Long-Term Stewardship Assessment Report

TRC Spent Cathode Storage Pile

EPA ID #: WVD988766127

Ravenswood, WV 26164

Assessment Date: **September 26, 2024**

Introduction: In EPA Region 3 and its RCRA-Authorized states, a Long-Term Stewardship (LTS) or "LTS Assessment Visit" refers to a site inspection that includes both a record review and a field inspection to ensure that the remedies are implemented and maintained according to the final decision. This involves evaluating whether a previously remediated facility or a former facility site continues to meet the environmental protection standards over time by ensuring that engineering controls (ECs) are maintained and that institutional controls (ICs) continue to be enforced. The LTS program periodically assesses the efficacy of the implemented remedies (i.e., ECs and ICs) and to update the community on the status of the RCRA Hazardous Waste Cleanup Program facilities.

Facility Background: The TRC Spent Potliner (SPL) Pile was originally part of an integrated aluminum manufacturing facility, which began operations in 1957 under Kaiser Aluminum. Between 1972 and 1980, spent potliner from the smelting process was stockpiled on concrete and clay pads, awaiting shipment for mineral recycling. An Ethylene Propylene Diene Monomer (EPDM) cover was installed in 1981 to isolate the material from the environment and to prevent contact with rainwater. Cyanide is the constituent of concern in soil, whereas cyanide and fluoride are the constituents of concern in groundwater.

In 1989, Ravenswood Aluminum Corporation (RAC) purchased the entire Kaiser Plant, excluding three parcels (identified as "Spent Potliner Pile", "Discolored Puddle Area" (adjacent to the Spent Potliner Pile), and "Spent Cathode Vault"), which Kaiser retained. TRC Environmental Corporation purchased these three parcels from Kaiser in 2004. Both the Spent Potliner Pile and the Spent Cathode Vault have engineered caps maintained by TRC. The TRC Spent Potliner Vault is a permitted landfill under Class F Industrial Permit NPDES No. WV0111244. It is being monitored and maintained by TRC under the West Virginia Solid Waste Management Rule and it was not a part of this site assessment visit.

EPA issued a Final Decision and Response to Comments (FDRTC) for the TRC Spent Potliner Pile in November 2011. A Consent Order between EPA and TRC was signed in August 2012 requiring implementation of the corrective measures set forth in the FDRTC. TRC submitted an Environmental Covenant (UECA) to West Virginia and EPA. The UECA was signed by West Virginia on September 24, 2012.

Century Aluminum of West Virginia (CAWV), which envelopes the TRC parcels, continued to operate the aluminum production portion of the facility until 2009, when aluminum production activities were shut down. In 2017, CAWV sold their portion of the facility to Applied Partners for site decommissioning. In 2020, West Virginia Economic Development Authority (WVEDA) acquired the former CAWV property from Applied Partners via deed

in lieu foreclosure and is the current property owner. WVEDA is currently making arrangements with contractors for demolition and site preparation activities on the site, as well as for environmental compliance, and has entered the site into the West Virginia Voluntary Remediation Program (VRP) as VRP Project #24024.

Current Site Status: As stipulated by the signed Orders, the EPA serves as the lead agency, providing oversight of RCRA Corrective Action activities at the TRC Spent Potliner Pile site in coordination with WVDEP. The site is completely enclosed by a chain-link fence and is located within the inactive former CAWV Facility.

Long-Term Stewardship Site Visit: On September 16, 2024, WVDEP conducted an LTS assessment site visit with representatives from two parties at the Ravenswood facility (TRC and Constellium and their contractors) to discuss and assess the status of the implemented remedies at the site. This is the first LTS visit to the site since the June 23, 2016 visit conducted by EPA personnel. The former CAWV Facility portion was not included in this assessment visit as it is currently being remediated under the West Virginia VRP.

The attendees were:

Name	Organization	Email Address
Kenan Cetin	West Virginia Dept of Env. Protection (WVDEP)	kenan.cetin@wv.gov
Hiral Kukkillaya	WVDEP	hiral.kukkillaya@wv.gov
John Lockhart	WVDEP	john.v.lockhart@wv.gov
Michael Hofe	WVDEP	michael.p.hofe@wv.gov
Mike Steele	Constellium Rolled Products	mike.steele@constellium.com
Chris Harvey	TRC Companies	CHarvey@trccompanies.com
Karen Souza	Allegheny Environmental Services Inc.	ksouza@alleghenyenviron.com
Scott Rasmussen	Allegheny Environmental Services Inc.	srasmussen@alleghenyenviron.com

Institutional Controls (ICs) Status: The TRC SPL Pile site has the following IC restrictions specified on the UECA covenant, pursuant to WV Code 22-22B-1, et seq, and recorded on September 24, 2012.

Groundwater: Restriction of groundwater use to remediation purposes only.

Land Use: Restriction for industrial use only as described in the UECA.

Excavation: Restriction on the property within the SPL boundary for any excavation or development which could interfere with the integrity and effectiveness of the EPDM cover.

During this LTS assessment visit, WVDEP confirmed that Facility is in compliance with these institutional controls and that each of the ICs above is fulfilled, maintained or in place.

Engineering Controls (ICs) Status: The main engineering control (EC) remedy component at the Spent Potline Pile is an EPDM cover, originally installed in 1981. The original EPDM cover was damaged by wildlife and weather. Following a 2013 long-term rehabilitation analysis recommendation, a new EPDM cover was installed in 2016 as a long-term capital improvement. The details of the work were documented in the "SPL Pile Improvement Report", dated July 28, 2016. During this work, old and damaged sections of fencing surrounding the SPL Pile were replaced.

Groundwater Monitoring – Monitored Natural Attenuation (MNA) - Status:
Monitored Natural Attenuation (MNA) was selected as the site-wide remedy for groundwater in the FDRTC, with the goal of restoring groundwater to drinking water standards. Due to past releases of hazardous contaminants from the Spent Potliner Pile into the groundwater, TRC has been participating in the MNA Program. Until these standards are met, TRC will conduct annual monitoring of the natural attenuation of cyanide and fluoride in groundwater at wells SPL-1, SPL-2, SPL-3, SPL-4R, and SPL-5. During this visit, WVDEP observed all of the wells listed above on location. TRC has been sampling these wells and providing analytical results, included in Annual MNA Reports, since 2017. The 2023 Annual MNA report was submitted in May 2024.

