



# STATEMENT OF BASIS

REGION III  
ID # PAD 000 621 839

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Industrial Waste, Inc.  
Darlington, Pennsylvania  
Signed May 2015

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<b>Facility/Unit Type:</b>	<b>Hazardous Waste Landfill</b>
<b>Contaminants:</b>	<b>Heavy metals, Nitrite/Nitrate</b>
<b>Media:</b>	<b>Groundwater and soil</b>
<b>Proposed Remedy:</b>	<b>Continued compliance with the terms and conditions of the Commonwealth of Pennsylvania Consent Order and Post-Closure Plan, and Implementation of an Environmental Covenant.</b>

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## I. INTRODUCTION

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis to solicit public comment on its proposed remedy for the Industrial Waste, Inc. facility located at 405 North State-Line Road, Darlington, PA 16115 (IWI or Facility). IWI includes closed hazardous waste landfills (Landfills). The Facility is subject to EPA's Corrective Action program under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901 et seq.

IWI is also subject to a Consent Order and Agreement, entered January 4, 1982 and amended January 7, 1986 (Consent Order), by Industrial Waste, Inc. and the Commonwealth of Pennsylvania Department of Environmental Resources (PADER), subsequently renamed Pennsylvania Department of Environmental Protection (PADEP) (hereinafter referred to as PADEP). The Consent Order requires, among other things, closure of the process area and impoundments, and post-closure care of the Landfills. The required post-closure activities, including monitoring of the groundwater, maintenance of landfill caps, operation and maintenance of the leachate collection and treatment system, and an acknowledgement of hazardous waste disposal in the form of a deed notification, are ongoing pursuant to a 1986 PADER-approved Post Closure Plan which was approved by PADEP pursuant to the Consent Order and is enforceable thereunder.

EPA's proposed remedy for the Facility is continued compliance with the terms and conditions of the Consent Order, submission of an annual report describing post-closure and remedial

actions taken, and implementation of an environmental covenant to restrict certain uses of Facility land and groundwater.

EPA is providing a 30-day public comment period on this Statement of Basis and may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for IWI in a Final Decision and Response to Comments (Final Decision) after the comment period has ended.

Information on the Corrective Action program as well as a fact sheet and the Government Performance and Results Act Environmental Indicator Determinations for IWI can be found by navigating to <http://www.epa.gov/reg3wcmd/correctiveaction.htm>.

The Administrative Record for IWI contains all documents on which EPA's proposed remedy is based. See Section IX for information on how you may review the Administrative Record.

## **II. FACILITY BACKGROUND**

IWI is located at 405 North State-Line Road, Darlington, PA 16115. It is situated on approximately 493 acres in Beaver County. The Landfills occupy approximately 45 acres of the Facility property. The areas at the Facility located outside of the 45 acres occupied by the closed Landfills are undeveloped and were not used as part of the Facility's disposal activities. The Facility is surrounded by wooded areas and farms. (Figures 1 and 2).

IWI is owned and operated by Industrial Waste, LLC, an indirect subsidiary of HCR ManorCare, Inc. IWI treated and disposed of waste from steel mills, primarily spent pickle liquors, at the Facility from 1959 until June 1982. Waste from steel mill operations was treated in a batch neutralization process. The treated waste was then disposed of in sludge ponds constructed within an abandoned strip mine cut. The sludge ponds were closed as hazardous waste landfills in accordance with an August 1982 PADER-approved Closure and Post Closure Plan. IWI currently performs post-closure activities at the Facility pursuant to the PADER-approved 1986 Post Closure Plan, as required by the Consent Order.

The sludge ponds, now closed as landfills, are located on top of the underclay of the Mahoning coal strip mine cut. The strip cut was filled, beginning in 1959, without the installation of a liner. The sludge thickness is estimated to average 50 to 70 feet, and covers an area of approximately 45 acres.

## **III. SUMMARY OF ENVIRONMENTAL HISTORY**

The post-closure activities at IWI are overseen by PADEP under its authorized RCRA hazardous waste program. The post-closure requirements are specified in the 1986 Post Closure Plan. The 1986 Post Closure Plan requires continued inspection, maintenance, monitoring, and assessment of the landfill caps, groundwater monitoring systems, and leachate collection and treatment system. In addition, the Consent Order requires a deed notice to be placed on the title to the Facility property informing interested parties that the Facility property contains hazardous waste disposal units.

