

Application Type Renewal
Facility Type Industrial
Major / Minor Major

**NPDES PERMIT FACT SHEET
INDIVIDUAL INDUSTRIAL WASTE (IW)
AND IW STORMWATER**

Application No. PA0232343
APS ID 1098904
Authorization ID 1458402

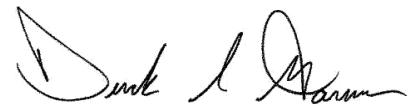
Applicant and Facility Information

Applicant Name	<u>PA Waste LLC</u>	Facility Name	<u>Camp Hope Run Landfill</u>
Applicant Address	<u>175 Bustleton Pike</u> <u>Feasterville, PA 19053-6456</u>	Facility Address	<u>Route 153 South</u> <u>West Decatur, PA 16878</u>
Applicant Contact	<u>Steven Rovner</u>	Facility Contact	<u>Steven Rovner</u>
Applicant Phone	<u>(215) 953-2714</u>	Facility Phone	<u>(215) 953-2714</u>
Client ID	<u>251326</u>	Site ID	<u>461639</u>
SIC Code	<u>4953</u>	Municipality	<u>Boggs Township</u>
SIC Description	<u>Trans. & Utilities - Refuse Systems</u>	County	<u>Clearfield</u>
Date Application Received	<u>October 2, 2023</u>	EPA Waived?	<u>No</u>
Date Application Accepted	<u>October 17, 2023</u>	If No, Reason	<u>Major Facility</u>
Purpose of Application	<u>Camp Hope Run Landfill IWTP and stormwater discharges.</u>		

Summary of Review

This is a permit renewal for the discharge associated with a proposed landfill leachate treatment system and proposed stormwater discharges. The landfill has not yet been constructed so there are currently no active discharges.

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		 Derek S. Garner / Project Manager	May 23, 2025
X		 Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	May 28, 2025

Facility/Treatment Summary

The proposed treatment facility would treat landfill leachate and sewage produced at the proposed Camp Hope Run Landfill. The landfill is proposed to be located on the site of a former strip mine where two existing passive abandoned mine drainage treatment systems currently exist (permitted under NPDES Permit No. PA0232653). A conceptual treatment process has been developed based upon influent leachate characterization and preliminary effluent limits provided to HRG, Inc on behalf of PA Waste LLC in a letter dated December 19, 2012. The treatment of the leachate and sewage is currently proposed as follows:

1. Equalization
2. Screening
3. Chemical Precipitation
4. Sequencing Batch Reactors (SBRs)
5. Membrane Filtration
6. Disinfection
7. Sludge Digestion
8. Sludge Dewatering

See Appendix A for the process flow diagram.

The treated landfill leachate and sewage will be discharged to Clearfield Creek via Outfall 001 at river mile 10.39. The proposed discharge will be located at latitude 40° 57' 16" N and longitude 78° 24' 12" W. The proposed discharge rates, in MGD, are as follows:

Wastewater	Maximum Daily	Monthly Average	Long-Term Average
Landfill Leachate	0.073	0.049	0.049
Sewage	0.002	0.001	0.001
Total	<i>0.075</i>	<i>0.050</i>	<i>0.050</i>

Stormwater Outfalls 003 through 009 are sedimentation basin overflows located throughout the property.

See Appendix B for a location map.

Discharge, Receiving Waters and Water Supply Information

Outfall 001 discharges treated landfill leachate and sewage from the onsite treatment plant.

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.049</u>
Latitude	<u>40° 57' 15.78"</u>	Longitude	<u>-78° 24' 13.44"</u>
Quad Name	<u>Glen Richey</u>	Quad Code	<u>1118</u>
Wastewater Description:	<u>IW Process Effluent with ELG, Sewage Effluent</u>		
Receiving Waters	<u>Clearfield Creek</u>	Stream Code	<u>26107</u>
NHD Com ID	<u>61831437</u>	RMI	<u>10.39</u>
Drainage Area (mi ²)	<u>310</u>	Yield (cfs/mi ²)	<u>0.057</u>
Q ₇₋₁₀ Flow (cfs)	<u>17.8</u>	Q ₇₋₁₀ Basis	<u>Streamgage No. 01541500</u>
Elevation (ft)	<u>1179</u>	Slope (ft/ft)	<u>n/a</u>
Watershed No.	<u>8-C</u>	Chapter 93 Class.	<u>WWF, MF</u>
Existing Use	<u>n/a</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Metals (Al, Fe, Mn)</u>		
Source(s) of Impairment	<u>Abandoned Mine Drainage</u>		
TMDL Status	<u>Final</u>	Name	<u>Clearfield Creek Watershed</u>

Outfalls 003 through 009 discharge stormwater.

Outfall No.	<u>003</u>	Design Flow (MGD)	<u>n/a</u>
Latitude	<u>40° 55' 41.98"</u>	Longitude	<u>-78 24' 23.43"</u>
Quad Name	<u>Glen Richey</u>	Quad Code	<u>1118</u>
Wastewater Description:	<u>Stormwater</u>		
Receiving Waters	<u>Sanborn Run</u>	Stream Code	<u>26184</u>
NHD Com ID	<u>134238118</u>	RMI	<u>0.57</u>
Drainage Area	<u>n/a</u>	Yield (cfs/mi ²)	<u>n/a</u>
Q ₇₋₁₀ Flow (cfs)	<u>n/a</u>	Q ₇₋₁₀ Basis	<u>n/a</u>
Elevation (ft)	<u>n/a</u>	Slope (ft/ft)	<u>n/a</u>
Watershed No.	<u>8-C</u>	Chapter 93 Class.	<u>CWF, MF</u>
Existing Use	<u>n/a</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Metals, pH</u>		
Source(s) of Impairment	<u>Abandoned Mine Drainage</u>		
TMDL Status	<u>Final</u>	Name	<u>Clearfield Creek Watershed</u>

NPDES Permit Fact Sheet
Camp Hope Run Landfill

NPDES Permit No. PA0232343

Outfall No.	004	Design Flow (MGD)	n/a
Latitude	40° 55' 48.62"	Longitude	-78° 23' 45.53"
Quad Name	Glen Richey	Quad Code	1118
Wastewater Description:	Stormwater		
Receiving Waters	Sanborn Run	Stream Code	26184
NHD Com ID	61831867	RMI	1.01
Drainage Area	n/a	Yield (cfs/mi ²)	n/a
Q ₇₋₁₀ Flow (cfs)	n/a	Q ₇₋₁₀ Basis	n/a
Elevation (ft)	n/a	Slope (ft/ft)	n/a
Watershed No.	8-C	Chapter 93 Class.	CWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final	Name	Clearfield Creek Watershed

Outfall No.	005	Design Flow (MGD)	n/a
Latitude	40° 55' 28.99"	Longitude	-78° 23' 50.13"
Quad Name	Glen Richey	Quad Code	1118
Wastewater Description:	Stormwater		
Receiving Waters	Sanborn Run	Stream Code	26184
NHD Com ID	61831867	RMI	0.4
Drainage Area	n/a	Yield (cfs/mi ²)	n/a
Q ₇₋₁₀ Flow (cfs)	n/a	Q ₇₋₁₀ Basis	n/a
Elevation (ft)	n/a	Slope (ft/ft)	n/a
Watershed No.	8-C	Chapter 93 Class.	CWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final	Name	Clearfield Creek Watershed

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Outfall No.	006	Design Flow (MGD)	n/a
Latitude	40° 56' 10.79"	Longitude	-78° 23' 25.85"
Quad Name	Glen Richey	Quad Code	1118
Wastewater Description:	Stormwater		
Receiving Waters	Camp Hope Run	Stream Code	26183
NHD Com ID	61831601	RMI	1.62
Drainage Area	n/a	Yield (cfs/mi ²)	n/a
Q ₇₋₁₀ Flow (cfs)	n/a	Q ₇₋₁₀ Basis	n/a
Elevation (ft)	n/a	Slope (ft/ft)	n/a
Watershed No.	8-C	Chapter 93 Class.	CWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, PH		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final	Name	Clearfield Creek Watershed

Outfall No.	007	Design Flow (MGD)	n/a
Latitude	40° 56' 1.17"	Longitude	-78° 24' 16.80"
Quad Name	Glen Richey	Quad Code	1118
Wastewater Description:	Stormwater		
Receiving Waters	UNT to Sanborn Run	Stream Code	26185
NHD Com ID	134238120	RMI	0.6000
Drainage Area	n/a	Yield (cfs/mi ²)	n/a
Q ₇₋₁₀ Flow (cfs)	n/a	Q ₇₋₁₀ Basis	n/a
Elevation (ft)	n/a	Slope (ft/ft)	n/a
Watershed No.	8-C	Chapter 93 Class.	CWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH, Sulfate		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final	Name	Clearfield Creek Watershed

NPDES Permit Fact Sheet
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Outfall No.	008	Design Flow (MGD)	n/a
Latitude	40° 56' 1.17"	Longitude	-78° 24' 16.80"
Quad Name	Glen Richey	Quad Code	1118
Wastewater Description: Stormwater			
Receiving Waters	UNT to Sanborn Run	Stream Code	26185
NHD Com ID	134238120	RMI	0.22
Drainage Area	n/a	Yield (cfs/mi ²)	n/a
Q ₇₋₁₀ Flow (cfs)	n/a	Q ₇₋₁₀ Basis	n/a
Elevation (ft)	n/a	Slope (ft/ft)	n/a
Watershed No.	8-C	Chapter 93 Class.	CWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH, Sulfate		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final	Name	Clearfield Creek Watershed

Outfall No.	009	Design Flow (MGD)	n/a
Latitude	40° 55' 57.75"	Longitude	-78° 24' 26.32"
Quad Name	Glen Richey	Quad Code	1118
Wastewater Description: Stormwater			
Receiving Waters	UNT to Sanborn Run	Stream Code	26185
NHD Com ID	134238120	RMI	0.46
Drainage Area	n/a	Yield (cfs/mi ²)	n/a
Q ₇₋₁₀ Flow (cfs)	n/a	Q ₇₋₁₀ Basis	n/a
Elevation (ft)	n/a	Slope (ft/ft)	n/a
Watershed No.	8-C	Chapter 93 Class.	CWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH, Sulfate		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final	Name	Clearfield Creek Watershed

Receiving Surface Waters

Outfall 001 will discharge to Clearfield Creek, stream code 26107. 25 Pa. Code § 93.9I classifies the creek as a Warm Water Fishes surface water. The discharge is located in drainage basin L, watershed 8-C. Clearfield Creek has been assigned a total maximum daily load (TMDL) to address impairment caused by metals from abandoned mined drainage. The TMDL was finalized by DEP in 2007. The TMDL establishes wasteload and load allocations for aluminum, iron, and manganese as well as recommending pH remain between 6.0 and 9.0. Since these parameters are expected to be in the treated effluent, the TMDL will be taken into consideration while developing the effluent limitations. Please refer to the "Development of Effluent Limitation" section below for further details.

Outfalls 003 through 009 are proposed stormwater outfalls that will potentially discharge via sedimentation basin overflows. Outfalls 003, 004, and 005 will discharge to Sanborn Run; Outfall 006 to Camp Hope Run; and Outfalls 007, 008, and 009 to an unnamed tributary to Sanborn Run.

Outfall 002 is for the site's AMD treatment system discharge and is not included in this permit. The AMD treatment system discharge is covered under NPDES Permit No. PA0232653.

The nearest downstream water supply intake is Shawville Power, LLC located in Shawville, PA on the West Branch Susquehanna River approximately 18 river miles downstream of the discharges. The discharges are not expected to impact the intake.

The drainage area of the creek above Outfall 001 is 310.55 square miles and provides 35.1 CFS at Q_{7-10} conditions. The Q_{7-10} was determined by using Stream Gage No. 01541500 on Clearfield Creek at Dimeling, PA as a reference gage.

See Appendix C for upstream drainage area information.

Compliance History

Since this facility has not yet been constructed there is no associated compliance history.

There are no open violations associated with the permittee.

Development of Effluent Limitations

Outfall No. 001 Design Flow (MGD) 0.049
 Latitude 40° 57' 16.00" Longitude -78° 24' 12.00"
 Wastewater Description: IW Process Effluent with ELG, Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/L)	SBC	Federal Regulation	State Regulation
BOD	140	Maximum Daily	445.21	
	45	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	37	Average Monthly	445.21	
	30	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
Total Suspended Solids	88	Maximum Daily	445.21	
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	30	Average Monthly	445.21	
	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Ammonia-N	10	Maximum Daily	445.21	
	4.9	Average Monthly	445.21	
α-Terpineol	0.033	Maximum Daily	445.21	
	0.016	Average Monthly	445.21	
Benzoic acid	0.12	Maximum Daily	445.21	
	0.071	Average Monthly	445.21	
p-Cresol	0.025	Maximum Daily	445.21	
	0.014	Average Monthly	445.21	
Phenol	0.026	Maximum Daily	445.21	
	0.015	Average Monthly	445.21	
Zinc	0.2	Maximum Daily	445.21	
	0.11	Average Monthly	445.21	
pH	6.0 – 9.0 S.U.	Min – Max	445.21 and 133.102(c)	95.2(1)
Dissolved Iron	7.0	IMAX		95.2(4)
Oil and Grease	15	Average Monthly		95.2(2)(ii) and 92a.47(a)(7)
	30	IMAX		95.2(2)(ii) and 92a.47(a)(7)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
	10,000 / 100 ml	IMAX	-	92a.47(a)(5)

The proposed discharge is, in part, regulated by 40 CFR Part 445, Subpart B. Since this discharge is a new source as defined in 40 CFR § 401.11(e), it is subject to new source performance standard limitations in § 445.24. Section 445.24 states, "Any new source subject to this subpart must achieve the following performance standards: Standards are the same as those specified in § 445.21." Section 445.21 limitations represent the application of best practicable technology (BPT).

In addition to the federal regulations, 25 Pa. Code Chapter 95 provides effluent limitations for industrial discharges.

The permittee has also proposed to treat sewage produced onsite. Discharges of sewage are subject to minimum secondary treatment standards at 40 CFR § 133.102 and 25 Pa. Code § 92a.47.