Reporting Requirements/Compliance: Pursuant to the requirements under the UECA, TRC is required to submit an annual progress report.

Financial Assurance: According to the June 2016 LTS report, Financial Assurance (FA) is not required at the TRC Facility. However, there is an ongoing EPA review of what the FA status is or should be for the site. Therefore, FA is not being addressed in this report at this time.

Mapping: The EPA Facility website are accurate and include a geospatial PDF showing the use restriction boundaries of the SPL Pile and the adjacent Discolored Puddle Area. This map was field-verified and no issues were noted. A relatively recent drone image of the SPL Pile showing the location of the five monitoring wells is attached as Figure 1 in this report.

Conclusions and Recommendations:

During this assessment visit, WVDEP observed and verified that the engineering controls selected for the Facility are implemented and remain intact and undamaged. Monitoring wells were verified to be in good condition (see attached images). Furthermore, no IC deficiencies have been identified at the Facility.

Based on the historical groundwater data trends, the effectiveness of MNA appears uncertain. An evaluation of MNA effectiveness will be discussed with the Facility within the scope of the MNA report reviews in the near future.

Attachments:

Figure 1: Aerial/drone image of SPL Pile, showing locations of the five (5) monitoring wells.

Image 1: A close look at the EPDM cover; looking southeast from the northeast corner of the SPL Pile shown in Figure 1.

Image 2: Walking south along the east, steep edge of the SPL Pile. Monitoring well SPL-1 is visible in the distant foreground.

Image 3: A close up view of monitoring well SPL-1.

Image 4: Looking west near the mid-point of the eastern edge of the SPL Pile, where a steeply sloping EPDM cover goes under the gravel covering the less steep southern part of the pile. Linear features over the gravel are wooden walk boards to conduct inspections, and, if needed repair work.

Image 5: Looking north near the southeastern corner of the SPL Pile; visible here the gravel covered gently sloping southeastern part and the southern half of the EPDM covered portion of the pile.

Image 6: Looking east over the gravel covered southern half of the of the SPL Pile.

Image 7: Monitoring well SPL-3 and its vicinity.

Image 8: Looking east near the northwest corner of the pile; river rock/gravel to use as fill between the washed out areas of the 4-6 inch rip rap rock at the foot of the SPL Pile. The 4-6 inch rip rap is used for water velocity reduction/water dissipation.

Image 9: Monitoring well SPL-4R and its vicinity, looking west.

Image 10: Looking west along northern edge of the SPL Pile where the air vents are visible. Air vents were installed around the top and bottom perimeter of the wood substructure supporting the EPDM Cover. Also visible is the small rock/rip rap along the steep pile wall for water dissipation.

LEGEND

- Monitoring Well
- Extent of Drone Imagery

N

0 75 150 Feet

1 " = 75 '

1:900

PROJECT:
CONSTELLIUM - RAVENSWOOD
859 CENTURY ROAD
RAVENSWOOD, WEST VIRGINIA 26164

TITLE:
SPENT CATHODE PILE

DRAWN BY:	K. FOWLER	PROJ NO.:	449342.0000.0000
CHECKED BY:	C. HARVEY		
APPROVED BY:	C. HARVEY		**FIGURE 1**
DATE:	MARCH 2023		

TRC
1382 West Ninth Street, Suite 400
Cleveland, OH 44113
Phone: 216.344.3072
www.trccompanies.com

FILE NO.: Ravenswood - Storage Pile.mxd

Coordinate System: NAD 1983 StatePlane West Virginia South FIPS 4702 Feet (Foot US)
Map Rotation: 0

TRC - GIS

Plot Date: 3/28/2023, 14:43:12 PM by KFOWLER -- LAYOUT: ANSI B (11"x17")
Path: T:\1-PROJECTS\CLE\Ravenswood\Ravenswood - Storage Pile.mxd