Closure actions and other remedial action taken at IWI under PADEP oversight are described below.

Facility Closure - IWI was closed in three phases.

Phase I – The three dried sludge ponds (western, central and eastern) were closed as landfills. They were capped with a multi-layer soil/geosynthetic cover and a vegetation layer. Water supply wells for two downgradient private properties were replaced to draw water from a lower water-bearing zone, below the landfill impact zone. The work was completed in December 1983

Phase II – The process area was closed in 1986 by removing the equipment, demolishing the buildings, and filling the area to grade.

Phase III – A leachate collection system and treatment plant were constructed to intercept and treat landfill leachate and groundwater which outcrops within the valley below the Landfills. They were completed and the treatment plant was placed in operation in 1986.

Drum Removal – In 1985/1986, 65 buried drums and related contaminated soil were removed and disposed of off-site. The removal and confirmation sampling operations were conducted with PADEP oversight.

Environmental Indicator Sampling – In 2000, PADEP conducted a comprehensive environmental assessment at IWI to determine whether additional corrective action was needed. The assessment included a comprehensive inspection of the Facility and the collection of groundwater, stream and surface seep samples for analysis. The assessment showed that landfill seepage was not properly collected along one section of the Eastern Sludge Landfill. Otherwise, releases from the Facility were under control.

Leachate Collection System Improvements - In 2001, the leachate collection system was modified to improve the collection of discharges from the closed Landfills, as directed by PADEP following the 2000 Environmental Indicator Sampling assessment.

Groundwater at IWI is monitored quarterly for indicator parameters and metals. The monitoring well network evaluates 3 water-bearing zones at 6 locations, 2 upgradient locations and 4 downgradient locations. Three surface water points are also sampled quarterly with 1 upgradient point and 2 downgradient points.

Groundwater monitoring data show elevated levels of nitrate/nitrite, cadmium and manganese. Some nitrate/nitrite and cadmium concentrations are above the applicable maximum contaminant levels (MCLs), promulgated at 40 C.F.R. Part 141 pursuant to Section 1412 of the Safe Drinking Water Act, 42 U.S.C. Section 300g-1, for drinking water. Manganese does not have an MCL, however, some manganese concentrations are above the tap water Regional Screening Level. The elevated levels for the three contaminants are sporadic and are detected in both the upgradient and downgradient wells in similar concentrations, indicating that the contaminants may not be related to releases from the Landfills.

Leachate from the closed Landfills is collected and transported by pipe to an on-site treatment system.

Two downgradient private wells are monitored annually. Water samples from one of the wells shows sporadic elevated levels of manganese. Since manganese is detected in the upgradient landfill wells in similar concentrations, the source of the manganese is uncertain. IWI provides bottled drinking water to the two downgradient private well users, due to the close proximity of the wells to the closed Landfills.

## **V. STATE OVERSIGHT**

IWI has operated under the Commonwealth of Pennsylvania (Commonwealth) permitting authorities since 1972. In 1984, EPA granted the Commonwealth authorization to operate a state hazardous waste program in lieu of the federal program pursuant to Section 3006(b) of RCRA, 42 U.S.C. Section 6926(b). The PADEP has overseen the operation, environmental monitoring, and closure of the disposal areas at IWI for over 40 years. PADEP oversight activities include:

- routine inspections and groundwater compliance and monitoring evaluations throughout the closure/post-closure period;
- review of closure plans and oversight of closure construction;
- review of monitoring data to determine compliance with closure/post closure requirements;
- review of annual financial assurance cost estimates and mechanisms; and
- evaluation of compliance with land-use restrictions.

PADEP is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains all authority in the Commonwealth for RCRA Corrective Action.

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control and (2) Migration of Contaminated Groundwater Under Control. In 2002, EPA determined that there were no unacceptable exposures to contamination at IWI and that the migration of contaminated groundwater was under control. The environmental indicator determinations are available at [www.epa.gov/reg3wcmd/ca/pa.htm](http://www.epa.gov/reg3wcmd/ca/pa.htm).

