



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION III**  
**1650 Arch Street**  
**Philadelphia, Pennsylvania 19103-2029**

**SUBJECT:** Industrial Waste, Inc.  
405 N State Line Road  
Darlington, PA 16115  
EPA ID: PAD000621839

**DATE:** 04/07/2022

Long-term Stewardship Assessment

**FROM:** Kristin Koroncai, Remedial Project Manager (3LD20)

**TO:** Long Term Stewardship File for Industrial Waste, Inc.  
RCRA Corrective Action Branch 2 (3LD20)

**Remedy Review Summary:**

EPA's Final Decision and Response to Comments (FDRTC) dated July 16, 2015 requires Industrial Waste, Inc (the Facility) located at 405 N State Line Road, Darlington, PA 16115 to implement the final remedy selected in the FDRTC which includes, in part, prohibition of residential use and groundwater use (unless approved by Pennsylvania Department of Environmental Protection (PADEP)) and compliance with the Consent Order and Post Closure Plan issued by PADEP. The Facility implemented an Environmental Covenant with Beaver County, recorded on August 9, 2016, that addresses the residential and groundwater use restrictions. Comprehensive reviews of quarterly groundwater monitoring at the site and residential property wells has shown exceedances of indicator parameters and metals. This combined with field observations and well monitoring data indicate that migration of the contaminated groundwater is bypassing the leachate collection system and migrating to deeper groundwater and offsite. EPA has identified deficiencies regarding the implementation of EPA's remedy decision at the Facility.

**Document Review:**

The corrective action objectives for the Facility include compliance with the Consent Order (and Post-Closure Plan within), annual reporting, and land and groundwater restrictions to prevent human exposures to the contaminants. To address the groundwater and residential use restrictions outlined in the FDRTC and Consent Order, an Environmental Covenant was obtained in 2016 for a portion of the property encompassing the 45 acre land fill area as well as an additional 215.7 acre buffer area around the landfills. The covenant restricts usage of the property for residential purposes, groundwater for any purpose, installation of new wells (unless approved by PADEP), earth moving activities, and use that



would adversely affect the integrity of the landfill covers or groundwater systems. Aerial imagery from 2021 (Google Earth 2021) of the Facility does not indicate evidence of earth moving activities.

On site groundwater monitoring is conducted quarterly for indicator parameters and metals. The monitoring well network is comprised of 14 wells with both upgradient and downgradient locations and target three aquifers. An assessment completed in 2019 revealed significant discrepancies in several monitoring well reference point elevations, revealing historic misrepresentation of groundwater elevations and flow, though they have now been corrected. A 2018 review of field observations and groundwater monitoring results noted newly discovered seeps and downgradient impacts to surface and groundwater.

A groundwater seep that had not been previously identified was discovered in an area not located within the capture area for the existing leachate collection system. In 2018, a Notice of Violation was issued by PADEP for the conveyance of impacted leachate from this discovered seep, identified as Seep 8, to surface and groundwater; in 2020, a leachate collection system was installed in this area that captures water from both Seep 8 and another discovered seep (identified as Cs-1).

Additionally, data indicate that site-impacted groundwater migrates beneath the leachate collection system and beyond the site, ultimately surfacing at downgradient areas. The groundwater at the site is recharged from perched water zones above the Mahoning Coal seam (mined at the site); this water laterally inflows to the waste areas resulting in long-term saturation and mobilization of contaminants to downgradient areas. Monitoring data indicate that groundwater migrates beneath the existing leachate collection system, as evident in sampling results from wells that are screened below the depth of the adjacent leachate collection systems. For example, well 4-DG-FS is screened at 100 feet below the depth of the adjacent leachate collection system and sampling events have shown elevated levels of chlorides (leachate-derived) at 724 mg/L (SMCL 250 mg/L). Another well, 4-DG-BS, is screened at 60 feet below the depth of the adjacent leachate collection system; sampling events have shown elevated levels of multiple parameters (likely leachate-derived) above standards, including dissolved manganese at 4020 µg/L (SMCL 50 µg/L).