The permittee has proposed to disinfect effluent using ultraviolet light. Accordingly, total residual chlorine requirements at 25 Pa. Code § 92a.48(b) are not necessary.

Water Quality-Based Limitations

There have been no proposed changes to the characteristics of the discharge, and DEP is not aware of any significant changes to Clearfield Creek at Outfall 001. Accordingly, the previous WQBEL analysis is still appropriate and is summarized in the following paragraphs.

The existing limits were developed by modeling in-stream conditions to determine if water quality-based effluent limitations (WQBELs) are appropriate. Models were created using WQM 7.0 v1.1 for CBOD5, ammonia-N, and dissolved oxygen and PENTOXSD 2.0d for toxics. Since a new landfill discharge will most likely not reach maximum daily values within the first permit cycle, consistent with recommendations in the *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (362-0400-001)*, the long-term average flow was used in both models.

WQM 7.0 v1.1 is a multiple discharge model that assumes instantaneous mixing with the receiving surface water upon discharge. The reach chosen to model the in-stream characteristics of Clearfield Creek is appropriate as a recovery in dissolved oxygen levels is demonstrated. The input value for CBOD5 is based on 40 CFR § 445.21, which recommends a maximum daily limitation of 140 mg/L. Assuming all BOD is carbonaceous is a conservative approach and is appropriate for modeling purposes. Additionally, using the least stringent technology-based limitation poses a conservative “worst case” scenario. The deoxygenation rate was adjusted by a factor of 0.6 to account for the large BOD input value, which is outlined in the *Technical Guidance for WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.0 (386-2000-016)*. The ammonia-n input value of 10 mg/l is also based on § 445.21. The model does not recommend water quality-based effluent limitations with regards to CBOD5, ammonia-N, or dissolved oxygen. The output is as follows:

Parameter	Effluent Limit (mg/L)		
	30 Day Average	Maximum	Minimum
CBOD5	140	--	--
Ammonia-N	10	20	--
Dissolved Oxygen	--	--	3

Unlike WQM 7.0 v1.1, the PENTOXSD v2.0d is a single discharge model that does not assume instantaneous mixing with the receiving surface water upon discharge, but instead, assigns a partial mixing factor based on surface water and discharge characteristics. Background concentration data for Clearfield Creek was obtained from DEP’s Water Quality Network. As recommended by DEP’s standard operation procedures, the 90th percentile of background concentrations for each parameter were calculated and entered into PENTOXSD. Model inputs for the discharge from Outfall 001 were based off two “categories”. The first input category used TBELs from the federal and state regulations, while the second input category used maximum daily values reported in the pollutant groups from the application. Whichever category yielded the more stringent (larger) input value was then entered into the Toxics Screening Analysis Spreadsheet v1.1, which compares the input value to the most stringent criterion established in 25 Pa. Code Chapter 93 for each parameter and determines if it is a parameter of concern. All parameters of concern were entered into PENTOXSD, which recommends a WQBEL. The recommended WQBEL is then placed into the Toxics Screening Analysis Spreadsheet v1.1, which recommends monitoring requirements, effluent limits, or taking no action.

Based on the Toxics Screening Analysis Spreadsheet, reporting requirements were established for total antimony, hexavalent chromium, total copper, and total lead. Limits were established for total thallium and 1,4-dichlorobenzene. The limits for total aluminum, total iron, and total manganese are addressed in the TMDL Considerations section below.

See Appendix D for the previous modeling data.

TMDL Considerations

In accordance with 40 CFR § 122.4, DEP cannot allow a discharge to contribute to impairment of a surface water. Since this discharge was not in existence during the development of the TMDL and no reserve was allocated for future discharges, water quality criteria specified in 25 Pa. Code Chapter 93 for the pollutants of concern (aluminum, iron, manganese) were established in the previous review. Limitations established at or below criteria cannot be considered to contribute to impairment. Since the majority of landfill leachate is caused by stormwater percolating through the deposited waste, meaning the discharge is mostly dependent on stormwater; assimilative capacity of Clearfield Creek will not be decreased. The Chapter 93 criterion values are as follows:

Parameter	Criterion Value (mg/L)
Total Aluminum	1.50
Total Iron	1.00
Total Manganese	0.75

DEP is not aware of any changes to the Clearfield Creek TMDL that would change the justification for setting limits at criteria for aluminum, iron, or manganese. Accordingly, the limits should remain in the permit.

Total Dissolved Solids, Sulfate, Chloride, and Bromide Considerations

This is a new (proposed) discharge treating wastewater other than natural gas wastewater (i.e., landfill leachate) that will be discharging below the 5,000 lbs/day *de minimus* threshold value set forth in 25 Pa. Code § 95.10(a)(7). Consequently, the treatment standards set forth in § 95.10 are not applicable. However, since the proposed landfill will be located on a former strip mine that will require lime stabilization of the overburden (which will be disposed of in the landfill), it is important to track the amount of TDS being discharged. Therefore, reporting requirements will be established for TDS and its main constituents, sulfate, chloride, and bromide.

Best Professional Judgment (BPJ) Limitations

To help further characterize the wastewater, DEP has proposed to establish quarterly sampling for four PFAS parameters; PFOA, PFOS, HFPO-DA, and PFBS. The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in four consecutive monitoring periods indicate non-detect results at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees must enter a No Discharge Indicator (NODI) Code of “GG” on the discharge monitoring reports.

An annual reporting requirement for E. Coli is proposed per the 2017 Triennial Review of Water Quality Standards, published in the PA Bulletin on July 11, 2020.

Chesapeake Bay

Per Phase 3 of Pennsylvania’s Watershed Implementation Plan Wastewater Supplement, Outfall 001 at the Camp Hope Run Landfill is considered a non-significant industrial discharge. The WIP states, “For new non-significant IW discharges, the permit writer must document in the fact sheet that adequate available Capacity for TN and TP remains to authorize the new permit. Permit writers will contact DEP’s Bureau of Clean Water for assistance.”

When the existing permit was issued, DEP did not anticipate sufficient capacity for total nitrogen or total phosphorus. Accordingly, cap loads of 0 lbs/year for total nitrogen and total phosphorus were established at Outfall 001. DEP is recommending that the cap loads remain in the permit at 0 lbs/year.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding should not impact the permit.

Development of Effluent Limitations

Outfall Nos. 003 - 009 Design Flow (MGD) n/a
Latitude Various Longitude Various
Wastewater Description: Stormwater

Technology-Based Limitations

There are no applicable technology-based effluent limitations for stormwater associated with landfills.

Water Quality-Based Limitations

DEP does not have an established procedure for modeling stormwater discharges. Accordingly, no water quality-based limitations are proposed.

Best Professional Judgment (BPJ) Limitations

Stormwater discharges associated with landfills are covered under Appendix C of the PAG-03. Using best professional judgment, these requirements were established when the permit was first issued. Since this permit's issuance, Appendix C of the PAG-03 has expanded to now include monitoring requirements for total nitrogen and total phosphorus. DEP recommends the following requirements for stormwater Outfalls 003 through 009.

Pollutant	Monitoring Requirements		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L) ⁽¹⁾	1 / 6 months	Calculation	XXX
Total Phosphorus (mg/L)	1 / 6 months	Grab	XXX
pH (S.U.)	1 / 6 months	Grab	9.0
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 months	Grab	120
Ammonia-Nitrogen (mg/L)	1 / 6 months	Grab	XXX
Total Iron (mg/L)	1 / 6 months	Grab	XXX

- (1) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N ($\text{NO}_2 + \text{NO}_3\text{-N}$), where TKN and $\text{NO}_2 + \text{NO}_3\text{-N}$ are measured in the sample.

TMDL Considerations

In accordance with 40 CFR § 122.4, DEP cannot allow a discharge to contribute to impairment of a surface water. Since this discharge was not in existence during the development of the TMDL and no reserve was allocated for future discharges, water quality criteria specified in 25 Pa. Code Chapter 93 for the pollutants of concern (aluminum, iron, manganese) were established in the previous review. Limitations established at or below criteria cannot be considered to contribute to impairment. Since these are stormwater-dependent discharges, assimilative capacity of the receiving waters should be decreased. The Chapter 93 criterion values are as follows:

Parameter	Criterion Value (mg/L)
Total Aluminum	1.50
Total Iron	1.00
Total Manganese	0.75

DEP is not aware of any changes to the Clearfield Creek TMDL that would change the justification for setting limits at criteria for aluminum, iron, or manganese. Accordingly, the limits should remain in the permit.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding should not impact the permit.

Whole Effluent Toxicity (WET)

No WET testing was completed for the application since this is still a proposed discharge.

Acute Partial Mix Factor (PMFa): **0.15**

Chronic Partial Mix Factor (PMFc): **1.0**

1. Determine IWC – Acute (IWCa):

$$(Q_d \times 1.547) / ((Q_{7-10} \times \text{PMFa}) + (Q_d \times 1.547))$$

$$[(0.049 \text{ MGD} \times 1.547) / ((17.8 \text{ cfs} \times 0.15) + (0.049 \text{ MGD} \times 1.547))] \times 100 = \mathbf{2.8\%}$$

Is IWCa < 1%? ☐ YES ☒ NO

Type of Test for Permit Renewal: **Chronic**

2. Determine Target IWCC

$$(Q_d \times 1.547) / (Q_{7-10} \times \text{PMFc}) + (Q_d \times 1.547)$$

$$[(0.049 \text{ MGD} \times 1.547) / ((17.8 \text{ cfs} \times 1.0) + (0.049 \text{ MGD} \times 1.547))] \times 100 = \mathbf{0.42\%}$$

Since a target IWC of 0.42% is impracticable for a laboratory setting, it should be rounded up to 1% for determining the dilution series.

3. Determine Dilution Series

Dilution Series = 100%, 60%, 30%, 2%, and 1%.

WET Limits

Since this is a proposed discharge no reasonable potential has been determined and no WET limits will be established in the permit.

Existing Effluent Limitations and Monitoring Requirements

The existing limitations and monitoring requirements are as follows:

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Biochemical Oxygen Demand (BOD5)	Report	Report	XXX	36.0	138.0	170	1/week	24-Hr Composite
Total Suspended Solids	Report	Report	XXX	27.0	85.0	105	1/week	24-Hr Composite
Total Dissolved Solids	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Oil and Grease	Report	XXX	XXX	15.0	XXX	30.0	1/day	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia-Nitrogen	Report	Report	XXX	4.8	9.8	12	1/week	24-Hr Composite
Aluminum, Total	0.31	0.31	XXX	0.75	0.75	0.75	1/week	24-Hr Composite
Antimony, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Chromium, Hexavalent	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Copper, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Iron, Dissolved	XXX	XXX	XXX	XXX	XXX	6.86	1/week	Grab
Iron, Total	0.62	1.25	XXX	1.50	3.00	3.75	1/week	24-Hr Composite
Lead, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Manganese, Total	0.41	0.83	XXX	1.00	2.00	2.5	1/week	24-Hr Composite
Sulfate, Total	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Thallium, Total	0.04	0.07	XXX	0.10	0.17	0.25	1/week	24-Hr Composite
Zinc, Total	Report	Report	XXX	0.10	0.19	0.25	1/week	24-Hr Composite
Phenol	Report	Report	XXX	0.014	0.025	0.035	1/week	24-Hr Composite
a-Terpineol	Report	Report	XXX	0.015	0.032	0.037	1/week	24-Hr Composite
1,4-Dichlorobenzene	13.51	15.87	XXX	32.41	38.06	81	1/week	24-Hr Composite
Benzoic Acid	Report	Report	XXX	0.069	0.11	0.17	1/week	24-Hr Composite
Chloride	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Bromide	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
p-Cresol	Report	Report	XXX	0.013	0.024	0.03	1/week	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001

Outfalls 003 through 009, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/6 months	Grab
Chemical Oxygen Demand (COD)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Aluminum, Total	XXX	XXX	XXX	XXX	0.75	XXX	1/6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	3.0	XXX	1/6 months	Grab
Manganese, Total	XXX	XXX	XXX	XXX	2.0	XXX	1/6 months	Grab

Compliance Sampling Location: Each individual outfall

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Net Total Nitrogen	Report	0	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	0	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: Outfall 001

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Biochemical Oxygen Demand (BOD5)	Report	Report	XXX	36.0	138.0	170	1/week	24-Hr Composite
Total Suspended Solids	Report	Report	XXX	27.0	85.0	105	1/week	24-Hr Composite
Total Dissolved Solids	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Oil and Grease	Report	XXX	XXX	15.0	XXX	30.0	1/day	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia-Nitrogen	Report	Report	XXX	4.8	9.8	12	1/week	24-Hr Composite
Aluminum, Total	0.31	0.31	XXX	0.75	0.75	0.75	1/week	24-Hr Composite
Antimony, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Chromium, Hexavalent	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Copper, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Iron, Dissolved	XXX	XXX	XXX	XXX	XXX	6.86	1/week	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Iron, Total	0.62	1.25	XXX	1.50	3.00	3.75	1/week	24-Hr Composite
Lead, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Manganese, Total	0.41	0.83	XXX	1.00	2.00	2.5	1/week	24-Hr Composite
Sulfate, Total	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Thallium, Total	0.04	0.07	XXX	0.10	0.17	0.25	1/week	24-Hr Composite
Zinc, Total	Report	Report	XXX	0.10	0.19	0.25	1/week	24-Hr Composite
Phenol	Report	Report	XXX	0.014	0.025	0.035	1/week	24-Hr Composite
a-Terpineol	Report	Report	XXX	0.015	0.032	0.037	1/week	24-Hr Composite
1,4-Dichlorobenzene	13.51	15.87	XXX	32.41	38.06	81	1/week	24-Hr Composite
Benzoic Acid	Report	Report	XXX	0.069	0.11	0.17	1/week	24-Hr Composite
Chloride	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Bromide	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
p-Cresol	Report	Report	XXX	0.013	0.024	0.03	1/week	24-Hr Composite
PFOA (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab

Compliance Sampling Location: Outfall 001

Outfalls 003 through 009, Effective Period: Permit Effective Date through Permit Expiration Date.