In addition, EPA has reviewed the closure and post-closure measures taken at IWI under the Consent Order. On-going groundwater sampling shows that releases from IWI are controlled by the landfill caps and leachate collection system. Although sampling data shows sporadic elevated levels of manganese, cadmium and nitrite/nitrate, the concentrations are similar in both upgradient and downgradient wells indicating that the contaminants may not be related to

releases from the Landfills. Nonetheless, IWI provides nearby private well users with bottled drinking water to assure that there is not a complete exposure pathway from the Landfills to those residents.

## **V. CORRECTIVE ACTION OBJECTIVES**

EPA's Corrective Action Objectives for the specific environmental media at the Facility are the following:

### **1. Soils**

For the 45 acres occupied by the closed Landfills, EPA's corrective action objective is to contain the waste beneath the multi-layered covers to control exposure to any hazardous constituents in that waste.

### **2. Groundwater**

EPA expects final remedies to return usable groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the project. For projects where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the National Primary Drinking Water Standard Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141).

While manganese, cadmium and nitrite/nitrate have been sporadically found in concentrations that exceed the applicable MCL in Facility groundwater, it appears that those contaminants are not Facility-related. While there are currently no Facility-related contaminants that exceed applicable MCLs, because waste remains in place in the Landfills, EPA's Corrective Action Objective for Facility groundwater is to assure that the multi-layered covers in place over the Landfills and the leachate collection system continue to prevent contaminants from migrating into Facility groundwater at concentrations that exceed applicable MCLs.

## **VI. PROPOSED REMEDY**

EPA's proposed remedy for IWI is:

1. IWI shall continue to comply with the terms and conditions of the Consent Order and the 1986 PADEP-approved Post Closure Plan which was approved pursuant to the Consent Order and is enforceable thereunder.
2. IWI shall submit to PADEP an annual report which describes the post-closure and remedial actions taken by IWI during the preceding year. The report shall include a

summary of all operation, maintenance and monitoring activities and results required by the Post-Closure Plan; a description of any releases that occurred and remedial actions taken; and a description of actions taken at nearby private properties. EPA anticipates that PADEP will incorporate this requirement into the Facility's Post-Closure Plan.

3. IWI shall implement land and groundwater use restrictions to prevent human exposure to contaminants at IWI through an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa. C.S. Sections 6501-6517, (UECA) to be recorded with the deed for the IWI property. The following restrictions shall apply to the Facility area that has been impacted by the Landfills and support activities (Restricted Area):
  - a) The Restricted Area shall not be used for residential purposes;
  - b) Groundwater at the Restricted Area shall not be used for any purpose, including, but not limited to, use as a potable water source, other than to conduct the maintenance and monitoring activities required by PADEP and/or EPA;
  - c) No new wells will be installed on the Restricted Area unless it is demonstrated to PADEP that such wells are necessary to perform post closure activities and PADEP provides prior written approval to install such wells;
  - d) The Restricted Area shall not be used in any way that will adversely affect or interfere with the integrity and protectiveness of the multi-layered covers over the Landfills and the Groundwater Monitoring and Leachate Collection System and all associated pipes and wells unless it is demonstrated to EPA that such use will not pose a threat to human health or the environment and EPA provides prior written approval for such disturbance; and
  - e) All earth moving activities on the Restricted Area, including excavation, drilling and construction activities, shall be conducted in a manner such that the activity will not pose a threat to human health and the environment or adversely affect or interfere with the 1986 Post Closure Plan. No such activities shall take place at the Facility unless PADEP provides prior written approval.

**VII. EVALUATION OF PROPOSED REMEDY**

<b>Threshold Criteria</b>	<b>Evaluation</b>
1) Protect human health and the environment	The primary human health and environmental threats posed by the Landfills are related to direct contact with the waste remaining in place and any hazardous constituents leaching to the groundwater. These threats have been mitigated by the closure and post-closure activities under PADEP oversight.

