



**UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION III
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852**

SUBJECT: Long-Term Stewardship Assessment
Groundwater Remedy at ISG Tecumseh Redevelopment
aka Lehigh Valley Industrial Park VII
Formerly Bethlehem Structural Products - Bethlehem
EPA ID: PAD990824161
1805 East 4th Street
Bethlehem PA 18015

DATE: 09/25/2023

TO: Alizabeth Olhasso, RCRA Corrective Action South Section Manager
Long Term Stewardship File for Groundwater Remedy at ISG Tecumseh
Redevelopment
RCRA Corrective Action

FROM: Linda Matyskiela, Remedial Project Manager

Remedy Assessment Summary:

On June 05, 2023, the United States Environmental Protection Agency's (USEPA) Land, Chemicals, and Redevelopment Division (LCRD) representative, Linda Matyskiela, conducted a long-term stewardship assessment site visit of the Groundwater Remedy at ISG Tecumseh Redevelopment (Facility) in Bethlehem, PA. The Remedy for groundwater was developed, and public noticed independent of the other media at the property, as the groundwater was viewed site-wide, while the soils/surface of the property was divided into parcels with remedies determined on a parcel-by-parcel basis.

The information gathered concludes the Facility is meeting the objectives of USEPA's final remedy selected in the groundwater Final Decision and Response to Comments on January 8, 2010.

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 enforced. 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 twofold, which consists of a record review and a field inspection, to ensure that the remedies are implemented and maintained in accordance with the final decision.

Facility Background:

January 08, 2010, EPA selected Natural Attenuation with Technical Impracticability (TI) Zones and Institutional Controls (ICs) as the Final Remedy for the groundwater at the ISG Tecumseh Redevelopment Facility in Bethlehem, PA. This flagship location of the Bethlehem Steel Corporation has had many names during its lifetime, including Bethlehem Structural Products, Lehigh Valley Industrial Park VII, Bethlehem Works (part of the facility), and Bethlehem Commerce Center (part of the facility). The 2010 FDRTC covers the site-wide groundwater for the entire property previously owned by Bethlehem Steel, however the TI Zones, MNA area, and monitoring network are located on the Bethlehem Commerce Center portion. Lehigh Valley Industrial Park, Inc. (LVIP) currently is responsible for activities involving groundwater investigation and remediation.

Remedy –

A) Monitored Natural Attenuation - EPA's Final Remedy requires that natural attenuation be monitored at the Site through a post-remediation care and monitoring program to confirm that contaminants of concern are not migrating at concentrations that exceed their current concentrations and that there are no complete exposure pathways to contaminated groundwater. This post-remediation care and monitoring program was approved by EPA, and incorporated into the August 18, 2010 Environmental Covenant recorded by Lehigh Valley Industrial Park Inc.

B) TI Zones - EPA determined that two (2) Technical Impracticability Zones exist at the Site, one associated with the former Coke Works Area (206 acres) and the other a smaller zone associated with the SI-1 impoundment (18 acres). EPA has determined, based on the nature of the contamination and the Site geology, that remediation of groundwater to drinking water standards cannot be met by any practicable means within these zones. The locations of these TI Zones are depicted on Attachment 1 of this 2023 LTS Report.

C) Institutional Controls for land/surface parcels– As potential for human exposure to contaminated groundwater must be minimized, and to protect the integrity of a remedy, EPA determined that land and resource limitations are required for each Parcel at the Bethlehem Commerce Center. For each parcel, an environmental covenant will be recorded with the following restrictions and requirements:

1. Land use restricted to non-residential uses.
2. Groundwater beneath the parcel restricted to monitoring, treatment and remediation uses.
3. No extraction wells installed, other than for the purposes listed in 2, above
4. No digging or excavation, or other earth moving activities not in compliance with a plan approved by EPA.
5. Advance notification to EPA of sale of any parcel acreage.
6. Advance notification to EPA for proposed use-change of parcel acreage, proposal of site work, and filing for building permits.
7. Metes and Bounds survey of parcel perimeter and all activity and use limitation areas.

D) Convert old/existing covenants to environmental covenants

Current Site Status:

LVIP is in compliance with all activities and reporting requirements for the Groundwater Remedy. In an effort to update the Post Remediation Care Plan for Site-Wide Groundwater, future land development considerations as well as maintaining pathway elimination and the integrity of the Groundwater Remedy, LVIP has proposed modifications to the monitoring network and the list of analytical parameters. EPA, PADEP and LVIP have met several times to discuss these changes. EPA expects a formal submittal, for approval, in the near future. Any EPA-approved modifications to the post remedial care plan will be automatically incorporated into the 2010 Environmental Covenant, and will be applicable to any future responsible parties.

