

 Application Type
 Renewal

 Facility Type
 Industrial

 Major / Minor
 Minor

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

Application No.PA0090301APS ID721249Authorization ID836036

Applicant and Facility Information

Applicant Name	Solid Waste Disposal, Inc.	Facility Name	Solid Waste Disposal Inc. Landfill
Applicant Address	211 Brunner Road	Facility Address	Doyle Drive
	Zelienople, PA 16063-3505		Beaver, PA 15009
Applicant Contact	Joseph Brunner	Facility Contact	Eric Kennedy
Applicant Phone	724-775-6665	Facility Phone	724-712-5011
Client ID	80110	Site ID	49137
SIC Code	4953	Municipality	Brighton Township
SIC Description	Transportation & Utilities - Refuse Systems	County	Beaver
Date Application Recei	ved <u>May 6, 2010</u>	EPA Waived?	Yes
Date Application Accept	Dted May 27, 2010	If No, Reason	N/A
Purpose of Application	Renewal of NPDES permit PA00	090301	

Summary of Review

Background

The Pennsylvania Department of Environmental Protection (Department) received an NPDES permit renewal application for the Solid Waste Disposal Inc. Landfill in Brighton Township of Beaver County on May 6, 2010. The current permit was issued on October 3, 2005 and became effective November 1, 2005. The permit expired on October 31, 2010 but has been administratively extended since that time. A more recent, supplemental set of samples were collected and submitted to the Department on July 17, 2020.

Facility Description

The clay-lined landfill received municipal waste until 1991. Once the facility was inactive, the disposal area was covered with a minimum of three feet of soil and fully vegetated. The erosion and sedimentation control structures that were in use during active operations were decommissioned several years after the final vegetation cover was established. The cover was constructed so that there are no discernible, discrete conveyances that form outfalls, though stormwater can infiltrate through the cover and commingle with the leachate. Surface stormwater is managed through implementation of Best Management Practices (BMPs). The volume of leachate varies with the degree of precipitation, and at times there is no discharge. Previous uncontaminated stormwater runoff from Outfalls 002 and 003 were closed prior to 2005.

Approve	Deny	Signatures	Date
Х		Nicole H. Benoit, P.E. / Environmental Engineering Specialist	January 31, 2022
Х		Michael E. Fifth, P.E. / Environmental Engineer Manager	February 2, 2022

Summary of Review

The underdrain collection system flows by gravity to an aeration basin which allows the leachate to be exposed to atmospheric conditions and obtains some natural air-flux oxygenation. The leachate then enters a settling basin and is discharged through Outfall 001, the facility's only outfall. The settling basin was authorized for treatment under Water Quality Management Permit No. 0478204 issued on November 6, 1978.

Outfall Description

Outfall 001 discharges the treated leachate through a buried pipe to an unnamed tributary of Sixmile Run. Sixmile Run is designated as a Warm Water Fishery (WWF) in Pa Code Chapter 93.9w and it is attaining its existing use.

Public Participation

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.

Conclusion

It is recommended that a draft permit be issued for public comment for renewal of NPDES permit PA0090301.

Discharge, Receiving Waters an	d Water Supply Information	on	
Outfall No. 001		Design Flow (MGD)	0.0144
Latitude 40° 40' 0.24"		Longitude	<u>-80º 23' 13.15"</u>
Quad Name <u>Midland</u>		Quad Code	1302
Wastewater Description: Lar	ndfill Leachate		
Unnamed	Tributary to Sixmile Run		
Receiving Waters (WWF)		Stream Code	33542
NHD Com ID 99680200		RMI	0.3
Drainage Area <u>1.49 mi²</u>		Yield (cfs/mi ²)	0.0087
Q ₇₋₁₀ Flow (cfs) 0.0188		Q7-10 Basis	USGS StreamStats
Elevation (ft) 855		Slope (ft/ft)	0.035
Watershed No. 20-B		Chapter 93 Class.	WWF
Existing Use WWF		Existing Use Qualifier	Supporting Aquatic Life
Exceptions to Use <u>None</u>		Exceptions to Criteria	None
Assessment Status Atta	aining Use(s)		
Cause(s) of Impairment <u>N/A</u>	Ą		
Source(s) of Impairment _N/A	Ą		
TMDL Status Not	ne	Name N/A	
Background/Ambient Data	Da	ta Source	
pH (SU)	7.0 De	fault	
Temperature (°F)	Ambient De	fault	
Hardness (mg/L)	Hardness (mg/L) 100 Det		
Other:	N/A N/A	A	
Nearest Downstream Public Wa	ater Supply Intake Du	auesne Liaht Co. – BVPS ±	±1
		······································	
PWS Waters No		Flow at Intake (cfs)	1 584 MGD Pumps

* Other Comments:

The drainage area of the tributary at the outfall discharge is small and produced the following note in Stream Stats: "One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors." To account for this, the drainage area and Q7-10 flow of Sixmile run just past the confluence with the tributary was delineated. The 7.06 square mile drainage area and Q7-10 flow of 0.0893 cfs results in a yield of 0.0126 cfs/mi². This yield was then multiplied by the 1.49 mi² drainage area at the outfall to estimate a Q7-10 flow of 0.0188 cfs.

The previous permit issued in 2005 utilized the Water Resources Bulletin 12, Chapter 93. The Department selected a location at Moffatts Mill along Raccoon Creek with a drainage area of 178 sq. mi as the best representation in the outfall vicinity. The Q7-10 was used to calculate a yield of 0.042 cfs/mi² and a resulting Q7-10 flow in the tributary of 0.063 cfs. Due to the drastic difference in drainage area, this best approximation made in 2005 is much less accurate than using the USGS StreamStats flow modeling calculations at the confluence with Sixmile Run.

Compliance History

DMR Data for Outfall 001 (from December 1, 2020 to November 30, 2021) All samples are grab type at a frequency of 2/month

Parameter	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20
Flow (MGD)												
Average Monthly	0.007	0.01296	0.00684	0.00525	0.00432	0.00504	0.0108	0.01224	0.01224	0.00648	0.01296	0.00432
Flow (MGD)												
Daily Maximum	0.013	0.0144	0.0108	0.00625	0.00576	0.00576	0.0144	0.0144	0.0144	0.00864	0.0144	0.00432
pH (S.U.)												
Instantaneous												
Minimum	7.8	7.8	8.05	8.2	7.2	7.2	7.6	7.4	8.2	8.0	7.9	8.2
pH (S.U.)												
Instantaneous												
Maximum	7.9	7.8	8.16	8.3	8.0	7.2	7.8	7.6	8.3	8.0	8.1	8.6
CBOD5 (mg/L)								-	-		-	
Average Monthly	< 2.00	3.1	2.4	2.3	4.2	4.1	2.9	< 2	< 3	< 3	< 3	< 3
CBOD5 (mg/L)												
Instantaneous		1.0	0.7	0.4	1.0	5.0					0	0
	< 2	4.3	2.7	3.1	4.6	5.2	3.0	< 2	< 3	< 3	< 3	< 3
155 (mg/L)	- F	- F	- F	- F	. 2	0 5	0.5	10	7	4 5	. 2	. 2
	< 5	< 5	< 5	< 5	< 3	0.0	9.5	12	1	4.5	< 3	< 3
ISS (IIIg/L)												
Maximum	~ 5	~ 5	~ 5	~ 5	- 3	11	11	10	11	6.0	- 3	- 3
Fecal Coliform	~ 5	~ 5	~ 5	~ 5	~ 5	11	11	13	11	0.0	~ 5	< 5
(CEU/100 ml)												
Geometric Mean	35	48.5	9.8	46	65.7	111 1	60.6	61	9.8	14	19.6	13
Fecal Coliform	00	1010	0.0	10	0011		00.0	0.1	0.0		10.0	10
(No./100 ml)												
Geometric Mean	35	48.5	9.8	46	65.7	111.1	60.6	6.1	9.8	1.4	19.6	13
Ammonia (mg/L)												
Average Monthly	0.235	0.2675	0.3650	0.144	0.3355	0.273	0.276	0.186	2.85	0.8365	0.14	0.395
Ammonia (mg/L)												
Instantaneous												
Maximum	0.37	0.3	0.40	0.15	0.51	0.45	0.28	0.24	5.27	0.91	0.15	0.61
Total Cadmium (mg/L)												
Average Monthly	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002
Total Cadmium (mg/L)												
Instantaneous												
Maximum	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002

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Total Iron (mg/L)												
Average Monthly	0.243	0.605	0.496	0.661	0.727	0.926	0.629	0.506	0.265	0.265	0.255	0.234
Total Iron (mg/L)												
Instantaneous												
Maximum	0.257	0.964	0.569	0.726	0.759	1.1	0.662	0.781	0.377	0.283	0.293	0.254
Total Manganese												
(mg/L)												
Average Monthly	0.057	0.181	0.151	0.548	0.514	0.615	0.16	0.332	0.063	0.072	0.044	0.224
Total Manganese												
(mg/L)												
Instantaneous												
Maximum	0.086	0.284	0.161	0.581	0.625	0.661	0.178	0.611	0.106	0.09	0.047	0.41
Total Nickel (mg/L)												
Average Monthly	< 0.005	0.007	< 0.02	< 0.02	< 0.02	< 0.02	< 0.010	< 0.005	< 0.02	0.0075	< 0.02	< 0.02
Total Nickel (mg/L)												
Instantaneous												
Maximum	< 0.005	0.008	< 0.02	< 0.02	< 0.02	< 0.02	< 0.010	< 0.005	< 0.02	0.008	< 0.02	< 0.02
Total Zinc (mg/L)												
Average Monthly	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02
Total Zinc (mg/L)												
Instantaneous												
Maximum	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02
Phenol (mg/L)												
Average Monthly	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
Phenol (mg/L)												
Instantaneous												
Maximum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
a-Terpineol (mg/L)												
Average Monthly	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.010	< 0.010	< 0.001	< 0.010
a-Terpineol (mg/L)												
Instantaneous												
Maximum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.010	< 0.010	< 0.001	< 0.010
Benzoic Acid (mg/L)												
Average Monthly	< 0.050	< 0.050	< 0.050	< 0.005	< 0.050	< 0.001	< 0.001	< 0.050	< 0.001	< 0.001	< 0.001	< 0.001
Benzoic Acid (mg/L)												
Instantaneous												
Maximum	< 0.050	< 0.050	< 0.050	< 0.005	< 0.050	< 0.001	< 0.001	< 0.050	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol (mg/L)												
Average Monthly	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol (mg/L)												
Instantaneous												
Maximum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
Total Phenolics (mg/L)												
Average Monthly	< 0.25	< 0.25	0.313	0.275	0.193	0.313	< 0.25	0.548	0.578	< 0.010	< 0.010	0.156

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Total Phenolics (mg/L)												
Instantaneous												
Maximum	< 0.25	< 0.25	0.375	0.295	0.335	0.375	< 0.25	0.835	0.895	< 0.010	< 0.010	0.302

*Part C.2: Effective disinfection to control disease producing organisms shall be the production of an effluent which will contain a concentration of fecal coliform organisms not greater than

a. 200/100 mL as a monthly geometric mean, nor greater than 1000/100 mL in more than ten percent of the samples examined during any month from May through September inclusive.

b. 14,000/100mL as a monthly geometric mean based on five consecutive samples collected on different days during any month from October through April inclusive.

Compliance History

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
		Monthly				
Total Iron	07/31/20	Average	5.8	mg/L	4.0	mg/L
		Instantaneous				
Total Iron	07/31/20	Maximum	7.45	mg/L	7.0	mg/L
		Monthly				
Total Manganese	07/31/20	Average	2.9	mg/L	1.0	mg/L
		Instantaneous				
Total Manganese	07/31/20	Maximum	3.8	mg/L	2.0	mg/L
		Monthly				
Total Manganese	08/31/19	Average	1.06	mg/L	1.0	mg/L
		Monthly				
Total Cadmium	12/31/18	Average	<0.01	mg/L	0.005	mg/L
		Geometric				
Fecal Coliform	9/30/18	Mean	681.6	CFU/100 mL	200	CFU/100 mL

Effluent Violations for Outfall 001, from: September 1, 2018 To: November 30, 2021

Facility Violation Comments on DMRs:

July 2020: Beavers in pond using mud to plug discharge pipes. Small amounts of this sediment cause a spike in the sample result.

August 2019: no explanation provided December 2018: no explanation provided September 2018: no explanation provided

Other Non-Compliances:

October 2020: Late DMR submittal

Summary of Inspections:

On April 11, 2019 the Department conducted an inspection of the facility.

The inspection produced the following violations:

- Failure to use approved analytical methods (25 Pa. Code 92a.41(a)(10)
- Violations of effluent limits in Part A of the NPDES Permit (25 Pa. Code 92a.44)

The administrative review indicated eDMRs submitted for the monitoring period of August 2013 through March 2019 had the following exceedances:

- Fecal coliform monthly average limit is 200 CFU per 100 mL. Results were 316, 243 and 681.6 per 100 mL in June 2014, June 2016 and September 2018, respectively.
- Manganese monthly average limit is 1 mg/L and was 1.4275 mg/L in November 2014. Also, during that month, the instantaneous maximum limit of 2 mg/L was exceeded with a concentration of 2.728 mg/L
- Cadmium monthly average limit is 0.005 mg/L. In December 2018 the monthly average was <0.01 mg/L.

On June 18, 2019 the Department issued Solid Waste Disposal, Inc. a Notice of Violation (NOV) for the violations noted above. The NOV requested a written response as to corrective actions taken on or before July 26, 2019. The facility responded on July 10, 2019 saying that they will analyze pH onsite instead of at the laboratory and that the manganese and cadmium exceedances would be investigated, and future exceedances avoided.

On June 24, 2019 the Department conducted another inspection for routine sampling. The Department collected a sample at Outfall 001. Results indicated no exceedances of Instantaneous Maximum limits. No other issues were observed.

	Development of Effluent Limitations							
Outfall No.	001		Design Flow (MGD)	0.0144				
Latitude	40° 40' 01"		Longitude	-80º 23' 14"				
Wastewater D	Description:	Landfill Leachate						

Technology-Based Limitations (TBELs)

Section 304(b) of the Federal Clean Water Act (CWA) requires technology limits to be considered. Section 301(b)(1) of the CWA requires compliance with best practicable control technology (BPT) by July 1, 1977. Section 301(b)(2)(E) of the CWA requires compliance with best conventional pollutant control technology (BCT) by March 31, 1989. Section 301(b)(2)(C) of the CWA requires compliance with best available technology (BAT) by March 31, 1989.

The EPA promulgated an Effluent Limitation Guideline (ELG) under 40 CFR Part 445 for the Landfills Point Source Category. Applicability of this ELG per §445.1 does not exclude inactive landfills. Landfill unit is defined in §445.2e as "an area of land or an excavation in which wastes are placed for permanent disposal, that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, a salt bed formation, an underground mine or a cave as these terms are defined in 40 CFR 257.2, 258.2 and 264.10." Landfill wastewater is defined in §445.2f as "all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas which have come in direct contact with solid waste at the landfill facility." Therefore, the leachate and any infiltrated stormwater from this inactive landfill is subject to the Part 445 ELG requirements.

The applicable ELG subpart is B – RCRA Subtitle D Non-Hazardous Waste Landfill. Subpart A – RCRA Subtitle C Hazardous Waste Landfill is not applicable since the facility has only accepted municipal and residual waste and not any hazardous waste. The BPT effluent limitations in accordance with §445.21 are those in Table 1. This ELG is concentration based and not production-based so mass effluent limits based on loading are not necessary.

Regulated Parameter	Maximum Daily (mg/L)	Maximum Monthly Average (mg/L)
BOD ₅	140	37
TSS	88	27
Ammonia (as N)	10	4.9
a-Terpineol	0.033	0.016
Benzoic acid	0.12	0.071
p-Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH	Within the range 6 to 9	Within the range 6 to 9

Table 1. Effluent limitations attainable by the application of best practicable control technology currently available (BPT)

In §445.22 it was determined that the limitations for BOD, TSS and pH specified for BPT also represent BCT, and per §445.23 the limitations for ammonia (as N), a-terpineol, benzoic acid, p-cresol, phenol and zinc specified for BPT also represent the application of BAT.