	<p>It requires IWI to maintain the landfill caps and to operate and maintain the groundwater monitoring system and the leachate collection and treatment system. Implementation of the proposed environmental covenant to restrict land and groundwater uses will minimize the potential for human exposure to contamination and protect the integrity of the remedy.</p> <p>In addition, monitoring data indicate there are no significant groundwater impacts from the Landfill. Nonetheless, the continued operation of the leachate collection and treatment system will ensure continued protection of human health and the environment. Furthermore, groundwater is not used as a potable water source within the IWI property, and IWI provides downgradient groundwater users with bottled drinking water.</p>
<p>2) Achieve media cleanup objectives</p>	<p>EPA’s proposed remedy meets the cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource use(s). The Consent Order restricts land and groundwater uses at the Landfill areas of the Facility for any purpose other than as a closed Landfills. Groundwater monitoring confirms there are no significant impacts or releases to groundwater beneath the Landfills. The multi-layered covers over the Landfills, the Consent Order, and the proposed environmental covenant will prevent human and environmental exposure to the hazardous wastes and hazardous constituents remaining in the Landfills.</p>
<p>3) Remediating the Source of Releases</p>	<p>Sixty-five buried drums and relate contaminated soil were removed and disposed off-site. While waste remains in place in the closed Landfills, the Consent Order requires all landfill leachate to be collected and treated so it does not contaminate the groundwater. In addition, groundwater monitoring and site inspections continue under PADEP-approved post-closure requirements to detect any releases that may occur in the future.</p>
<p><b>Balancing Criteria</b></p>	<p><b>Evaluation</b></p>
<p>1) Long-Term Effectiveness</p>	<p>EPA has determined that the closure activities which were conducted and the post-closure activities which are being conducted at the Facility pursuant to the Consent Order are protective of human health and the environment. The protection of human health and the</p>

	environment will be maintained in the long-term via the proposed Environmental Covenant which will run with the land and control exposure to any hazardous constituents in the Landfills and groundwater at the Facility.
2) Reduction of Toxicity, Mobility, or Volume of Hazardous Waste	The reduction of toxicity, mobility and volume of hazardous constituents has already been achieved by the installation of the landfill caps, and construction and operation of the leachate collection and treatment system.
3) Short-Term Effectiveness	EPA's proposed final remedy does not involve any activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment.
4) Implementability	EPA's proposed remedy is readily implementable. The necessary components of the existing landfill caps; the groundwater, surface water and leachate monitoring systems; and the leachate collection and treatment systems are in place and are currently operational. Additionally, EPA does not anticipate any regulatory constraints in requiring the Facility to record an Environmental Covenant with the deed to the Facility property.
5) Cost	The capital costs associated with the installation of the existing landfill caps; the groundwater and surface water monitoring systems; and the leachate collection and treatment systems have already been incurred. The Facility has provided financial assurance for post-closure costs under the Consent Order.
6) Community Acceptance	EPA will evaluate Community acceptance based on comments received during the public comment period, and will address any comments in the Final Decision.
7) State/Support Agency Acceptance	PADEP has reviewed and concurs with EPA's proposed remedy for the Facility. EPA will address all comments received by the State during the public comment period in the Final Decision.



## **VIII. FINANCIAL ASSURANCE**

EPA is proposing that the financial assurance in place under the Consent Order, a letter of credit in the amount of \$2, 551,119, satisfies the financial assurance requirement. In addition, the mechanisms in place under the PADEP RCRA authorities to evaluate and modify the financial assurance on an annual basis are sufficient.

## **IX. PUBLIC PARTICIPATION**

Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last 30 calendar days from the date that the notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Ms. Maureen Essenthier, at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Ms. Maureen Essenthier at the address listed below. A meeting will not be scheduled unless one is requested.

The Administrative Record contains all the information considered by EPA for the proposed remedy at this Facility. The Administrative Record is available at the following location[s]:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Ms. Maureen Essenthier (3LC30)  
Phone: (215) 814-3416  
Fax: (215) 814 - 3113  
Email: [essenthier.maureen@epa.gov](mailto:essenthier.maureen@epa.gov)

## **X. INDEX TO ADMINISTRATIVE RECORD**

Consent Order and Agreement, between Commonwealth of Pennsylvania Department of Environmental Resources and Industrial Waste, Inc., issued January 4, 1982

Closure and Post Closure Plan for the Darlington Industrial Waste Disposal Facility, Industrial Waste, Inc., revised August 1982

Closure Plan for the Darlington Industrial Waste Disposal Facility Process Area Industrial Waste, Inc., December 1986

Amendment to the Consent Order and Agreement, between Commonwealth of Pennsylvania Department of Environmental Resources and Industrial Waste, Inc., issued January 7, 1986

Post Closure Plan for the Darlington Industrial Waste Disposal Facility, Industrial Waste, Inc., January 1986