Long-term Stewardship Site Visit:

The attendees were:

Name	Organization	Email Address
Linda Matyskiela	US EPA Region 3	Matyskiela.Linda@epa.gov
John Gross	PADEP	johnngross@pa.gov
Kerry Wrobel	LVIP	kwrobel@lvip.org
Chelsea Tarbell	HDR Inc.	Chelsea.Tarbell@hdrinc.com
Vincent Carbone	HDR Inc.	Vincent.Carbone@hdrinc.com

Implementation Mechanism(s):

The Implementation Mechanism is the method for implementing IC and ECs required as a condition of the Statement of Basis and Final Decision. The summary of implementation mechanisms are described in Attachment 2.

Financial Assurance:

In 2008, LVIP estimated that the cost of the Final Remedy for groundwater at the Site would be \$3,000,000. However, recently proposed modifications to the groundwater system; including a decrease in number of monitoring points and reduced analytical parameters will change the estimated cost. Once the modified groundwater plan is approved, EPA will request a new cost estimate.

Reporting Requirements/Compliance:

LVIP is in compliance with all reporting requirements in the Post Remediation Care Plan for Site-Wide Groundwater; annual compliance correspondence and scheduled monitoring reports.

Mapping:

The entire Bethlehem Steel facility and surface parcels have been geospatially mapped and is available on the Facility's EPA Factsheet.

Conclusions and Recommendations:

The information gathered during the LTS Assessment concludes the Facility is meeting the objectives of USEPA's final remedy selected in the groundwater Final Decision and Response to Comments on January 8, 2010.

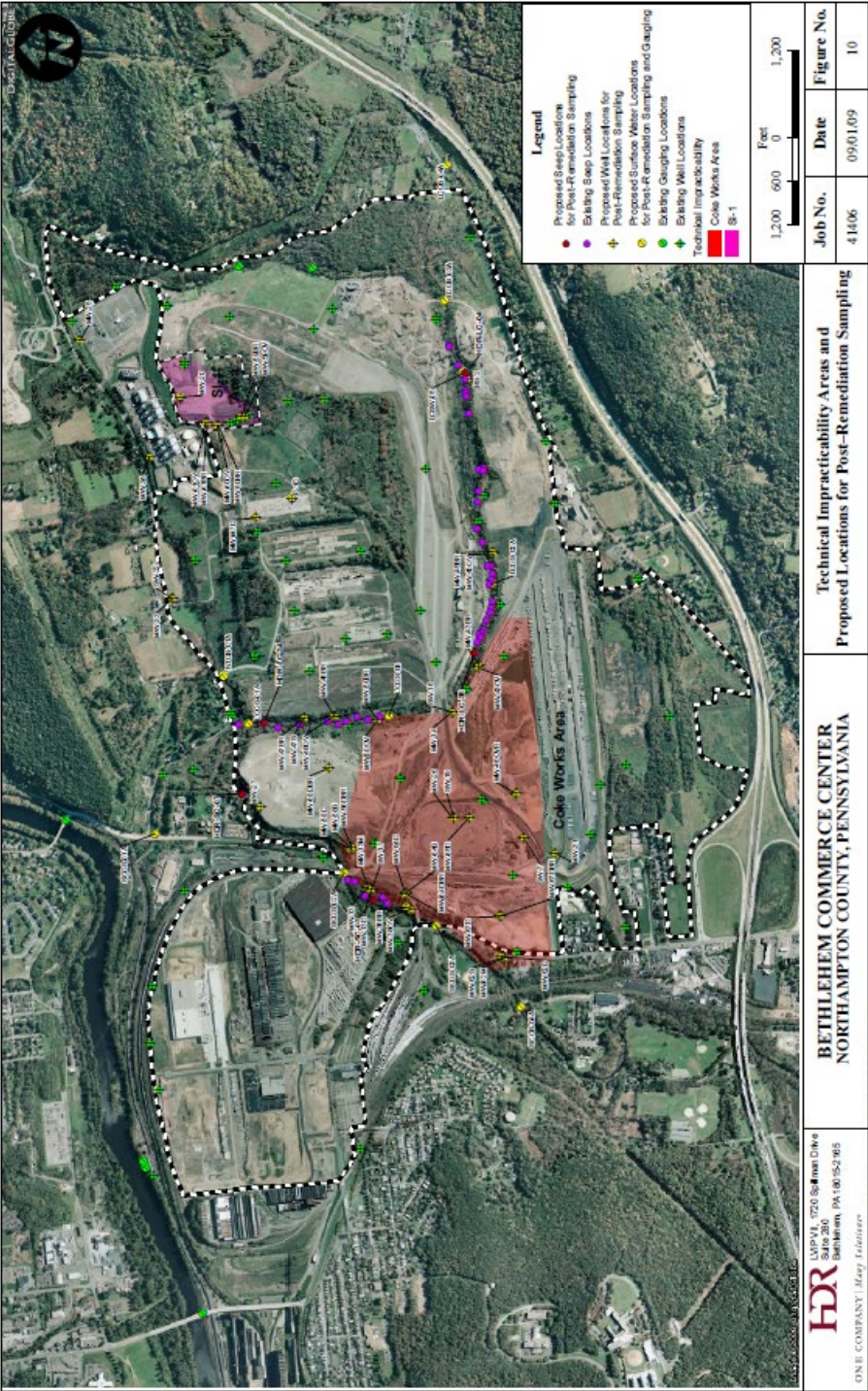
Files Reviewed:

2023 draft modification submittals for Post Remediation Care Plan for Site-Wide Groundwater
2019 Post Remediation Care Plan Report for Site-Wide Groundwater
August 10, 2010 Environmental Covenant for groundwater
January 08, 2010 EPA FDRTC for Groundwater

Enc.:

Attachments

Attachment 1. Map of facility.