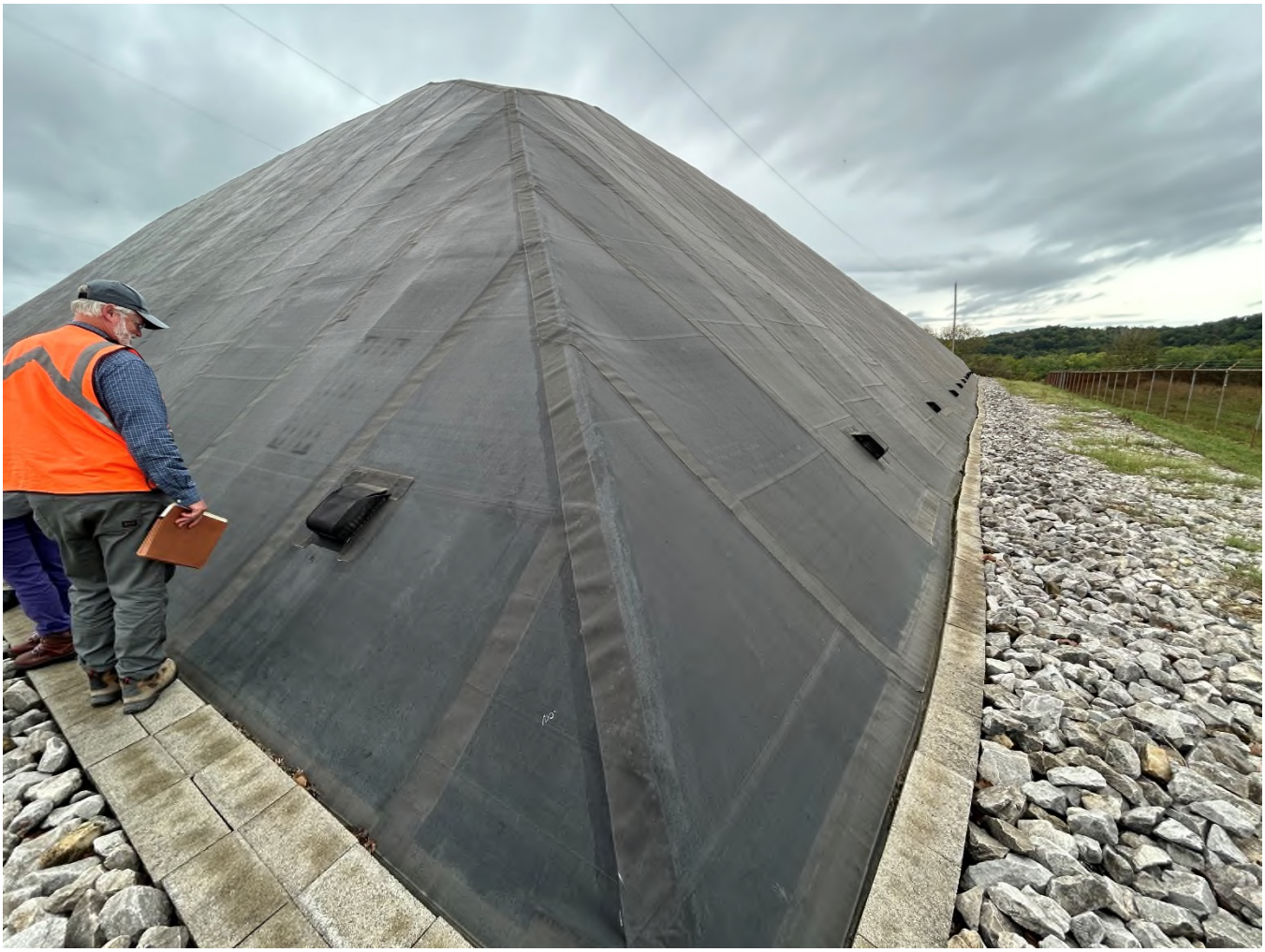


Image 1: A close look at the EPDM cover; looking east from the west corner from the SPL Pile.

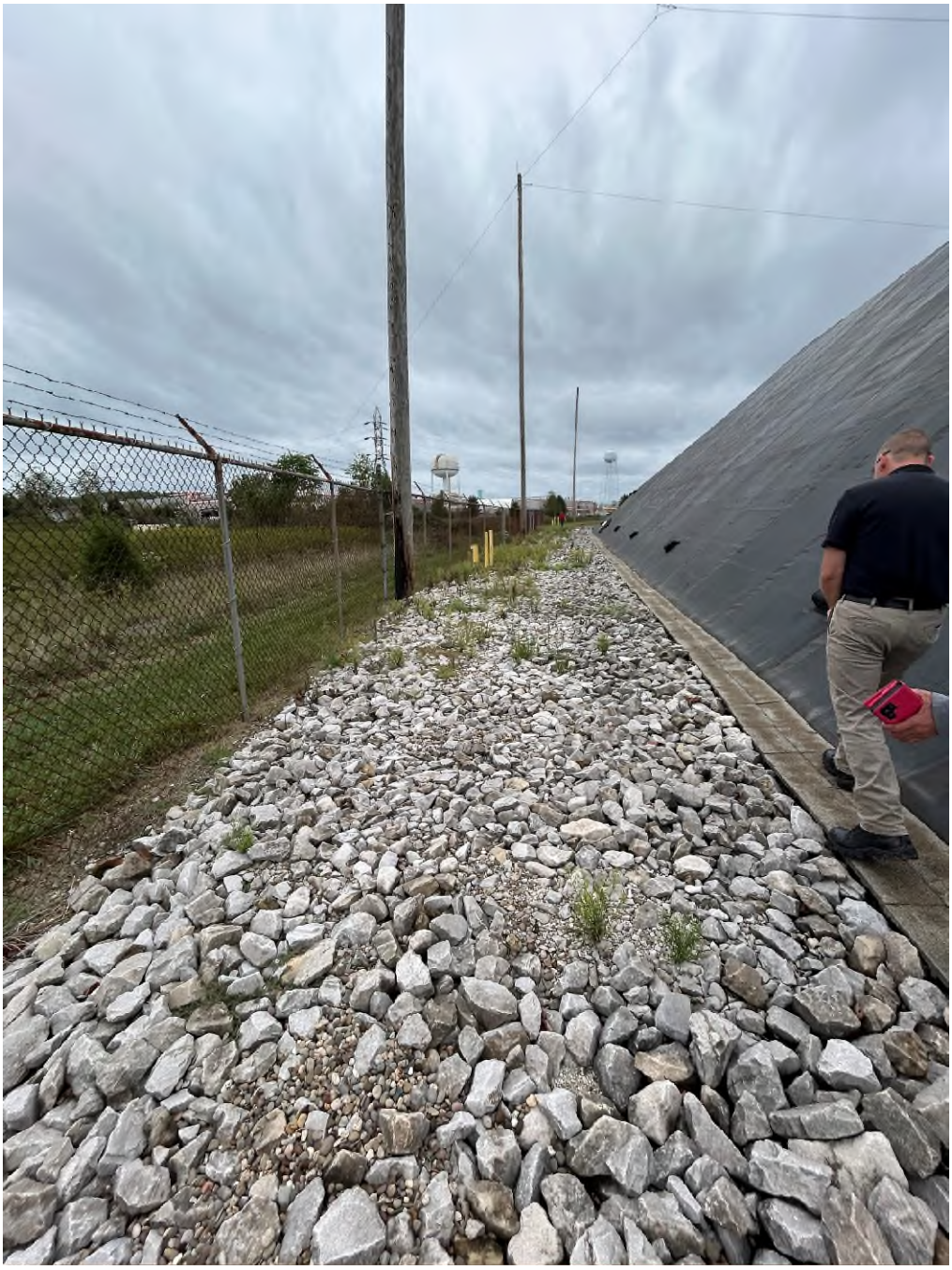


Image 2: Walking south along the east, steep edge of the SPL Pile. Monitoring well SPL-1 is visible in the distant foreground.