Sections k through m of §445.2 describe approved methods for analysis of particular parameters. A summary of the parameters listed in §445.21 are listed in Table 2. This will be included in the renewed permit as a Part C condition.

Regulated Parameter	§445.2 Section	Approved Method or 40 CFR Reference
BOD₅	(k)(2)	40 CFR 136.3, Table 1B (5-day biochemical oxygen demand)

Ammonia (as N)	(k)(1)	40 CFR 136.3, Table 1B (ammonia reported as nitrogen)
a-Terpineol	(m)(5)	40 CFR Part 136, Appendix A Attachments to Methods 625 and 1625B
Benzoic acid	(m)(2)	40 CFR Part 136, Appendix A Attachments to Methods 625 and 1625B
p-Cresol	(m)(3)	40 CFR Part 136, Appendix A Attachments to Methods 625 and 1625B
Phenol	(I)(2)	40 CFR 136.3, Table 1C (phenol)
Zinc	(k)(5)	40 CFR 136.3, Table 1B (total zinc)

TSS and pH are not specifically listed in this section of the ELG. The approved sampling method will fall under the Part A condition for test procedures "unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those contained in 40 CFR 136".

Fecal Coliform

Fecal coliform limitations were imposed in both the 1997 and 2005 permits for "effective disinfection to control disease producing organisms". The current fecal effluent limitation is provided in Part C.2 of the permit. Sampling is to be a grab 2/month. Part C.2 in summary is:

Table 3.	Current Effluent	Limitations – Fecal	Coliform
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Effective Months	Monthly Geometric Mean	Maximum in No More than 10% Samples	Sample Frequency	Sample Type
May – Sept	200/100 mL	1000/100 mL	2/month	Grab
Oct – Apr	14,000/100 mL		5/month (collected in any one month)	Grab

Using Best Professional Judgement (BPJ), it is reasonable to update the fecal coliform limitations to those currently in the regulations. The SOP Establishing Effluent Limitations for Individual Sewage Permits (SOP No. BCW-PMT-033) describes the procedures by which permitting engineers determine numeric values for effluent limitations for individual NPDES sewage permits where design flow exceeds 2,000 gallons per day. The SOP recommends that where water quality monitoring is not necessary, particular standards should still be achieved, including standards for fecal coliform. That recommendation is:

Table 4. Minimum Technology and BPJ Standards for Individual Sewage Permits – Fecal Coliform

Time Period (No./100 mL)	Minimum	Average Monthly Geometric Mean	Average Weekly	ΙΜΑΧ	Basis
May – September	XXX	200	XXX	1,000	§92a.47
October – April	XXX	2,000	XXX	10,000	§92a.47

During the past twelve months of DMR data, the maximum between May and September was 111.1/100 mL and the maximum between October and April was 94.3/100 mL. Both of these maximums, and the averages, complied with the effluent limitations. The July 2020 Analysis Results Table includes a summary of 27 analyses. The maximum was 461/100 mL, maximum monthly average of 256/100 mL, and an average 67.6/100 mL. A review of eDMR data from March 2018 through February 2020 reported a maximum 681.6/100 mL during September 2018, and a second highest value of 267.5/100 mL in January 2020. All other values were less than 100/100 mL. Exceedances are infrequent and implementation of the newer limits is not expected to cause violations that wouldn't occur if the current limits were maintained.

Water Quality-Based Limitations

Section 302(a) of the CWA allows establishment of water quality effluent limits. Section 303(a)(1) of the CWA allows states to adopt water quality standards. Section 303(d) of the CWQ requires states to designate water uses (e.g., Chapter 93 of PA Code). Section 303(c) of the CWA requires states to develop water quality criteria (e.g., Chapters 16 and 93 of PA Code).

Toxics Management Spreadsheet (TMS)

PENTOXSD Version 2.0d for Windows is a single discharge, mass-balance water quality modeling program that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. The PENTOXSD program has been replaced by the Toxics Management Spreadsheet, Version 1.3, March 2021. The Toxics Management Spreadsheet (TMS) is a macro-enabled Microsoft Excel program that has incorporated the same equations as the PENTOXSD program and the Toxics Screening Analysis spreadsheet that determined which pollutants should be modeled in PENTOXSD based on reasonable potential to exceed criterion.

Required input data for the TMS includes stream code, river mile index, elevation, drainage area and Q_{7-10} discharge flow rate. Pennsylvania defines Q_{7-10} flow in the Pa Code § 96.1 as "The actual or estimated lowest 7 consecutive-day average flow that occurs once in 10 years for a stream with unregulated flow, or the estimated flow for a stream with regulated flow." These inputs establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions, and partial mix factors may also be entered to further characterize the discharge and receiving water. The discharge concentration of pollutants is entered into the program as well. TMS then evaluates each pollutant by computing a Waste Load Allocation for each applicable criterion, determining a recommended maximum WQBEL, and comparing that recommended WQBEL with the input discharge concentration to determine which is more stringent. Based on this evaluation, TMS recommends average monthly, maximum daily and instantaneous maximum WQBELs (see Attachment A).

Attachment A, Table 1 of the application instructions lists the "Testing requirements for required analysis pollutant groups by industrial category". Municipal and residual landfill leachate is to be sampled for pollutant groups 1 through 6. Three samples were collected of the discharge from Outfall 001 specifically for updating the Analysis Results Tables as part of the renewal package. The Analysis Results Tables also include the DMR sampling for those pollutants required in the current NPDES permit. One sample was collected of the influent leachate to the treatment plant. Currently, no chemicals are used at the site. The facility does not have any site-specific criterion for any pollutant applied in the past, nor requested in the latest permit renewal application. The outfall flow used for modeling is the maximum design flow of 0.0144 MGD.

Table 5 below was produced by the TMS analysis and summarizes the recommended WQBELs and monitoring requirements using the maximum reported concentration. This was based on the updated Analysis Results Table data for Outfall 001 submitted on July 17, 2020. Where a pollutant has been monitored in Part A of the NPDES permit, the maximum from the most current 12 months of data (see Compliance History section above) was used in lieu of the Analysis Results Tables since all parameters are measured 2/month. The renewal application instructions state that the Analysis Results Tables should include pollutants analyzed under an existing permit at a frequency of 1/month or more and to summarize the results of all samples collected for the one year period preceding the date the permit application is prepared.

	Mass	Limits	Concentration Limits			
Pollutants	AML (Ibs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units
Total Arsenic	Report	Report	Report	Report	Report	μg/L
Total Barium	Report	Report	Report	Report	Report	µg/L
Total Boron	Report	Report	Report	Report	Report	µg/L
Total Cadmium	0.00005	0.00008	0.43	0.67	1.07	µg/L
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L
Dissolved Iron	Report	Report	Report	Report	Report	µg/L
Total Iron	Report	Report	Report	Report	Report	µg/L
Total Lead	Report	Report	Report	Report	Report	µg/L
Total Manganese	0.19	0.3	1,584	2,471	3,959	µg/L
Total Thallium	0.00005	0.00007	0.38	0.59	0.95	µg/L
Total Zinc	Report	Report	Report	Report	Report	µg/L
Acrylamide	0.00007	0.0001	0.59	0.93	1.49	µg/L
Benzo(a)Anthracene	0.000001	0.000002	0.008	0.013	0.021	µg/L
Benzo(a)Pyrene	1.02E-07	1.59E-07	0.0008	0.001	0.002	µg/L
3,4-Benzofluoranthene	0.000001	0.000002	0.008	0.013	0.021	µg/L
Benzo(k)Fluoranthene	0.00001	0.00002	0.085	0.13	0.21	µg/L
Bis(2-Ethylhexyl)Phthalate	Report	Report	Report	Report	Report	µg/L
PCBs, Total	6.53E-08	1.02E-07	0.0005	0.0008	0.001	µg/L
Toxaphene	3.80E-08	5.93E-08	0.0003	0.0005	0.0008	µg/L

Table 5. Recommended WQBELs and Monitoring Requirements

The discharge flow is influenced by infiltrated stormwater and is variable. The calculation of a mass concentration based on an instantaneous flow during the storm event will not be indicative of the total mass discharged during a single day and is prone to significantly more error when calculating a monthly average. Therefore, only concentration based effluent limitations will be imposed.

Where the maximum reported concentration exceeds 50% of the WQBEL a reasonable potential has been demonstrated to exceed the water quality criterion and an effluent limitation will be established. For non-conservative pollutants, monitoring will be applied if the maximum reported concentration is greater than 25% of the WQBEL. For conservative pollutants, monitoring will be applied if the maximum reported concentration is greater than 10% of the WQBEL. Conservative pollutants are defined in Pa Code §96.1. See Table 6 for a summary of the reasonable potential of each pollutant based on the reported maximum concentration from the application.

Table 6. Application Data, Quantification Limits and Reasonable Potential for Monitoring and Effluent Limitations

Pollutants	Reported Maximum	Department Quantification	Governing WQBEL (ug/L)	WQBEL Basis	Comments	
	(ug/L)	Reporting				
Total Arsenic	2.0	3.0	15.8	THH	>10% WQBEL	
Total Lead	0.6	1.0	5.04	CFC	>10% WQBEL	
Bis(2-Ethylhexyl)Phthalate	1.05	5.0	2.72	CRL	>25% WQBEL	
Total Barium	401	2.0	3801	THH	>10% WQBEL	
Total Boron	480	200	2534	CFC	>10% WQBEL	
Dissolved Iron	70	20	475	THH	>10% WQBEL	
Total Iron	1175	20	2375	CFC	>10% WQBEL	
Total Zinc	30	5.0	122	AFC	>10% WQBEL	
Hexavalent Chromium	<5.0	1.0	16.5	CFC	>10% WQBEL	
Effluent Limitation						
Total Cadmium	2.0	0.2	0.43	CFC	≥50% WQBEL	
Total Manganese	1280	2.0	1584	THH	≥50% WQBEL	

Total Thallium	2.0	2.0	0.38	THH	≥50% WQBEL
Acrylamide	<530	0.1	0.59	CRL	≥50% WQBEL
PCBs, Total	<3.5	1.75	0.0005	CRL	≥50% WQBEL
Toxaphene	<0.53	0.5	0.0003	CFC	≥50% WQBEL
Benzo(a)Anthracene	0.167	2.5	0.008	CRL	≥50% WQBEL
Benzo(a)Pyrene	0.453	2.5	0.0008	CRL	≥50% WQBEL
3,4-Benzofluoranthene	0.474	2.5	0.008	CRL	≥50% WQBEL
Benzo(k)Fluoranthene	0.516	2.5	0.085	CRL	≥50% WQBEL

THH = Threshold Human Health, CFC = Chronic Fish Criterion, AFC = Acute Fish Criterion, CRL = Cancer Risk Level

Arsenic, Lead, Bis(2-Ethyhexyl)Phthalate

• These pollutants were sampled to concentrations less than the Department's target quantitation limits (QL). Because detection was present, monitoring is recommended. Monitoring will be imposed in the renewed permit but may be removed in the following renewal if reasonable potential does not exceed the water quality criterion, or if the pollutant is not detected in the effluent.

Barium, Boron, Total Iron, Dissolved Iron, Zinc

• These pollutants were sampled and found to be present at concentrations above the QL but are of a concentration that an effluent limitation is not recommended. Monitoring will be imposed in the renewed permit but may be removed in the following renewal if there is no reasonable potential to exceed the water quality criterion, or if the pollutant is not detected in the effluent.

Hexavalent Chromium

• This pollutant was not detected, but the detection level is greater than the Department's target QL. This pollutant may be resampled prior to issuance of the final permit, and monitoring may be removed if the reasonable potential does not exceed the criterion, or if the pollutant is not detected at the Department's target QL.

Cadmium, Manganese

- These pollutants have effluent limits in the current NPDES and therefore cannot be removed per anti-backsliding.
- The current cadmium effluent limits are 0.005 mg/L (5 ug/L) monthly average and 0.01 mg/L (10 ug/L) as an instantaneous maximum. The new effluent limitation will be reduced to 0.43 ug/L and 1.1 ug/L as an IMAX. The permittee has met this new limit in each of the most recent 12 months of DMR (August 2021 was <5 ug/L) and so a Compliance Schedule is not needed. The limit will be imposed upon issuance.
- The current manganese effluent limits are 1.0 mg/L (1000 ug/L) monthly average and 2.0 mg/L (2000 ug/L) as an instantaneous maximum. The new effluent limitations recommended are 1.6 mg/L and 4.0 mg/L IMAX. Since these values are greater than the existing effluent limitations, the existing limits will remain in place.

Thallium

 This pollutant was present at a detectable concentration greater than 50% of the WQBEL and greater than the Department's target QL. The effluent limitation will be imposed following completion of a Toxics Reduction Evaluation.

Acrylamide, Total PCBs, Toxaphene

• These pollutants were not detected, but the detection level is greater than the Department's target quantitation limits. These pollutants may be resampled prior to issuance of the draft permit, and effluent limitations in the renewed permit will be removed if reasonable potential does not exceed, or if the concentration is not detected at the Department's target quantitation limits. The effluent limitations may also be replaced with monitoring if there is a potential to exceed 10%, but not 50%, of the WQBEL based on a detectable concentration. If a reasonable potential to exceed 50% of the WQBEL remains after resampling, effluent limitations will be imposed.

Benzo(a)Anthracene, Benzo(a)Pyrene, 3,4-Benzofluoranthene, Benzo(k)Fluoranthene

• These pollutants were detected at a concentration less than the Department's recommended QL, and greater than the governing WQBEL. The effluent limitation will be imposed, but the permittee may analyze the sampling using the Department's recommended QL for the detection level. Samples that do not exceed the QL will not be considered effluent violations. This will be detailed in a Part C condition.

The public notice and cover letter to the permittee will note that the following pollutants may be sampled during the draft permit using the Department's Target Quantitation Limit (QL): hexavalent chromium, acrylamide, total PCBs, and toxaphene. If the samples are non-detect at the QL or show no reasonable potential to require monitoring or effluent limitations, the pollutants may be removed or modified in the final permit. A minimum of three samples must be analyzed.

The Department has defined target Quantification Limits (QLs) for certified laboratory effluent analysis. The QLs represent the minimum sensitivity of laboratory analysis techniques. The target QLs for the following pollutants are higher than the proposed WQBEL: Bis(2-Ethylhexyl)Phthalate, Thallium, total PCBs, Toxaphene, Benzo(a)Anthracene, Benzo(a)Pyrene, 3,4-Benzofluoranthene, and Benzo(k)Fluoranthene. A Part C condition will define the Target QL and allow for these pollutants to be in compliance as long as the concentration is not detected above the QL.

The target QLs for the new WQBELs are in Table 7.

Fable 7. Target Quantification	Limits for New WQBELs	and Monitoring
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Pollutant	Target QL (ug/L)	Proposed Monthly Average (ug/L)	Proposed IMAX (ug/L)
Thallium, Total	2.0	0.38	0.95
Benzo(a)Anthracene	2.5	0.008	0.021
Benzo(a)Pyrene	2.5	0.0008	0.002
3,4-Benzofluoranthene	2.5	0.008	0.021
Benzo(k)Fluoranthene	2.5	0.085	0.21
PCBs, Total	1.75	0.0005	0.001
Toxaphene	0.5	0.0003	0.0008
Bis(2-Ethylhexyl)Phthalate	5.0	Report	Report

Toxics Reduction Evaluation

The permittee will be required to complete a Toxics Reduction Evaluation (TRE) to investigate approaches, strategies and feasibility to provide treatment to achieve the final WQBELs for the pollutants in Table 5. The evaluation may also include a further analysis of water quality of the leachate and any other possible sources to the landfill that may be impacting the water quality. Details will be included in Part C of the permit.