Outfall 009 , Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/6 months	Grab
Chemical Oxygen Demand (COD)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Ammonia-Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Aluminum, Total	XXX	XXX	XXX	XXX	0.75	XXX	1/6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	3.0	XXX	1/6 months	Grab
Manganese, Total	XXX	XXX	XXX	XXX	2.0	XXX	1/6 months	Grab

Compliance Sampling Location: Each individual outfall

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

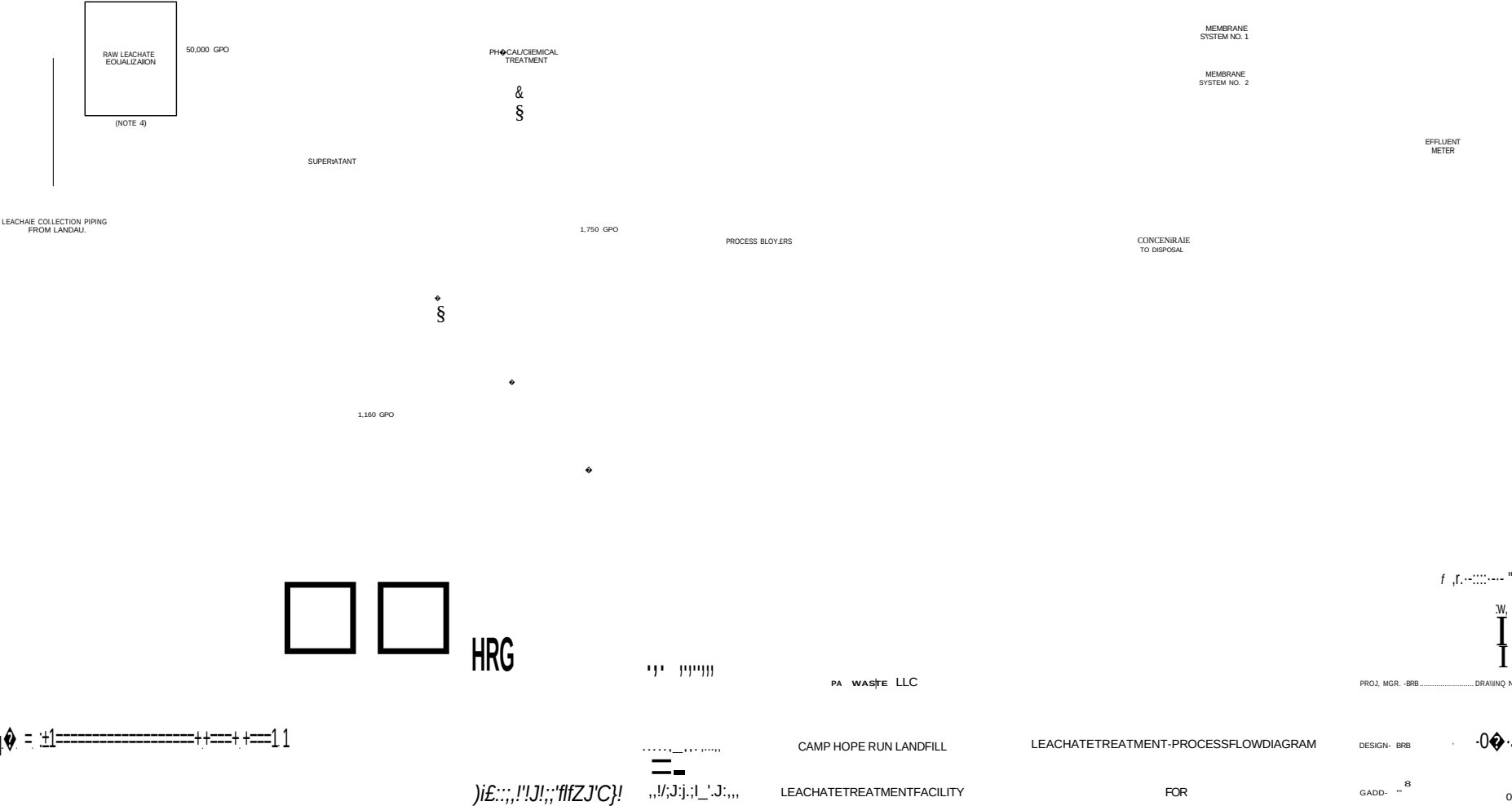
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Net Total Nitrogen	Report	0	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	0	XXX	XXX	XXX	XXX	1/month	Calculation

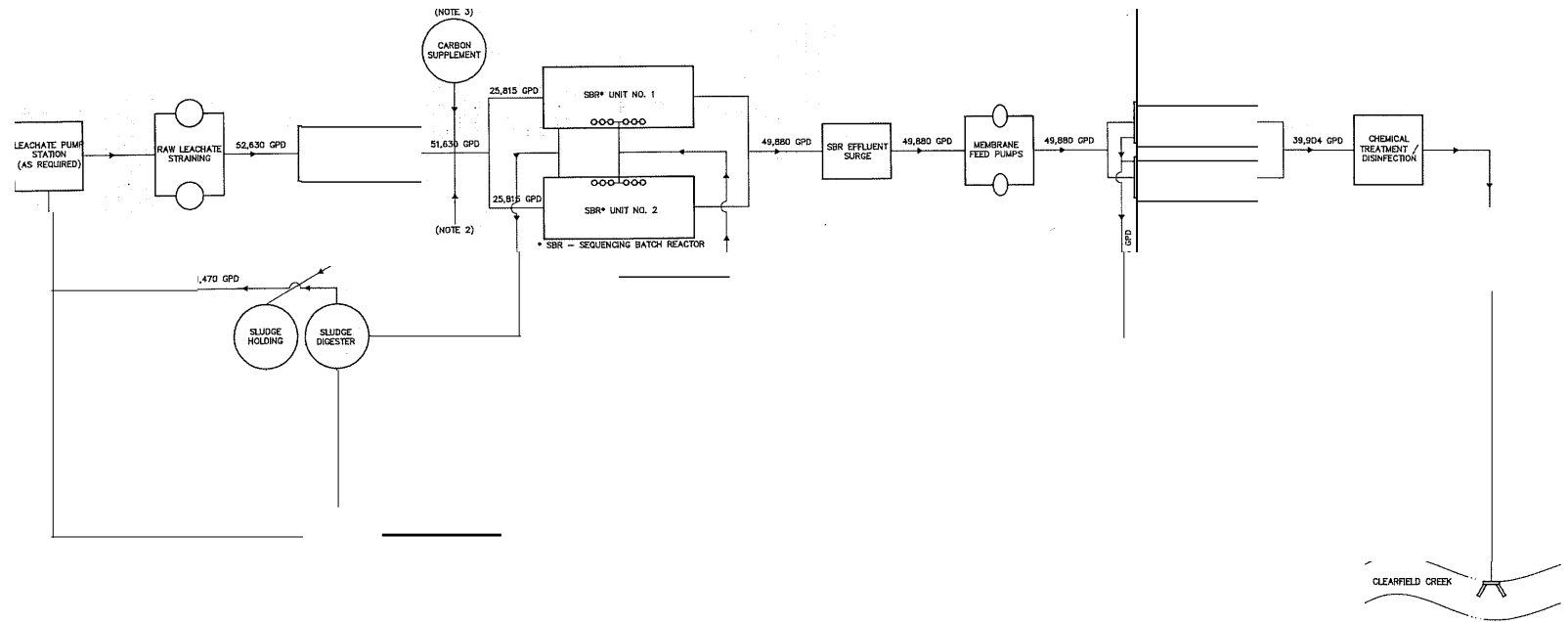
Compliance Sampling Location: Outfall 001

APPENDIX A

PROCESS FLOW DIAGRAM

- NOTES:
1. LEVEL OF MEMBRANE FILTRATION TO BE DETERMINED BASED ON NPDES EFFLUENT LIMITATIONS.
 2. A HEATER OR HEAT EXCHANGER MAY BE REQUIRED FOR BIOLOGICAL PROCESS OPTIMIZATION, SPECIALLY NITRIFICATION.
 3. ADDITION OF CARBON SOURCE OR WASTEWATER SUDGE MAY BE REQUIRED TO FACILITATE ACHEE TREATMENT.
 4. RAW LEACHATE EQUALIZATION TO BE LOCATED OFF SITE FROM TREATMENT PLANT.
 5. ASSUMES CHEMICAL ADDITIONS ARE INSIGNIFICANT TO WATER BALANCE.
 6. LABELED FLOWS REPRESENT A-DGE DAILY FLOWS.

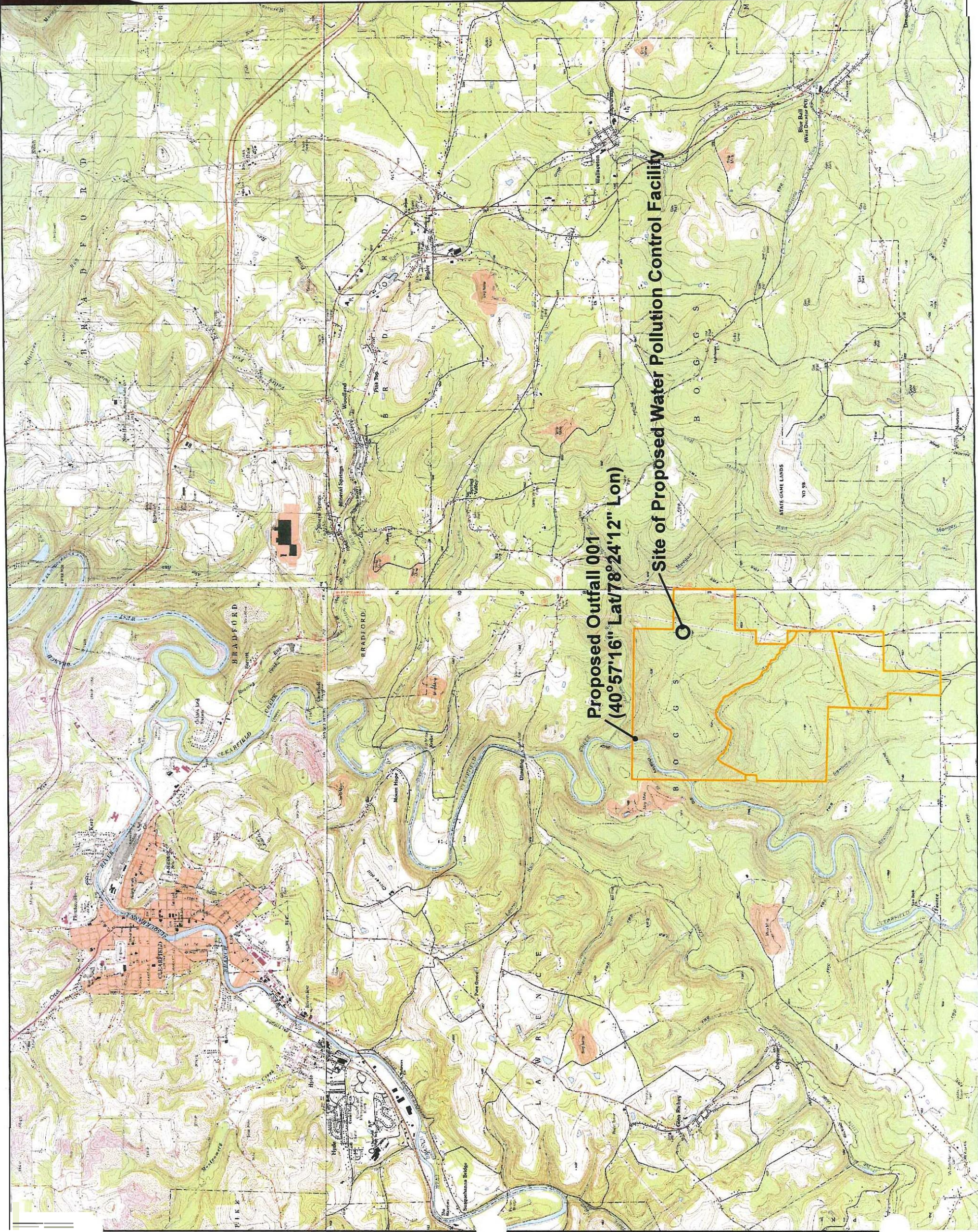
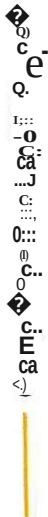




APPENDIX B

LOCATION MAP

EXHIBIT GIF-1
Site Location
Boggs Township
Clearfield County, Pennsylvania



Mapping derived from data provided by USGS.