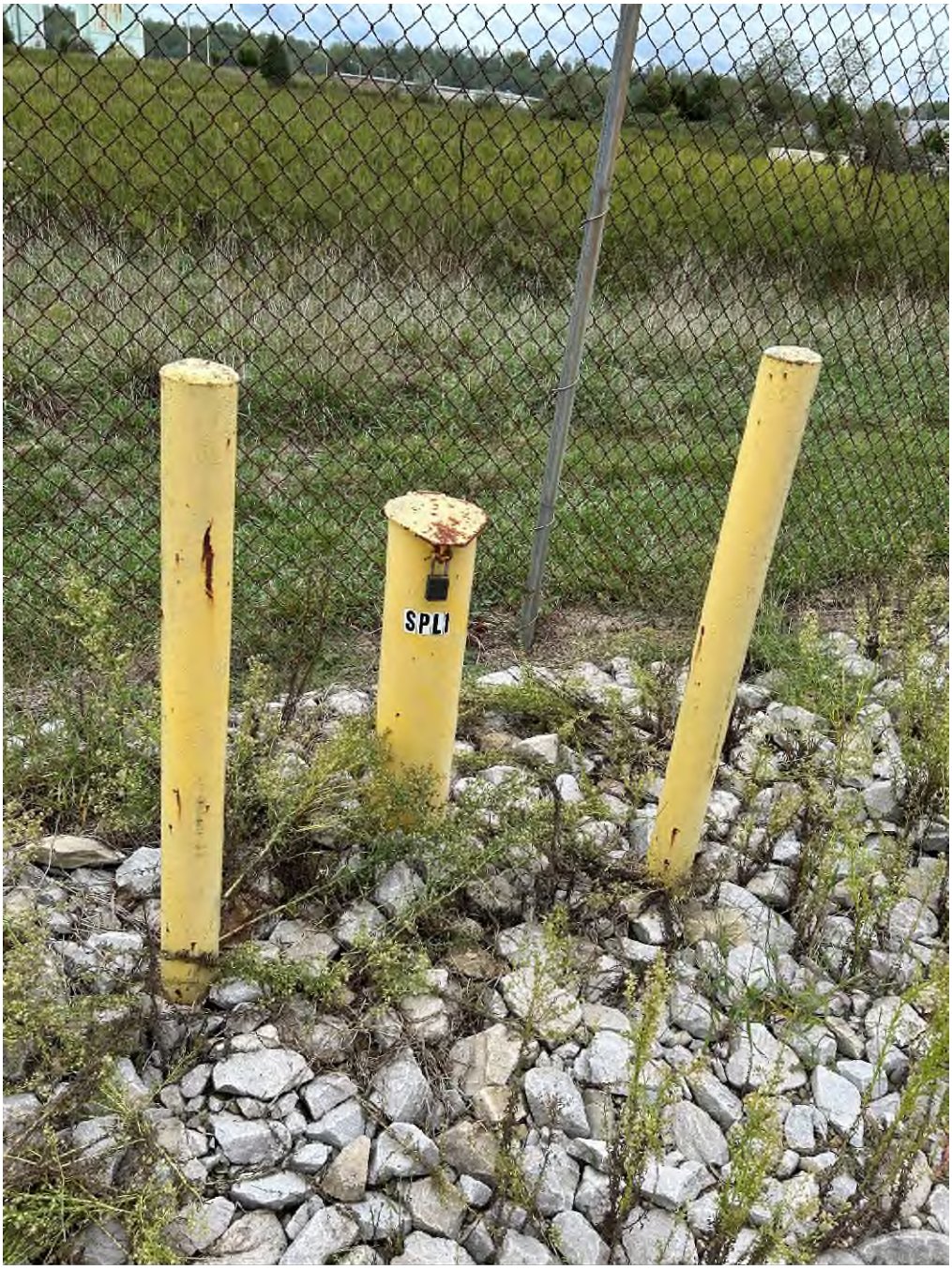


Image 3: A close up view of monitoring well SPL-1.

