Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Acting Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

September 29, 2022

Mr. Devin Fisher
Three Rivers Management, Inc.
600 River Avenue, Suite 200
Pittsburgh, PA 15212
Devin.Fisher@trmi.biz

VIA ELECTRONIC MAIL

RE: **Long-Term Stewardship Report**
Beazer East, Inc.
EPA ID VAD003125770

Dear Mr. Fisher:

The Department of Environmental Quality, Office of Remediation Programs (Department) has prepared the attached report following the Long-Term Stewardship inspection performed on August 23, 2022 at the Beazer East, Inc. site located in Salem, Virginia. The inspection found no outstanding items with regard to compliance of engineering and institutional controls.

You may contact me to discuss any questions. I can be reached at 804-718-8770 or by email at aaron.siegel@deq.virginia.gov.

Respectfully,

Aaron Siegel
Corrective Action Project Manager

ecc: Tara Mason, Ashby Scott – DEQ CO
Nichole Herschler – DEQ BRRO
Jacqueline Morrison, John Hopkins, Caitlin Elverson – USEPA Region III

Attachment

Long-Term Stewardship Assessment Report
Beazer East, Inc.
(Koppers Inc. - Roanoke Valley Site)
EPA ID VAD003125770

Prepared by: Aaron Siegel

Date: September 29, 2022

Introduction: Long-term stewardship (LTS) refers to the activities necessary to ensure that engineering controls (ECs) are maintained and that institutional controls (ICs) continue to be observed. The purpose of the EPA Region 3 LTS program is to periodically assess the efficacy of the implemented remedies (i.e, ECs and ICs) and to update the community on the status of the RCRA Corrective Action facilities. The assessment is conducted in two parts, consisting of a record review and a field inspection, to ensure that the remedies are implemented and maintained in accordance to the final decision.

The RCRA Corrective Action Program has identified key elements of effective Long-Term Stewardship for Corrective Action cleanups. The LTS Report took into consideration the following elements while preparing this report:

Element 1 – Legal Authorities
Element 2 – Information Regarding Engineering and Institutional Controls
Element 3 – Long-Term Facility Oversight, Monitoring, and Maintenance
Element 4 – Recordkeeping and Tracking
Element 5 – Meaningful Engagement and Consultation
Element 6 – Funding
Element 7 – Enforcement
Element 8 – Enforceable Mechanisms
Element 9 – Dedicated Resources

Site Background: Beazer East facility is located within the Roanoke Valley in Salem, Virginia (the Site) and is currently owned by Koppers Inc. This facility conducted wood treating operations using creosote, which began in 1955 when Koppers Company, Inc. built the Roanoke Valley Plant.

In 1988, BNS, a subsidiary of Beazer PLC, acquired all common stock of Koppers Company, Inc. Subsequently, the Facility was purchased by Koppers Industries, Inc., a new independent company. The name Koppers Industries, Inc. was subsequently changed to Koppers Inc. In 1989, the company name of Koppers Company Inc., was changed to Beazer Materials and Services, Inc. and then subsequently changed to Beazer East, Inc. (Beazer) in 1990. Beazer retained

responsibility for certain environmental liabilities at the Site including responsibility for Post-Closure Care and Site-Wide Corrective Action.

The container storage facility was closed in 1996 in accordance with a DEQ-approved closure plan. Corrective action for the closed container storage facility was deferred to site-wide corrective action. Operation of the surface impoundments ceased in June 1988. Closure activities included removal and disposal of sludge and soils in July and August 1988. A RCRA cap was installed in November 1993, and the DEQ approved the closure in August 1995.

Current Site Status:

Based on the findings of the RCRA Facility Investigation (RFI) and Corrective Measures Study (CMS), the Department concluded that historical releases in the eastern end of the process area and from the former surface impoundments have impacted soil and groundwater in both the overburden and bedrock. Such releases have been abated and there are no ongoing releases to the surface or subsurface. While some isolated intervals of dense non-aqueous phase liquids (DNAPL) have been observed in the subsurface and may act as a continuing source of residual dissolved constituents to the groundwater, no recoverable pools of DNAPL have been observed in the subsurface. Constituents detected in groundwater primarily consist of semi-volatile organic compounds (SVOCs), polynuclear aromatic hydrocarbons (PAHs), benzene, ethylbenzene, and xylenes. Documentation for completion of investigation reports and studies has been compiled by the Department, entitled Administrative Record. Based on the CMS results and the Administrative Record, the Final Remedy for the Facility was developed and is described in the Statement of Basis.