1/25/2013	PM: BRB	GIS: BRB	R006602.0425
HRC Herbert, Rowland & Grubic, Inc. Engineering & Related Services Offices Statewide			
474 Windmere Drive Suite 100 State College, PA 16801 814.238.7117 Fax 814.238.7126 www.hrg-inc.com			

APPENDIX C

UPSTREAM DRAINAGE AREA INFORMATION

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.-Continued

[Latitude and Longitude in decimal degrees; mi2, square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi2)	Regulated ¹
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5,24	N
01543000	Driftwood Branch Sinnemahoning Creel<: at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-71.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhomie Creek near English Center, Pa:	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaue Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	◆78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.-Continued[ft³/s; cubic feet per second;-; statistic not computed;<, less than]

Streamgage number	Period of record used in analysis ¹	Number of years used in analysis	1-day, 10-year (ft ³ /s)	7-day, 10-year (ft ³ /s)	7-day, 2-year (ft ³ /s)	30-day, 10-year (ft ³ /s)	30-day, 2-year (ft ³ /s)	90-day, 10-year (ft ³ /s)
01530500	1940-2008	69	5.0	6.1	11.0	7.6	13	9.0
01531000	² 1981-2008	28	138	147	237	169	296	203
01531000	³ 1905-1979	68	86.3	97.0	175	116	219	161
01531500	² 1981-2008	28	550	592	1,030	733	1,340	952
01531500	³ 1915-1979	65	539	571	990	675	1,230	928
01532000	1915-2008	94	2.2	2.8	9.7	4.6	14.4	9.4
01532850	1967-1979	13	.1	.2	A	.3	.8	.7
01533400	² 198F-2008	28	602	648	1,110	790	1,430	1,060
01533500	1942-1958	17	.4	.6	1.5	.8	2.0	1.7
01533950	1962-1978	17	.2	.3	1.0	.6	1.4	1.0
01534000	1915-2008	94	15.2	17.3	35.9	24.2	51.0	38.7
01534300	1960-2008	49	1.1	1.7	5.1	2.8	7.6	4.8
01534500	² 1961-2008	48	16.7	18.8	29.2	21.9	35.8	27.6
01534500	³ 1941-1959	19	18.8	23.0	33.3	25.6	39.2	34.9
01536000	² 1961-2008	48	28.7	32.7	51.7	40.8	68.1	54.3
01536000	³ 1940-1959	20	77.8	93.9	119	105	138	124
01536500	² 1981-2008	28	828	872	1,450	1,030	1,830	1,350
01536500	³ 1901-1979	79	778	811	1,350	927	1,640	1,260
01537000	1943-1993	51	1.3	2.0	4.9	3.1	6.4	4.7
01537500	1941-1990	50	.2	.3	1.9	.5	3.1	1.6
01538000	1921-2008	88	3.1	3.6	7.1	5.0	9.3	7.5
01539000	1940-2008	69	15.4	16.8	36.8	21.1	51.1	36.8
01539500	1942-1958	17	.1	.3	1.4	1.0	3.3	2.3
01540200	1965-1981	17	0	0	.3	.1	.3	.1
01540500	² 1981-2008	28	1,080	1,120	1,870	1,320	2,330	1,690_
01540500	³ 1906--1979	74	927	978	1,660	1,160	2,050	1,590
01541000	1915-2008	94	25.3	27.9	50.7	35.3	66.6	49.6
01541200	² 1967-2008	40	34.6	45.2	66.0	63.1	100	92.4
01541200	³ 1957,--1965	9	22.9	24.7	44.7	27.7	58.2	36.4
01541303	1980::_2008	29	53.4	58.5	94.0	74.4	123	102
01541308	1969-1979	11	1.3	1.3	1.9	1.6	2.4	2.1
01541500	² 1962-2008	47	39.0	41.9	66.5	51.9	86.3	70.6
01541500	³ 1915-1960	46	14.9	21.3	41.9	28.5	55.0	42.9
01542000	1942-1993	52	8.1	9.1	14.8	11.3	17.8	14.6
01542500	² 1967-2008	33	216	235	326	285	435	402
01542500	³ 1941-1965	20		131	189	152	243	221
01542810	1966:--2008	43	.1	.1	.3	.2	.5	.3
01543000	1915-2008	94	2.9	4.2	16.0	9.6	27.4	19.2
01543500	1940-2008	69	10.7	14.5	44.9	26.6	74.9	50.5
01544000	² 1957;_2008	52	3.3	6.9	19.0	11.2	31.1	19.0
01544500	1942-2008	67	4.2	4.9	12.5	7.5	17.4	11.7
01545000	² 1964-2008	45	6.8	8.2	21.2	12.0	32.7	20.7
01545500	² 1963-2008	46	217	238	446	306	629	428
01545500	³ 1909-1961	53	125	141	278	190	387	296
01545600	1966--2008	43	1.2	1.5	4.4	2.4	6.7	4.2



Basin Characteristics Report

Date: Wed Feb 13 2013 09:30:09 Mountain Standard Time

NAD27 Latitude: 40.9544 (40 57 16)

NAD27 Longitude: -78.4040 (-78 24 14)

NAD83 Latitude: 40.9544 (40 57 16)

NAD83 Longitude: -78.4037 (-78 24 13)

Parameter	Value
Area in square miles	310.551
Mean Basin Elevation in feet	1730.81
Unadjusted basin slope, in degrees	6.91
Adjusted basin slope, in degrees	6.7
Total stream length in miles	564.561
Stream density (miles/square mile)	1.821
Percent of area covered by lakes, ponds, reservoirs and wetlands	0.01
Percent of area covered by carbonate bedrock	0.01
Percent of area covered by glacial activity	0.01
Depth to rock in feet	4.5
Mean annual precipitation in inches	41.61
Maximum Daily Temperature in degrees F	56.51
Percent of area covered by forest	79.91
Percentage of impervious area determined from NLCD 2001 impervious dataset	0.61
Percent of area covered by urban land according to an enhanced version of NLCD 1992	1.61
Percentage of urban land cover determined from NLCD 2001 land cover dataset	7.0
Drainage quality index from STATSGO	3.6
X coordinate of the centroid, in map projection, meters	-43214.81
Y coordinate of the centroid, in map projection, meters	190127.51
X coordinate of the outlet, in map projection, meters	-33985.01
Y coordinate of the outlet, in map projection, meters	217075.01
Longitude of the outlet, in decimal degrees	-78.403721

Low-Flow (Q₇₋₁₀) Calculation

Facility: **PA Waste LLC - Camp Hope Run Landfill**

NPDES Permit No. **PA0232343**

Gage Information

Drainage Area: **371** mi²

Q₇₋₁₀: **41.9** cfs

LFY: **0.11** cfs/m

Outfall Information

Drainage Area: **310.55** mi²

Q₇₋₁₀: **35.1** cfs

Downstream Locations

RMI: **9.98**

Drainage Area: **325.23** mi²

Q₇₋₁₀: **36.7** cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

RMI:

Drainage Area: mi²

Q₇₋₁₀: cfs

APPENDIX D

MODELING INPUT/OUTPUT DATA

CONCENTRATION SELECTION SPREADSHEET VERSION 1.0

Facility: **PA Waste LLC**

Outfall: **001**

NPDES Permit No.: **PA0232343**

Parameter	Input Concentrations (µg/l)						Toxics Screening Analysis Input (µg/l)
	Technology		Application		DMR		
Total Aluminum				25500			25500
Total Barium				693			693
Total Boron				900			900
Total Cobalt				112			112
Total Iron				64000			64000
Dissolved Iron		7000		7000			7000
Total Manganese				37250			37250
Total Antimony				900			900
Total Arsenic				262			262
Total Cadmium				10			10
Total Chromium (III)				250			250
Hexavalent Chromium				250			250
Total Copper				108			108
Total Lead				72			72
Total Mercury			<	2			2
Total Nickel				300			300
Total Selenium				150			150
Total Silver				20			20
Total Thallium				200			200
Total Zinc				200			200
Free Available Cyanide				40			40
Osmotic Pressure (mOs/kg)				58.82			58.82
Benzene				100			100
Chlorobenzene				100			100
Chloroform				20			20
Ethylbenzene				55			55
Methylene Chloride				200			200
Toluene				100			100
1,2-trans-Dichloroethylene				60			60
1,1,1-Trichloroethane				200			200
Phenol		26		26			26
Butyl Benzyl Phthalate				20			20
2-Chloronaphthalene				20			20
1,4-Dichlorobenzene				24400			24400
Diethyl Phthalate				21			21
Isophorone				42			42

**TOXICS SCREENING ANALYSIS, VERSION 1.1
WATER QUALITY PARAMETERS OF CONCERN**

Facility: **PA Waste LLC - Camp Hope Run Landfill**
Analysis Hardness (mg/L): **500**

NPDES Permit No.: **PA0232343**
Analysis pH (SU): **7.0**

Outfall: **001**

Parameter	Maximum Concentration in Application or DMRs (µg/L)	Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Permit Recommendation
Total Aluminum	25500	750	Yes	1520.4	Establish Limits
Total Barium	693	2400	No		
Total Boron	900	1600	No		
Total Cobalt	112	19	Yes	4302.695	-
Total Iron	64000	1500	Yes	3088	Establish Limits
Dissolved Iron	7000	300	Yes	139094	-
Total Manganese	37250	1000	Yes	2450	Establish Limits
Total Antimony	900	5.6	Yes	2596.421	Monitor
Total Arsenic	262	10	Yes	4636.466	-
Total Cadmium	10	0.751	Yes	102.178	-
Total Chromium (III)	250	276.9	No		
Hexavalent Chromium	250	10	Yes	737.947	Monitor
Total Copper	108	35.43	Yes	667.802	Monitor
Total Lead	72	13.74	Yes	632.534	Monitor
Total Mercury	< 2	0.05	Yes	23.182	-
Total Nickel	300	202.9	Yes	19610.67	-
Total Selenium	150	4.6	Yes	2313.204	-
Total Silver	20	51.2	No		
Total Thallium	200	0.24	Yes	111.275	Establish Limits
Total Zinc	200	458	No		
Free Available Cyanide	40	5.2	Yes	996.413	-
Osmotic Pressure (mOs/kg)	58.82	50000	No		
Benzene	100	1.2	Yes	2636.06	-
Chlorobenzene	100	130	No		
Chloroform	20	5.7	Yes	12521.28	-
Ethylbenzene	55	530	No		
Methylene Chloride	200	4.6	Yes	10104.9	-
Toluene	100	330	No		
1,2-trans-Dichloroethylene	60	140	No		
1,1,1-Trichloroethane	200	610	No		
Phenol	26	21000	No		
Butyl Benzyl Phthalate	20	35	No		
2-Chloronaphthalene	20	1000	No		
1,4-Dichlorobenzene	24400	150	Yes	33062.81	Establish Limits
Diethyl Phthalate	50	800	No		
Isophorone	100	35	Yes	16227.63	-

Input Data WQM 7.0

	SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	OBC	26107	CLEARFIELD CREEK	10.390	1179.00	310.55	0.00000	0.00	

Stream Data												
Design Cond.	LFY	Trib Flow	Stream Flow	Reh Trav Time (days)	Reh Velocity (fps)	WD Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary		Stream	
	(cfsm)	(cfs)	(cfs)						Temp (OC)	pH	Temp (OC)	
Q7-10	0.100	0.00	35.07	0.000	0.000	0.0	0.00	0.00	20.00	7.00	20.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (OC)	Disc pH
PA Waste LLC	PA0232343	0.7500	0.7500	0.7500	0.000	20.00	7.00

Parameter Data				
Parameter Name	Disc Cone (mg/L)	Trib Cone (mg/L)	Stream Cone (mg/L)	Fate Cocl (1/days)
CBOD5	140.00	2.00	0.00	8.40
Dissolved Oxygen	3.00	8.24	13.60	0.00
NH3-N	10.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
08C	26107	CLEARFIELD CREEK	9.980	1178.00	325.23	0.00000	0.00	

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Reh Trav Time (days)	Reh Velocity (fps)	WD Ratio	Reh Width (ft)	Reh Depth (ft)	<u>Tributary</u>		<u>Stream</u>	
	(cfsm)	(cfs)	(cfs)						Temp (OC)	pH	Temp (OC)	pH
Q7-10	0.100	0.00	36.73	0.000	0.000	0.0	0.00	0.00	20.00	7.00	20.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (OC)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	7.00

Parameter Data

Parameter Name	Disc Cone (mg/L)	Trib Cone (mg/L)	Stream Cone (mg/L)	Fate Co  (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	13.60	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
OBC	26107	CLEARFIELD CREEK	8.140	1160.00	370.61	0.00000	0.00	

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Reh Trav Time (days)	Reh Velocity (fps)	WO Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary		Stream	
	(cfsm)	(cfs)	(cfs)						Temp	pH	Temp	pH
									(DC)		(DC)	
Q7-10	0.100	0.00	41.06	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (DC)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	7.00

Parameter Data

Parameter Name	Disc Cone	Trib Cone	Stream Cone	Fate Co
	(mg/L)	(mg/L)	(mg/L)	(1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	13.60	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

	SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	OBC	26107	CLEARFIELD CREEK	4.440	1125.00	377.93	0.00000	0.00	

Stream Data												
Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Reh Trav Time (days)	Reh Velocity (fps)	WD Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary		Stream	
									Temp (OC)	pH	Temp (OC)	pH
Q7-10	0,100	0.00	42.68	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data							
Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (OC)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data				
Parameter Name	Disc Cone (mg/L)	Trib Cone (mg/L)	Stream Cone (mg/L)	Fate Caci (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin		Stream Code		Stream Name								
08C		26107		CLEARFIELD CREEK								
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(OC)	
Q7-10 Flow												
10.390	35.07	0.00	35.07	1.1602	0.00046	.98	101.51	103.59	0.36	0.069	20.00	7.00
9.980	36.73	0.00	36.73	1.1602	0.00185	.946	96.49	101.95	0.41	0.271	20.00	7.00
8.140	41.06	0.00	41.06	1.1602	0.00179	.963	102.61	106.51	0.43	0.529	20.00	7.00
Q1-10 Flow												
10.390	32.62	0.00	32.62	1.1602	0.00046	NA	NA	NA	0.35	0.072	20.00	7.00
9.980	34.16	0.00	34.16	1.1602	0.00185	NA	NA	NA	0.40	0.282	20.00	7.00
8.140	38.19	0.00	38.19	1.1602	0.00179	NA	NA	NA	0.41	0.551	20.00	7.00
QJ0-10 Flow												
10.390	43.14	0.00	43.14	1.1602	0.00046	NA	NA	NA	0.41	0.061	20.00	7.00
9.980	45.18	0.00	45.18	1.1602	0.00185	NA	NA	NA	0.46	0.242	20.00	7.00
8.140	50.50	0.00	50.50	1.1602	0.00179	NA	NA	NA	0.48	0.473	20.00	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted 01-10 and 030-10 Flows	◆
WLA Method	EMPR	Use Inputted W/D Ratio	☐
01-10/07-10 Ratio	0.93	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.23	Temperature Adjust Kr	◆
D.O. Saturation			
D.O. Goal	90.00%	Use Balanced Technology	◆

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WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
OAC	26107	CLEARFIELD CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
10.390PA	Waste LLC	9.67	20	9.67	20	0	0
9.980		NA	NA	9.67	NA	NA	NA
8.140		NA	NA	9.67	NA	NA	NA

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
10.390PA	Waste LLC	1.92	10	1.92	10	0	0
9.980		NA	NA	1.92	NA	NA	NA
8.140		NA	NA	1.92	NA	NA	NA