The TRE will be required to address the following:

- 1. The source(s) of the toxic pollutants in the effluent through a comprehensive review of influent and effluent quality and contributors to the facility, if applicable.
- 2. An evaluation of approaches and strategies that exist to reduce or eliminate sources to achieve the final WQBELs.
- 3. An evaluation of approaches and strategies that exist to provide treatment to achieve the final WQBELs.
- 4. An analysis of the feasibility of the approaches and strategies identified in paragraphs 2 and 3, above.

The Part C condition outlines milestones for the work plan, data collection, implementation, final report, action completion, and compliance with the final permit limit. Final compliance with the effluent limits for the pollutants in Table 8 will be required three years (36-months) after permit issuance.

Table 8. Pollutants Requiring a Toxics Reduction Evaluation

Total Cadmium
Total Thallium
Acrylamide
PCBs, Total
Toxaphene
Benzo(a)Anthracene
Benzo(a)Pyrene
3,4-Benzofluoranthene
Benzo(k)Fluoranthene

As noted above, TMS modeling utilized the maximum reported concentration. Cadmium, total manganese and total iron were recommended for effluent limitations, but each have 27 samples that were included in the Analysis Results Tables. These parameters are currently included in Part A of the permit and have effluent limitations with 2/month sampling requirements. Per the Standard Operating Procedure *SOP – Establishing WQBELs and Permit Conditions for Toxic Pollutants in NPDES Permits* "For sample sizes greater than or equal to 10, the average monthly effluent concentration (AMEC) as determined by the TOXCONC spreadsheet exceeds or is equal to the most stringent Chapter 93 water quality criterion for the parameter."

- Cadmium Of the 27 samples analyzed and included in the July 2020 sampling update, 25 were non-detect. Using the most recent 12 months of reported DMR data, no samples were about the detection limit of 2 ug/L except for the most recent samples in August 2021 which were less than a 5 ug/L detection limit. Because a cadmium limit has already been imposed, the limit cannot be removed from the permit in accordance with antibacksliding. The reduced limit is a result of the lower Q7-10 stream flow.
- Total Manganese Of the 27 samples analyzed and included in the July 2020 sampling update, none were nondetect. The maximum was 1.28 mg/L, the maximum monthly average was 1.06 mg/L and the long-term average was 0.347 mg/L. For the last 12 months of DMR data (24 samples at 2/month), the maximum of the individual values was 0.66 mg/L. The TOXCONC spreadsheet calculated a 1.82 coefficient of variation, and resulting monthly average of 1.96 mg/L. This calculated monthly average of 1.96 mg/L was used in the maximum value column of the TMS spreadsheet rather than 1.06 mg/L.
- Total Iron Of the 27 samples analyzed and included in the July 2020 sampling update, none were non-detect. The maximum was 2.17 mg/L, the maximum monthly average was 1.89 mg/L and the long-term average was 0.738 mg/L. For the last 12 months of DMR data (24 samples at 2/month), the maximum of the IMAX values was 1.10 mg/L. The TOXCONC spreadsheet calculated a 0.669 coefficient of variation, and resulting monthly average of 1.175 mg/L. This calculated monthly average of 1.175 mg/L was used in the maximum value column of the TMS spreadsheet rather than 2.17 mg/L.

<u>Ammonia</u>

Per the SOP – Establishing Effluent Limitations for Individual Industrial Permits, the WQM 7.0 Model should be run if the BOD5/CBOD5 concentration exceeds 30/25 mg/L in the permit application or DMRs or if the application manager believes that effluent ammonia concentration may need to be evaluated. The WQM 7.0 model is used to determine NPDES discharge effluent limitations for carbonaceous BOD (CBOD-5), ammonia nitrogen (NH3-N), and dissolved oxygen (DO) for single and multiple point source discharge scenarios in a single stream segment.

In the NH3-N module, the model simulates the mixing and degradation of NH3-N in the stream and compares calculated instream NH3-N concentrations to NH3-N water quality criteria. WQM 7.0 then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions. NH3-N criteria are divided into acute fish and aquatic life toxicity criteria, and chronic fish and aquatic life toxicity criteria. Total ammonia in an aqueous system is a balance between un-ionized ammonia (NH3-N) and the ionized ammonium ion (NH4+). The speciation between NH3-N and NH4+ is important, because NH3-N is highly toxic to fish and aquatic life, while NH4+ is much less toxic. High temperature and high pH favor the formation of NH3-N, while low temperature and low pH favor the formation of NH4+. The NH3-N criteria are pH and temperature dependent. WQM 7.0 automatically calculates the appropriate NH3-N criteria for any given scenario based on the pH and temperature entered by the user. In addition to flow and load mixing, WQM 7.0 models deoxygenation, reaeration, and nitrification in calculating instream NH3-N, CBOD5, and DO concentrations. Temperature effects in these processes are considered.

Waste Load Allocations (WLAs) based on NH3-N criteria are calculated for two design stream flow conditions: Q1-10 (the minimum 24-hour average stream flow over a 10-year period) is used when calculating the allowable 24-hour average NH3-N concentration, and Q30-10 (the minimum 30-day average stream flow over a 10-year period) is used when calculating the allowable 30-day average NH3-N concentration. NH3-N water quality criteria vary based on temperature and pH, and the model automatically calculates the proper acute and chronic water quality criteria values at the beginning of each reach. The acute NH3-N water quality criterion is used when calculating the allowable 24-hour average NH3-N concentration, based on complete mix flow (stream plus discharge), temperature, and pH at the beginning of each reach. The chronic NH3-N water quality criterion is used when calculating the allowable 30-day average NH3-N concentration, again based on complete mix flow, temperature, and pH at the beginning of each reach.

The Analysis Results Tables indicate a BOD-5 of <3 mgL. The ammonia concentration reported on the Analysis Results Table is 0.47 mg/L maximum, 0.365 mg/L maximum monthly average and 0.216 mg/L long-term average. Although this concentration is low, the receiving water body is small and technology-based effluent limitations were developed for

ammonia. An analysis of the WQBEL should be performed to ensure the TBELs are sufficient for protection. Since higher temperatures result in a low criterion, the model was run using the maximum yearly temperature of a Warm Water Fishery (WWF) which is 87°F (30.5 °C) in July and August per 25 PA Code 93.7. Because the aeration and settling basin are open to the atmosphere, it is assumed the discharge water will be the same temperature. Both the stream and tributary assumed a neutral pH of 7.0 S.U.

See Appendix B for the results of the WQM 7.0 Model. The model was run conservatively with the maximum flow of 0.0144 MGD and maximum ammonia concentration of 0.47 mg/L. The model did not recommend effluent limitations (instead noted the input discharge values). The acute baseline criterion is 4.51 mg/L and the chronic allocation is 0.9 mg/L at this most conservative, maximum temperature scenario. Monitoring is not necessary since TBELs are established. See the anti-backsliding section below for more detail.

Chapter 95 Wastewater Treatment Requirements

Per 25 Pa Code 95.2(1) industrial wastes must have a pH of not less than 6 and not greater than 9, except if discharging to an acid stream. The unnamed tributary of Sixmile Run is not an acid stream, so the range of 6 to 9 S.U. shall apply.

Per 95.2(2) oil-bear wastewaters shall at no time cause a film or sheen upon or discoloration of waters of this Commonwealth or adjoining shoreline. This prohibition will be covered by the narrative standards in Part A of the permit. This section also states that at no time may the discharge contain more than 15 mg/L of oil as a daily average nor more than 30 mg/L of oil at any time. Per the Analysis Results Tables there is no reasonable potential to exceed these criteria, and so neither monitoring nor effluent limitations for oil and grease will be imposed. The Additional Requirements in Part A contain this narrative water quality prohibition.

Per 95.2(4) waste may not contain more than 7 mg/L of dissolved iron. Again, the Analysis Results Tables show no potential to exceed this value, however TMS modeling did recommend monitoring based on the human health criterion (THH) of 0.475 mg/L.

Anti-Backsliding

Section 402(o) of the CWA states "...a permit may not be renewed, reissued, or modified ... subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit."

The current permit issued in 2005 contains the following effluent limitations:

Discharge Parameter	Units	Average Monthly	Instant. Max.	Measurement Frequency	Sample Type
Flow	MGD	Monitor and	Report	2/month	estimate
Suspended Solids	mg/L	27	60	2/month	grab
CBOD-5 Day*	mg/L	25	50	2/month	grab
Ammonia Nitrogen (May to Oct)	mg/L	3.0	6.0	2/month	grab
Ammonia Nitrogen (Nov to Apr)	mg/L	4.9	10.0	2/month	grab
Cadmium	mg/L	0.005	0.01	2/month	grab
Iron	mg/L	4.0	7.0	2/month	grab
Nickel	mg/L	0.35	0.70	2/month	grab
Zinc	mg/L	0.11	0.20	2/month	grab
Manganese	mg/L	1.0	2.0	2/month	grab
Phenols (4AAP)	mg/L	0.75	1.5	2/month	grab
p-Cresol	mg/L	0.014	0.025	2/month	grab
a-Terpineol	mg/L	0.016	0.033	2/month	grab
Benzoic Acid	mg/L	0.071	0.12	2/month	grab
Phenol	mg/L	0.015	0.026	2/month	grab
Fecal Coliforms		Refer to Part C	.2	2/month	grab
рН	S.U.	Not < 6.0 nor >9.0		2/month	grab

Table 9. Effluent limitations for Outfall 001 in NPDES permit issued October 3, 2005

Part C.2: Effective disinfection to control disease producing organisms shall be the production of an effluent which will contain a concentration of fecal coliform organisms not greater than

- c. 200/100 mL as a monthly geometric mean, nor greater than 1000/100 mL in more than ten percent of the samples examined during any month from May through September inclusive.
- d. 14,000/100mL as a monthly geometric mean based on five consecutive samples collected on different days during any month from October through April inclusive.

The NPDES permit issued in 1997 utilized the Department's Landfill Leachate NPDES Permit Technical Guidance document and Best Professional Judgement (BPJ) to determine the appropriate technology-based effluent limitations. After the permit was issued, the EPA promulgated the current ELG for landfills in 2000. The 2005 permit renewal maintained the previous limits per anti-backsliding, or considered the revised ELG limits, whichever was more stringent.

The Part 445 ELG is specifically for BOD-5 and not carbonaceous BOD (CBOD-5). The renewed permit will be updated to reflect the correct parameter.

Nickel and Phenols (4AAP)

These parameters are not included in the current ELG. They will be maintained per anti-backsliding as was determined in the 2005 permit, but the sampling frequency will be considered for adjustment based on the Analysis Results Tables.

Renewed Permit

The more stringent of the Technology-Based Limitations and Water Quality-Based Limitations in accordance with antibacksliding will be the effluent limitations established for Outfall 001. Table 10 is a summary of the most stringent regulation.

Table 10. Summary of most stringent requirements for Outfall 001

Parameter	Most Stringent Requirement
Flow	25 Pa. Code 92a.61(b)
TSS	Anti-backsliding and ELG TBEL
BOD-5	Anti-backsliding and ELG TBEL
Ammonia Nitrogen (May to Oct)	Anti-backsliding and ELG TBEL/BPJ
Ammonia Nitrogen (Nov to Apr)	Anti-backsliding and ELG TBEL
Cadmium, Total	Anti-backsliding and WQBEL 25 Pa. Code 93
Iron, Total	Anti-backsliding and WQBEL 25 Pa. Code 93
Nickel, Total	Anti-backsliding
Zinc, Total	Anti-backsliding, ELG TBEL and WQBEL 25 Pa. Code 93
Manganese, Total	Anti-backsliding and WQBEL 25 Pa. Code 93
Phenols (4AAP)	Anti-backsliding
p-Cresol	Anti-backsliding and ELG TBEL
a-Terpineol	Anti-backsliding and ELG TBEL
Benzoic Acid	Anti-backsliding and ELG TBEL
Phenol	Anti-backsliding and ELG TBEL
Fecal Coliforms	Anti-backsliding and BPJ
рН	Anti-backsliding and ELG TBEL
Iron, Dissolved	WQBEL 25 Pa. Code 93
Arsenic, Total	WQBEL 25 Pa. Code 93
Barium, Total	WQBEL 25 Pa. Code 93
Boron, Total	WQBEL 25 Pa. Code 93
Chromium, Hexavalent	WQBEL 25 Pa. Code 93
Lead, Total	WQBEL 25 Pa. Code 93
Thallium, Total	WQBEL 25 Pa. Code 93
Acrylamide	WQBEL 25 Pa. Code 93
Benzo(a)Anthracene	WQBEL 25 Pa. Code 93

Benzo(a)Pyrene	WQBEL 25 Pa. Code 93
3,4-Benzofluoranthene	WQBEL 25 Pa. Code 93
Benzo(k)Fluoranthene	WQBEL 25 Pa. Code 93
PCBs, Total	WQBEL 25 Pa. Code 93
Toxaphene	WQBEL 25 Pa. Code 93
Bis(2-Ethylhexyl)Phthalate	WQBEL 25 Pa. Code 93

Correspondences

On February 27, 2008 the Department received an "NPDES Monitoring Reduction Application" from the permittee. The permittee requested that the NPDES permit be modified to (1) eliminate a-terpinol, benzoic acid, p-cresol, phenols (4AAP and total), iron and nickel from the sampling/analytical requirements and that (2) sampling and analyses for ammonia, CBOD, pH, total suspended solids, cadmium and zinc be reduced to twice per year.

Then in the May 2010 renewal application, the permittee asked that iron, nickel, a-terpinol, benzoic acid, p-cresol and phenols (4AAP and total) be removed from the required sampling/analytical protocol and that ammonia-nitrogen, CBOD-5, pH, TSS, cadmium and zinc have their sampling frequency reduced to once monthly.

On March 14, 2014 the permittee's legal counsel submitted a letter to the Department on the permittee's behalf further reiterating the financial burden on the permittee to sample and analyze the parameters at the frequency listed in the NPDES permit. In addition to listing the requests of February 27, 2008 and May 2010 by the permittee's consultant, the March 2014 letter also asks for elimination of the monitoring and disinfection requirements for fecal coliform. The letter notes fecal coliform bacteria can enter water bodies through direct discharge of waste from mammals and birds and that the ponds at the closed landfill have become a natural habitat for those species. The letter states it is extremely unlikely that anything remaining in the closed landfill would still be capable of generating fecal coliform since the landfill stopped receiving waste in 1991. Reduction of the parameters and frequency of sampling would reduce the annual analytical costs by approximately two-thirds.

Justification to forego sampling of a pollutant subject to 40 CFR Subchapter N is provided by reference to 40 CFR §122.44(a)(2) (underlined for emphasis).

§122.44 Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs, see §123.25). In addition to the conditions established under §122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable.

(a) (1) Technology-based effluent limitations and standards based on: effluent limitations and standards promulgated under section 301 of the CWA, or new source performance standards promulgated under section 306 of CWA, on case-by-case effluent limitations determined under section 402(a)(1) of CWA, or a combination of the three, in accordance with §125.3 of this chapter. For new sources or new dischargers, these technology-based limitations and standards are subject to the provisions of §122.29(d) (protection period).

(2) Monitoring waivers for certain guideline-listed pollutants.

(i) The Director may authorize a discharger subject to technology-based effluent limitations guidelines and standards in an NPDES permit to forego sampling of a pollutant found at 40 CFR Subchapter N of this chapter if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

(ii) This waiver is good only for the term of the permit and is not available during the term of the first permit issued to a discharger.

(iii) Any request for this waiver must be submitted when applying for a reissued permit or modification of a reissued permit. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

(iv) Any grant of the monitoring waiver must be included in the permit as an express permit condition and the reasons supporting the grant must be documented in the permit's fact sheet or statement of basis.

(v) This provision does not supersede certification processes and requirements already established in existing effluent limitations guidelines and standards.