To address concerns of offsite migration of contaminated groundwater, PADEP conducted an assessment of the potential impact to drinking water. In 2020, eleven properties within a ½ mile radius of the facility were identified as relying on well water for their potable water source. Five of these property owners agreed to allow PADEP to conduct sampling of surface water and their wells. Results of this sampling show elevated levels of parameters in excess of their recommended standard (Chloride, Sulfate, Cobalt, total and dissolved Manganese, total and dissolved Iron, dissolved Thallium, Specific Conductance, and TDS). Surface water on some of the residential properties is used for recreation and domestic livestock. Industrial Waste provides bottled water to residents affected by the contamination, as required by a PADEP Order.

### **Recommendations:**

Despite a leachate collection system integrity assessment conducted by the facility in 2020 stating the system is working properly, data and field observations indicate that leachate is contaminating groundwater and migrating offsite. A comprehensive assessment of groundwater at the site should be conducted to identify the deficiencies of the collection system in order to address the corrective action objectives in the FDRTC. The area of the property included in the environmental covenant should be

reassessed to determine if it needs to be expanded given the shown impacts to groundwater. Mechanical and maintenance issues identified at 7W Pump Station should be addressed to avoid improper operation.

**Background:**

Industrial Waste is located in Darlington, Beaver County, Pennsylvania and is situated on approximately 493 acres. The area had previously been strip mined and deep mined for coal. Land use surrounding the property is rural, with a few residential properties that utilize well water.

A total of 45 acres of the property are occupied by closed landfills while the remaining portion of the site is undeveloped and not used as part of the Facility's disposal activities. Between 1958 and 1982, the abandoned mine cuts on site were used by the facility as sludge ponds for waste from steel mill operations, primarily spent pickle liquor. A Consent Order issued by the Commonwealth of Pennsylvania Department of Environmental Resources, subsequently renamed PADEP, in 1982 (amended in 1986) required the impoundments to be capped and covered, installation of a leachate collection system to capture leachate from the waste areas for treatment, maintenance of the caps and leachate systems, and groundwater monitoring.

**Documents Reviewed:**

2021 Comprehensive GME, PADEP (June 25, 2021)  
Compliance Report, Industrial Wastes, LLC (January 18, 2021)  
2020 Leachate Collection System Integrity Report, CEC (May 18, 2020)  
2018 Comprehensive GME, PADEP (September 8, 2018)  
Environmental Covenant, Beaver County Recorder of Deeds (August 9, 2016)  
Final Decision and Response to Comments, EPA (July 16, 2015)  
Statement of Basis, EPA (May 26, 2015)