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBODS</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
10.39 PA	Waste LLC	140	140	10	10	3	3	0	0
9.98		NA	NA	NA	NA	NA	NA	NA	NA
8.14		NA	NA	NA	NA	NA	NA	NA	NA

WQM 7.0 D.O. Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>			
OSC	26107	CLEARFIELD CREEK			
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>	
10.390	0.750	20.000		7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>		<u>Reach Velocity (fps)</u>	
101.512	0.980	103.595		0.364	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc {1/days}</u>	<u>Reach NH3-N (mg/L)</u>		<u>Reach Kn {1/days}</u>	
6.42	5.321	0.32		0.700	
<u>Reach DO (mg/L)</u>	<u>Reach Kr {1/days}</u>	<u>Kr Equation</u>		<u>Reach DO Goal (mg/L)</u>	
13.262	0.785	Tsivoglou		5	
<u>Reach Travel Time (days)</u>					
0.069					
	Subreach Results				
	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)	
	0.007	6.19	0.32	8.24	
	0.014	5.97	0.32	8.24	
	0.021	5.75	0.32	8.24	
	0.028	5.55	0.31	8.24	
	0.034	5.35	0.31	8.24	
	0.041	5.15	0.31	8.24	
	0.048	4.97	0.31	8.24	
	0.055	4.79	0.31	8.24	
	0.062	4.62	0.31	8.24	
	0.069	4.45	0.31	8.24	
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>	
9.980	0.750	20.000		7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>		<u>Reach Velocity (fps)</u>	
96.495	0.946	101.954		0.415	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc {1/days}</u>	<u>Reach NH3-N (mg/L)</u>		<u>Reach Kn {1/days}</u>	
4.34	2.535	0.29		0.700	
<u>Reach DO (mg/L)</u>	<u>Reach Kr {1/days}</u>	<u>Kr Equation</u>		<u>Reach DO Goal (mg/L)</u>	
8.478	3.586	Tsivoglou		5	
<u>Reach Travel Time (days)</u>					
0.271					
	Subreach Results				
	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)	
	0.027	4.06	0.29	8.10	
	0.054	3.79	0.28	7.79	
	0.081	3.54	0.28	7.54	
	0.108	3.30	0.27	7.33	
	0.136	3.08	0.27	7.16	
	0.163	2.88	0.26	7.04	
	0.190	2.69	0.26	6.94	
	0.217	2.51	0.25	6.87	
	0.244	2.34	0.25	6.82	
	0.271	2.19	0.24	6.80	

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
OSC	26107	CLEARFIELD CREEK		
<u>RM</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
8.140	0.750	20.000	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
102.606	0.963	106.507	0.427	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>	
2.17	0.151	0.22	0.700	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
7.494	3.569	Tsivoglou	5	
<u>Reach Travel Time (days)</u>	Subreach Results			
0.529	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
	0.053	2.15	0.21	7.72
	0.106	2.13	0.20	7.92
	0.159	2.12	0.19	8.08
	0.212	2.10	0.19	8.21
	0.265	2.08	0.18	8.24
	0.318	2.07	0.17	8.24
	0.371	2.05	0.17	8.24
	0.424	2.03	0.16	8.24
	0.476	2.02	0.16	8.24
	0.529	2.00	0.15	8.24

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>	<u>Stream Name</u>				
oac		2s101	CLEARFIELD CREEK				
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
10.390	PA Waste LLC	PA0232343	0.750	CBOD5	140		
				NH3-N	10	20	
				Dissolved Oxygen			3

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
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26107	10.39	1179.00	310.55	0.00000	0.00	?
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Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Reh Width	Reh Depth	Reh Velocity	Reh Trav Time	Tributary		Stream		Analysis	
									Hard	pH	Hard	pH	Hard	pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.1	0	35.07	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH
		(mgd)	(mgd)	(mgd)						(mg/L)	
PA Waste LLC	PA0232343	0	0.049	0.049	0	0	0	0	0	500	7

Parameter Data

Parameter Name	Disc Cone	Trib Cone	Disc Daily CV	Disc Hourly CV	Steam Cone	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Cone
	(µg/L)	(µg/L)			(µg/L)					(µg/L)
1,4-DICHLOROBENZENE	24400	0	0.5	0.5	0	0	0	0		0
ALUMINUM	25500	1520.4	0.5	0.5	0	0	0	0		0
ANTIMONY	900	0	0.5	0.5	0	0	0	0		0
ARSENIC	262	0	0.5	0.5	0	0	0	0		0
BENZENE	100	0	0.5	0.5	0	0	0	0		0
CADMIUM	10	0	0.5	0.5	0	0	0	0		0
CHLOROFORM	20	0	0.5	0.5	0	0	0	0		0
CHROMIUM, VI	250	0	0.5	0.5	0	0	0	0		0
COBALT	112	0	0.5	0.5	0	0	0	0		0
COPPER	108	0	0.5	0.5	0	0	0	0		0
CYANIDE, FREE	40	0	0.5	0.5	0	0	0	0		0
DICHOLOROBENZENE, TOTAL	24400	0	0.5	0.5	0	0	0	0		0
DISSOLVED IRON	7000	0	0.5	0.5	0	0	0	0		0
ISOPHORONE	42	0	0.5	0.5	0	0	0	0		0
LEAD	72	1.26	0.5	0.5	0	0	0	0		0
MANGANESE	37250	2450	0.5	0.5	0	0	0	0		0
MERCURY	2	0	0.5	0.5	0	0	0	0		0
METHYLENE CHLORIDE	200	0	0.5	0.5	0	0	0	0		0
NICKEL	300	59.4	0.5	0.5	0	0	0	0		0
SELENIUM	150	0	0.5	0.5	0	0	0	0		0
THALLIUM	200	0	0.5	0.5	0	0	0	0		0
TOTAL IRON	64000	3088	0.5	0.5	0	0	0	0		0

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWSWith (mgd)	Apply FC
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26107 9.98 1178.00 325.23 0.00000 0.00 

Stream Data

	LFY	Trib Flow	Stream Flow	WO Ratio	Reh Width	Reh Depth	Reh Velocity	Reh Trav Time	Tributary		Stream		Analysis	
									Hard	pH	Hard	pH	Hard	pH
									(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.1	0	36.73	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH
		(mgd)	(mgd)	(mgd)						(mg/L)	
		0	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Cone	Trib Cone	Disc Daily CV	Disc Hourly CV	Steam Cone	Stream CV	Fate Coef	FOS	Grit Mod	Max Disc Cone
	(µg/L)	(µg/L)			(µg/L)					(µg/L)
1,4-DICHLOROBENZENE	0	0	0.5	0.5	0	0	0	0		0
ALUMINUM	0	0	0.5	0.5	0	0	0	0		0
ANTIMONY	0	0	0.5	0.5	0	0	0	0		0
ARSENIC	0	0	0.5	0.5	0	0	0	0		0
BENZENE	0	0	0.5	0.5	0	0	0	0		0
CADMIUM	0	0	0.5	0.5	0	0	0	0		0
CHLOROFORM	0	0	0.5	0.5	0	0	0	0		0
CHROMIUM, VI	0	0	0.5	0.5	0	0	0	0		0
COBALT	0	0	0.5	0.5	0	0	0	0		0
COPPER	0	0	0.5	0.5	0	0	0	0		0
CYANIDE, FREE	0	0	0.5	0.5	0	0	0	0		0
DICHLOROBENZENE, TOTAL	0	0	0.5	0.5	0	0	0	0		0
DISSOLVED IRON	0	0	0.5	0.5	0	0	0	0		0
ISOPHORONE	0	0	0.5	0.5	0	0	0	0		0
LEAD	0	0	0.5	0.5	0	0	0	0		0
MANGANESE	0	0	0.5	0.5	0	0	0	0		0
MERCURY	0	0	0.5	0.5	0	0	0	0		0
METHYLENE CHLORIDE	0	0	0.5	0.5	0	0	0	0		0
NICKEL	0	0	0.5	0.5	0	0	0	0		0
SELENIUM	0	0	0.5	0.5	0	0	0	0		0
THALLIUM	0	0	0.5	0.5	0	0	0	0		0
TOTAL IRON	0	0	0.5	0.5	0	0	0	0		0

PENTOXSD Analysis Results

Hydrodynamics

<u>SWP Basin</u>		<u>Stream Code:</u>		<u>Stream Name:</u>							
08C		26107		CLEARFIELD CREEK							
Stream	PWS	Net	Disc	Reach							
RMI	Flow	With	Stream	Analysis	Reach	Depth	Width	WO	Velocity	Trav	CMT
	(cfs)	(cfs)	Flow	Flow	Slope	(ft)	(ft)	Ratio	(fps)	Time	(min)
			(cfs)	(cfs)						(days)	

Q7-10 Hydrodynamics

10.390	35.07	0	35.07	0.0758	0.00046	0.97785	100.374	102.648	0.35808	0.06997	661.602
9.980	36.73	0	36.73	NA	0	0	0	0	0	0	NA

Qh Hydrodynamics

10.390	166.442	0	166.442	0.0758	0.00046	1.93878	100.374	51.7716	0.85568	0.02928	237.787
9.980	173.307	0	173.307	NA	0	0	0	0	0	0	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number							
10.39	PA Waste LLC	PA0232343							
AFC									
Q7-10:	CCT (min)	15	PMF	0.15	Analysis pH	7	Analysis Hardness	105.66	
	Parameter		Stream Cone (µg/L)	Stream CV	Trib Cone (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY		0	0	0	0	1100	1100	77728.26
	ARSENIC		0	0	0	0	340	340	24025.1
	CADMIUM		Dissolved WQC.		Chemical translator of 1 applied.		2.124	2.256	159.414
	CHROMIUM, VI		0	0	0	0	16	16.293	1151.317
	COPPER		Dissolved WQC.		Chemical translator of 0.982 applied.		14.155	14.745	1041.879
	LEAD		1.26	0	1.26	0	68.568	87.573	6100.341
	MERCURY		Dissolved WQC.		Chemical translator of 0.783 applied.		1.4	1.647	116.385
	NICKEL		59.4	0	59.4	0	490.564	491.547	30595.8
	SELENIUM		Dissolved WQC.		Chemical translator of 0.998 applied.		NA	NA	NA
	THALLIUM		0	0	0	0	65	65	4593.034
	CYANIDE, FREE		0	0	0	0	22	22	1554.565
	BENZENE		0	0	0	0	640	640	45223.71
	CHLOROFORM		0	0	0	0	1900	1900	134257.9
	METHYLENE CHLORIDE		0	0	0	0	12000	12000	847944.6
	1,4-DICHLOROBENZENE		0	0	0	0	730	730	51583.3
	ISOPHORONE		0	0	0	0	10000	10000	706620.6
	ALUMINUM		1520.4	0	1520.4	0	750	1520.4	1520.4
	TOTAL IRON		Background Governed.						
	TOTAL IRON		3088	0	3088	0	NA	NA	NA
	DISSOLVED IRON		0	0	0	0	NA	NA	NA
	MANGANESE		2450	0	2450	0	NA	NA	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
10.39	PA Waste LLC	PA0232343						
	COBALT	0	0	0	0	95	95	6712.895
	DICHLOROBENZENE, TOTAL	0	0	0	0	NA	NA	NA

CFC

Q7-10:	CCT (min)	661.602	PMF	Analysis pH	7	Analysis Hardness	100.862	
	Parameter	Stream Cone. (µg/L)	Stream CV	Trib Cone. (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY	0	0	0	0	220	220	102002.3
	ARSENIC	0	0	0	0	150	150	69546.99
		Dissolved WQC. Chemical translator of 1 applied.						
	CADMIUM	0	0	0	0	0.247	0.272	126.274
		Dissolved WQC. Chemical translator of 0.909 applied.						
	CHROMIUM, VI	0	0	0	0	10	10.395	4819.611
		Dissolved WQC. Chemical translator of 0.962 applied.						
	COPPER	0	0	0	0	9.022	9.398	4357.182
		Dissolved WQC. Chemical translator of 0.96 applied.						
	LEAD	1.26	0	1.26	0	2.54	3.217	908.419
		Dissolved WQC. Chemical translator of 0.79 applied.						
	MERCURY	0	0	0	0	0.77	0.906	420.009'
		Dissolved WQC. Chemical translator of 0.85 applied.						
	NICKEL	59.4	0	59.4	0	52.386	59.4	59.4
		Dissolved WQC. Chemical translator of 0.997 applied. Background Governed.						
	SELENIUM	0	0	0	0	4.6	4.989	2313.204
		Dissolved WQC. Chemical translator of 0.922 applied.						
	THALLIUM	0	0	0	0	13	13	6027.406
	CYANIDE, FREE	0	0	0	0	5.2	5.2	2410.962
	BENZENE	0	0	0	0	130	130	60274.06
	CHLOROFORM	0	0	0	0	390	390	180822.2
	METHYLENE CHLORIDE	0	0	0	0	2400	2400	1110000
	1,4-DICHLOROBENZENE	0	0	0	0	150	150	69546.99
	ISOPHORONE	0	0	0	0	2100	2100	973657.9
	ALUMINUM	1520.4	0	1520.4	0	NA	NA	NA
	TOTAL IRON	3088	0	3088	0	1500	3088	3088

Background Governed.WQC = 30 day average. PMF = 1.