On March 21, 2014 the Department sent a letter to the legal counsel in response to the March 14th letter. The Department stated that regulations prohibit the Department from amending or modifying an administratively extended permit and therefore reductions in sampling frequency or the number of analytes must be evaluated and implemented (if approved) as part of the permit renewal action. The Department elevated the priority of the review of the renewal application as part of the Permit Decision Guarantee process and ongoing efforts to reduce the permit backlog.

On April 2, 2020, the Department contacted the permittee regarding updated sampling of the Analysis Results Tables in the latest NPDES application. Update sampling results were received by the Department on July 17, 2020.

During October and November 2020, the permittee and the Department clarified questions regarding stormwater and fecal coliform results.

On October 25, 2021 a pre-draft survey letter was sent to the permittee following completion of the fact sheet draft. The letter accompanying the survey form detailed the new proposed WQBELs along with the option to collect additional samples for pollutants that were not sampled to the Department's target Quantitation Levels (QLs) for minimum laboratory sensitivity. Further clarification on the pre-draft survey and WQBELs was provided via email to the permittee on November 18, 2021. The pre-draft survey was received on November 24, 2021. The survey noted that the source of the pollutants is unknown, the date to achieve compliance is uncertain, and no studies have been conducted to date. As of the date of this fact sheet, sampling results have not been received. If sampling results are received during the public comment period, they will be considered prior to final permit issuance.

Sampling Frequency

The draft permit will propose the sampling frequency provided in Table 8. SOP – New and Reissuance Individual IW NPDES Permits Revised, October 11, 2013, Version 1.5 describes several recommendations for imposing and evaluating sampling frequency in Section IV.E. These include:

- For existing facilities in which there is no history of non-compliance with effluent limitations over the past two
 years according to DMR data, and the existing monitoring frequencies are less stringent than Table 6-4 [of DEP's
 Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001) ("Permit
 Writer's Manual")], the existing frequencies may be continued in the renewed permit.
- For existing facilities in which there are effluent violations in the past two years, and existing monitoring frequencies are less stringent than Table 6-4, the monitoring frequencies for parameters with violations should be increased to match those in Table 6-4.
- For new parameters introduced into renewed permits, in which the application manager desires for the permittee to collect data to verify reasonable potential for the subsequent permit application review, the application manager may select any reasonable monitoring frequency that is greater than or equal to once per year.
- For existing facilities in which there is no history of non-compliance with effluent limitations over the past two
 years according to DMR data, the application manager may use the statistical procedures in EPA's guidance,
 "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies" (April 1996) to
 conduct a parameter-by-parameter analysis on eligibility for reduced monitoring frequency. If this is done, the
 application manager will document the calculations and decisions in the fact sheet.

For a copy of Table 6-4 see Appendix F and for a copy of the EPA guidance see Appendix G.

Parameter	Current Frequency	Permittee Requested Frequency	PA DEP Proposed Frequency
Flow	2/month	No request	2/month ¹
TSS	2/month	2/year	2/month ²
BOD-5	2/month	2/year	1/quarter ^{3a}
Ammonia Nitrogen	2/month	2/year	1/month ⁸

Table 8. Proposed sampling frequency for Outfall 001

(May to Oct)			
Ammonia Nitrogen	2/month	2/year	1/month ⁸
(Nov to Apr)			
Cadmium, Total	2/month	2/year	2/month ^{3b}
Iron, Total	2/month	Eliminate	2/month ¹
Nickel, Total	2/month	Eliminate	1/6 months ⁵
Zinc, Total	2/month	2/year	1/quarter ^{3a}
Manganese, Total	2/month	No request	2/month ^{1, 3c}
Phenols (4AAP)	2/month	Eliminate	1/6 months ⁵
p-Cresol	2/month	Eliminate	1/quarter ^{3a}
a-Terpineol	2/month	Eliminate	1/quarter ^{3d}
Benzoic Acid	2/month	Eliminate	1/quarter ^{3d}
Phenol	2/month	Eliminate	2/month ^{3c}
Fecal Coliforms	2/month	No request	1/month ⁶
рН	2/month	2/year	2/month ¹
Iron, Dissolved			1/quarter ⁴
Arsenic, Total			1/quarter ⁴
Barium, Total			1/quarter ⁴
Boron, Total			1/quarter ⁴
Chromium, Hexavalent			1/quarter ⁴
Lead, Total			1/quarter ⁴
Thallium, Total			2/month ⁷
Acrylamide			2/month ⁷
Benzo(a)Anthracene			2/month ⁷
Benzo(a)Pyrene			2/month ⁷
3,4-Benzofluoranthene			2/month ⁷
Benzo(k)Fluoranthene			2/month ⁷
Toxaphene			2/month ⁷
PCBs, Total			2/month ⁷
Bis(2-Ethylhexyl)Phthalate			1/quarter ⁴

- 1. Total iron and manganese have had effluent violations within the past two years and therefore will remain at a frequency of 2/month. The violations are not persistent and therefore the frequency will not be set the same as Table 6-4. Flow and pH are field measurements and should be collected at the same time any parameter is sampled for.
- 2. Total suspended solids (TSS) is the key parameter for determining if the settling basin is operating properly. It is also an Effluent Limitation Guideline (ELG) parameter. Therefore, it will remain at the same frequency.
- EPA's guidance, "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies" (April 1996) was used to determine the ratio of long-term effluent average to monthly average limit using the DMR summary table in the Compliance History section. See Appendix G for the ratio calculations.
 - a. The long-term average ratio in comparison to the monthly average effluent limitation is less than 25%. Sampling will be reduced per Table 1 of the guidance to 1/quarter.
 - b. The DMR sample results are greater than the new proposed effluent limitation but have been non-detect at the higher reporting limit. The same sampling frequency will be maintained.
 - c. The DMR sample results for the long-term average are greater than 25% of the monthly average effluent limitation. A frequency of 2/month will be maintained.
 - d. The DMR sample results for the long-term average are greater than 25% of the monthly average effluent limitation, however all of the sample results have been below detection. A frequency of 1/quarter will be imposed.
- 4. Dissolved iron, arsenic, barium, boron, hexavalent chromium, lead and Bis(2-Ethylhexyl)Phthalate are new parameters introduced into the permit for monitoring. Since the facility is closed there is little potential for variability. Over a period of five years and quarterly sampling, a minimum of 20 samples analyses will be sufficient for determining the potential to exceed in the next renewal permit. Sampling will be imposed as 1/quarter.
- 5. Nickel and phenols (4AAP) are imposed in the renewed permit in accordance with anti-backsliding. The pollutants are not ELG parameters nor WQBELs. Since there have been no samples above detection for phenols and nickel had just two detections slightly above the reporting limit, semi-annual sampling is sufficient.
- 6. Fecal coliforms had a violation two years ago. The facility has been closed for a significant period of time and is no longer using chlorination. The violation is infrequent, and it is not expected that the concentration is elevated

in the influent, although the one influent sample on the Analysis Results Table was 347 CFU/100 mL which is greater than the 200 CFU/100 mL geometric limit in the warmer months. Because the basins are outdoors, and inactivity does not deter wildlife, reducing sampling frequency is appropriate. Fecal coliforms have a monthly average limit and the effluent limitation value changes by month and does not start and end on the quarters. One sample will be required per month. Additional samples may be performed by the permittee, if desired.

- 7. Thallium, acrylamide, benzo(a)anthracene, benzo(a)pyrene, 3,4-benzofluoranthene, benzo(k)fluoranthene, toxaphene, and total PCBs are new effluent limitations. These parameters are provided Schedules of Compliance which will require sufficient sampling in order to determine sample statistics for potential treatment, if a source cannot be eliminated. 2/month sampling will allow for at least 24 sample results in the first year of the SOC.
- 8. Effluent limitations for ammonia apply from May to October and November to April, inclusive. Since these months do not land at the start and end of quarters, effluent limitations will continue to apply monthly as 1/month.

The permittee requested several pollutants be provided a sampling waiver since the pollutants were rarely detected. The permittee referenced 40 CFR 122.44(a)(2)(i): "The Director may authorize a discharger subject to technology-based effluent limitations guidelines and standards in an NPDES permit to forego sampling of a pollutant found at 40 CFR Subchapter N of this chapter if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger."

The permittee has collected samples at Outfall 001 that demonstrate a significant majority, if not all, samples are nondetect, however the permittee has not demonstrated that the activities of the facility do not increase the pollutant levels, even if remaining still un-detected. Additionally, this regulation is in reference to facilities with an intake water source such as a surface water or groundwater well. At this landfill, the source is stormwater, which is void of pollutants, though it is acknowledged that uncontaminated stormwater may have a low pH due to a climatic shift towards acid rainwater. Elimination of an ELG-based parameter will not be considered at this time.

Sample Type

The Outfall 001 discharge is from an aeration and settling basin that utilizes retention time for treatment. Flow is induced by stormwater and is intermittent and variable (non-continuous). As such, all samples may be collected as grabs rather than 24-hour composites.

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. Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Thirty-Six (36) months after Permit Effective Date

				Monitoring Requirement				
Parameter	Mass Unit	ts (lbs/day)		Concentratio	ons (mg/L)		Minimum	Required
Farameter	Average	Daily	Instant.	Monthly	Daily	Instant.	Measurement	Sample
	Monthly	Maximum	Minimum	Average	Maximum	Maximum	Frequency	Туре
Flow (MGD)	Report	Report	xxx	XXX	XXX	XXX	2/month	Estimated
Total Suspended Solids	XXX	XXX	xxx	27.0	XXX	60.0	2/month	Grab
BOD-5	XXX	XXX	xxx	25.0	XXX	50.0	1/quarter	Grab
Ammonia-Nitrogen (May to Oct)	XXX	XXX	xxx	3.0	XXX	6.0	1/month	Grab
Ammonia-Nitrogen (Nov to Apr)	XXX	xxx	xxx	4.9	xxx	10.0	1/month	Grab
Cadmium, Total	XXX	XXX	xxx	0.005	xxx	0.01	2/month	Grab
Iron, Total	XXX	XXX	XXX	4.0	XXX	7.0	2/month	Grab
Iron, Dissolved	XXX	ххх	xxx	XXX	xxx	Report	1/quarter	Grab
Nickel, Total	XXX	XXX	xxx	0.35	xxx	0.70	1/6 months	Grab
Zinc, Total	XXX	XXX	xxx	0.11	XXX	0.20	1/quarter	Grab
Manganese, Total	XXX	ХХХ	xxx	1.0	XXX	2.0	2/month	Grab
Phenolics, Total (4AAP)	XXX	ХХХ	xxx	0.75	XXX	1.5	1/6 months	Grab
p-Cresol	XXX	XXX	xxx	0.014	XXX	0.025	1/quarter	Grab
a-Terpineol	XXX	XXX	xxx	0.016	XXX	0.033	1/quarter	Grab
Benzoic Acid	XXX	XXX	xxx	0.071	xxx	0.12	1/quarter	Grab
Phenol	XXX	XXX	xxx	0.015	xxx	0.026	2/month	Grab
Fecal Coliforms (No./100 mL) (May-Sept)	XXX	xxx	xxx	200	xxx	1000	1/month	Grab

		Monitoring Requirements						
Baramotor	Mass Unit	s (lbs/day)		Concentration	ons (mg/L)		Minimum	Required
Farameter	Average	Daily	Instant.	Monthly	Daily	Instant.	Measurement	Sample
	Monthly	Maximum	Minimum	Average	Maximum	Maximum	Frequency	Туре
Fecal Coliforms (No./100 mL)								
(Oct-Apr)	XXX	XXX	XXX	2000	XXX	10,000	1/month	Grab
рН	XXX	xxx	6.0	XXX	xxx	9.0	2/month	Grab
Arsenic, Total	XXX	xxx	ххх	XXX	xxx	Report	1/quarter	Grab
Barium, Total	XXX	xxx	ххх	XXX	XXX	Report	1/quarter	Grab
Boron, Total	XXX	xxx	ххх	XXX	xxx	Report	1/quarter	Grab
Chromium, Hexavalent	XXX	xxx	ххх	XXX	xxx	Report	1/quarter	Grab
Lead, Total	XXX	xxx	ХХХ	XXX	xxx	Report	1/quarter	Grab
Thallium, Total (ug/L)	XXX	xxx	XXX	Report	XXX	Report	2/month	Grab
Acrylamide (ug/L)	XXX	xxx	ххх	Report	xxx	Report	2/month	Grab
Benzo(a)Anthracene (ug/L)	XXX	xxx	xxx	Report	xxx	Report	2/month	Grab
Benzo(a)Pyrene (ug/L)	XXX	xxx	XXX	Report	xxx	Report	2/month	Grab
3,4-Benzofluoranthene (ug/L)	XXX	xxx	XXX	Report	xxx	Report	2/month	Grab
Benzo(k)Fluoranthene (ug/L)	XXX	XXX	xxx	Report	xxx	Report	2/month	Grab
Bis(2-Ethylhexyl)Phthalate (ug/L)	XXX	xxx	ххх	XXX	xxx	Report	1/quarter	Grab
PCBs, Total (ug/L)	XXX	xxx	xxx	Report	xxx	Report	2/month	Grab
Toxaphene (ug/L)	XXX	XXX	ххх	Report	xxx	Report	2/month	Grab

Compliance Sampling Location: End of Outfall Pipe

NPDES Permit No. PA0090301

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. Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Outfall 001, Effective Period: Thirty-Six (36) Months after Permit Effective Date through Permit Expiration Date

			Effluent I	Limitations			Monitoring Requirements		
Baramotor	Mass Unit	ts (Ibs/day)		Concentratio	ons (mg/L)		Minimum	Required	
Faranieter	Average	Daily	Instant.	Monthly	Daily	Instant.	Measurement	Sample	
	Monthly	Maximum	Minimum	Average	Maximum	Maximum	Frequency	Туре	
Flow (MGD)	Report	Report	xxx	XXX	xxx	ххх	2/month	Estimated	
Total Suspended Solids	XXX	ххх	XXX	27.0	ХХХ	60.0	2/month	Grab	
BOD-5	XXX	XXX	xxx	25.0	XXX	50.0	1/quarter	Grab	
Ammonia-Nitrogen (May to Oct)	XXX	ххх	xxx	3.0	xxx	6.0	1/month	Grab	
Ammonia-Nitrogen (Nov to Apr)	XXX	xxx	xxx	4.9	xxx	10.0	1/month	Grab	
Cadmium, Total (ug/L)	XXX	XXX	xxx	0.43	XXX	1.1	2/month	Grab	
Iron, Total	XXX	XXX	xxx	4.0	XXX	7.0	2/month	Grab	
Iron, Dissolved	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab	
Nickel, Total	XXX	XXX	XXX	0.35	XXX	0.70	1/6 months	Grab	
Zinc, Total	XXX	xxx	xxx	0.11	xxx	0.20	1/quarter	Grab	
Manganese, Total	XXX	xxx	xxx	1.0	xxx	2.0	2/month	Grab	
Phenolics, Total (4AAP)	XXX	XXX	xxx	0.75	xxx	1.5	1/6 months	Grab	
p-Cresol	XXX	XXX	xxx	0.014	xxx	0.025	1/quarter	Grab	
a-Terpineol	XXX	XXX	xxx	0.016	xxx	0.033	1/quarter	Grab	
Benzoic Acid	XXX	XXX	xxx	0.071	xxx	0.12	1/quarter	Grab	
Phenol	XXX	XXX	xxx	0.015	xxx	0.026	2/month	Grab	
Fecal Coliforms (No./100 mL) (May-Sept)	XXX	XXX	xxx	200	XXX	1000	1/month	Grab	
Fecal Coliforms (No./100 mL) (Oct-Apr)	XXX	XXX	XXX	2000	XXX	10,000	1/month	Grab	