Current operation and maintenance of the corrective action activities are detailed in the Sampling and Analysis Plan (SAP). The corrective action includes the following:

i. Continue the DNAPL detection and recovery program to reduce and ultimately eliminate DNAPL as an ongoing source to groundwater contamination;
ii. Continue the groundwater monitoring program to confirm stabilization and/or reductions in hazardous constituents on-site; continue to monitor sentinel wells off-site to confirm that constituents are not migrating to potential receptors;
iii. Perform a dye trace study every five years to reconfirm that constituents are not migrating off-site to potential receptors;
iv. Maintain compliance with land use restrictions and institutional controls. Institutional controls will be implemented on the Permittee through the Permit.

The groundwater corrective action at the closed surface impoundments has been integrated with the site-wide corrective action program under both the DEQ's authority to address groundwater contamination at the Site related to solid waste management units (SWMUs) and closed surface impoundments (SIs), and the United States Environmental Protection Agency's (USEPA's) Hazardous and Solid Waste Amendments (HSWA) authority (Site-wide program). The DEQ has deferred post-closure care groundwater monitoring requirements for the regulated unit (closed surface impoundments) to site-wide corrective action under the authority of 40 CFR 264.110(c) and 40 CFR 264.90(f). The concentrations of site-related constituents in the groundwater plume

beneath the Facility will be monitored as described in the DEQ-approved Groundwater Sampling and Analysis Plan for Site-Wide Corrective Action Groundwater Monitoring (ARCADIS, 2015).

The Facility has worked with the Owner to implement institutional controls through an environmental covenant pursuant to the Virginia Uniform Environmental Covenants Act (UECA), VA Code, §10.1-1238, et seq. which has been recorded with the deed for the property.

Element 1: Legal Authorities

The remedy is being implemented under a Hazardous Waste Management Permit for Post Closure Care and Site-Wide Corrective Action (Permit) which was modified on September 18, 2015 to incorporate the remedy and renewed on January 23, 2018. Institutional controls were implemented through an Environmental Covenant compliant with the Uniform Environmental Covenant Act (UECA), recorded on January 14, 2016.

Element 2: Information Regarding Engineering and Institutional Controls

The following controls are required as part of the CA remedy.

Associated Tax Parcel	Restriction
055.03-02-06.00-0000 055.03-02-08.00-0000 055.03-02-09.00-0000 055.03-02-10.00-0000 055.03-02-10.01-0000 055.03-02-11.00-0000	1. The Property shall not be used for residential purposes or for children's (under the age of 16) daycare facilities, schools or playground purposes. 2. Groundwater beneath the Property shall not be used for any purposes except for Environmental monitoring and testing, or for non-contact Industrial use as may be requested in writing to the Agency, with a copy to the Holder(s), and as approved in writing by the Agency subject to the considerations in the Corrective Measures Study. Any new groundwater wells installed on the Property must be approved by the Agency. 3. Excavation and disturbance on the Property shall be conducted pursuant to the Materials Management Plan. 4. 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, including, but not limited to groundwater monitoring wells and the engineered cover installed over the closed SIs, without prior written request to the Agency, with a copy to the Holder(s), and written approval of the Agency. 5. Vapor intrusion mitigation measures shall be installed in any newly constructed totally enclosed building(s) designed for occupation within 100 feet of the foot print of groundwater that may be impacted with volatile and semi-volatile organic compounds. Additionally the need for vapor intrusion mitigation measures shall be assessed for any existing totally enclosed building(s) designed for occupation should the use of such building(s) be

	modified from its current use in such a manner that vapor intrusion could become a human health risk. Vapor intrusion mitigation measures may be waived following a written request to the Agency, with a copy to the Holders, and written approval from the Agency based upon a demonstration that vapor intrusion does not represent a human health risk

Element 3 – Long-Term Facility Oversight, Monitoring and Maintenance and Element 4 – Recordkeeping and Tracking

The Permit requires that the Facility properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Facility 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 quality assurance procedures.