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
10.39	PA Waste LLC	PA0232343						
	DISSOLVED IRON	0	0	0	0	NA	NA	NA
	MANGANESE	2450	0	2450	0	NA	NA	NA
	COBALT	0	0	0	0	19	19	8809;286
	DICHLOROBENZENE, TOTAL	0	0	0	0	NA	NA	NA

THH

Q7-10:	CCT (min)	661.602	PMF	Analysis pH		NA	Analysis Hardness		NA
	Parameter	Stream Cone (µg/L)	Stream CV	Trib Cone (µg/L)	Fate Coef		WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY	0	0	0	0		5.6	5.6	2596.421
	ARSENIC	0	0	0	0		10	10	4636.466
	CADMIUM	0	0	0	0		NA	NA	NA
	CHROMIUM, VI	0	0	0	0		NA	NA	NA
	COPPER	0	0	0	0		NA	NA	NA
	LEAD	1.26	0	1.26	0		NA	NA	NA
	MERCURY	0	0	0	0		0.05	0.05	23.182
	NICKEL	59.4	0	59.4	0		610	610	255343.2
	SELENIUM	0	0	0	0		NA	NA	NA
	THALLIUM	0	0	0	0		0.24	0.24	111.275
	CYANIDE, FREE	0	0	0	0		140	140	64910.53
	BENZENE	0	0	0	0		NA	NA	NA
	CHLOROFORM	0	0	0	0		NA	NA	NA
	METHYLENE CHLORIDE	0	0	0	0		NA	NA	NA
	1,4-DICHLOROBENZENE	0	0	0	0		NA	NA	NA
	ISOPHORONE	0	0	0	0		35	35	16227.63

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
10.39	PA Waste LLC	PA0232343						
	ALUMINUM	1520.4	0	1520.4	0	NA	NA	NA
	TOTAL IRON	3088	0	3088	0	NA	NA	NA
	DISSOLVED IRON	0	0	0	0	300	300	139094
	MANGANESE	2450	0	2450	0	1000	2450	2450
		Background Governed.						
	COBALT	0	0	0	0	NA	NA	NA
	DICHLOROBENZENE, TOTAL	0	0	0	0	420	420	194731.6

CRL

Qh:	CCT (min)	237.787	PMF					
	Parameter	Stream Cone (µg/L)	Stream CV	Trib Cone (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY	0	0	0	0	NA	NA	NA
	ARSENIC	0	0	0	0	NA	NA	NA
	CADMIUM	0	0	0	0	NA	NA	NA
	CHROMIUM, VI	0	0	0	0	NA	NA	NA
	COPPER	0	0	0	0	NA	NA	NA
	LEAD	1.26	0	1.26	0	NA	NA	NA
	MERCURY	0	0	0	0	NA	NA	NA
	NICKEL	59.4	0	59.4	0	NA	NA	NA
	SELENIUM	0	0	0	0	NA	NA	NA
	THALLIUM	0	0	0	0	NA	NA	NA
	CYANIDE, FREE	0	0	0	0	NA	NA	NA
	BENZENE	0	0	0	0	1.2	1.2	2636.06

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
10.39	PA Waste LLC	PA0232343						
	CHLOROFORM	0	0	0	0	5.7	5.7	12521.28
	METHYLENE CHLORIDE	0	0	0	0	4.6	4.6	10104.9
	1,4-DICHLOROBENZENE	0	0	0	0	NA	NA	NA
	ISOPHORONE	0	0	0	0	NA	NA	NA
	ALUMINUM	1520.4	0	1520.4	0	NA	NA	NA
	TOTAL IRON	3088	0	3088	0	NA	NA	NA
	DISSOLVED IRON	0	0	0	0	NA	NA	NA
	MANGANESE	2450	0	2450	0	NA	NA	NA
	COBALT	0	0	0	0	NA	NA	NA
	DICHLOROBENZENE, TOTAL	0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Wasteload Allocations

<u>RMI</u>	<u>Name</u>	<u>Permit Number</u>
10.39	PA Waste LLC	PA0232343

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin

Stream Code:

Stream Name:

08C

26107

CLEARFIELD CREEK

RMI	Name	Permit Number	Disc Flow (mgd)
10.39	PA Waste LLC	PA0232343	0.0490

Parameter	Effluent Limit	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent	
	(µg/L)			WQBEL (µg/L)	WQBEL Criterion
1,4-DICHLOROBENZENE	24400	INPUT	38067.92	33062.81	AFC
ALUMINUM	1520.4	AFC - BKGR	1520.4	NA	NA
ANTIMONY	900	INPUT	1404.145	2596.421	THH
ARSENIC	262	INPUT	408.762	4636.466	THH
BENZENE	100	INPUT	156.016	2636.06	CRL
CADMIUM	10	INPUT	15.602	102.178	AFC
CHLOROFORM	20	INPUT	31.203	12521.28	CRL
CHROMIUM, VI	250	INPUT	390.04	737.947	AFC
COBALT	112	INPUT	174.738	4302.695	AFC
COPPER	108	INPUT	168.497	667.802	AFC
CYANIDE, FREE	40	INPUT	62.406	996.413	AFC
DICHLOROBENZENE, TOTAL	24400	INPUT	38067.92	194731.6	THH
DISSOLVED IRON	7000	INPUT	10921.13	139094	THH
ISOPHORONE	42	INPUT	65.527	16227.63	THH
LEAD	72	INPUT	112.332	908.419	CFC
MANGANESE	2450	THH - BKGR	2450	NA	NA
MERCURY	2	INPUT	3.12	23.182	THH
METHYLENE CHLORIDE	200	INPUT	312.032	10104.9	CRL
NICKEL	59.4	CFC - BKGR	59.4	19610.67	AFC
SELENIUM	150	INPUT	234.024	2313.204	CFC
THALLIUM	111.275	THH	173.607	111.275	THH
TOTAL IRON	3088	CFC - BKGR	3088	NA	NA

TOTAL ALUMINUM

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1675962
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	697043
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1177738
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1265625
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1111782
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1130095
40.9858	-78.4058	NAD83				River/Stream	1655508
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1224251
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1074064
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	848233
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1189392
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1203584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1018888
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	838913
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288142
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1334980
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1483791
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	645244
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	913200
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	675214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	720217
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	778219
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1314388
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	875269
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	985802
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1094924
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	999214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	975370
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	964098
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070114
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1245758
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288033
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1304190
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1155403
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1081365
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070138
40.9858	-78.4058	NAD83				River/Stream	1643562
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1705479
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	927932
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	750027
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1351397
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	859130
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	764584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/200213:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 8:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
				Sample-Routine		
5/14/2007 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16:30 EST		water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/200312:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/200814:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15:00 EST		water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/26/200413:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/200213:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/2003 11:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/2005 14:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/2004 12:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/2004 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/2005 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/200612:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/201113:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/201217:00 EST		water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/2012 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12:40 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/200812:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

Field Gear ID	Characteristic Name	CPS Num	Sample Fraction	Value Type	Result Value Status	Result Value as Text	Result Value as Number	Units
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		891	891 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		863	863 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		457	457 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		413	413 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		715	715 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		526	526 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1326	1326 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		534	534 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		3540	3540 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		255	255 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1150	1150 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		318	318 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		917	917 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		2320	2320 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		2160	2160 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1080	1080 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1650	1650 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		812	812 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1180	1180 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1940	1940 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		941	941 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		1050	1050 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		498	498 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		505	505 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		238	238 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		684	684 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		937	937 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		314	314 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		254	254 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		422	422 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		258	258 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		299	299 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		525	525 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final	Present Below Quantification Limit		200 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		629	629 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		425	425 ug/l
Miscellaneous (Other)	Aluminum	7429-90-5	Total	Actual	Final		704	704 ug/l

90th Percentile 1520.4 ug/l

0.91

Converted Result Value	Converted Result Unit	Analytical Proc ID	Detection/Threshold Limit	Detection/Threshold Limit Unit	Detection/Threshold Limit	Description
8.91E+02	ug/l	21PA_WQX01105A				
8.63E+02	ug/l	21PA_WQX 01105A				
4.57E+02	ug/l	21PA_WQX 01105A				
		21PA_WQX01105A		200 ug/l		Lower Reporting Limit
4.13E+02	ug/l	21PA_WQX01105A				
		21PA_WQX01105A		200 ug/l		Lower Reporting Limit
7.1SE+02	ug/l	21PA_WQX01105A				
5.26E+02	ug/l	21PA_WOX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
1.33E+03	ug/l	21PA_WQX 01105A				
5.34E+02	ug/l	21PA_WaX 01105A				
3.54E+03	ug/l	21PA_WQX 01105A				
2.5SE+02	ug/l	21PA_WQX01105A				
1.1SE+03	ug/l	21PA_WQX01105A				
3.18E+02	ug/l	21PA_WQX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
9.17E+02	ug/l	21PA_WQX 01105A				
2.32E+03	ug/l	21PA_WQX 01105A				
2.16E+03	ug/l	21PA_WQX0110SA				
1.08E+03	ug/l	21PA_WQX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
1.6SE+03	ug/l	21PA_WQX 01105A				
8.12E+02	ug/l	21PA_WQX 01105A				
1.18E+03	ug/l	21PA_WQX 01105A				
1.94E+03	ug/l	21PA_WQX 01105A				
9.41E+02	ug/l	21PA_WQX 01105A				
1.0SE+03	ug/l	21PA_WQX 01105A				
4.98E+02	ug/l	21PA_WQX01105A				
5.0SE+02	ug/l	21PA_WQX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
2.38E+02	ug/l	21PA_WQX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
6.84E+02	ug/l	21PA_WQX 01105A				
9.37E+02	ug/l	21PA_WQX 01105A				
3.14E+02	ug/l	21PA_WQX 01105A				
2.54E+02	ug/l	21PA_WQX 01105A				
4.22E+02	ug/l	21PA_WQX 01105A				
2.58E+02	ug/l	21PA_WQX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
2.99E+02	ug/l	21PA_WQX 01105A				
5.2SE+02	ug/l	21PA_WQX 01105A				
		21PA_WQX 01105A		200 ug/l		Lower Reporting Limit
6.29E+02	ug/l	21PA_W_q>(01105A				
4.2SE+02	ug/l	21PA_WQX 01105A				
7.04E+02	ug/l	21PA_WQX 01105A				

All Result Detections/Thresholds	Last Change Date
	S-Oct-12
	21-Oct-11
Lower Reporting limit"200"ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting Limit"200"ug/l	21-Oct-11
	S-Apr-12
	21-Oct-11
Lower Reporting Limit"200"ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting limit"200"ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting Umit"200"ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting Limit"200-ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting Limit-200-ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting Limit"200"ug/l	S-Apr-12
	5-Oct-12
	S-Oct-12
	21-Oct-11
	21-Oct-11
Lower Reportinglimit"200"ug/l	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11

TOTAL COPPER

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1675962
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	697043
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1177738
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1265625
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1111782
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1130095
40.9858	-78.4058	NAD83				River/Stream	1655508
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1224251
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1074064
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	848233
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1189392
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1203584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1018888
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	838913
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288142
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1334980
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1483791
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	645244
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	913200
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	675214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	720217
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	778219
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1314388
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	875269
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	985802
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1094924
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	999214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	975370
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	964098
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070114
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1245758
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288033
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1304190
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1155403
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1081365
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070138
40.9858	-78.4058	NAD83				River/Stream	1643562
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1705479
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	927932
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	750027
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1351397
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	859130
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	764584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 18:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/14/2007 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/2003 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/2008 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/26/2004 13:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/2003 11:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/2005 14:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/2004 12:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/2004 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/2005 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/2006 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/2011 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2012 17:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/2012 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12:40 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/2008 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

[illegible]

...

...

90th Percentile =< ' ' USE ZERO.

[illegible]

•••	•••	21PA_WQX 01042H	4 ug/1	Lower Reporting Limit
•••	•••	21PA_WQX 01042H	4 ug/1	Lower Reporting Limit
•••	•••	21PA_WQX 01042A	10 ug/1	Lower Reporting Limit
• • •	•••	21PA_WQX 01042A	10 ug/1	Lower Reporting Limit
• • •	• • •	21PA_WQX 01042H	4 ug/1	Lower Reporting Limit
• • •	• • •	21PA_WQX 01042A	10 ug/1	Lower Reporting Limit
• • •	•••	21PA_WQX 01042A	10 ug/1	Lower Reporting Limit
• • •	•••	21PA_WQX 01042A	10 ug/1	Lower Reporting Limit

All Result Detections/rhresholds	Last Change Date
Lower Reporting Limir4~ug/l	5-Oct-12
Lower Reporting LimirIO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~4~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~4~ug/l	5-Apr-12
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IQ~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~4~ug/l	21-Oct-11
Lower Reporting Limit~4~ug/l	21-Oct-11
Lower Reporting Limit~4~ug/l	21-Oct-11
Lower Reporting Limit~10~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~10~ug/l	21-Oct-11
Lower Reporting Limit~10~ug/l	21-Oct-11
Lower Reporting Limir1o~ug/l	21-Oct-11
Lower Reporting Limit~10~ug/l	21-Oct-11
Lower Reporting Limir4~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~lo~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting LimirIO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~10~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limit~4~ug/l	21-Oct-11
Lower Reporting Umit~4~ug/l	21-Oct-11
Lower Reporting Limit~1o~ug/l	21-Oct-11
Lower Reporting Limit~lo~ug/l	21-Oct-11
Lower Reporting Limir1o~ug/l	21-Oct-11
Lower Reporting Limir4~ug/l	5-Apr-12
Lower Reporting Limir4~ug/l	5-Oct-12
Lower Reporting Limit~4~ug/l	5-Oct-12
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limir1o~ug/l	21-Oct-11
Lower Reporting Limir4~ug/l	21-Oct-11
Lower Reporting Limit~IO~ug/l	21-Oct-11
Lower Reporting Limir-lo~ug/l	21-Oct-11
Lower Reporting Limir1o~ug/l	21-Oct-11

DISSOLVED OXYGEN

Org ID	Beach ID/Project ID	Org Name	Station ID	Station Name
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK

State	County	HUC	Generated HUC	Station Latitude	Station Longitude	Station Horizontal Datum
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83

Converted Station Latitude	Converted Station Longitude	Primary Type	Activity ID	Activity Start	Activity Start Zone
40.9858	-78.4058	River/Stream	1675962	2/15/2012 12:30	EST
40.9858	-78.4058	River/Stream	1693481	4/19/2012 17:00	EST
40.9858	-78.4058	River/Stream	1705479	6/20/2012 13:00	EST

Activity Medium	Activity Matrix	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
Water		Sample-Routine	Sample-Routine	SAMPLING	1
Water		Sample-Routine	Sample-Routine	SAMPLING	1
Water		Sample-Routine	Sample-Routine	SAMPLING	1

Field Gear ID	Characteristic Name	CAS Num	Sample Fraction	Value Type	Statistic Type	Result Value Status
Miscellaneous (Other)	Dissolved oxygen (DO)			Actual		Final
Miscellaneous (Other)	Dissolved oxygen (DO)			Actual		Final
Miscellaneous (Other)	Dissolved oxygen (DO)			Actual		Final

Result Value as Text	Result Value as Number	Units	Converted Result Value	Converted Result Unit	Analytical Proc ID
14.45	14.45	mg/l	1.45E+04	ug/1	21PA_WQX F00300
10.23	10.23	mg/l	1.02E+04	ug/1	21PA_WQX F00300
8.52	8.52	mg/l	8.52E+03	ug/1	21PA_WQX F00300

90th Percentile=	11.606 mg/1
:CV=	0.23...