			Effluent I	imitations			Monitoring Requirements	
Paramotor	Mass Unit	ts (Ibs/day)		Concentrati	ons (mg/L)		Minimum	Required
Falameter	Average Monthly	Daily Maximum	Instant. Minimum	Monthly Average	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type
рН	ххх	ххх	6.0	XXX	xxx	9.0	2/month	Grab
Arsenic, Total	ххх	ХХХ	xxx	XXX	ХХХ	Report	1/quarter	Grab
Barium, Total	ххх	ХХХ	XXX	XXX	XXX	Report	1/quarter	Grab
Boron, Total	ххх	ХХХ	xxx	XXX	XXX	Report	1/quarter	Grab
Chromium, Hexavalent	ххх	ХХХ	xxx	XXX	XXX	Report	1/quarter	Grab
Lead, Total	ххх	ХХХ	xxx	XXX	XXX	Report	1/quarter	Grab
Thallium, Total (ug/L)	ххх	ХХХ	xxx	0.38	XXX	0.95	2/month	Grab
Acrylamide (ug/L)	ххх	ХХХ	xxx	0.59	XXX	1.49	2/month	Grab
Benzo(a)Anthracene (ug/L)	ххх	ХХХ	xxx	0.008	XXX	0.021	2/month	Grab
Benzo(a)Pyrene (ug/L)	ххх	ХХХ	xxx	0.0008	XXX	0.002	2/month	Grab
3,4-Benzofluoranthene (ug/L)	ххх	ХХХ	xxx	0.008	XXX	0.021	2/month	Grab
Benzo(k)Fluoranthene (ug/L)	ххх	ххх	xxx	0.085	xxx	0.21	2/month	Grab
Bis(2-Ethylhexyl)Phthalate (ug/L)	ххх	ххх	xxx	XXX	XXX	Report	1/quarter	Grab
PCBs, Total (ug/L)	xxx	ххх	xxx	0.0005	XXX	0.001	2/month	Grab
Toxaphene (ug/L)	ххх	ххх	XXX	0.0003	XXX	0.0008	2/month	Grab

Compliance Sampling Location: End of Outfall Pipe

	Tools and References Used to Develop Permit
	Tavias Management Careadahaat (ass Attachment A)
	TOXICS Management Spreadsheet (see Attachment A)
	WOM for Windows Model (see Attachment C)
	PENTOXSD for Windows Model (see Attachment C)
	TPC Model Spreadshoet (see Attachment)
	Tomporature Model Spreadsheet (see Attachment)
	Temperature model Spreadsheet (see Attachment)
	Water Quality Toxics Management Strategy 361-0100-003 4/06
	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/07
	Policy for Permitting Surface Water Diversions, 362,2000-003, 3/08
	Policy for Conducting Technical Paviows of Minor NPDES Ponowal Applications, 362,2000-008, 11/06
	Tochnology Based Control Poquiroments for Water Treatment Plant Waster, 362,2183-003, 10/07
	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004.
	12/97.
	Pennsylvania CSO Policy, 385-2000-011, 9/08.
	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
\boxtimes	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
\boxtimes	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
	Design Stream Flows, 391-2000-023, 9/98.
	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
<u> Ц </u>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
	SOP: Establishing Effluent Limitations for Individual Industrial Permits (SOP No. BCW-PMT-032, Version 1.5) SOP: Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic
	Pollutants in NPDES Permits for Existing Dischargers (SOP No. BCW-PMT-037, Version 1.2)
	Other:

Appendix A Toxics Management Spreadsheet



Toxics Management Spreadsheet Version 1.1, October 2020

Discharge Information

Inst	tructions D	ischarge Stream												
Fac	ility: Sol	id Waste Disposal, I	nc.			N	PDES Per	mit No.:	PA0090	301		Outfall	No.: 001	
	·	• •				-								
Eva	luation Type:	Major Sewage /	Industr	ial Was	te	W	/astewater	Descrip	tion: Lar	ndfill Lea	nchate			
					Diecha	argo Ch	aractorie	tice						
	aine Flaur				Dische	Dar	tial Miv E	actore //			Com	olete Mi	v Timoe	(min)
	(MCD)*	Hardness (mg/l)*	pH (SU)*		Fai			- Mirsj	CDI	com	piece mit	x miles	(1111)
		100	-	7	AFU	-	LFL	THE	1	CKL	Q.	7-10		łh
	0.0144	100		1										
						0 if	left blank	0.5 if le	eft blank	() if left blan	k	1 if lef	t blank
	Disch	arge Pollutant	Units	Max D C	ischarge onc	Trib Conc	Stream Conc	Daily CV	Hourly CV	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
	Total Dissolve	ed Solids (PWS)	mg/L		396									
2	Chloride (PW	(S)	mg/L		52.3									
1 no	Bromide		mg/L		0.39									
5	Sulfate (PWS	i)	mg/L		11.3									
	Fluoride (PW	S)	mg/L	<	0.25									
	Total Aluminu	ım	µg/L		12									
	Total Antimor	ıy	µg/L	<	0.2									
	Total Arsenic		µg/L		2									
	Total Barium		µg/L		401									
	Total Berylliu	m	µg/L	<	0.1									
	Total Boron		µg/L		480									
	Total Cadmiu	m um (III)	µg/L	<	2									
	Hexavalent C	hromium	µg/L	-	5									
	Total Cobalt	momum	µg/L µg/l	_	0.7									
	Total Copper		µg/L µg/l	<	2									
2	Free Cyanide		ug/L		-		::: :::							
d d	Total Cvanide	2	ug/L		34									
8	Dissolved Iron	n	µg/L		70									
Ĩ	Total Iron		µg/L		2170									
	Total Lead		µg/L		0.6									
	Total Mangan	iese	µg/L		1280									
	Total Mercury	1	µg/L	<	0.04									
	Total Nickel		µg/L		6									
	Total Phenols	(Phenolics) (PWS)	µg/L		0.012									
	Total Seleniu	m	µg/L	<	5									
	Total Silver		µg/L	<	0.05									
	Total Thalliun	n	µg/L		2									
	Total ∠inc		µg/L		30									
<u> </u>	A oroloim	enum	µg/L	-	0.9									
	Acrolemide		µg/L	~	530									
	Acrylopitrile		µg/L	~	0.5									
	Benzene		µg/L	<	0.5									
	Bromoform		ug/L	<	0.5									
1			1975						-				-	

1	Carbon Tetrachloride	uall	-	0.5						
	Oblessharess	µy/L	_	0.5					 	
	Chioropenzene	µg/L	<	0.5					 	
	Chlorodibromomethane	µg/L		1.6						
	Chloroethane	µg/L	<	0.5						
	2-Chloroethyl Vinyl Ether	ua/l	<	0.5						
	Chloroform	ug/l		8.1						
	Disklasskassastkass	µg/L		0.1					 	
	Dichloropromomethane	µg/L	<	0.5						
	1,1-Dichloroethane	µg/L	<	0.5						
0	1,2-Dichloroethane	µg/L	<	0.5						
₽.	1.1-Dichloroethylene	ua/L	<	0.5						
0	1.2 Dichloropropage	ug/l	-	0.5						
ō	1,2-Dichloropropane	µy/L	~	0.5					 	
-	1,3-Dichloropropylene	µg/L	<	0.5					 	
	1,4-Dioxane	µg/L		1.8						
	Ethylbenzene	µg/L	<	0.5						
	Methyl Bromide	ua/L	<	0.5						
	Methyl Chloride	ug/l	-	0.5						
	Medityl Chloride	µy/L	<u> </u>	0.5					 	
	Methylene Chloride	µg/L	<	0.5						
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5						
	Tetrachloroethylene	µg/L	<	0.5						
	Toluene	ug/l	<	0.5						
	1.2 trans Disblarasthidana		-	0.5						
	1,2-trans-Dichloroeutylene	µy/L	<u> </u>	0.5					 	
	1,1,1-Trichloroethane	µg/L	<	0.5					 	
	1,1,2-Trichloroethane	µg/L	<	0.5						
	Trichloroethylene	µg/L	<	0.5						
	Vinyl Chloride	ua/l	<	0.5						
<u> </u>	2 Chloraphanol	µ9/2	-	0.0069						
	2-Childrophenoi	µg/L	· ·	0.0960					 	
	2,4-Dichlorophenol	µg/L	<	0.0872					 	
	2,4-Dimethylphenol	µg/L	<	0.465						
	4,6-Dinitro-o-Cresol	µg/L	<	0.126						
4	2 4-Dinitrophenol	ua/l	<	3 19						
9	2 Nitrophonol	ug/L		0.0543						
ē	2-Nitrophenol	µy/L	<u> </u>	0.0343					 	
G	4-Nitrophenol	µg/L	<	0.0436						
	p-Chloro-m-Cresol	µg/L	<	0.105						
	Pentachlorophenol	µg/L	<	0.111						
	Phenol	ua/l	<	0.0479						
	2.4.6 Trichlorophanol	ug/L	-	0.105						
<u> </u>	2,4,0-menorophenor	µy/L	<u> </u>	0.105					 	
	Acenaphthene	µg/L	<	0.11						
	Acenaphthylene	µg/L	<	0.0989						
	Anthracene	µg/L	<	0.0968						
	Benzidine	ua/L	<	5.32						
	Benzo(a)Anthracene	10/		0.167						
	Penze(a)Durca a	pg/L		0.107						
	benzo(a)Pyrene	µg/L		0.453						
	3,4-Benzofluoranthene	µg/L		0.474						
	Benzo(ghi)Perylene	µg/L		0.263						
	Benzo(k)Fluoranthene	µa/L		0.516						
	Bis(2-Chloroethovy)Methane	10/	-	0.0904						
	Bis/2 Chlorosthul)Ethor	pg/L		0.0004						
	Dis(2-Chioroeutyr)Ettier	µg/L	<	0.063						
1	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.0947						
1	Bis(2-Ethylhexyl)Phthalate	µg/L		1.05						
	4-Bromophenyl Phenyl Ether	µg/L	<	0.115						
	Butyl Benzyl Phthalate	ug/l	<	0.0702						
	2 Chloronophtholono	ug/L		0.0069						
1		µg/L	<	0.0966						
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.101						
1	Chrysene	µg/L		0.137						
1	Dibenzo(a,h)Anthrancene	µg/L	<	0.0564						
1	1.2-Dichlorobenzene	ug/L	<	0.5						
1	1.3 Dichlorohenzene	ug/L		0.5						
1	1,3-Dichlorobenzene	µg/L	<	0.5						
5	1,4-Dichlorobenzene	µg/L	<	0.5						
d d	3,3-Dichlorobenzidine	µg/L	<	0.148						
2	Diethyl Phthalate	µg/L		0.138						
G	Dimethyl Phthalate	uo/I		0.227						
	Di-n-Butyl Phthalate	µg/L		2.99						
	2.4 Disitestaluana	pg/L		0.0004						
1	2,4-Dinitrotoluene	µg/L	<	0.0894						

	2,6-Dinitrotoluene	µg/L	<	0.0117					
	Di-n-Octyl Phthalate	µg/L		0.915					
	1.2-Diphenylhydrazine	µg/L	<	0.126					
	Fluoranthene	ug/L	<	0.0947					
	Fluorene	ug/L	<	0.115					
	Hexachlorobenzene	uo/l	<	0.0936					
	Hexachlorobutadiene	ug/L	~	0.0872					
	Hexachlorocyclonentadiene	µg/L	-	0.0072					
	Hexachlorocyclopentadiene	µg/L	~	0.0479					
	Hexachioroethane	µg/L	<	0.0734					
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.0617		 			
	Isophorone	µg/L		0.104					
	Naphthalene	µg/L	<	0.0681					
	Nitrobenzene	µg/L	<	0.066					
	n-Nitrosodimethylamine	µg/L	<	0.0702					
	n-Nitrosodi-n-Propylamine	µg/L	<	0.207					
	n-Nitrosodiphenylamine	µg/L	<	0.223					
	Phenanthrene	µg/L	<	0.105					
	Pyrene	µg/L		0.166					
	1.2.4-Trichlorobenzene	µg/L	<	0.0989					
	Aldrin	ug/L	<	0.02					
	alpha-BHC	ug/l	~	0.02					
	hata BHC	ug/L	-	0.02					
	aamma BHC	µy/L	-	0.02					
	gamma-bhc	µg/L	~	0.02					
	delta BHC	µg/L	<	0.02					
	Chlordane	µg/L	<	0.51					
	4,4-DDT	µg/L	<	0.02					
	4,4-DDE	µg/L	<	0.02					
	4,4-DDD	µg/L	<	0.02					
	Dieldrin	µg/L	<	0.02					
	alpha-Endosulfan	µg/L	<	0.02					
	beta-Endosulfan	µg/L	<	0.02					
9	Endosulfan Sulfate	µq/L	<	0.02					
Ľ,	Endrin	ug/L	<	0.02					
2	Endrin Aldehyde	uo/l	<	0.02					
0	Hentschlor	ug/L	-	0.02					
	Heptachior Heptachior Enovide	µy/L	-	0.02					
	neptachior Epoxide	µg/L	<	0.02					
	PCB-1016	µg/L	<	0.5					
	PCB-1221	µg/L	<	0.5					
	PCB-1232	µg/L	<	0.5					
	PCB-1242	µg/L	<	0.5					
	PCB-1248	µg/L	<	0.5					
	PCB-1254	µg/L	<	0.5					
	PCB-1260	µg/L	<	0.5					
	PCBs, Total	µg/L	<						
	Toxaphene	ug/L	<	0.53					
	2.3.7.8-TCDD	ng/L	<						
	Gross Alpha	pCi/l							
	Total Beta	pCi/L	~						
2	Redium 226/228	pCi/L	-						
ž	Tatal Streetium	point	-						
ŏ	Total Strontium	µg/L	<			 			
-	Total Uranium	µg/L	<						
	Osmotic Pressure	mOs/kg							
					provident de la constante de la				

Toxics Management Spreadsheet Version 1.1, October 2020



Stream / Surface Water Information

Solid Waste Disposal, Inc., NPDES Permit No. PA0090301, Outfall 001

Instructions	Discharge	Stream			
Receiving Su	rface Water N	lame:	No. Reaches to Model:	1	Statewide Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi ²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	033542	0.3	855	1.49	0.035		Yes
End of Reach 1	033542	0	800	1.57	0.0675904	0	Yes

O Great Lakes Criteria ORSANCO Criteria

Q 7-10

Location	DMI	LFY	Flow	(cfs)	W/D	Width	Depth	Velocit	Timo	Tributa	iry	Strear	n	Analys	sis
Location	I NIVII	(cfs/mi ²)*	Stream	Tributary	Ratio	(ft)	(ft)	y (fps)	(days)	Hardness	pН	Hardness*	pH*	Hardness	pН
Point of Discharge	0.3	0.1	0.0126174									100	7		
End of Reach 1	0	0.1	0.0088535												

Q_h

Location	DMI	LFY	Flow	ı (cfs)	W/D	Width	Depth	Velocit	Time	Tributary		Stream	n	Analys	sis
Location	TXIVII	(cfs/mi ²)	Stream	Tributary	Ratio	(ft)	(ft)	y (fps)	(days)	Hardness	pН	Hardness	pН	Hardness	pН
Point of Discharge	0.3														
End of Reach 1	0														