Industrial Waste, Inc. response to EPA Corrective Action information request, dated 3/8/00

PADEP letter report, Industrial Waste, Inc., RCRA Corrective Action Post-closure Management Sampling, 9/27/2000

HCR-ManorCare letter report, Major Ion Sampling Results, Industrial Waste, Inc., PAD 000 621 839, 9/10/2002

EPA RCRA Corrective Action Environmental Indicator – Migration of Contaminated Groundwater Under Control, Industrial Waste, Inc., PAD 000 621 839, 9/30/2002

EPA RCRA Corrective Action Environmental Indicator – Current Human Exposure Under Control, Industrial Waste, Inc., PAD 000 621 839, 9/30/2002

Darlington Industrial Waste Disposal Facility, PAD 000 621 839, Compliance Monitoring **Evaluation (CME) 2012 Inspection Report, issued by PADEP**

Hazardous Waste Monitoring Quarterly Report, Industrial Waste, Inc., PAD 000 621 839

4<sup>th</sup> Quarter 2014, December 2014

3<sup>rd</sup> Quarter 2014, September 2014

2<sup>nd</sup> Quarter 2014, June 2014

1<sup>st</sup> Quarter 2014, March 2014

4<sup>th</sup> Quarter 2013, December 2013

3<sup>rd</sup> Quarter 2013, September 2013

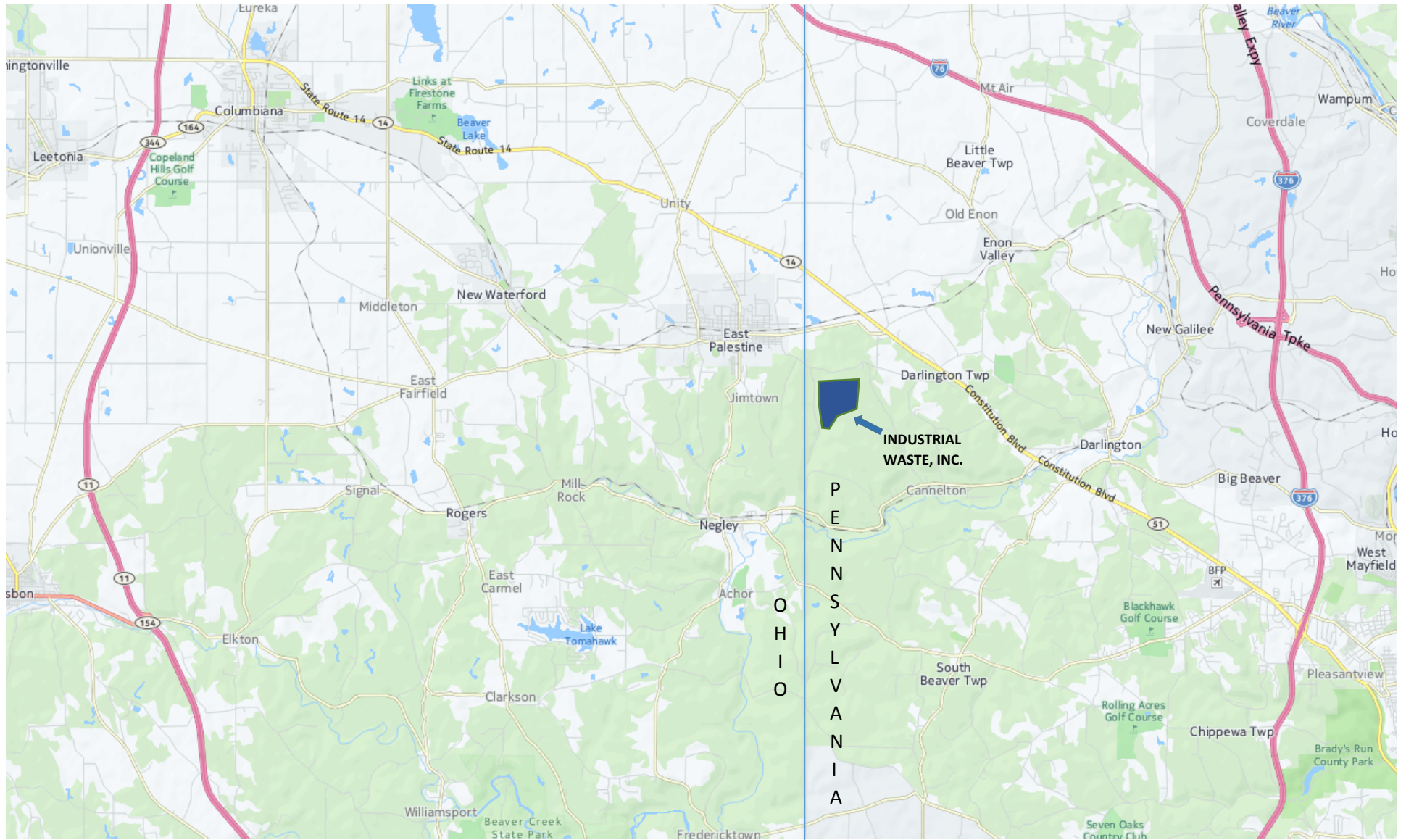
Private Well Monitoring data (annual), summary table, 1990 to 2014