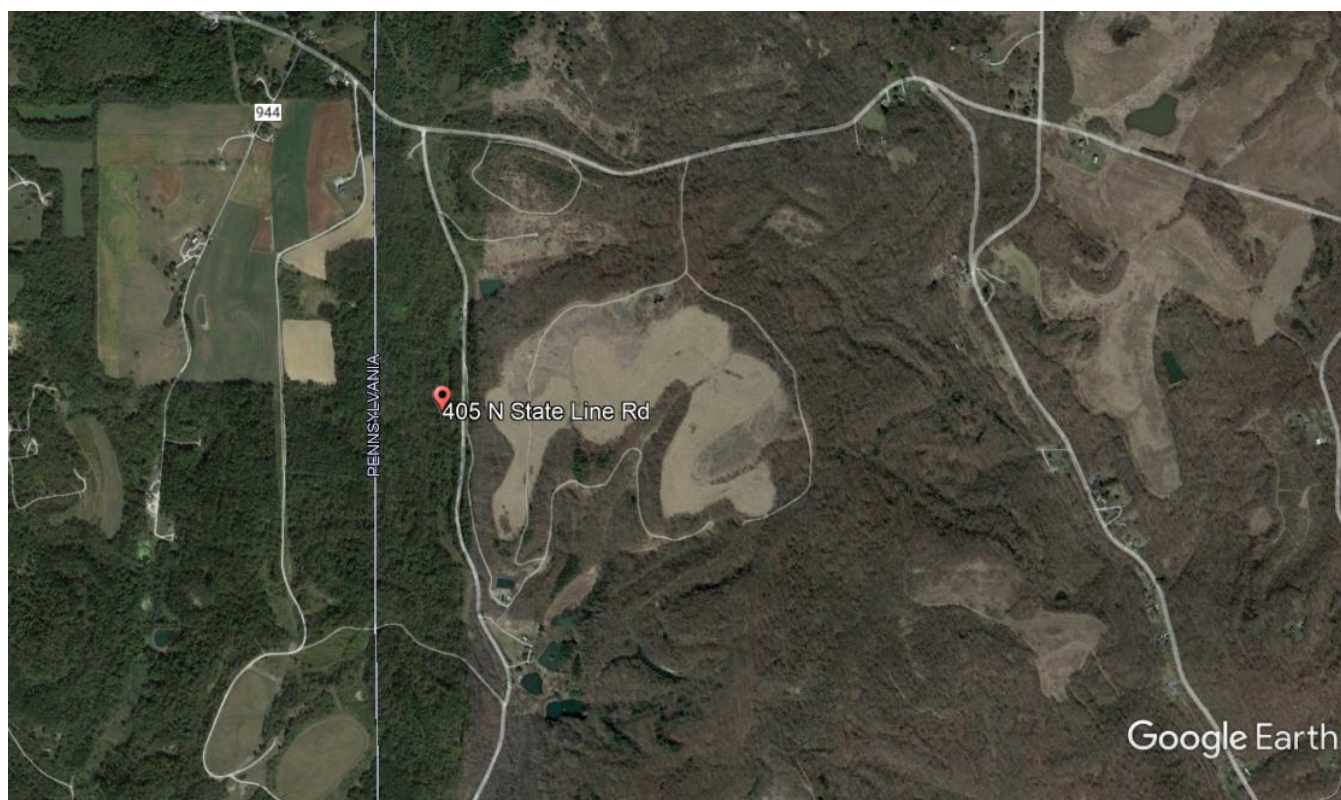


Figure 1. Aerial imagery from March 2021 showing the Industrial Waste, LLC property in Darlington, PA (Google Earth, accessed September 30, 2021).