In addition, the Permit requires the Facility to submit a groundwater monitoring and remedial progress report no later than March 1st of each calendar year. The sampling and reporting frequency was reduced from annual to biennial as approved by the DEQ on May 1, 2020. The biennial report shall contain, at a minimum, groundwater monitoring results for each monitoring event including applicable summary tables and figures, remedial measures monitoring results, and evaluation of remedial effectiveness. The Facility shall continue to submit biennial groundwater monitoring and remedial measures reports until remedial clean-up requirements have been met. The last biennial groundwater monitoring report was submitted on February 25, 2022.

A three (3)-year remedy status evaluation report is also required that reports on progress of remedial measures and attaining remedial goals and the effectiveness of institutional controls and engineering controls for meeting human health and environmental protection objectives including, but not limited to, a review of the potential new uses of the facility with respect to zoning maps or planning documents that may affect future land use of the impacted area.

Under the UECA, by the end of the calendar year in which the Agency (DEQ) signed the environmental covenant and every three (3) years thereafter, and whenever else requested in writing by the Agency, written documentation must be submitted stating whether or not the activity and use limitations in the environmental covenant are being observed. The last UECA compliance and use report was last submitted on February 4, 2021.

Portions of the Facility are located within the 1% Annual Chance Flood Hazard Area with the remainder within the 0.2% Annual Chance Flood Area as indicated on FEMA's National Flood Hazard Layer (NFHL) Viewer. DEQ did not observe any issues related to its location that would affect the remedy during this Long-Term Stewardship Evaluation.

Mapping: The EPA Facility website figure has been updated with a Geospatial PDF showing the use restriction boundaries. The map was field-verified, and no issues were noted.

Element 5 – Meaningful Engagement and Consultation
Facility remains an operating facility in the community with no off-site impacts. The Permit requires that records be provided to the community upon request.

Element 6 – Funding
Financial Assurance: Financial Assurance is required for this Facility and has been demonstrated to the DEQ in accordance with the Permit.

Element 7 – Enforcement
The Permit allows DEQ the Authority to enforce the remedy. EPA, without limitation, reserves its right to take administrative enforcement action under RCRA or other federal law for violations. The UECA covenant provides additional enforceability.

Element 8 – Enforceable Mechanisms
An Environmental Covenant compliant with the Uniform Environmental Covenant Act (UECA) was recorded on January 14, 2016. The Hazardous Waste Management Permit for Post Closure Care and Site-Wide Corrective Action was renewed on January 23, 2018.

Element 9 – Dedicated Resources
The Performance Partnership Grant Workplan provides for Long-Term Stewardship activities. The Programmatic goal is to evaluate 20% of facilities with remedies older than 10 years.

Long-term Stewardship Site Visit: On August 23, 2022
DEQ conducted a long-term stewardship site visit to discuss and assess the status of the implemented remedies at the site. A field report is included with this letter.

The attendees were:

Name	Organization	Contact Information
Stephanie Houston	Virginia Department of Environmental Quality	Stephanie.Houston@deq.virginia.gov (804)584-3143
Kimberly Thompson	Virginia Department of Environmental Quality	Kimberly.Thompson@deq.virginia.gov (540)759-9857
Brock Malcolm	Virginia Department of Environmental Quality	Brock.Malcolm@deq.virginia.gov (804)712-8077
Andrew Clark	FTS	(724)456-5388
Trevor Lowe	FTS	(336)830-0602
Brendan McLoughlin	Koppers	(540)521-8474
John Clayton	Koppers	(540)632-9597
Travis Yeoman	Koppers	(540)613-9313