Detection/Threshold Limit	Detection/Threshold Limit Unit	Detection/Threshold Limit Description	All Result Detections/Thresholds
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Last Change Date

5-Oct-12

5-Oct-12

5-Oct-12

TOTAL IRON

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	•78.4058	NAD83	40.9858	·78.4058		River/Stream	1675962
40.9858	·78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	697043
40.9858	·78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1177738
40.9858	·78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	1265625
40.9858	·78.4058	NA083	40.9858	·78.4058	NAD83	River/Stream	1111782
40.9858	·78.4058	NA083	40.9858	·78.4058	NA083	River/Stream	1130095
40.9858	·78.4058	NAD83				River/Stream	1655508
40.9858	·78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1224251
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	1074064
40.9858	·78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	848233
40.9858	·78.4058	NA083	40.9858	•78.4058	NAD83	River/Stream	1189392
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	1203584
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	1018888
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	838913
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1288142
40.9858	·78.4058	NA083	40.9858	•78.4058	NAD83	River/Stream	1334980
40.9858	•78.4058	NAD83	40.9858	·78.4058		River/Stream	1483791
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	645244
40.9858	·78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	913200
40.9858	·78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	675214
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	720217
40.9858	·78.4058	NAD83	40.9858	·78.4058	NA083	River/Stream	778219
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1314388
40.9858	·78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	875269
40.9858	·78.4058	NAD83	40.9858	·78.4058	NA083	River/Stream	985802
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1094924
40.9858	·78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	999214
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	975370
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	964098
40.9858	·78.4058	NAD83	40.9858	·78.4058	NA083	River/Stream	1070114
40.9858	•78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1245758
40.9858	·78.4058	NAD83	40.9858	·78.4058	NAD83	River/Stream	1288033
40.9858	·78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	1304190
40.9858	·78.4058	NAD83	40.9858	•78.4058	NA083	River/Stream	1155403
40.9858	·78.4058	NA083	40.9858	·78.4058	NAD83	River/Stream	1081365
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	1070138
40.9858	·78.4058	NAD83				River/Stream	1643562
40.9858	·78.4058	NA083	40.9858	•78.4058		River/Stream	1693481
40.9858	·78.4058	NAD83	40.9858	·78.4058		River/Stream	1705479
40.9858	·78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	927932
40.9858	·78.4058	NA083	40.9858	·78.4058	NAD83	River/Stream	750027
40.9858	·78.4058	NA083	40.9858	•78.4058	NAD83	River/Stream	1351397
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	859130
40.9858	•78.4058	·NA083	40.9858	·78.4058	NAD83	River/Stream	764584
40.9858	•78.4058	NAD83	40.9858	•78.4058	NAD83	River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9:00 EST		water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 8:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/14/2007 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/2003 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/2008 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/26/200413:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/2003 11:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/2005 14:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/200412:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/200412:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/2005 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/200612:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/201113:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/201217:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/2012 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12:40 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/2008 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

Field Gear ID	Characteristic Name	CASNum	Sample Fraction	Value Type	Result Value Status	Result Value as Text	Result Value as Number	Units	Converted Result Value
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2016	2016 ug/l		2.02E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1840	1840 ug/l		1.84E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1116	1116 ug/l		1.12E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	301	301 ug/l		3.01E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1353	1353 ug/l		1.35E+03
Miscellaneous (Other)	iron	7439-89-6	Total	Actual	Final	584	584 ug/l		5.84E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1508	1508 ug/l		1.51E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	969	969 ug/l		9.69E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	279	279 ug/l		2.79E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2537	2537 ug/l		2.54E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1350	1350 ug/l		1.35E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	7445	7445 ug/l		7.45E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	657	657 ug/l		6.57E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	3220	3220 ug/l		3.22E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1040	1040 ug/l		1.04E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	297	297 ug/l		2.97E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2252	2252 ug/l		2.25E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	5860	5860 ug/l		5.86E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	3670	3670 ug/l		3.67E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	100	100 ug/l		1.00E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	233	233 ug/l		2.33E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2890	2890 ug/l		2.89E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1710	1710 ug/l		1.71E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2830	2830 ug/l		2.83E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	4750	4750 ug/l		4.75E+03
Miscellaneous (other)	Iron	7439-89-6	Total	Actual	Final	2080	2080 ug/l		2.08E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2260	2260 ug/l		2.26E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1830	1830 ug/l		1.83E+03
Miscellaneous (other)	Iron	7439-89-6	Total	Actual	Final	1430	1430 ug/l		1.43E+03
Miscellaneous {Other}	Iron	7439-89-6	Total	Actual	Final	162	162 ug/l		1.62E+02
Miscellaneous {other}	Iron	7439-89-6	Total	Actual	Final	1130	1130 ug/l		1.13E+03
Miscellaneous {Other}	Iron	7439-89-6	Total	Actual	Final	238	238 ug/l		2.38E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1400	1400 ug/l		1.40E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1420	1420 ug/l		1.42E+03
Miscellaneous {Other}	Iron	7439-89-6	Total	Actual	Final	1250	1250 ug/l		1.25E+03
Miscellaneous {Other}	Iron	7439-89-6	Total	Actual	Final	815	815 ug/l		8.15E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1345	1345 ug/l		1.35E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	965	965 ug/l		9.65E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	342	342 ug/l		3.42E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	906	906 ug/l		9.06E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2360	2360 ug/l		2.36E+03
Miscellaneous {Other}	Iron	7439-89-6	Total	Actual	Final	304	304 ug/l		3.04E+02
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1830	1830 ug/l		1.83E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	2060	2060 ug/l		2.06E+03
Miscellaneous (Other)	Iron	7439-89-6	Total	Actual	Final	1570	1570 ug/l		1.57E+03

90th Percentile=
CV=

3088 ug/l
0.86

[illegible]

Last Change Date

5-Oct-12

21-Oct-11

21-Oct-11

21-Oct-11

21-Oct-11

21-Oct-11

5-Apr-12

21-Oct-11

21-Oct-11

21-Oct-11

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21-Oct-11

21-Oct-11

21-Oct-11

21-Oct-11

5-Apr-12

5-Oct-12

5-Oct-12

21-Oct-11

21-Oct-11

21-Oct-11

21-Oct-11

21-Oct-11

21-Oct-11

TOTAL LEAD

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1675962
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	697043
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	111n33
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1265625
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1111782
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1130095
40.9858	-78.4058	NAD83				River/Stream	1655508
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1074064
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1224251
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	848233
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1189392
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1203584
40.9858	-78.4058	NA083	40.9858	-78.4058 NA083		River/Stream	1018888
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	838913
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1288142
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1334980
40.9858	-78.4058	NAD83	40.9858	-78A058		River/Stream	1483791
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	645244
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	913200
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	675214
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	720217
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	778219
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1314388
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	875269
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	985802
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1094924
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	999214
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	975370
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	964098
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1070114
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1245758
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1288033
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1304190
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1155403
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1081365
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1070138
40.9858	-78.4058	NAD83				River/Stream	1643562
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1705479
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	927932
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	750027
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	1351397
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	859130
40.9858	-78.4058	NA083	40.9858	-78.4058 NA083		River/Stream	764584
40.9858	-78.4058	NAD83	40.9858	-78.4058 NAD83		River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/200213:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 8:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/14/2007 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/2003 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/2008 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/26/2004 13:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/200213:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/2003 11:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/2005 14:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/200412:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/200412:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/2005 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/2006 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/201113:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/201217:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/201213:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12:40 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/2008 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

[illegible]

All Result Detections/Thresholds			Last Change Date
			5-Oct-12
Lower	Reporting	Limit""l.O""ug/l	21-Oct-11
Lower	Reporting	Limir-1.0-ug/l	21-Oct-11
Lower	Reporting	Limir-1.0-ug/l	21-Oct-11
Lower	Reporting	Limit""l.O""ug/l	21-Oct-11
Lower	Reporting	Limir1.o-ug/l	21-Oct-11
Lower	Reporting	Limir-1.0-ug/l	5-Apr-12
Lower	Reporting	Limit""l.O--ug/l	21-Oct-11
Lower	Reporting	Limit""l.O--ug/l	21-Oct-11
			21-Oct-11
Lower	Reporting	Limit""l.O""ug/l	21-Oct-11
			21-Oct-11
Lower	Reporting	Limir1.o-ug/l	21-Oct-11
Lower	Reporting	Limit""l.O""ug/l	21-Oct-11
Lower	Reporting	Limirl.0 ug/l	21-Oct-11
Lower	Reporting	Limit~1.0 ug/l	21-Oct-11
Lower	Reporting	Limit~l.O-ug/l	21-Oct-11
			21-Qct-11
			21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
			21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
			21-Oct-11
Lower	Reporting	Limir-1.0-ug/l	21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
Lower	Reporting	Limir-1.0-ug/l	21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
Lower	Reporting	Limir-1.0-ug/l	21-Oct-11
Lower	Reporting	Limirl.O-ug/l	21-Oct-11
Lower	Reporting	Limit"l.O-ug/l	21-Oct-11
Lower	Reporting	Limit"l.O-ug/l	21-Oct-11
Lower	Reporting	Limit"l.O~ug/l	21-Oct-11
Lower	Reporting	Limit"l.O-ug/l	21-Oct-11
Lower	Reporting	Limir1.o-ug/l	5-Apr-12
Lower	Reporting	Limit"l.O-ug/l	5-Oct-12
Lower	Reporting	Limir1.o~ug/l	5-Oct-12
Lower	Reporting	Limirl.O""ug/l	21-Oct-11
Lower	Reporting	Limir1.o-ug/l	21-Oct-11
Lower	Reporting	Limit"l.O-ug/l	21-Oct-11
Lower	Reporting	Limir1.o~ug/l	21-Oct-11
Lower	Reporting	Limirl.O ug/l	21-Oct-11
Lower	Reporting	Limir1.o-ug/l	21-Oct-11

TOTAL MANGANESE

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1675962
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	697043
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1177738
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1265625
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1111782
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1130095
40.9858	-78.4058	NAD83				River/Stream	1655508
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1224251
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1074064
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	848233
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1189392
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1203584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1018888
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	838913
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288142
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1334980
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1483791
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	645244
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	913200
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	675214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	720217
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	778219
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1314388
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	875269
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	985802
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1094924
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	999214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	975370
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	964098
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070114
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1245758
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288033
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1304190
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1155403
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1081365
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070138
40.9858	-78.4058	NAD83				River/Stream	1643562
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1705479
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	927932
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	750027
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1351397
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	859130
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	764584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 8:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/14/2007 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/2003 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/2008 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/26/2004 13:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/2003 11:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/2005 14:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/2004 12:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/2004 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/2005 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/2006 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/2011 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2012 17:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/2012 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12:40 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/2008 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

Field Gear ID	Characteristic Name	CASNum	Sample Fraction	Value Type	Statistic Type	Result Value Status	Result Value as Text	Result Value as Number	Units
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1902	1902	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1750	1750	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1052	1052	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1532	1532	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1765	1765	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1453	1453	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1432	1432	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2606	2606	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2530	2530	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1085	1085	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	803	803	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	883	883	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2450	2450	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2340	2340	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	866	866	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1720	1720	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2040	2040	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1140	1140	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1430	1430	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1400	1400	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	4040	4040	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1050	1050	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1710	1710	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2140	2140	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1480	1480	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1880	1880	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1980	1980	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1750	1750	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2130	2130	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2430	2430	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2144	2144	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2310	2310	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1240	1240	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2222	2222	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2080	2080	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2597	2597	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1474	1474	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1582	1582	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1188	1188	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1620	1620	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2060	2060	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1310	1310	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2450	2450	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	2310	2310	ug/l
Miscellaneous (Other)	Manganese	7439-96-5	Total	Actual		Final	1670	1670	ug/l

90th Percentile=
CV=

245.0 ug/l
0.33'

Converted	Result	Value	Converted	Result	Unit	Analytical	Pre ID	Last	Change	Date
		1.90E+03	ug/1			21PA_WQX01055A		5-Oct-12		
		1.75E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.0SE+03	ug/1			21PA_WQX01055A		21-Oct-11		
		1.53E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.77E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.4SE+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.43E+03	ug/1			21PA_WQX 01055A		5-Apr-12		
		2.61E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.53E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.09E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		8.03E+02	ug/1			21PA_WQX 01055A		21-Oct-11		
		8.83E+02	ug/1			21PA_WQX01055A		21-Oct-11		
		2.45E+Q3	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.34E+Q3	ug/1			21PA_WQX01055A		21-Oct-11		
		8.66E+02	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.72E+o3	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.04E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.14E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.43E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.40E+03	ug/1			21PA_WQX01055A		21-Oct-11		
		4.04E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.0SE+03	ug/1			21PA_WQX01055A		21-Oct-11		
		1.71E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.14E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.48E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.88E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.98E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.75E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.13E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.43E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.14E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.31E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.24E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.22E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.08E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.60E+03	ug/1			21PA_WQX01055A		21-Oct-11		
		1.47E+03	ug/1			21PA_WQX01055A		5-Apr-12		
		1.58E+03	ug/1			21PA_WQX 01055A		s-oct-12		
		1.19E+o3	ug/1			21PA_WQX 01055A		5-Oct-12		
		1.62E+03	ug/1			21PA_WQX01055A		21-Oct-11		
		2.06E+o3	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.31E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.4SE+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		2.31E+03	ug/1			21PA_WQX 01055A		21-Oct-11		
		1.67E+03	ug/1			21PA_WQX 01055A		21-Oct-11		