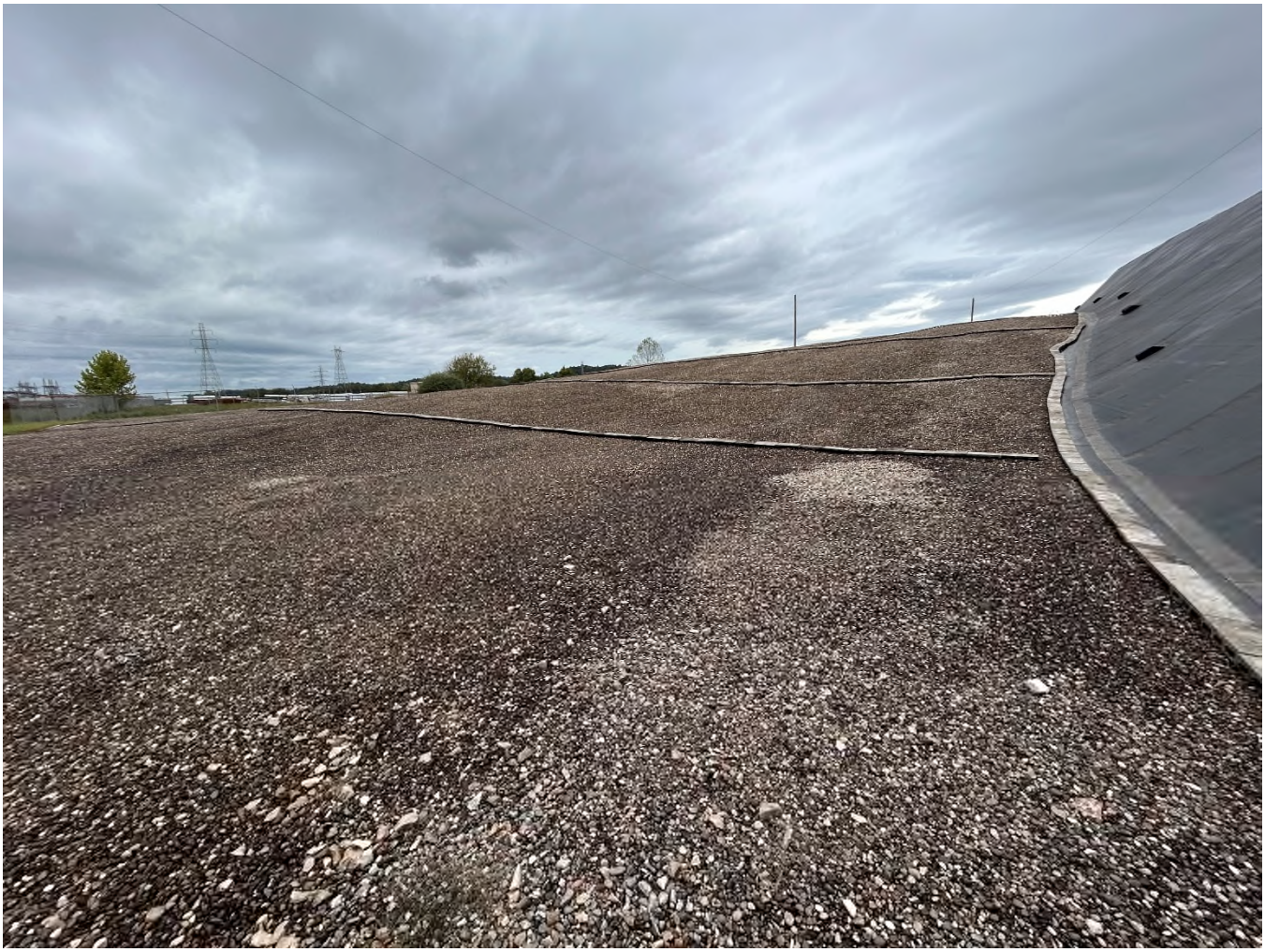
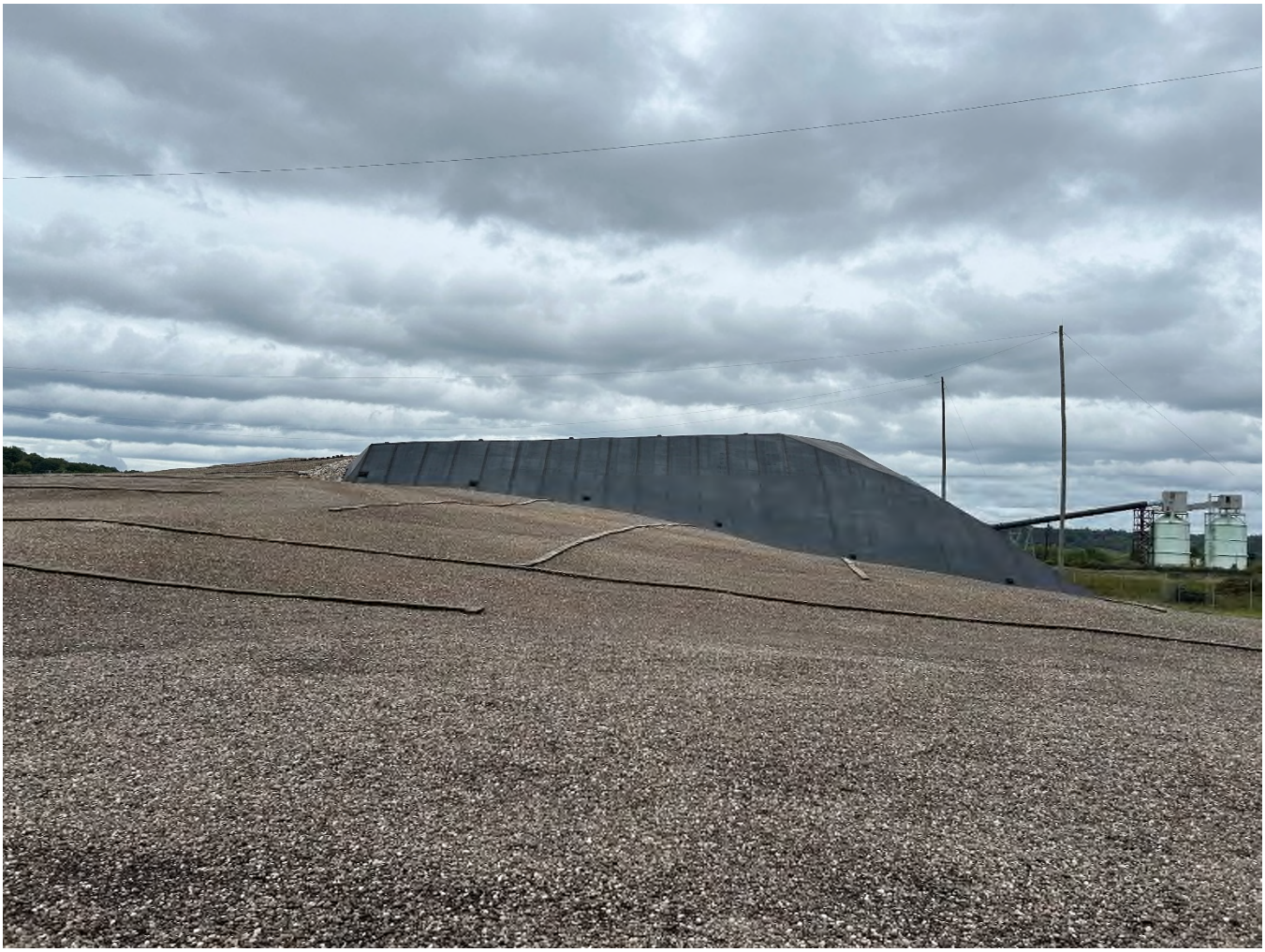


Image 4: Looking west near the mid-point of the eastern edge of the SPL Pile, where a steeply sloping EPDM cover goes under the gravel covering the less steep southern part of the pile. Linear features over the gravel are cinder blocks to walk and conduct inspections, and, if needed repair work.