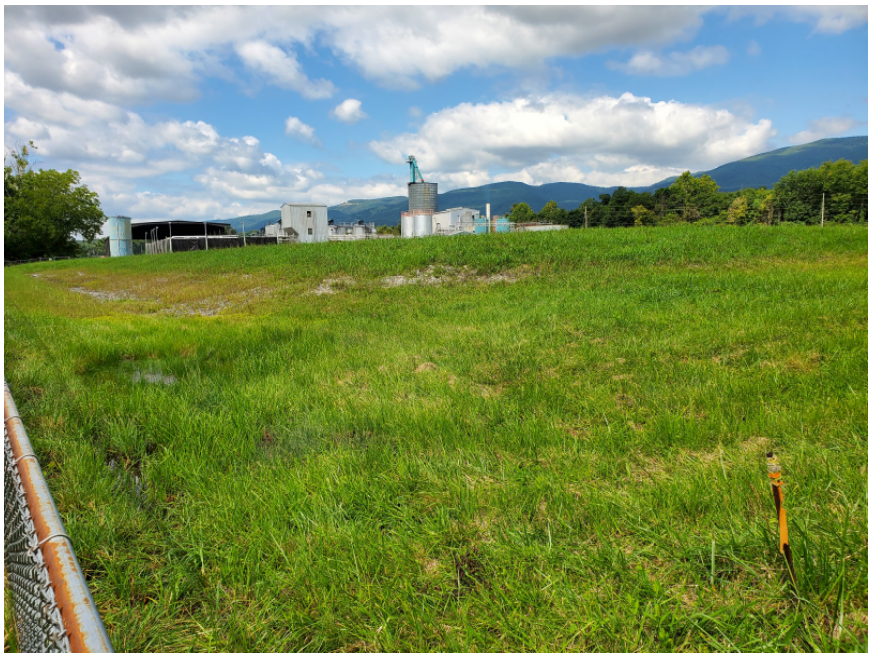
Follow-up Activities: Monitoring well maintenance is recommended to ensure well integrity between biennial groundwater monitoring events.

Conclusion: The engineering and institutional controls selected are implemented and remain intact and undamaged. No EC/IC deficiencies have been identified.

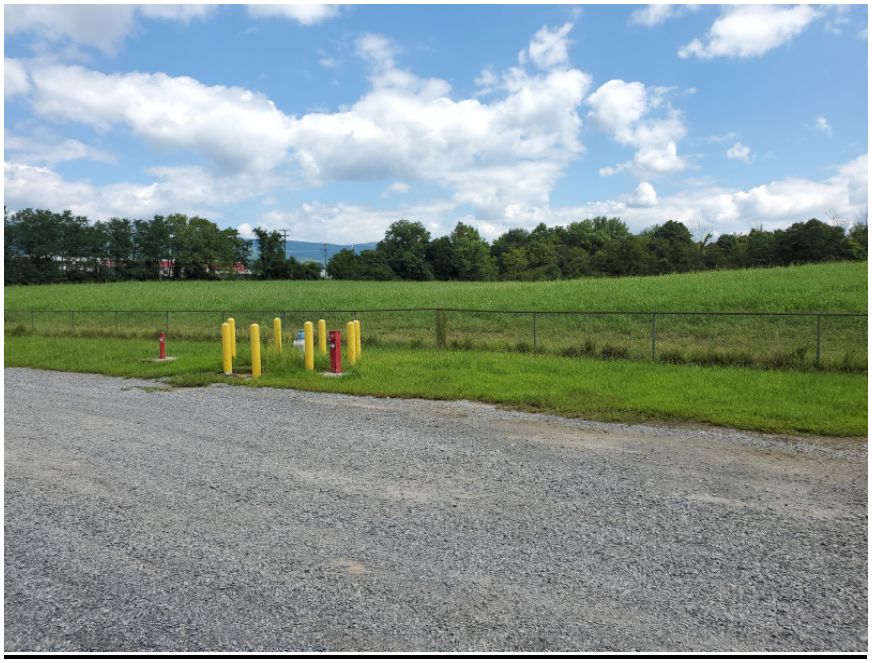
DEQ Long-Term Stewardship Facility Geospatial PDF
Beazer East, Inc. – Salem, Virginia