Annual Operating and Maintenance activities, Steve Sares email, 4/20/2015

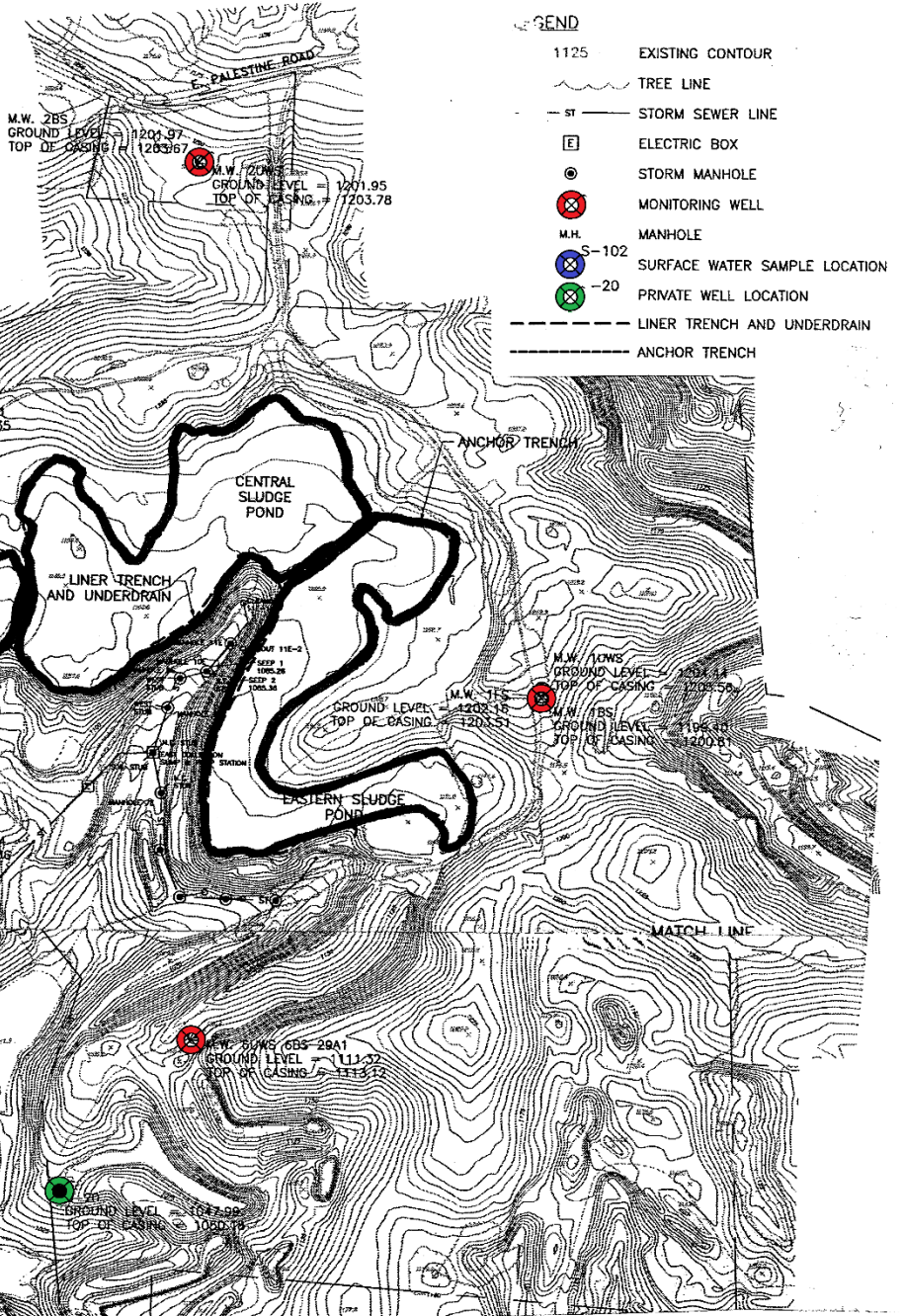
Date:

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ORIGINAL SIGNED 5-26-2015

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John A. Armstead, Director  
Land and Chemicals Division  
US EPA, Region III



**INDUSTRIAL WASTE. INC.**  
**DARLINGTON, PA**  
**FIGURE 1**



**LEGEND**

1125	EXISTING CONTOUR
	TREE LINE
— ST —	STORM SEWER LINE
	ELECTRIC BOX
	STORM MANHOLE
	MONITORING WELL
M.H.	MANHOLE
	SURFACE WATER SAMPLE LOCATION
	PRIVATE WELL LOCATION
---	LINER TRENCH AND UNDERDRAIN
---	ANCHOR TRENCH

M.W. 3BS  
GROUND LEVEL = 1070.06  
TOP OF CASING = 1071.96

M.W. 2BS  
GROUND LEVEL = 1201.97  
TOP OF CASING = 1203.67

M.W. 20WS  
GROUND LEVEL = 1201.95  
TOP OF CASING = 1203.78

M.W. UNNAMED  
GROUND LEVEL = 1010.94  
TOP OF CASING = 1012.35

M.W. 10WS  
GROUND LEVEL = 1204.14  
TOP OF CASING = 1208.50

M.W. 11BS  
GROUND LEVEL = 1196.81  
TOP OF CASING = 1200.81

M.W. 4FS  
GROUND LEVEL = 1051.85  
TOP OF CASING = 1053.49

M.W. 4PS  
GROUND LEVEL = 1051.88  
TOP OF CASING = 1054.29

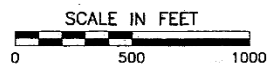
M.W. 4WS  
GROUND LEVEL = 1068.11  
TOP OF CASING = 1072.48

M.W. 5FS  
GROUND LEVEL = 1001.61  
TOP OF CASING = 1002.73

M.W. 6BS-20A1  
GROUND LEVEL = 1111.37  
TOP OF CASING = 1113.72

M.W. 5FS  
GROUND LEVEL = 967.74  
TOP OF CASING = 970.40

M.W. 5WS  
GROUND LEVEL = 967.46  
TOP OF CASING = 970.54



- REFERENCE**
- EXISTING FEATURES AND TOPOGRAPHY CREATED BY CEC, INC. OF 2000.
  - LINER TRENCH AND UNDERDRAIN LOCATION PROVIDED BY PEC GEOLOGISTS CONSULTANTS DRAWING "PHASE II TOPSOIL & GF DRAWING NUMBERS: 6100-28-C4 AND 6100-28-C5, DATED 3/25/2015

  
**Civil & Environmental Consultants, Inc.**  
 333 Baldwin Road · Pittsburgh, PA 15205  
 412-428-2324 · 800-365-2324  
 www.cecinc.com

HCR - MANOR CARE  
 INDUSTRIAL WASTE LANDFILL  
 DARLINGTON TOWNSHIP  
 BEAVER COUNTY, PENNSYLVANIA  
 RCRA CORRECTIVE ACTION ASSESSMENT  
 DRAFT FOR REVIEW PURPOSES

DRAWN BY:	SCC	CHECKED BY:	DRAFT	APPROVED BY:	DRAFT	FIGURE NO.:	
DATE:	3/25/2015	DWG SCALE:	1"=500'	PROJECT NO.:	150-829		<b>2</b>

**INDUSTRIAL WASTE. INC.**  
**DARLINGTON, PA**  
**FIGURE 1**

P:\2015\150-829-0291-C001\DWG\CDR\150829-0291.dwg 1-NO 2:04:10 PM 3/25/2015 3:49 PM