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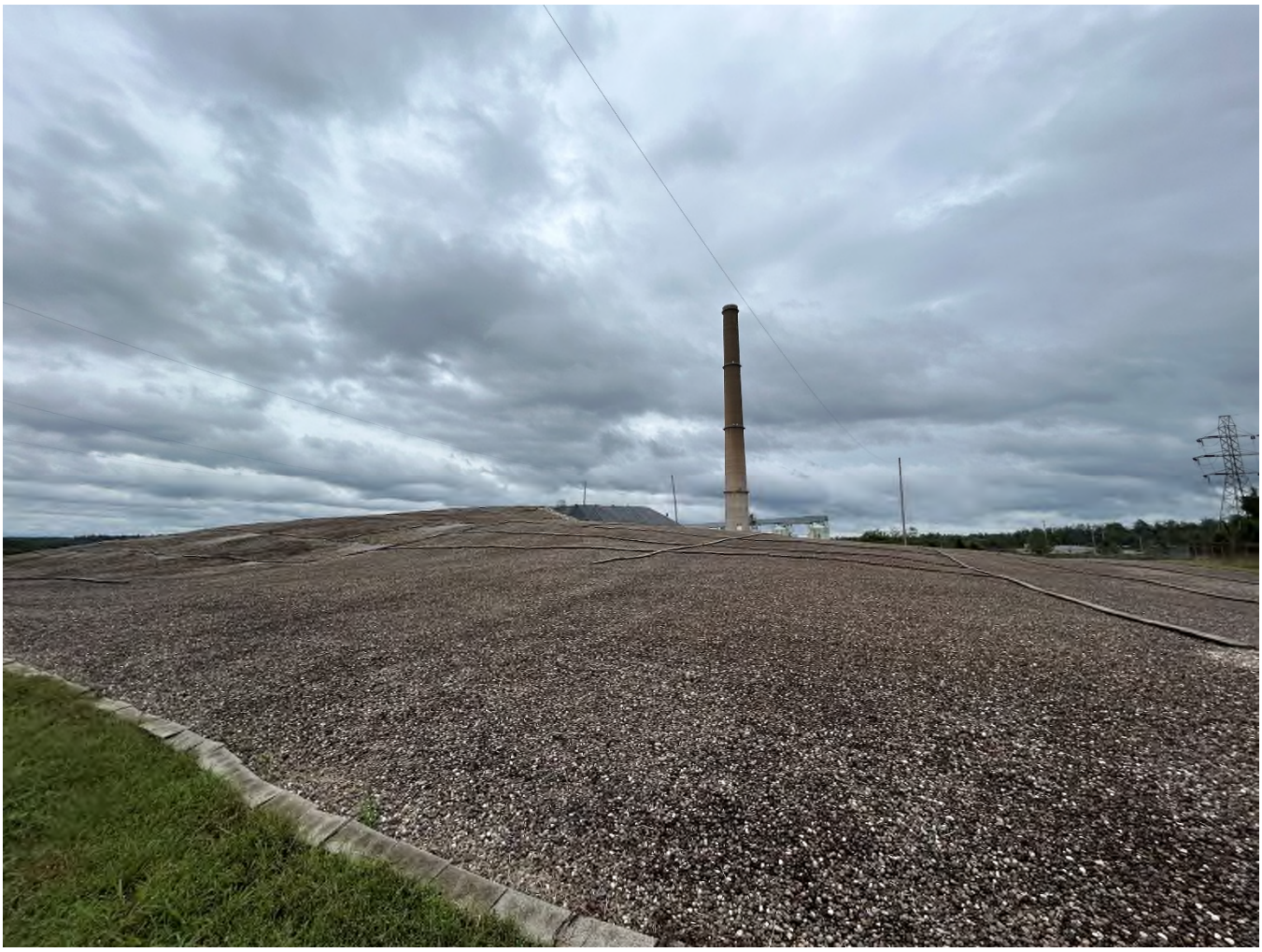


Image 6: Looking east over the gravel covered southern half of the of the SPL Pile.