Select Site Photos
Photos by: Stephanie Houston
August 23, 2022

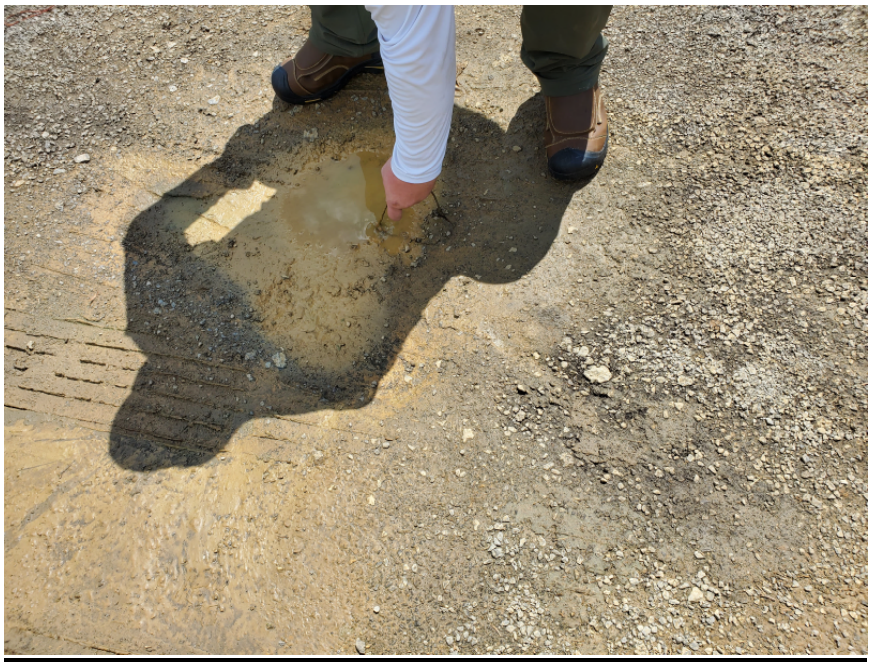
Impoundment Area Cap I - Southeast



Impoundment Area Cap II - West



Monitoring Well M-30B



VADEQ - Long Term Stewardship Checklist
Beazer East, Incorporated (Formerly: Koppers) in Salem, Virginia August 18, 2022
VAD003125770

Onsite: 8/23/2022, 11:00AM
Offsite: 8/23/2022, 1:30PM

DEQ Project Manager: Aaron Siegel

DEQ Field Visit Personnel
Stephanie Houston, Remediation Project Manager
Kim Thompson, Hazardous Waste Inspector
Brock Malcolm, Hazardous Waste Inspector

Facility Representatives

1.) Andrew Clark, FTS on behalf of Beazer, (724)456-5388
2.) Trevor Lowe, FTS, (336)830-0602
3.) Brendan McLoughlin, Koppers, (540)521-8474
4.) John Clayton, Koppers, (540)632-9597
5.) Travis Yeoman, Koppers, (540)613-9313

Selected Remedies and AULs:

i. Continue the DNAPL detection and recovery program to reduce and ultimately eliminate DNAPL as an ongoing source to groundwater contamination.
ii. Continue the groundwater monitoring program to confirm stabilization and/or reductions in hazardous constituents on-site and continue to monitor sentinel wells off-site to confirm that constituents are not migrating to potential receptors. 13 Beazer East - KI Hazardous Waste Management Permit EPA ID No.: VAD003125770 Expiration Date October 28, 2017 Modified Date: September 16, 2015
iii. Perform a dye trace study every five years to reconfirm that constituents are not migrating off-site to potential receptors.
iv. Develop and maintain compliance with land use restrictions and institutional controls. Institutional controls will be implemented on the Permittee through the Facility's Permit. An Environmental Covenant will be filed on the Property deed which will be UECA compliant. Institutional controls will include:
    - The property shall not be used for residential purposes or for children's (under the age of 16) daycare facilities, schools, or playground purposes.
    - Groundwater beneath the property shall not be used for any purposes except for environmental monitoring and testing, or for non-contact industrial use as may be approved by the agency subject to the considerations in the CMS. Any new groundwater wells installed on the property must be approved by the agency.
    - Excavation and disturbance on the property shall be conducted in accordance with the agency approved Materials Management Plan.
    - Vapor intrusion mitigation measures shall be installed in any newly constructed totally enclosed building(s) designed for occupation within 100 feet of the foot print

of groundwater impacted with VOCs and SVOCs. Additionally, the need for vapor intrusion mitigation measures shall be assessed for any existing totally enclosed building(s) designed for occupation should the use of such building(s) be modified from its current use in such a manner that vapor intrusion could become a human health risk. Vapor intrusion mitigation measures may be waived with agency approval based upon a demonstration that mitigation measures are not necessary for protection of human health.

- 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, including, but not limited to groundwater monitoring wells and the engineered cover installed over the closed surface impoundments, without agency approval.

