CLOSURE PLAN: CLOSED SURFACE IMPOUNDMENTS

A. INTRODUCTION

1. The post-closure care shall continue for 30 years after certification of closure (June 21, 1989) and consists of the following:
 - a. Maintenance and monitoring of the surface impoundment closed as a landfill in accordance with the requirements of 40 CFR 264.110 and 40 CFR 264.310.
2. Use of the Facility subject to this post-closure care plan shall never, during the post-closure care period, be allowed to disturb the integrity of the final cover or any other component of the containment system unless the Owner/Operator demonstrates to the Director that the disturbance:
 - a. Is necessary to the proposed use of the property and will not increase the potential hazard to human health or the environment; or
 - b. Is necessary to reduce the threat to human health or the environment.
Such use will require the written permission of the Director prior to implementation.

B. INSPECTION AND MAINTENANCE SCHEDULE

1. Vegetation

At least monthly, the cover and the area surrounding the closed surface impoundment shall be inspected for deterioration, settlement, subsidence, erosion, and undesirable plant species (i.e. deep-rooted shrubs and trees). A complete stand of vegetation shall be maintained on the entire vegetation layer throughout the post-closure care period. The vegetation layer shall be limed and fertilized as needed based on inspections. Mowing shall be performed at least yearly or more frequently as needed to control deep-rooted shrubs and trees. Approved herbicides and insecticides shall be applied as needed to control noxious invading species. Irrigation shall be performed as needed during excessive dry spells.

2. Cap/Cover

The original configuration shall be maintained throughout the entire post-closure care period. Within 30 days of the detection of significant subsidence or erosion, repair work shall be accomplished to bring the lines and grades back to at least their original configuration. Significant subsidence or erosion shall be defined as any deterioration which may reduce the performance of the cover from its original intended design performance. Erosional features with a depth of six inches will be considered "significant" due to final cover design. Soils, materials, and repair work shall meet minimum standards set forth in the closure cover design.

3. Drainage

Drainage shall be maintained as designed in the closure plan. Swales and gullies shall be maintained, repaired, and kept free from debris and brush as necessary to provide the appropriate slope. Appropriate maintenance and repair shall be accomplished to ensure drainage is directed towards the outfall or retention structure as indicated in the approved closure design.

4. Benchmarks

Benchmarks were installed after closure to act as points of reference for locating the boundaries of the Regulated Unit and to detect any changes such as subsidence that may impact the Facility. Benchmarks were installed by a certified land surveyor. Their location and elevation are tied into the property boundary and are recorded in the deed to the property. The location and elevation of the benchmarks shall be determined annually and any changes noted in the log book. The benchmark shall be inspected annually for any disturbance and maintained as necessary to sustain their intended use.

5. Security

Adequate security shall be maintained to prohibit unauthorized access to the Facility, and warning signs shall be maintained at all directions of approach. A four-foot chainlink security fence surrounds the closed regulated unit. The fence, locks, and gates shall be maintained and replaced as necessary to impede unauthorized access to the Facility. The Owner/Operator shall inspect the security fence at least semiannually. Monthly inspections shall be conducted to ensure that the gates and locks are secure.

6. Records

All inspections shall be logged and detailed inspection reports written. The logged reports of each inspection shall be maintained by the Owner/Operator during the entire postclosure care period. The inspection results and groundwater sampling and analysis results shall be available at the Facility for the Department of Environmental Quality representatives during periodic on-site inspections of the Facility.

B. FACILITY CONTACT

The post-closure care contact representative for the Bohler-Uddeholm South Boston Plant is noted below:

Facility Contact:

Current Bohler-Uddeholm Director of Operations
2306 Eastover Drive
South Boston, Virginia 24592
Phone: (434) 517-7905

The Permittee is responsible for storing on-site and updating the Post-closure Plan during the post –closure period.

Facility Site-Wide Corrective Action Permit
Bohler-Uddeholm
South Boston Plant

EPA ID No.: VAD089022685
Renewal Date: January 22, 2016