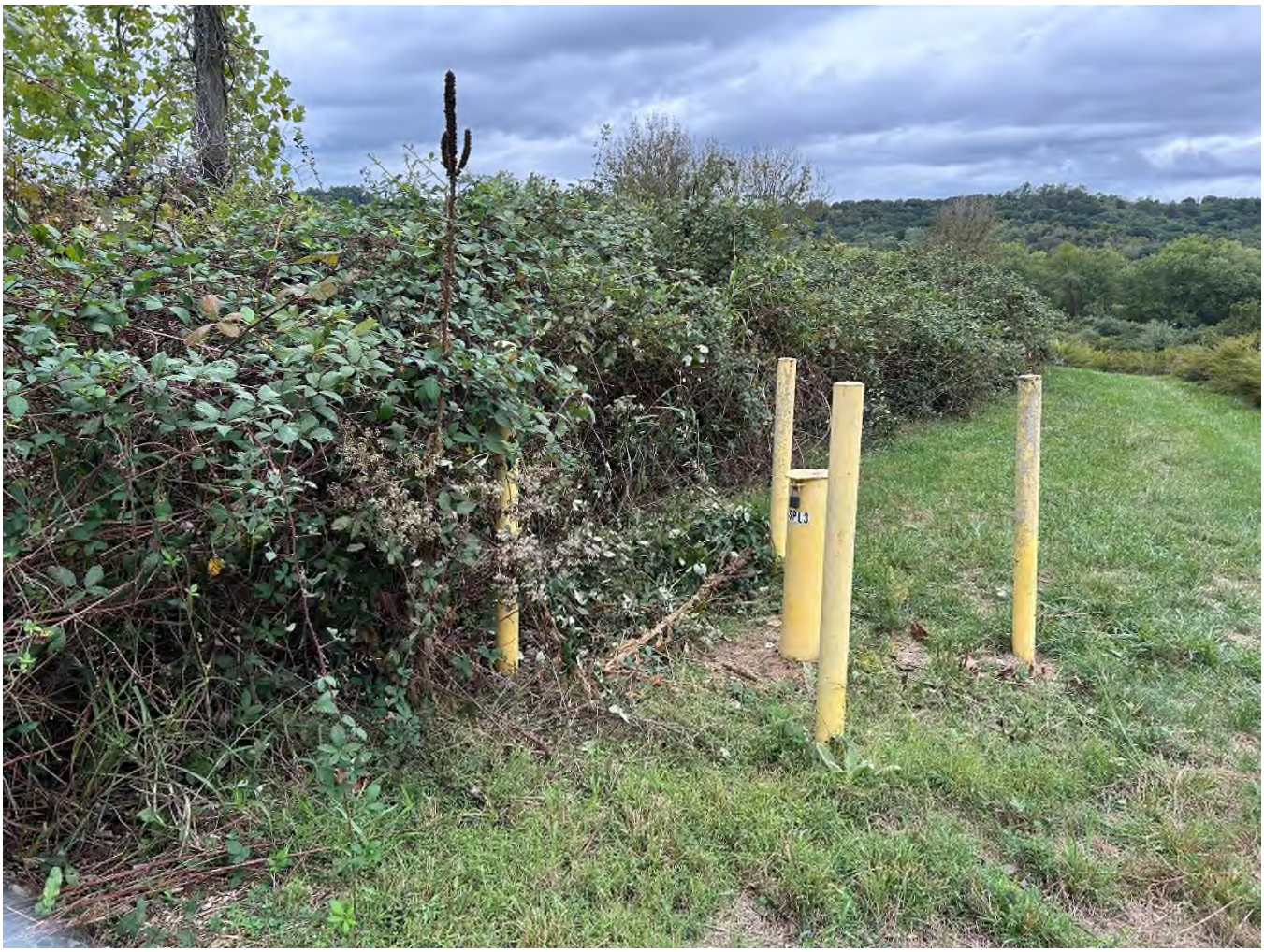
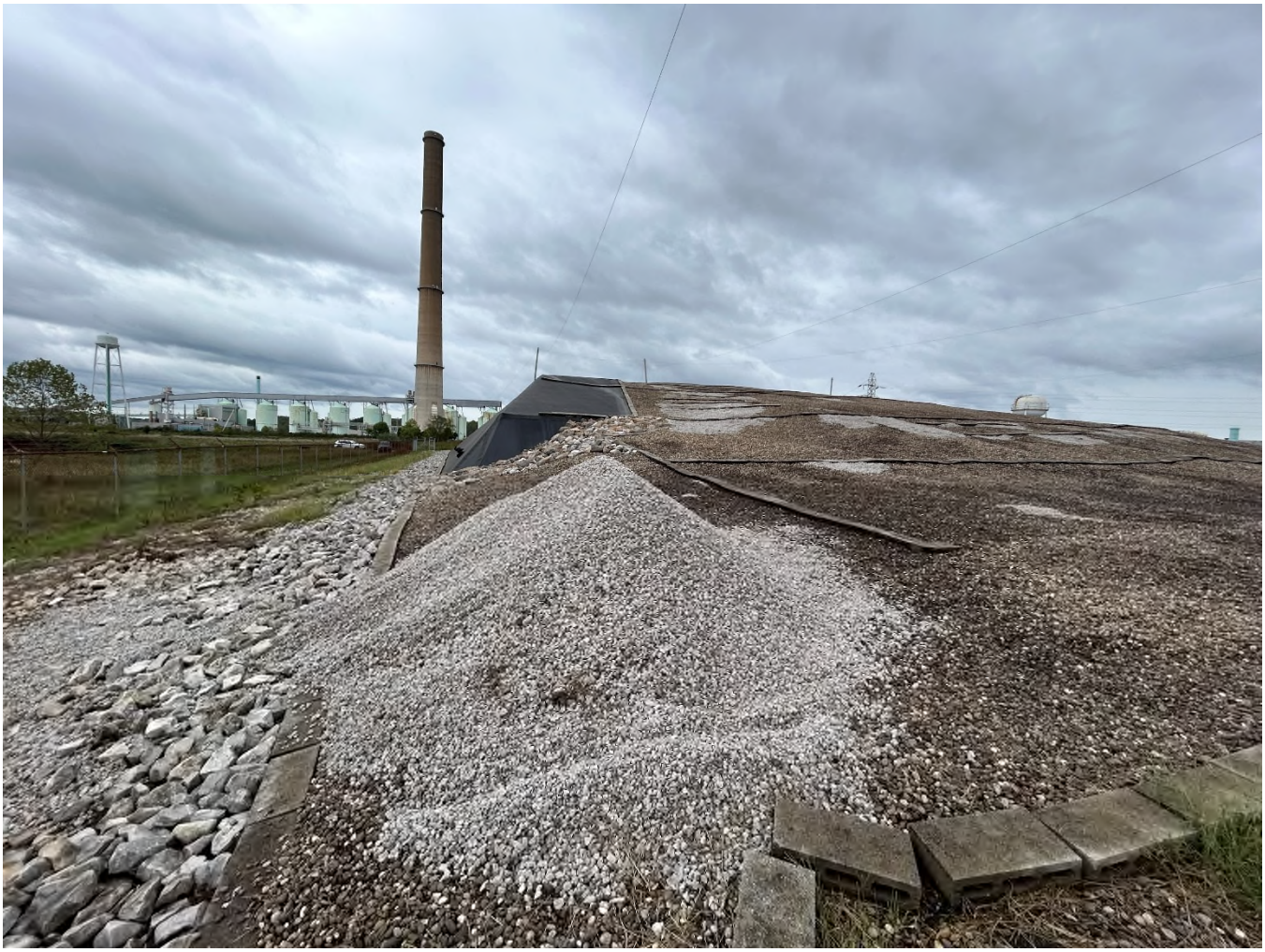


Image 7: Monitoring well SPL-3 and its vicinity.