IC Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Have the ICs specified in the remedy been fully implemented? Implementation mechanism in place?	*X*		Corrective Action Permit Modification 9/18/2015 to incorporate remedy. UECA recorded Roanoke County, 1/14/2016
• Do the ICs provide control for the entire extent of contamination (entire site or a specific portion)?	X		Per Project Manager review of 2021 Biennial Groundwater Monitoring Report
• Are the ICs eliminating or reducing exposure of all potential receptors to known contamination?	X		Per PM review of 2021 Biennial Groundwater Monitoring Report
• Are the ICs effective and reliable for the activities (current and future) at the property to which the controls are applied?	X		Per PM review of 2021 Biennial Groundwater Monitoring Report
• Have the risk of potential pathway exposures addressed under Corrective Action changed based on updated screening levels and new technologies?		X	Per PM review of 2021 Biennial Groundwater Monitoring Report
• Are modifications to the IC implementation mechanism needed? (i.e. UECA Covenant, Permit or Order)		X	Per PM review of 2021 Biennial Groundwater Monitoring Report

• Are there plans to develop or sell the property?		X	
• Have all reporting requirements been met?	X		Per PM review of 2021 Biennial Groundwater Monitoring Report

Groundwater Remedy Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Is groundwater onsite used for potable purposes?		X	Not used for industrial purposes either (per facility representatives during 8/23/2022 site visit)
• Is the Facility connected to a public water supply?	X		• City water used for potable water • Wastewater discharged into sewer, discharge to public works • Western VA – discharge through treatment plant – April 2021 (per facility representatives during 8/23/2022 site visit)
• Are the current groundwater flow rate and direction similar as mentioned in the previous studies?	X		Per PM review of 2021 Biennial Groundwater Monitoring Report
• Groundwater contaminants stable or decreasing in concentration?	X		Per PM review of 2021 Biennial Groundwater Monitoring Report
• Are groundwater monitoring wells still in place (# wells)?			• No new wells since 2018 permit (per facility representatives during 8/23/2022 site visit) • Multiple wells need to have surrounding vegetation trimmed/cleared, can't see pad (e.g., M-6A, M-5A, R-3) • Multiple wells' labels hard to read/can't read (e.g., M-2R, M-5A, M-27B); all wells have clear bar codes on them, which is linked to

			FTS database that has well names linked to bar codes • MW-2R – wood border degraded, can't see pad • MW-30A, B, C – because Krogers had damaged prior wells, wells were converted to flush mount wells, and strings were attached to the flush mounts to help locate (per facility representatives during 8/23/2022 site visit); site visit 8/23/2022 – covered in mud, could not see wells but could find the strings (see pics) • Minor rust on most wells • Some wells have a flip top with a slit at the top that allows possible access to the well (e.g., M-2R, M-3R)
• Any evidence or reason to re-evaluate the number and location of monitoring points and/or monitoring frequency?		X	
• For wells where groundwater monitoring is no longer required, have the wells be decommissioned?	X		October 2017 – decommissioned 1, replaced 1; last time any wells were decommissioned (per facility representatives during 8/23/2022 site visit)

Surface and Subsurface IC Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Is the facility being used for residential purposes?		X	Sheds onsite used for maintenance, showers, etc (per facility representatives during 8/23/2022 site visit)

• Have there been recent construction or earth-moving activities or future plans for such?	X		• No new buildings • Trench was made in 2017/18 to put in City water line (pump house was abandoned at this time to switch to City water) (per facility representatives during 8/23/2022 site visit)

Engineered Cap or Cover Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Have vegetative landfill caps (name) been properly maintained?	X		Mowing is performed on cap (not sure when last mowing event occurred) (per facility representatives during 8/23/2022 site visit)
• Have any repairs been necessary? (i.e. regrading, filling, root removal)	X		• 2017 – drainage issues (ponding) but was fixed (per facility representatives during 8/23/2022 site visit) • Site visit 8/23/2022 – some ponding in Southeast corner of cap; Koppers said due to a lot of rain in the past week
• Is the leachate collection system operating and effectively preventing groundwater contamination?			N/A

Miscellaneous EC Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Is the security fence intact?			Not required in remedy.

• Is the appropriate signage posted?			Not required in remedy.

Additional Notes:

No changes to Materials Management Plan
DNAPL recovery system has not been utilized recently according to both FTS and Koppers
Dye tracing has not been done recently