Toxics Management Spreadsheet Version 1.1, October 2020

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Model Results

Solid Waste Disposal, Inc., NPDES Permit No. PA0090301, Outfall 001

Instructions Results	RETURN	TO INPU	TS S	SAVE AS	PDF	PRINT	r 🔵 🖲 A	II () Inputs () Results () Limits						
] Hydrodynamics														
✓ Wasteload Allocations														
Image: AFC CCT (min): 0.063 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00														
Pollutants Conc Stream Trib Conc Fate WQC WQ Obj WLA (µg/L) Comments														
	(ug/L)	CV	(µg/L)	Coef	(µg/L)	(µg/L)								
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A							
Chloride (PWS)	0	0		0	N/A	N/A	N/A							
Sulfate (PWS)	0	0		0	N/A	N/A	N/A							
Fluoride (PWS)	0	0		0	N/A	N/A	N/A							
Total Aluminum	0	0		0	750	750	1,175							
Total Antimony	0	0		0	1,100	1,100	1,723							
Total Arsenic	0	0		0	340	340	533	Chem Translator of 1 applied						
Total Barium	0	0		0	21,000	21,000	32,894							
Total Boron	0	0		0	8,100	8,100	12,688							
Total Cadmium	0	0		0	2.014	2.13	3.34	Chem Translator of 0.944 applied						
Total Chromium (III)	0	0		0	569.763	1,803	2,824	Chem Translator of 0.316 applied						
Hexavalent Chromium	0	0		0	16	16.3	25.5	Chem Translator of 0.982 applied						
Total Cobalt	0	0		0	95	95.0	149							
Total Copper	0	0		0	13.439	14.0	21.9	Chem Translator of 0.96 applied						
Dissolved Iron	0	0		0	N/A	N/A	N/A							
Total Iron	0	0		0	N/A	N/A	N/A							
Total Lead	0	0		0	64.581	81.6	128	Chem Translator of 0.791 applied						
Total Manganese	0	0		0	N/A	N/A	N/A							
Total Mercury	0	0		0	1.400	1.65	2.58	Chem Translator of 0.85 applied						
Total Nickel	0	0		0	468.236	469	735	Chem Translator of 0.998 applied						
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A							
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied						
Total Silver	0	0		0	3.217	3.78	5.93	Chem Translator of 0.85 applied						
Total Thallium	0	0		0	65	65.0	102							
Total Zinc	0	0		0	117.180	120	188	Chem Translator of 0.978 applied						
Acrolein	0	0		0	3	3.0	4.7							

Acrylamide	0	0	0	N/A	N/A	N/A	
Acrylonitrile	0	0	0	650	650	1,018	
Benzene	0	0	0	640	640	1,002	
Bromoform	0	0	0	1,800	1,800	2,820	
Carbon Tetrachloride	0	0	0	2,800	2,800	4,386	
Chlorobenzene	0	0	0	1,200	1,200	1,880	
Chlorodibromomethane	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	18,000	18,000	28,195	
Chloroform	0	0	0	1,900	1,900	2,976	
Dichlorobromomethane	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	15,000	15,000	23,496	
1,1-Dichloroethylene	0	0	0	7,500	7,500	11,748	
1,2-Dichloropropane	0	0	0	11,000	11,000	17,230	
1,3-Dichloropropylene	0	0	0	310	310	486	
Ethylbenzene	0	0	0	2,900	2,900	4,543	
Methyl Bromide	0	0	0	550	550	862	
Methyl Chloride	0	0	0	28,000	28,000	43,859	
Methylene Chloride	0	0	0	12,000	12,000	18,797	
1,1,2,2-Tetrachloroethane	0	0	0	1,000	1,000	1,566	
Tetrachloroethylene	0	0	0	700	700	1,096	
Toluene	0	0	0	1,700	1,700	2,663	
1,2-trans-Dichloroethylene	0	0	0	6,800	6,800	10,651	
1,1,1-Trichloroethane	0	0	0	3,000	3,000	4,699	
1,1,2-Trichloroethane	0	0	0	3,400	3,400	5,326	
Trichloroethylene	0	0	0	2,300	2,300	3,603	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0	560	560	877	
2,4-Dichlorophenol	0	0	0	1,700	1,700	2,663	
2,4-Dimethylphenol	0	0	0	660	660	1,034	
4,6-Dinitro-o-Cresol	0	0	0	80	80.0	125	
2,4-Dinitrophenol	0	0	0	660	660	1,034	
2-Nitrophenol	0	0	0	8,000	8,000	12,531	
4-Nitrophenol	0	0	0	2,300	2,300	3,603	
p-Chloro-m-Cresol	0	0	0	160	160	251	
Pentachlorophenol	0	0	0	8.723	8.72	13.7	
Phenol	0	0	0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0	460	460	721	
Acenaphthene	0	0	0	83	83.0	130	
Anthracene	0	0	0	N/A	N/A	N/A	
Benzidine	0	0	0	300	300	470	
Benzo(a)Anthracene	0	0	0	0.5	0.5	0.78	
Benzo(a)Pyrene	0	0	0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	0	30,000	30,000	46,992	
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	0	4,500	4,500	7,049	
4-Bromophenyl Phenyl Ether	0	0	0	270	270	423	

Dut d Danard Dhith alata	0	0		0	140	140	040	1
Dutyi Benzyi Pritialate	0	0		0	140	140	219	
2-Chioronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,n)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	1,284	
1,3-Dichlorobenzene	0	0		0	350	350	548	
1,4-Dichlorobenzene	0	0		0	730	730	1,143	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	6,266	
Dimethyl Phthalate	0	0		0	2,500	2,500	3,916	
Di-n-Butyl Phthalate	0	0		0	110	110	172	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	2,506	
2,6-Dinitrotoluene	0	0		0	990	990	1,551	
1,2-Diphenylhydrazine	0	0		0	15	15.0	23.5	
Fluoranthene	0	0		0	200	200	313	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	15.7	
Hexachlorocyclopentadiene	0	0		0	5	5.0	7.83	
Hexachloroethane	0	0		0	60	60.0	94.0	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	15,664	
Naphthalene	0	0		0	140	140	219	
Nitrobenzene	0	0		0	4.000	4.000	6,266	
n-Nitrosodimethylamine	0	0		0	17.000	17.000	26,629	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	470	
Phenanthrene	0	0		0	5	50	7.83	
Pyrene	0	0		0	N/A	N/A	N/A	
1 2 4-Trichlorobenzene	0	0		0	130	130	204	
Aldrin	0	0	-	0	3	3.0	47	
alpha BHC	0			0	N/A	N/A		
beta BHC	0			0	N/A	N/A	N/A	
dommo BHC	0			0	0.05	0.05	1.40	
Ghlordana	0	0		0	0.95	0.95	1.43	
	0	0		0	2.4	2.4	3.70	
4,4-DDT	0	0		0	1.1	1.1	1.72	
4,4-DDE	0	0		0	1.1	1.1	1.72	
4,4-DDD	0	0		0	1.1	1.1	1.72	
Dielarin	0	0		0	0.24	0.24	0.38	
aipna-Endosultan	U	U		0	0.22	0.22	0.34	
beta-Endosulfan	0	0		0	0.22	0.22	0.34	
Endrin	0	0	-	0	0.086	0.086	0.13	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	0.81	
Heptachlor Epoxide	0	0		0	0.5	0.5	0.78	
_	I 0		1	0	073	073	1 1 1 4	

NPDES Permit No. PA0090301

NPDES Permit Fact Sheet Solid Waste Disposal Inc. Landfill

Pollutants	Conc	Stream	Trib Conc	Fate	WQC	WQ Obj	WIA(uq/I)	Comments
	(ug/L)	CV	(µg/L)	Coef	(µg/L)	(µg/L)	(µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	345	
Total Arsenic	0	0		0	150	150	235	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	6,422	
Total Boron	0	0		0	1,600	1,600	2,506	
Total Cadmium	0	0		0	0.246	0.27	0.42	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	135	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	16.3	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	29.8	
Total Copper	0	0		0	8.956	9.33	14.6	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	2,350	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	4.98	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1.42	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	81.7	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	7.81	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	20.4	
Total Zinc	0	0		0	118.139	120	188	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	4.7	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	204	
Benzene	0	0		0	130	130	204	
Bromoform	0	0		0	370	370	580	
Carbon Tetrachloride	0	0		0	560	560	877	
Chlorobenzene	0	0		0	240	240	376	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	5,482	
Chloroform	0	0		0	390	390	611	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	4,856	
1,1-Dichloroethylene	0	0		0	1,500	1,500	2,350	
1,2-Dichloropropane	0	0		0	2,200	2,200	3,446	
1,3-Dichloropropylene	0	0		0	61	61.0	95.6	
Ethylbenzene	0	0		0	580	580	909	
Methyl Bromide	0	0		0	110	110	172	

Methyl Chloride	0	0	0	5,500	5,500	8,615	
Methylene Chloride	0	0	0	2,400	2,400	3,759	
1,1,2,2-Tetrachloroethane	0	0	0	210	210	329	
Tetrachloroethylene	0	0	0	140	140	219	
Toluene	0	0	0	330	330	517	
1,2-trans-Dichloroethylene	0	0	0	1,400	1,400	2,193	
1,1,1-Trichloroethane	0	0	0	610	610	956	
1,1,2-Trichloroethane	0	0	0	680	680	1,065	
Trichloroethylene	0	0	0	450	450	705	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0	110	110	172	
2,4-Dichlorophenol	0	0	0	340	340	533	
2,4-Dimethylphenol	0	0	0	130	130	204	
4,6-Dinitro-o-Cresol	0	0	0	16	16.0	25.1	
2,4-Dinitrophenol	0	0	0	130	130	204	
2-Nitrophenol	0	0	0	1,600	1,600	2,506	
4-Nitrophenol	0	0	0	470	470	736	
p-Chloro-m-Cresol	0	0	0	30	30.0	47.0	
Pentachlorophenol	0	0	0	6.693	6.69	10.5	
Phenol	0	0	0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0	91	91.0	143	
Acenaphthene	0	0	0	17	17.0	26.6	
Anthracene	0	0	0	N/A	N/A	N/A	
Benzidine	0	0	0	59	59.0	92.4	
Benzo(a)Anthracene	0	0	0	0.1	0.1	0.16	
Benzo(a)Pyrene	0	0	0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	0	6,000	6,000	9,398	
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	0	910	910	1,425	
4-Bromophenyl Phenyl Ether	0	0	0	54	54.0	84.6	
Butyl Benzyl Phthalate	0	0	0	35	35.0	54.8	
2-Chloronaphthalene	0	0	0	N/A	N/A	N/A	
Chrysene	0	0	0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0	0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0	0	160	160	251	
1,3-Dichlorobenzene	0	0	0	69	69.0	108	
1,4-Dichlorobenzene	0	0	0	150	150	235	
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A	
Diethyl Phthalate	0	0	0	800	800	1,253	
Dimethyl Phthalate	0	0	0	500	500	783	
Di-n-Butyl Phthalate	0	0	0	21	21.0	32.9	
2,4-Dinitrotoluene	0	0	0	320	320	501	
2,6-Dinitrotoluene	0	0	0	200	200	313	

1,2-Diphenylhydrazine	0	0		0	3	3.0	4.7	
Fluoranthene	0	0		0	40	40.0	62.7	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	3.13	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.57	
Hexachloroethane	0	0		0	12	12.0	18.8	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	3,289	
Naphthalene	0	0		0	43	43.0	67.4	
Nitrobenzene	0	0		0	810	810	1,269	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	5,326	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	92.4	
Phenanthrene	0	0		0	1	1.0	1.57	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	40.7	
Aldrin	0	0		0	0.1	0.1	0.16	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0043	0.004	0.007	
4,4-DDT	0	0		0	0.001	0.001	0.002	
4,4-DDE	0	0		0	0.001	0.001	0.002	
4,4-DDD	0	0		0	0.001	0.001	0.002	
Dieldrin	0	0		0	0.056	0.056	0.088	
alpha-Endosulfan	0	0		0	0.056	0.056	0.088	
beta-Endosulfan	0	0		0	0.056	0.056	0.088	
Endrin	0	0		0	0.036	0.036	0.056	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.006	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.006	
Toxaphene	0	0		0	0.0002	0.0002	0.0003	
☑ THH CC [*]	T (min): 0.0	063 1	The PMF:	1	Ana	alysis Hardne	ess (mg/l):	N/A Analysis pH: N/A PWS PMF: 1
Dellutente	Stream	Stream	Trib Conc	Fate	WQC	WQ Obj		Commonto
Poliutants	(ug/L)	CV	(µg/L)	Coef	(µg/L)	(µg/L)	VVLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	8.77	
Total Arsenic	0	0		0	10	10.0	15.7	

Total Barium	0	0	0	2,400	2,400	3,759	
Total Boron	0	0	0	3,100	3,100	4,856	
Total Cadmium	0	0	0	N/A	N/A	N/A	
Total Chromium (III)	0	0	0	N/A	N/A	N/A	
Hexavalent Chromium	0	0	0	N/A	N/A	N/A	
Total Cobalt	0	0	0	N/A	N/A	N/A	
Total Copper	0	0	0	N/A	N/A	N/A	
Dissolved Iron	0	0	0	300	300	470	
Total Iron	0	0	0	N/A	N/A	N/A	
Total Lead	0	0	0	N/A	N/A	N/A	
Total Manganese	0	0	0	1,000	1,000	1,566	
Total Mercury	0	0	0	0.050	0.05	0.078	
Total Nickel	0	0	0	610	610	956	
Total Phenols (Phenolics) (PWS)	0	0	0	5	5.0	N/A	
Total Selenium	0	0	0	N/A	N/A	N/A	
Total Silver	0	0	0	N/A	N/A	N/A	
Total Thallium	0	0	0	0.24	0.24	0.38	
Total Zinc	0	0	0	N/A	N/A	N/A	
Acrolein	0	0	0	6	6.0	9.4	
Acrylamide	0	0	0	N/A	N/A	N/A	
Acrylonitrile	0	0	0	N/A	N/A	N/A	
Benzene	0	0	0	N/A	N/A	N/A	
Bromoform	0	0	0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0	0	N/A	N/A	N/A	
Chlorobenzene	0	0	0	130	130	204	
Chlorodibromomethane	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	N/A	N/A	N/A	
Chloroform	0	0	0	N/A	N/A	N/A	
Dichlorobromomethane	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0	0	33	33.0	51.7	
1,2-Dichloropropane	0	0	0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0	0	N/A	N/A	N/A	
Ethylbenzene	0	0	0	530	530	830	
Methyl Bromide	0	0	0	47	47.0	73.6	
Methyl Chloride	0	0	0	N/A	N/A	N/A	
Methylene Chloride	0	0	0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0	0	N/A	N/A	N/A	
Tetrachloroethylene	0	0	0	N/A	N/A	N/A	
Toluene	0	0	0	1,300	1,300	2,036	
1,2-trans-Dichloroethylene	0	0	0	140	140	219	
1,1,1-Trichloroethane	0	0	0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0	0	N/A	N/A	N/A	
Trichloroethylene	0	0	0	N/A	N/A	N/A	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	

2-Chlorophenol	0	0	0	81	81.0	127	
2,4-Dichlorophenol	0	0	0	77	77.0	121	
2,4-Dimethylphenol	0	0	0	380	380	595	
4,6-Dinitro-o-Cresol	0	0	0	13	13.0	20.4	
2,4-Dinitrophenol	0	0	0	69	69.0	108	
2-Nitrophenol	0	0	0	N/A	N/A	N/A	
4-Nitrophenol	0	0	0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0	0	N/A	N/A	N/A	
Pentachlorophenol	0	0	0	N/A	N/A	N/A	
Phenol	0	0	0	10,400	10,400	16,290	
2,4,6-Trichlorophenol	0	0	0	N/A	N/A	N/A	
Acenaphthene	0	0	0	670	670	1,049	
Anthracene	0	0	0	8,300	8,300	13,001	
Benzidine	0	0	0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0	0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0	0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0	0	1,400	1,400	2,193	
Bis(2-Ethylhexyl)Phthalate	0	0	0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0	0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0	0	150	150	235	
2-Chloronaphthalene	0	0	0	1,000	1,000	1,566	
Chrysene	0	0	0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0	0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0	0	420	420	658	
1,3-Dichlorobenzene	0	0	0	420	420	658	
1,4-Dichlorobenzene	0	0	0	420	420	658	
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A	
Diethyl Phthalate	0	0	0	17,000	17,000	26,629	
Dimethyl Phthalate	0	0	0	270,000	270,000	422,926	
Di-n-Butyl Phthalate	0	0	0	2,000	2,000	3,133	
2,4-Dinitrotoluene	0	0	0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0	0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0	0	N/A	N/A	N/A	
Fluoranthene	0	0	0	130	130	204	
Fluorene	0	0	0	1,100	1,100	1,723	
Hexachlorobenzene	0	0	0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0	0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0	0	40	40.0	62.7	
Hexachloroethane	0	0	0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0	0	0.0038	0.004	0.006	
Isophorone	0	0	0	35	35.0	54.8	
Naphthalene	0	0	0	N/A	N/A	N/A	