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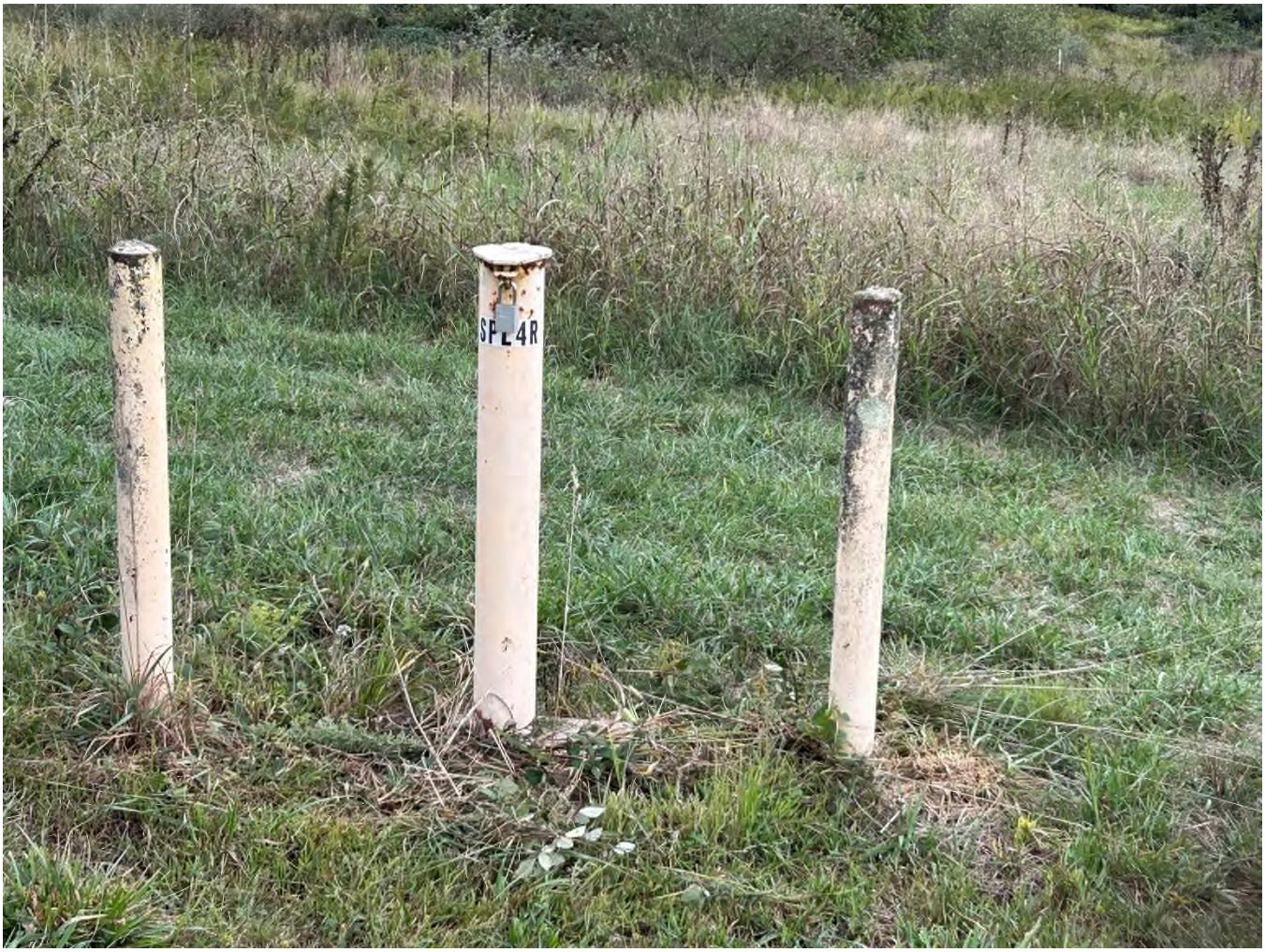

Image 9: Monitoring well SPL-4R and its vicinity, looking west.

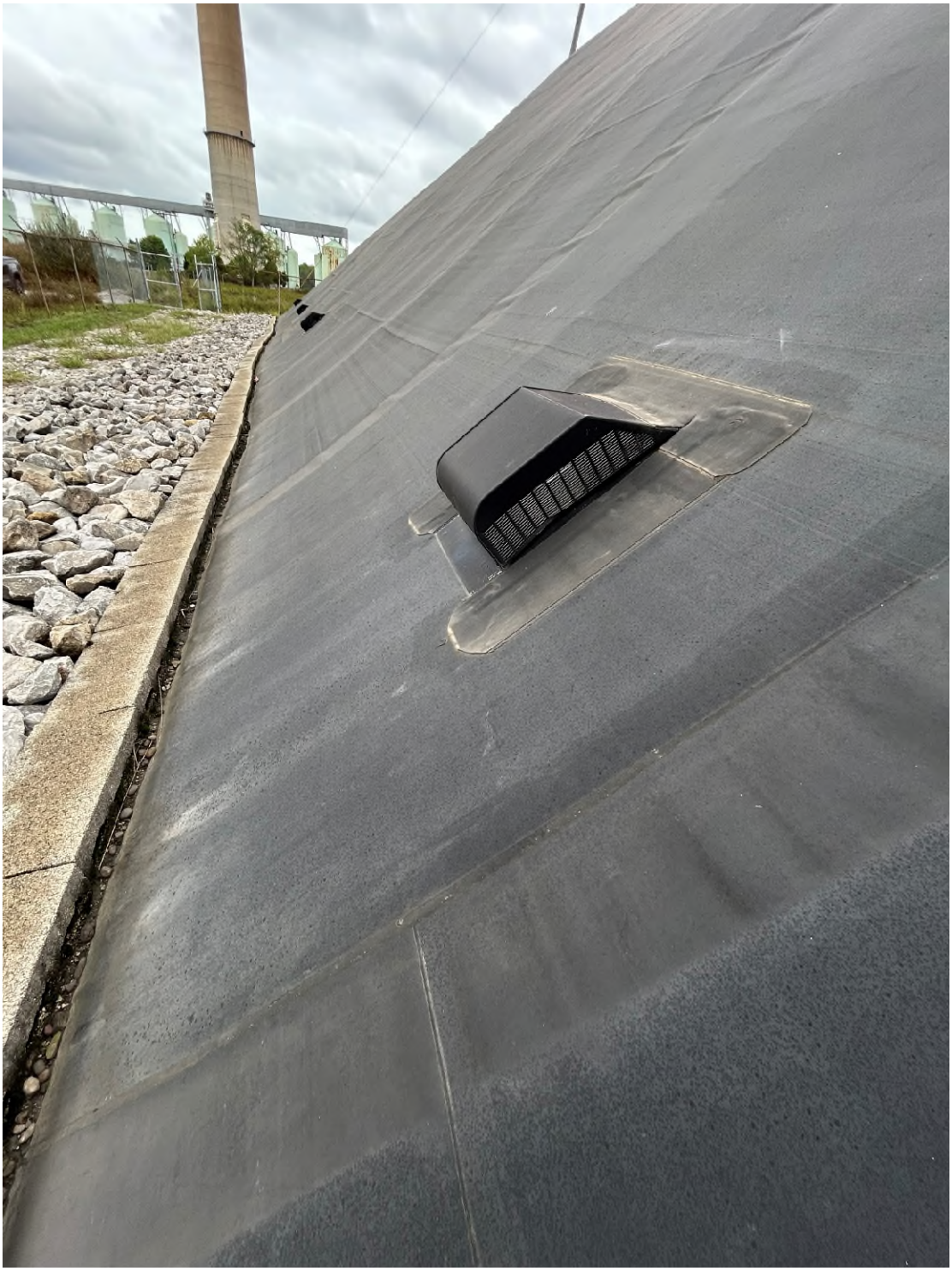

Image 10: Looking west along northern edge of the SPL Pile where the air vents are visible. Air vents were installed around the top and bottom perimeter of the wood substructure supporting the EPDM Cover. Also visible is the small rock/rip rap along the steep pile wall for water dissipation.