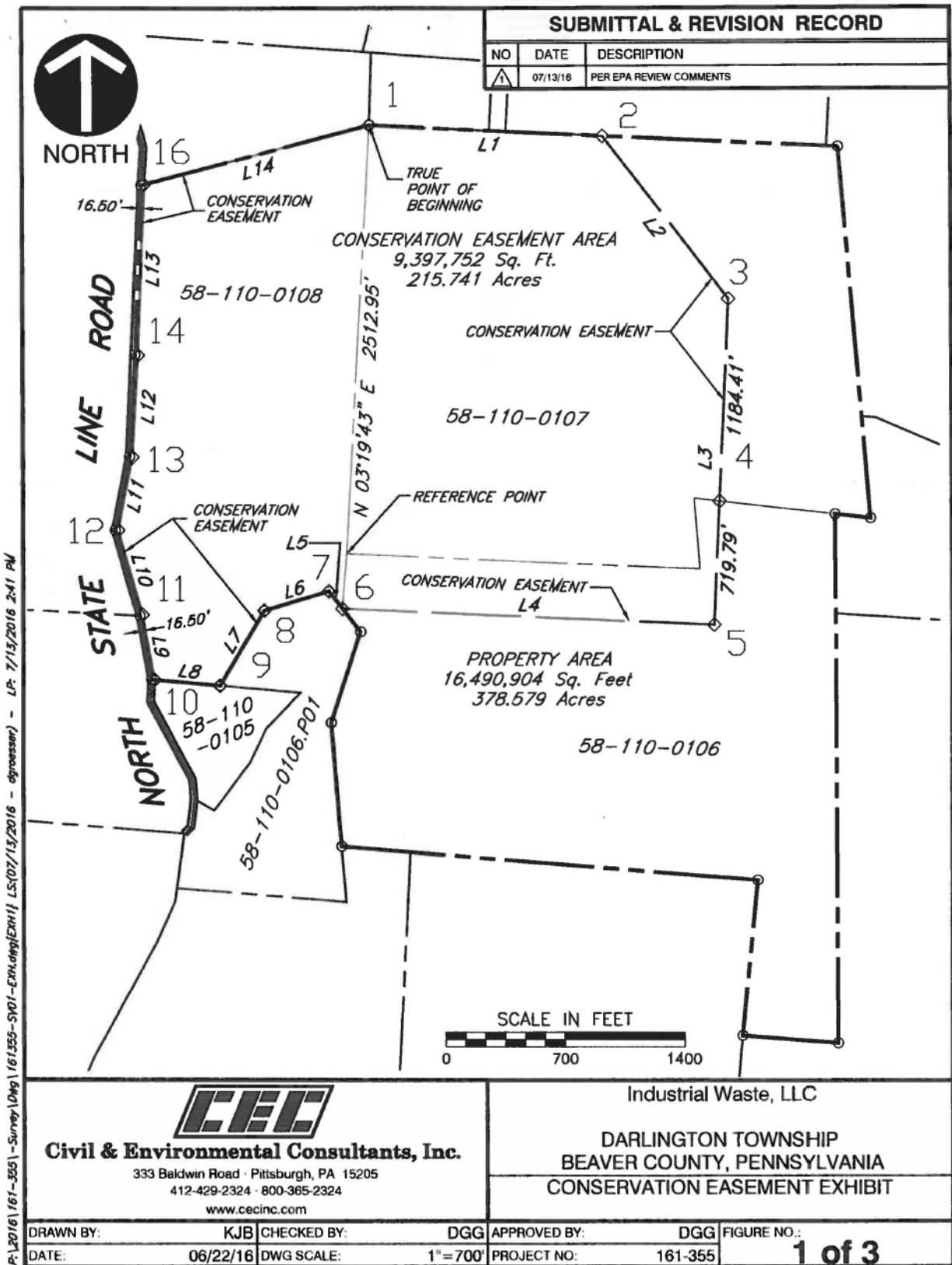


Figure 2. Map showing the area included in the Environmental Covenant.

**Industrial Waste, Inc.  
405 N State Line Road  
Darlington, PA 16115**

**EPA ID: PAD000621839**

<i>Are there restrictions or controls that address:</i>	<i>Yes</i>	<i>No</i>	<i>Area(s)</i>	<i>Description of restrictions, controls, and mechanisms</i>	<i><b>LTS Assessment:</b> Is the integrity of restriction or control maintained?</i>	<i><b>LTS Assessment:</b> Description of inadequate integrity of restriction or control:</i>
<i>Groundwater Use</i>	X		Entire site (covenant addresses portion of site)	Environmental covenant and corrective action objectives in FDRTC prohibit groundwater use	Unknown	Area incorporated in covenant may need to be expanded due to impacts to groundwater shown in adjacent and offsite sampling.
<i>Residential Use</i>	X		Entire site (covenant addresses portion of site)	Environmental covenant prohibits residential use	Unknown	Environmental covenant does not incorporate entire facility property.
<i>Excavation</i>	X		Entire site	FDRTC	Yes	
<i>Vapor Intrusion</i>		X				
<i>Capped Areas</i>	X		45-acre portion of site where landfills are located	Annual monitoring and reporting of integrity of controls is required	Yes	
<i>Other engineering controls</i>	X		3 leachate collection systems	Prevent contaminants from entering groundwater at the facility and migrating off site	No	Monitoring data and field observations show that groundwater is contaminated at depths below where the leachate collection system is installed and on offsite residential properties
<i>Other restrictions</i>	X		Entire site	1. No installation of new wells (unless approved by PADEP) 2. Use that would adversely affect the integrity of the landfill covers or groundwater systems	Yes	