Attachment 2: Remedial EC/IC Summary Table.

Facility Name	ISG Tecumseh Redevelopment			
Address	1805 East 4 th Street, Bethlehem, PA 18015			
EPA ID#	PAD990824161			
Are there restrictions or controls that address:	Yes	No	Area(s)	Description of restrictions, controls, and mechanisms
Groundwater Use	X		Site-Wide	8/18/2010 Environmental Covenant restricts to sampling and remedial uses only
Residential Use	X		Site-Wide	2010 FDRTC/Covenant for GW restricts land use to non-residential
Excavation	X		Site-Wide	2010 FDRTC/Covenant for GW restricts earth moving to approved only for surface parcels
Vapor Intrusion		X		VI restrictions in covenants for specific surface parcels, not in FDRTC/Covenant for GW
Capped Area(s)		X		Cap requirements in covenants for specific surface parcels, not in FDRTC/Covenant for GW
Other Engineering Controls	X		Site-Wide	GW monitoring for MNA and TI Zones
Other Restrictions		X		

LTS Checklist Template

<u>IC Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Have the ICs specified in the remedy been fully implemented? Implementation mechanism in place?	X		Proposal for modified PRCP for GW will be submitted soon
• Do the ICs provide control for the entire extent of contamination (entire site or a specific portion)?	X		Yes, as it applies to 2023 GW assessment
• Are the ICs eliminating or reducing exposure of all potential receptors to known contamination?	X		Yes, as it applies to 2023 GW assessment
• Are the ICs effective and reliable for the activities (current and future) at the property to which the controls are applied?	X		Yes, as it applies to 2023 GW assessment
• Have the risk of potential pathway exposures addressed under Corrective Action changed based on updated screening levels and new technologies?		X	No, as it applies to 2023 GW assessment
• Are modifications to the IC implementation mechanism needed? (i.e. UECA Covenant, Permit or Order)	X		Modified PRCP for GW will be submitted soon
• Are there plans to develop or sell the property?	X		Most of surface site is expected to be sold. Some has been sold
• Have all reporting requirements been met?	X		Yes, as it applies to 2023 GW assessment

<u>Groundwater Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Is groundwater onsite used for potable purposes?		X	
• Is the Facility connected to a public water supply?	X		
• Have any new wells been installed at the facility?	X		To replace decommissioned wells
• Are the current groundwater flow rate and direction similar as mentioned in the previous studies?	X		
• Groundwater contaminants stable or decreasing in concentration?	X		TI zones appear shrinking very slowly

• Are groundwater monitoring wells still in place (# wells)?	X		Currently 55 sampling locations
• Any evidence or reason to re-evaluate the number and location of monitoring points and/or monitoring frequency?	X		Redevelopment changes merit reevaluation of PRCP for GW
• For wells where groundwater monitoring is no longer required, have the wells be decommissioned?		X	Not all
• Is there evidence of monitored natural attenuation occurring in groundwater?	X		
• Has (active remediation system) been maintained as necessary?			NA
• Is the (groundwater containment system) effectively containing COCs and protecting potential receptors (surface water body and/or groundwater resource) via hydraulic control?	X		
• Have notification letters been sent to the local POTW, County Department of Health, and Planning and Zoning Department regarding groundwater use restrictions?	X		

<u>Surface and Subsurface Soil Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Is the facility being used for residential purposes?		X	
• Have there been recent construction or earth-moving activities or plans for such?	X		Redevelopment continues

<u>Engineered Cap or Cover Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Have geosynthetic/vegetative landfill caps (name) been properly maintained?	X		Yes, although not part of this 2023 GW assessment
• Have any repairs been necessary? (i.e. regrading, filling, root removal)		X	No, although not part of this 2023 GW assessment
• Is the leachate collection system operating and effectively preventing groundwater contamination?			NA

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<u>Vapor Intrusion Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Have there been construction of new structures within the vapor intrusion restriction zone(s)?		X	No, although not part of this 2023 GW assessment
• Is the vapor intrusion mitigation system radius of influence effective for the structure in which its installed?			NA

<u>Miscellaneous Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Is the security fence intact?	X		Site security, where needed is intact, although not part of this 2023 GW assessment
• Is the appropriate signage posted?	X		Appropriate signage is intact, although not part of this 2023 GW assessment