Nitobenzene 0 0 10 17 17.0 28.6 n-Nitosod-n-Programme 0 0 NA N/A N/A N/A n-Nitosod-n-Programme 0 0 N/A N/A N/A N/A Phrenathrene 0 0 N/A N/A N/A N/A Pyrene 0 0 0 N/A N/A N/A adrin 0 0 0 0 35 35.0 54.8 adrin 0 0 0 N/A N/A N/A adrin 0 0 0 N/A N/A N/A adrin 0 0 0 0.098 0.98 0.15 Chordane 0 0 0 0 0.14 N/A N/A 4.4.0DE 0 0 0 0 0.22 0.71 bektrin 0 0 0 0.22 0.71									
n-Nitrosodimethydanine 0 0 NA NA NA NA n-Nitrosodiphenydanine 0 0 NA NA NA NA n-Nitrosodiphenydanine 0 0 NA NA NA NA Pyrene 0 0 NA NA NA NA 12,4-Trichlorobezene 0 0 NA NA NA NA alpha-BHC 0 0 NA NA NA NA gamma-BHC 0 0 NA NA NA NA gamma-BHC 0 0 0 NA NA NA 4,4-DDT 0 0 0 NA NA NA 4,4-DDD 0 0 0 NA NA NA alpha-Endosulfan 0 0 0 0 0 0 0 deidran 0 0 0 0 0 0 0 <td< td=""><td>Nitrobenzene</td><td>0</td><td>0</td><td></td><td>0</td><td>17</td><td>17.0</td><td>26.6</td><td></td></td<>	Nitrobenzene	0	0		0	17	17.0	26.6	
n-Nitrosodi-n-Programme 0 0 NA NA NA NA Phenanthrene 0 0 NA NA NA NA Pyrene 0 0 NA NA NA NA Atin 0 0 0 35 35.0 56.8 - Atin 0 0 0 NA NA NA NA Atin 0 0 0 NA NA NA NA Atin 0 0 0 NA NA NA NA Atin 0 0 0 0.089 0.068 0.15 - Chordane 0 0 0 0.089 0.089 0.15 - Chordane 0 0 0 NA NA NA NA 4.4.DDE 0 0 0 0.62 62.0 97.1 - Endrin 0 0 <t< td=""><td>n-Nitrosodimethylamine</td><td>0</td><td>0</td><td></td><td>0</td><td>N/A</td><td>N/A</td><td>N/A</td><td></td></t<>	n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodighenydanine 0 0 0 NA N/A N/A N/A Pyrene 0 0 0 0 830 830 1300 12,4-Trichordenzene 0 0 0 0 35 35 54 830 Adam 0 0 0 0 35 35 54 830 Adam 0 0 0 N/A N/A N/A N/A alpha-BHC 0 0 0 N/A N/A N/A N/A gamma-BHC 0 0 0 N/A N/A N/A N/A 4,4-DDT 0 0 0 N/A N/A N/A N/A 4,4-DDD 0 0 0 N/A N/A N/A N/A alpha-Endosulfan 0 0 0 0.62 62.0 97.1 beta-Endosulfan 0 0 0 0.059 0.069	n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene 0 0 NA NA NA Pyrene 0 0 330 1300 1300 1,2,4-Trichlorobezene 0 0 35 35.0 54.8 Aldrin 0 0 0 35 35.0 54.8 Aldrin 0 0 0 N/A N/A N/A alpha-BHC 0 0 0 N/A N/A N/A gamma-BHC 0 0 0 N/A N/A N/A gamma-BHC 0 0 0 N/A N/A N/A 4,4-DDE 0 0 0 N/A N/A N/A 4,4-DDE 0 0 0 N/A N/A N/A Bieldrin 0 0 0 0 0 0 0 Endran 0 0 0 0 0 0 0 0 0 Biehdrain <t< td=""><td>n-Nitrosodiphenylamine</td><td>0</td><td>0</td><td></td><td>0</td><td>N/A</td><td>N/A</td><td>N/A</td><td></td></t<>	n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Pyrene 0 0 830 830 1300 12,4-Trichorobenzene 0 0 35 350 54.8 Aldrin 0 0 0 35 350 54.8 Aldrin 0 0 0 N/A N/A N/A N/A alpha-BHC 0 0 0 N/A N/A N/A N/A gamma-BHC 0 0 0 N/A N/A N/A N/A 4/4-DDT 0 0 0 N/A N/A N/A N/A 4/4-DDD 0 0 0 N/A N/A N/A 4/4-DDD 0 0 0 N/A N/A N/A alpha-Endosuffan 0	Phenanthrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene 0 0 35 35.0 56.4 Aldrin 0 0 NA NA NA NA alpha.5HC 0 0 NA NA NA NA beta.6HC 0 0 NA NA NA NA gamma.3HC 0 0 0.0 NA NA NA 4.4.4D0T 0 0 0.0 NA NA NA 4.4.4DDE 0 0 0 NA NA NA alpha-Endosulfan 0 0 NA NA NA alpha-Endosulfan 0 0 0 NA NA alpha-Endosulfan 0 0 0.22 0.29 0.45 Endm 0 0 0.22 0.29 0.45 Endm 0 0 0 0.29 0.45 Endm 0 0 0 0.00028 0.0003 0.0004 <td>Pyrene</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>830</td> <td>830</td> <td>1,300</td> <td></td>	Pyrene	0	0		0	830	830	1,300	
Addin 0 0 NA NA NA NA alpha-BHC 0 0 0 NA NA NA NA gamma-BHC 0 0 0 0.098 0.098 0.15 Chlordane 0 0 0 0.088 0.15 Chlordane 0 0 0.014 N/A N/A 4,4-DDT 0 0 0.014 N/A N/A 4,4-DDD 0 0 0.014 N/A N/A 4,4-DDD 0 0 0.014 N/A N/A Diedrin 0 0 0.029 0.29 97.1 Deta-Endosulfan 0 0 0.055 0.059 0.092 Endrin 0 0 0.055 0.059 0.092 Endrin 0 0 0 0.0003 0.0004 Heptachor 0 0 0 0.0003 0.0004 Toxaphene	1,2,4-Trichlorobenzene	0	0		0	35	35.0	54.8	
alpha-BHC 0 NA NA NA NA beta-BHC 0 0 0 NA NA NA gamma-BHC 0 0 0 0.098 0.15	Aldrin	0	0		0	N/A	N/A	N/A	
beta-BHC 0 NA NA NA NA gamma-BHC 0 0 0 0.098 0.15 Chlordane 0 0 0 0.098 0.15 Chlordane 0 0 0 N/A N/A N/A 4,4-DDT 0 0 0 N/A N/A N/A 4,4-DDD 0 0 0 N/A N/A N/A 4,4-DDD 0 0 0 N/A N/A N/A alpha-Endosulfan 0 0 0 0.42 62.0 97.1 beta-Endosulfan 0 0 0 0.29 0.29 0.45 Heptachlor 0 0 0 0.0028 0.0004 0 0.004 V/A N/A N/A N/A N/A N/A Heptachlor Cort (min: Otz5 PMF: 1 Analysis Hardness (mg/): N/A M/A Total Dissolv	alpha-BHC	0	0		0	N/A	N/A	N/A	
gamma_BHC 0 0 0.098 0.098 0.015 Chlordane 0 0 N/A N/A N/A N/A 4,4-DDT 0 0 0 N/A N/A N/A 4,4-DDE 0 0 0 N/A N/A N/A 4,4-DDE 0 0 0 N/A N/A N/A alpha-Endosulfan 0 0 0 0 A N/A N/A alpha-Endosulfan 0 0 0 62 62.0 97.1 beta-Endosulfan 0 0 0 0.29 0.45 Endrin 0 0 0 0.29 0.29 0.45 Heptachlor 0 0 0 0.0028 0.0003 0.0004 Toxaphene 0 0 0 0.0028 0.0003 0.0004 Chlorde (PWS) 0 0 0 0 <	beta-BHC	0	0		0	N/A	N/A	N/A	
Chlordane 0 0 NA NA NA NA 4,4-DDT 0 0 0 N/A N/A N/A N/A 4,4-DDE 0 0 0 N/A N/A N/A N/A 4,4-DDD 0 0 0 N/A N/A N/A N/A 4,4-DDD 0 0 0 N/A N/A N/A N/A alpha-Endosulfan 0 0 0 62 62.0 97.1 1 beta-Endosulfan 0 0 0 0.29 0.29 0.45 1 Heptachlor 0 0 0 0.00028 0.0003 0.0004 1 <td>gamma-BHC</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>0.098</td> <td>0.098</td> <td>0.15</td> <td></td>	gamma-BHC	0	0		0	0.098	0.098	0.15	
4.4-DDT 0 0 NA NA NA NA 4.4-DDE 0 0 0 N/A N/A N/A N/A 4.4-DDD 0 0 0 N/A N/A N/A N/A Diektin 0 0 0 N/A N/A N/A N/A alpha-Endosulfan 0 0 0 62 62.0 97.1	Chlordane	0	0		0	N/A	N/A	N/A	
4.4-DDE 0 0 N/A N/A N/A 4,4-DDD 0 0 0 N/A N/A N/A alpha-Endosulfan 0 0 0 N/A N/A N/A alpha-Endosulfan 0 0 0 62 62.0 97.1 Endrin 0 0 0 0.62 62.0 97.1 Endrin 0 0 0 0.059 0.059 0.092 Endrin 0 0 0 0.029 0.29 0.45 Heptachlor 0 0 0 0.00028 0.0003 0.0004 Toxaphene 0 0 0 0.00028 0.0003 0.0004 CCRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Total Dissolved Solids (PWS) 0 0 N/A N/A N/A N/A Choinde (PWS) 0 0 N/A	4,4-DDT	0	0		0	N/A	N/A	N/A	
4,4-DDD 0 0 N/A N/A N/A N/A Dieldrin 0 0 0 N/A N/A N/A N/A alpha-Endosulfan 0 0 0 62 62.0 97.1 beta-Endosulfan 0 0 0 62 62.0 97.1 Endrin 0 0 0 0.059 0.092 Endrin Aldehyde 0 0 0 0.29 0.29 0.45 Heptachlor Epoxide 0 0 0 N/A N/A N/A Toxaphene 0 0 0 N/A N/A N/A Pollutants Stream Trib Conc Fate WQC WQC bi WLA (µg/L) Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A<	4,4-DDE	0	0		0	N/A	N/A	N/A	
Dieldrin 0 0 N/A N/A N/A N/A alpha-Endosulfan 0 0 62 62.0 97.1 Endrin 0 0 0 62 62.0 97.1 Endrin 0 0 0 0.059 0.059 0.902 Endrin N/A N/A N/A N/A N/A N/A Heptachlor 0 0 0 0.79 0.45 0.45 Heptachlor 0 0 0 N/A N/A N/A N/A Toxaphene 0 0 0 0.0003 0.0004 0.0004 Z CRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Ghinde (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0	4,4-DDD	0	0		0	N/A	N/A	N/A	
alpha-Endosulfan 0 0 62 62.0 97.1 beta-Endosulfan 0 0 62 62.0 97.1 Endrin 0 0 0 62.0 97.1 Endrin 0 0 0.059 0.059 0.92 Endrin Aldehyde 0 0 0.29 0.45 Heptachlor 0 0 0 N/A N/A Heptachlor 0 0 0 0.45 Toxaphene 0 0 0 0.00028 0.0003 0.0004 // CRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Total Dissolved Solids (PWS) 0 0 N/A N/A N/A N/A Gender (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0	Dieldrin	0	0		0	N/A	N/A	N/A	
beta-Endosulfan 0 0 62 62.0 97.1 Endrin 0 0 0.059 0.059 0.092 Endrin Aldehyde 0 0 0.29 0.29 0.45 Heptachlor 0 0 0 0.29 0.45 Heptachlor Epoxide 0 0 0 N/A N/A N/A Toxaphene 0 0 0 0.00028 0.0003 0.0004 CCR CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Stream (marki) Cocn (marki) Trib Conc (marki) Fate CV WQC WQ Obj (mg/l,) WLA (mg/l,) Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A Total Aluminum	alpha-Endosulfan	0	0		0	62	62.0	97.1	
Endrin 0 0 0.059 0.059 0.092 Endrin Aldehyde 0 0 0.29 0.45 Heptachlor 0 0 0.14 N/A N/A Heptachlor 0 0 0 N/A N/A N/A Toxaphene 0 0 0 0.00028 0.0003 0.0004 Image: CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Stream Conc (mal) CV Coef (µg/L) Fate Coef WQC bj (µg/L) WLA (µg/L) Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Ghoride (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Atiminum 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 <td>beta-Endosulfan</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>62</td> <td>62.0</td> <td>97.1</td> <td></td>	beta-Endosulfan	0	0		0	62	62.0	97.1	
Endrin Aldehyde 0 0 0.29 0.29 0.45 Heptachlor 0 0 0 N/A N/A N/A Heptachlor Epoxide 0 0 0 N/A N/A N/A Toxaphene 0 0 0 0.00028 0.0003 0.0004 Image: CRL CCT (min): D.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Stream Trib Conc Fate WQC Obj WLA (µg/L) Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Suffate (PWS) 0 0 0 N/A N/A N/A Fluoride (FWS) 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Antimony 0 0 N/A N/A N/A Total Boron 0 <td< td=""><td>Endrin</td><td>0</td><td>0</td><td></td><td>0</td><td>0.059</td><td>0.059</td><td>0.092</td><td></td></td<>	Endrin	0	0		0	0.059	0.059	0.092	
Heptachlor 0 0 N/A N/A N/A N/A Heptachlor Epoxide 0 0 0 N/A N/A N/A N/A Toxaphene 0 0 0 0.00028 0.0003 0.0004 ✓ CRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A N/A Choinde (PWS) 0 0 0 N/A N/A N/A N/A Fluonde (PWS) 0 0 0 N/A N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Arseninc	Endrin Aldehyde	0	0		0	0.29	0.29	0.45	
Heptachlor Epoxide 0 0 N/A N/A N/A N/A Toxaphene 0 0 0 0.00028 0.0003 0.0004 Image: CRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Stream (µg/L) Conc (µg/L) Fate (µg/L) WQC (µg/L) WLA (µg/L) Comments Total Dissolved Solids (PWS) 0 0 N/A N/A N/A Chloride (PWS) 0 0 0 N/A N/A N/A Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Assenic 0 0 N/A N/A N/A N/A Total Barium 0 0 N/A N/A N/A N/A Total	Heptachlor	0	0		0	N/A	N/A	N/A	
Toxaphene 0 0 0.00028 0.0003 0.0004 CRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Sureatin Conc (und1) Trib Conc (ug/L) Fate Coef WQC (ug/L) WLA (µg/L) Comments Total Dissolved Solids (PWS) 0 0 0 0 Sulfate (PWS) 0 0 Chloride (PWS) 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 Total Autimony 0 0 0 N/A N/A Total Assenic 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Cadmium 0 0 <td>Heptachlor Epoxide</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td></td>	Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
CRL CCT (min): 0.125 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Stream (mg/l): Stream (mg/l): Trib Conc (mg/l): Fate Coef (mg/l): WQO bj (mg/l): WLA (µg/l): Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Choride (PWS) 0 0 0 N/A N/A N/A Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Assenic 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A<	Toxaphene	0	0		0	0.00028	0.0003	0.0004	
Pollutants Conc (mall) CV (µg/L) Coef (µg/L) (µg/L) WLA (µg/L) Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A N/A Chloride (PWS) 0 0 0 N/A N/A N/A N/A Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Assenic 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Hexavalent Chromium (CRL CC	T (min): 0.	125 Stream	PMF:	1 Fate	Ana	alysis Hardne	ess (mg/l):	N/A Analysis pH: N/A
Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Chloride (PWS) 0 0 0 N/A N/A N/A Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Hexavalent Chromium (III) 0 0 0 N/A N/A	Pollutants	Conc (ug/L)	CV	(µg/L)	Coef	(µg/L)	(µg/L)	WLA (µg/L)	Comments
Chloride (PWS) 0 0 0 N/A N/A N/A Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A Total Chromium (III) 0 0 0 N/A N/A Hexavalent Chromium 0 0 0 N/A N/A Total Cobalt 0 0 0 N/A N/A Total Copper 0 0 0 <td>Total Dissolved Solids (PWS)</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td></td>	Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS) 0 0 0 N/A N/A N/A Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A	Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS) 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A	Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Antimony 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A	Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Antimony 0 0 0 N/A N/A N/A Total Arsenic 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Iron 0 0 0 N/A N/A N/A <td>Total Aluminum</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td></td>	Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Arsenic 0 0 N/A N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Iron 0 0 0 N/A N/A N/A	Total Antimony	0	0		0	N/A	N/A	N/A	
Total Barium 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Lrop 0 0 0 N/A N/A N/A	Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Boron 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Lrop 0 0 0 N/A N/A N/A	Total Barium	0	0		0	N/A	N/A	N/A	
Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Iron 0 0 0 N/A N/A N/A	Total Boron	0	0		0	N/A	N/A	N/A	
Total Chromium (III) 0 0 0 N/A N/A N/A Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Iron 0 0 0 N/A N/A N/A	Total Cadmium	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium 0 0 0 N/A N/A N/A Total Cobalt 0 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Lrop 0 0 0 N/A N/A N/A	Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Total Cobalt 0 0 N/A N/A N/A Total Copper 0 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Loop 0 0 N/A N/A N/A N/A	Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Copper 0 0 N/A N/A N/A Dissolved Iron 0 0 0 N/A N/A N/A Total Iron 0 0 0 N/A N/A N/A	Total Cobalt	0	0		0	N/A	N/A	N/A	
Dissolved Iron 0 0 0 N/A N/A Total Iron 0 0 0 N/A N/A	Total Copper	0	0		0	N/A	N/A	N/A	
Total Iron 0 0 N/A N/A N/A	Dissolved Iron				-	N1/A			
		0	0		0	N/A	N/A	N/A	
Total Lead 0 0 N/A N/A N/A	Total Iron	0	0		0	N/A N/A	N/A N/A	N/A N/A	