TOTAL NICKEL

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1675962
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	697043
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1177738
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1265625
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1111782
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1130095
40.9858	-78.4058	NAD83				River/Stream	1655508
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1224251
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1074064
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	848233
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1189392
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1203584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1018888
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	838913
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288142
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1334980
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1483791
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	645244
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	913200
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	675214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	720217
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	778219
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1314388
40.9858	-78.4058	NAD83	40.9858	-78.4058	Nf.D83	River/Stream	875269
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	985802
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1094924
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	999214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	975370
40.9858	-78.4058	NAD83	40.9858	-78.4058	NA083	River/Stream	964098
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070114
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1245758
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288033
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1304190
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1155403
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1081365
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070138
40.9858	-78.4058	NAD83				River/Stream	1643562
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1705479
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	927932
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	750027
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1351397
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	859130
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	764584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/200213030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9o3O EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9oOO EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 8000 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/14/2007 12'4S EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 1180 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10020 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12015 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/200312000 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14045 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/2008 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15000 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sai-nple-Routine	SAMPLING	1
4/26/2004 13020 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9oOO EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/2002 13030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9o45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/200311015 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/200514:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8045 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/200412:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/200412:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/200512'45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10045 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/2006 12030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8030 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/201113000 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/201217:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/201213000 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12015 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12040 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/2008 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 1180 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

90th.Percentile, $\mu_{.90} = 59.4 \text{ ug/l}$
CV = 0.12

Converted Result Value	Converted Result Unit	Analytical Pree ID	Detection/Threshold Limit	Detection/Threshold Limit Unit	Detection/Threshold Limit Description
5.20E+01 ug/1		21PA_WQX 01067A			
5.70E+01 ug/1		21PA_WQX 01067A			
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
6.80E+01 ug/1		21PA_WQX01067A			
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
S.60E-Hll ug/1		21PA_Wax01067A			
6.70E+01 ug/1		21PA_WQX01067A			
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
5.10E+01 ug/1		21PA_wax 01067A			
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
8.30E+01 ug/1		21PA_WOX01067A			
		21PA_WQ)(01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		so ug/1	Lower Reporting Limit
6.10E+01 ug/1		21PA_WQX01067A			
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
S.00E+01 ug/1		21PA_WQX 01067A			
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
S.10E+01 ug/1		21PA_WQX 01067A			
5.00E+01 ug/1		21PA_WQX 01067A			
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
		21PA_WQ)(01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX 01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		so ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_Wax01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
		21PA_Wax 01067A		SO ug/1	Lower Reporting Limit
		21PA_WQX01067A		SO ug/1	Lower Reporting Limit
S.40E+01 ug/1		21PA_WOX 01067A			
6.40E+01 ug/1		21PA_WQX01067A			
5.00E+01 ug/1		21PA_Wax01067A			

All Result Detections/Thresholds	Last Change Date
	5-Oct-12
	21-Oct-11
Lower Reporting Limirso~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limit"S0~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	5-Apr-12
	21-Oct-11
Lower Reporting Limit~So~ug/1	21-Oct-11
Lower Reporting Limit~SO"ug/1	21-Oct-11
Lower Reporting Limirso~ug/1	21-Oct-11
Lower Reporting Limit""S0~ug/1	21-Oct-11
	21-Oct-11
Lower Reporting Limirso~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
	21-Oct-11
Lower Reporting Limirso~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limit~SQ~ug/1	21-Oct-11
	21-Oct-11
Lower Reporting Limit""SO~ug/1	21-Oct-11
Lower Reporting Limit""SO~ug/1	21-Oct-11
	21-Oct-11
Lower Reporting Limit""S0~ug/1	21-Oct-11
	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting limit~so~ug/1	21-Oct-11
	21-Oct-11
	21-Oct-11
Lower Reporting Limit"SQ~ug/1	21-Oct-11
Lower Reporting Limirso~ug/1	21-Oct-11
Lower Reporting Limit~So~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limit~So~ug/1	21-Oct-11
Lower Reporting Limirso~ug/1	21-Oct-11
Lower Reporting Limir~So~ug/1	5-Apr-12
Lower Reporting Limit~SO~ug/1	5-Oct-12
Lower Reporting Limit~SO~ug/1	5-Oct-12
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limit~so~ug/1	21-Oct-11
Lower Reporting Limir~so~ug/1	21-Oct-11
	21-Oct-11
	21-Oct-11
	21-Oct-11

TOTAL SELENIUM

Org ID	Beach ID/Project ID	Org Name	Station ID	Station Name
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK
21PA_WQX	WQN	PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION	WQN0422	CLEARFIELD CREEK

State	County	HUC	Generated HUC	Station Latitude	Station Longitude	Station Horizontal Datum
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83
PENNSYLVANIA	CLEARFIELD	2050201	2050201	40.9858	-78.4058	NAD83

Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity ID
40.9858	-78.4058		River/Stream	1675962
			River/Stream	1655508
			River/Stream	1643562
40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058		River/Stream	1705479

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING
12/19/2011 8:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING
10/12/2011 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING
4/19/2012 17:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING
6/20/2012 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING

Sample Collection ID	Field Gear ID	Characteristic Name	CAS Num	Sample Fraction	Value Type	Result Value Status
	1 Miscellaneous (Other)	Selenium	7782-49-2	Total	Actual	Final
	1 Miscellaneous (Other)	Selenium	7782-49-2	Total	Actual	Final
	1 Miscellaneous (Other)	Selenium	7782-49-2	Total	Actual	Final
	1 Miscellaneous (Other)	Selenium	7782-49-2	Total	Actual	Final
	1 Miscellaneous (Other)	Selenium	7782-49-2	Total	Actual	Final

Result Value as Text	Result Value as Number	Units	Converted Result Value	Converted Result Unit	Analytical Pree ID
Present Below Quantification Limit	***	●●●	●●●	●●●	21PA_WQX 01147H
Present Below Quantification Limit	***	●●●	***	●●●	21PA_WQX 01147H
Present Below Quantification Limit	***	***	●●●	***	21PA_WQX 01147H
Present Below Quantification Limit	***	***	●●●	***	21PA_WQX 01147H
Present Below Quantification Limit	***	●●●	●●●	***	21PA_WQX 01147H

• 90th Percentile =: • .USE ZERO.

Detection/Threshold Limit	Detection/Threshold Limit Unit	Detection/Threshold Limit Description	All Result Detections/Thresholds
	7 ug/l	Lower Reporting Limit	Lower Reporting Limit~J~ug/1
	7 ug/l	Lower Reporting Limit	Lower Reporting Limit~J~ug/1
	7 ug/l	Lower Reporting Limit	Lower Reporting Limit~rug/1
	7 ug/l	Lower Reporting Limit	Lower Reporting Limit~7~ug/l
	7 ug/l	Lower Reporting Limit	Lower Reporting Limit~rug/1

Last Change Date

5-Oct-12

5-Apr-12

5-Apr-12

5-Oct-12

5-Oct-12

TOTAL ZINC

[illegible]

Station Latitude	Station Longitude	Station Horizontal Datum	Converted Station Latitude	Converted Station Longitude	Converted Station Horizontal Datum	Primary Type	Activity JD
40.9858	• 78.4058	NAD83	40.9858	-78.4058		River/Stream	1675962
40.9858	• 78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	697043
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1177738
40.9858	-78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	1265625
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1111782
40.9858	-78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	1130095
40.9858	-78.4058	NAD83				River/Stream	1655508
40.9858	-78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	1224251
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1074064
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	848233
40.9858	• 78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	1189392
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1203584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1018888
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	838913
40.9858	• 78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	1288142
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1334980
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1483791
40.9858	• 78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	645244
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	913200
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	675214
40.9858	• 78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	720217
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	778219
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1314388
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	875269
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	985802
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1094924
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	999214
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	975370
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	964098
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070114
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1245758
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1288033
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1304190
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1155403
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1081365
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1070138
40.9858	-78.4058	NAD83				River/Stream	1643562
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1693481
40.9858	-78.4058	NAD83	40.9858	-78.4058		River/Stream	1705479
40.9858	-78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	927932
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	750027
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	1351397
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	859130
40.9858	-78.4058	NAD83	40.9858	• 78.4058	NAD83	River/Stream	764584
40.9858	-78.4058	NAD83	40.9858	-78.4058	NAD83	River/Stream	802226

Activity Start	Activity Start Zone	Activity Medium	Activity Type	Activity Category-Rep Num	Actual Location Point Type	Sample Collection ID
2/15/2012 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/19/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/16/2006 9:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/27/2007 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2006 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2006 10:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2011 8:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/14/2007 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/5/2005 16:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/29/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/11/2007 9:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/14/2007 10:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/19/2005 12:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/23/2003 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/19/2007 14:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/24/2008 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/23/2010 15:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/12/2002 14:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/26/2004 13:20 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/30/2002 9:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/27/2002 13:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/19/2003 11:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/15/2008 9:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/22/2003 11:15 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/4/2005 14:30 EST		Water	Quality Control Sample-Field Replicate	Quality Control Sample-Field Replicate	SAMPLING	1
2/16/2006 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
3/22/2005 8:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
11/17/2004 12:10 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/16/2004 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
9/13/2005 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
7/24/2007 10:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2007 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
2/20/2008 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/29/2006 12:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
12/13/2005 8:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/25/2005 9:15 EST		water	Sample-Routine	Sample-Routine	SAMPLING	1
10/12/2011 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
4/19/2012 17:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/20/2012 13:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
6/22/2004 12:15 EST		Water	Samp_le-Routine	Sample-Routine	SAMPLING	1
11/12/2002 12:40 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
8/19/2008 12:00 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
10/23/2003 12:45 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
1/21/2003 11:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1
5/27/2003 10:30 EST		Water	Sample-Routine	Sample-Routine	SAMPLING	1

Field Gear ID	Characteristic Name	CASNum	Sample Fraction	Value Type	Statistic Type	Result Value Status	Result Value asText	Result Value as Number	Units
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	80	80 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	53	53 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	38	38 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	36	36 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	46	46 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	19	19 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	61	61 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	77	77 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	43	43 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	151	151 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	77	77 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	71	71 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	51	51 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	77	77 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	29	29 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	20	20 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	87	87 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	50	50 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	80	80 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	65	65 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	36	36 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	79	79 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	75	75 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	87	87 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	74	74 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	92	92 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	79	79 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	51	51 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	43	43 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	42	42 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	23	23 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	28	28 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	64	64 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	46	46 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	79	79 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	38	38 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	50	50 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	28	28 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	12	12 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	38	38 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	49	49 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	17	17 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	76	76 ug/l	
Miscellaneous (Other)	Zinc	7440-66-6	Total	Actual		Final	106	106 ug/l	
Miscellaneous (other)	Zinc	7440-66-6	Total	Actual		Final	75	75 ug/l	

90th Percentile =

... 84.2 ug/l -1

CV=

0.47:

Converted Result Value	Converted Result Unit	Analytical Proc ID	Detection/Threshold Limit	Detection/Threshold Limit Unit	Detection/Threshold Limit Description
8.00E+01	ug/l	21PA_W0X 01092A			
5.30E+01	ug/l	21PA_WOX 01092A			
3.50E+01	ug/l	21PA_WQX 01092A			
3.60E+01	ug/l	21PA_WQX 01092A			
4.60E+01	ug/l	21PA_WQX01092A			
1.90E+01	ug/l	21PA_WQX01092A			
6.10E+01	ug/l	21PA_WQX 01092A			
7.70E+01	ug/l	21PA_WOX 01092A			
4.30E+01	ug/l	21PA_WQX 01092A			
1.51E+02	ug/l	21PA_WQX 01092A			
7.70E+01	ug/l	21PA_WQX 01092A			
7.10E+01	ug/l	21PA_WQX01092A			
5.10E+01	ug/l	21PA_WQX 01092A			
7.70E+01	ug/l	21PA_WQX 01092A			
2.90E+01	ug/l	21PA_WQX 01092A			
2.00E+01	ug/l	21PA_WQX01092A			
8.70E+01	ug/l	21PA_WQX 01092A			
5.00E+01	ug/l	21PA_WOX 01092A			
8.00E+01	ug/l	21PA_WQX 01092A			
6.50E+01	ug/l	21PA_WQX 01092A			
3.60E+01	ug/l	21PA_WQX 01092A			
7.90E+01	ug/l	21PA_WQX 01092A			
7.50E+01	ug/l	21PA_WQX 01092A			
8.70E+01	ug/l	21PA_WQX 01092A			
7.40E+01	ug/l	21PA_WQX 01092A			
9.20E+01	ug/l	21PA_WQX 01092A			
7.90E+01	ug/l	21PA_WOX01092A			
5.10E+01	ug/l	21PA_WQX 01092A			
4.30E+01	ug/l	21PA_WQX 01092A			
4.20E+01	ug/l	21PA_WQX 01092A			
2.30E+01	ug/l	21PA_WQX 01092A			
2.80E+01	ug/l	21PA_WQX 01092A			
6.40E+01	ug/l	21PA_WQX 01092A			
4.60E+01	ug/l	21PA_WQX 01092A			
7.90E+01	ug/l	21PA_WQX 01092A			
3.50E+01	ug/l	21PA_WQX 01092A			
5.00E+01	ug/l	21PA_WQX 01092A			
2.50E+01	ug/l	21PA_WQX 01092A			
1.20E+01	ug/l	21PA_WQX 01092A			
3.50E+01	ug/l	21PA_WQX 01092A			
4.90E+01	ug/l	21PA_WQX 01092A			
1.70E+01	ug/l	21PA_WQX 01092A			
7.60E+01	ug/l	21PA_WQX 01092A			
1.06E+02	ug/l	21PA_WQX 01092A			
7.50E+01	ug/l	21PA_WQX 01092A			

[illegible]

APPENDIX E

EFFLUENT LIMITATIONS CALCULATIONS

[illegible]

Facility: **PA Waste LLC - Camp Hope Run Landfill**
NPDES Permit No.: **PA0232343**

[illegible]

				Outfall:	001
Q _S :	0.001	MGD	Q _{IW} :	0.049	CF: 8.34

[illegible]