Total Manganese	0	0	0	N/A	N/A	N/A	
Total Mercury	0	0	0	N/A	N/A	N/A	
Total Nickel	0	0	0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0	0	N/A	N/A	N/A	
Total Selenium	0	0	0	N/A	N/A	N/A	
Total Silver	0	0	0	N/A	N/A	N/A	
Total Thallium	0	0	0	N/A	N/A	N/A	
Total Zinc	0	0	0	N/A	N/A	N/A	
Acrolein	0	0	0	N/A	N/A	N/A	
Acrylamide	0	0	0	0.07	0.07	0.58	
Acrylonitrile	0	0	0	0.051	0.051	0.42	
Benzene	0	0	0	1.2	1.2	9.96	
Bromoform	0	0	0	4.3	4.3	35.7	
Carbon Tetrachloride	0	0	0	0.23	0.23	1.91	
Chlorobenzene	0	0	0	N/A	N/A	N/A	
Chlorodibromomethane	0	0	0	0.4	0.4	3.32	
2-Chloroethyl Vinyl Ether	0	0	0	N/A	N/A	N/A	
Chloroform	0	0	0	5.7	5.7	47.3	
Dichlorobromomethane	0	0	0	0.55	0.55	4.57	
1,2-Dichloroethane	0	0	0	0.38	0.38	3.15	
1,1-Dichloroethylene	0	0	0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0	0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0	0	0.34	0.34	2.82	
Ethylbenzene	0	0	0	N/A	N/A	N/A	
Methyl Bromide	0	0	0	N/A	N/A	N/A	
Methyl Chloride	0	0	0	N/A	N/A	N/A	
Methylene Chloride	0	0	0	4.6	4.6	38.2	
1,1,2,2-Tetrachloroethane	0	0	0	0.17	0.17	1.41	
Tetrachloroethylene	0	0	0	0.69	0.69	5.73	
Toluene	0	0	0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0	0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0	0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0	0	0.59	0.59	4.9	
Trichloroethylene	0	0	0	2.5	2.5	20.8	
Vinyl Chloride	0	0	0	0.025	0.025	0.21	
2-Chlorophenol	0	0	0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0	0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0	0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0	0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0	0	N/A	N/A	N/A	
2-Nitrophenol	0	0	0	N/A	N/A	N/A	
4-Nitrophenol	0	0	0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0	0	N/A	N/A	N/A	
Pentachlorophenol	0	0	0	0.270	0.27	2.24	
Phenol	0	0	0	N/A	N/A	N/A	
					I		

2,4,6-Trichlorophenol	0	0		0	1.4	1.4	11.6	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.000086	0.00009	0.0007	
Benzo(a)Anthracene	0	0		0	0.0038	0.004	0.032	
Benzo(a)Pyrene	0	0		0	0.0038	0.004	0.032	
3,4-Benzofluoranthene	0	0		0	0.0038	0.004	0.032	
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	0.032	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.25	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	1.2	1.2	9.96	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.0038	0.004	0.032	
Dibenzo(a,h)Anthrancene	0	0		0	0.0038	0.004	0.032	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.021	0.021	0.17	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	0.42	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.42	
1,2-Diphenylhydrazine	0	0		0	0.036	0.036	0.3	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00028	0.0003	0.002	
Hexachlorobutadiene	0	0		0	0.44	0.44	3.65	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	1.4	1.4	11.6	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.00069	0.0007	0.006	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.042	
n-Nitrosodiphenvlamine	0	0		0	3.3	3.3	27.4	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	
Aldrin	0	0		0	0.000049	0.00005	0.0004	
alpha-BHC	0	0		0	0.0026	0.003	0.022	
beta-BHC	0	0		0	0.0091	0.009	0.076	
1		1	A	a	1		1	

gamma-BHC	0	0	0	N/A	N/A	N/A	
Chlordane	0	0	0	0.0008	8000.0	0.007	
4,4-DDT	0	0	0	0.00022	0.0002	0.002	
4,4-DDE	0	0	0	0.00022	0.0002	0.002	
4,4-DDD	0	0	0	0.00031	0.0003	0.003	
Dieldrin	0	0	0	0.000052	0.00005	0.0004	
alpha-Endosulfan	0	0	0	N/A	N/A	N/A	
beta-Endosulfan	0	0	0	N/A	N/A	N/A	
Endrin	0	0	0	N/A	N/A	N/A	
Endrin Aldehyde	0	0	0	N/A	N/A	N/A	
Heptachlor	0	0	0	0.000079	0.00008	0.0007	
Heptachlor Epoxide	0	0	0	0.000039	0.00004	0.0003	
Toxaphene	0	0	0	0.00028	0.0003	0.002	

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

	Mass	Limits		Concentra	tion Limits				
Pollutants	AML (Ibs/day)	MDL (Ibs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Arsenic	Report	Report	Report	Report	Report	µg/L	15.7	THH	Discharge Conc > 10% WQBEL (no RP)
Total Barium	Report	Report	Report	Report	Report	µg/L	3,759	THH	Discharge Conc > 10% WQBEL (no RP)
Total Boron	Report	Report	Report	Report	Report	µg/L	2,506	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Cadmium	0.00005	0.00008	0.42	0.66	1.06	µg/L	0.42	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	16.3	CFC	Discharge Conc > 10% WQBEL (no RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	470	THH	Discharge Conc > 10% WQBEL (no RP)
Total Iron	0.28	0.44	2,350	3,666	5,874	µg/L	2,350	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	Report	Report	Report	Report	Report	µg/L	4.98	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Manganese	0.19	0.29	1,566	2,444	3,916	µg/L	1,566	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Thallium	0.00005	0.00007	0.38	0.59	0.94	µg/L	0.38	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	120	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrylamide	0.00007	0.0001	0.58	0.91	1.45	µg/L	0.58	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chlorodibromomethane	Report	Report	Report	Report	Report	µg/L	3.32	CRL	Discharge Conc > 25% WQBEL (no RP)
Benzo(a)Anthracene	0.000004	0.000006	0.032	0.049	0.079	µg/L	0.032	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(a)Pyrene	0.000004	0.000006	0.032	0.049	0.079	µg/L	0.032	CRL	Discharge Conc ≥ 50% WQBEL (RP)
3,4-Benzofluoranthene	0.000004	0.000006	0.032	0.049	0.079	µg/L	0.032	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(k)Fluoranthene	0.000004	0.000006	0.032	0.049	0.079	µg/L	0.032	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chrysene	0.000004	0.000006	0.032	0.049	0.079	µg/L	0.032	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Toxaphene	3.76E-08	5.87E-08	0.0003	0.0005	0.0008	µg/L	0.0003	CFC	Discharge Conc ≥ 50% WQBEL (RP)

✓ Other Pollutants without Limits or Monitoring

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	753	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Beryllium	N/A	N/A	No WQS
Total Chromium (III)	135	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	29.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	14.1	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Total Mercury	0.078	µg/L	Discharge Conc < TQL
Total Nickel	81.7	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	7.81	µg/L	Discharge Conc < TQL
Total Silver	3.8	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.01	µg/L	Discharge Conc < TQL
Acrylonitrile	0.42	µg/L	Discharge Conc < TQL
Benzene	9.96	µg/L	Discharge Conc < TQL
Bromoform	35.7	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	1.91	µg/L	Discharge Conc < TQL
Chlorobenzene	204	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	5,482	µg/L	Discharge Conc < TQL
Chloroform	47.3	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	4.57	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	3.15	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	51.7	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	3,446	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	2.82	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	830	µg/L	Discharge Conc < TQL
Methyl Bromide	73.6	µg/L	Discharge Conc < TQL
Methyl Chloride	8,615	µg/L	Discharge Conc < TQL
Methylene Chloride	38.2	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	1.41	µg/L	Discharge Conc < TQL
Tetrachloroethylene	5.73	µg/L	Discharge Conc < TQL
Toluene	517	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	219	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	956	µg/L	Discharge Conc < TQL
			-

h			
1,1,2-Trichloroethane	4.9	µg/L	Discharge Conc < TQL
Trichloroethylene	20.8	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.21	µg/L	Discharge Conc < TQL
2-Chlorophenol	127	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	121	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	204	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	20.4	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	108	µg/L	Discharge Conc < TQL
2-Nitrophenol	2,506	µg/L	Discharge Conc < TQL
4-Nitrophenol	736	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	47.0	µg/L	Discharge Conc < TQL
Pentachlorophenol	2.24	µg/L	Discharge Conc < TQL
Phenol	16,290	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	11.6	µg/L	Discharge Conc < TQL
Acenaphthene	26.6	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	13,001	µg/L	Discharge Conc < TQL
Benzidine	0.0007	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.25	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	2,193	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	9.96	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	84.6	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	54.8	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	1,566	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Dibenzo(a,h)Anthrancene	0.032	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	251	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	108	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	235	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.17	µg/L	Discharge Conc < TQL
Diethyl Phthalate	1,253	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	783	µg/L	Discharge Conc ≤ 25% WQBEL
Di-n-Butyl Phthalate	32.9	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	0.42	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.42	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.3	µg/L	Discharge Conc < TQL
Fluoranthene	62.7	µg/L	Discharge Conc < TQL
Fluorene	1,723	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.002	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	3.13	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.57	µg/L	Discharge Conc < TQL
Hexachloroethane	11.6	µg/L	Discharge Conc < TQL
h			-

		-	
Indeno(1,2,3-cd)Pyrene	0.006	µg/L	Discharge Conc < TQL
Isophorone	54.8	µg/L	Discharge Conc ≤ 25% WQBEL
Naphthalene	67.4	µg/L	Discharge Conc < TQL
Nitrobenzene	26.6	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.006	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.042	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	27.4	µg/L	Discharge Conc < TQL
Phenanthrene	1.57	µg/L	Discharge Conc < TQL
Pyrene	1,300	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	40.7	µg/L	Discharge Conc < TQL
Aldrin	0.0004	µg/L	Discharge Conc < TQL
alpha-BHC	0.022	µg/L	Discharge Conc < TQL
beta-BHC	0.076	µg/L	Discharge Conc < TQL
gamma-BHC	0.15	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.007	µg/L	Discharge Conc < TQL
4,4-DDT	0.002	µg/L	Discharge Conc < TQL
4,4-DDE	0.002	µg/L	Discharge Conc < TQL
4,4-DDD	0.002	µg/L	Discharge Conc < TQL
Dieldrin	0.0004	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.088	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.088	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	N/A	N/A	No WQS
Endrin	0.056	µg/L	Discharge Conc < TQL
Endrin Aldehyde	0.45	µg/L	Discharge Conc < TQL
Heptachlor	0.0007	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.0003	µg/L	Discharge Conc < TQL
PCB-1016	N/A	N/A	No WQS
PCB-1221	N/A	N/A	No WQS
PCB-1232	N/A	N/A	No WQS
PCB-1242	N/A	N/A	No WQS
PCB-1248	N/A	N/A	No WQS
PCB-1254	N/A	N/A	No WQS
PCB-1260	N/A	N/A	No WQS

Append	dix B
TOXCONC Spreadsheet	(Iron and Manganese)

			oproducin				
	Faci	lity:		Solid Waste D	isposal, Inc.		
	NPD	ES#:		PA00090301			
	Duti p (S	all No: amplee/Moi	ath):	4			
	Rev	iewer/Perm	it Engineer:	4 Nicole Benoit	PF		
	1101	ewent entit	it Engineen	Nicole Denoit,			
Parameter Name		ron, Total	Manganese,	Total			
Units		mg/L	mg/L				
Detection Limit							
Cample Data	14/1-			dha dadaadi a limid		the structure (10.021
5ample Date	vvne	0 254	Values below	the detection limit	, enter ND or use	the < notation (e	∋g. <0.0 2)
12/1/2020		0.234	0.410				+
11/1/2020		0.214	0.030				
11/1/2020		0.704	0.343				
10/1/2020		0.700	0.319				
10/1/2020		0.407	0.100				
10/1/2020		0.401	1.660				
9/1/2020		1.510	0.847				
9/1/2020		0.906	0.461				
7/1/2020		7.450	3.800				
7/1/2020		4.150	2.000				
6/1/2020		1.600	0.837				
6/1/2020		1.260	0.573				
5/1/2020		0.520	0.250				
5/1/2020		0.310	0.120				
4/1/2020		0.480	0.090				
4/1/2020		0.150	0.030				
3/1/2020		0.260	0.060				
3/1/2020		0.230	0.040				
2/1/2020		0.200	0.030				
2/1/2020		0.160	0.030				
1/1/2020		0.210	0.030				
1/1/2020		0.130	0.020				
12/1/2019		0.370	0.070				
12/1/2019		0.180	0.030				
				Reviewer/Pe	rmit Engineer: Ni	cole Benoit, P.E.	-
Facility:	y: Solid Waste Disposal,		te Disposal,	Inc.			
NPDES #:		PA000903	01				
Outfall No:		001					_
n (Samples/	Month):	4					_

Parameter	Distribution Applied	Coefficient of Variation (daily)	Avg. Monthly
Iron, Total (mg/L)	Lognormal	1.4288747	3.0123415
Manganese, Total (mg/L)	Lognormal	3.2962770	4.1273003

Appendix C WQM 7.0 Modeling Results (Ammonia)

Input Data WQM 7.0

	SWF Basi	o Strea n Coo	am Je	Stre	eam Name		RMI	Ele	vation (ft)	Drainage Area (sq mi)	Slo (ft/	ope P\ With (ft) (m	NS drawal 1gd)	Apply FC
	20B	33	542 Trib 33	3542 to S	ixmile Run		0.3	00	855.00	1.4	49 0.03	3500	0.00	v
					St	ream Dat	a							
Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Ten	<u>Tributary</u> 1p pł	н	<u>Strea</u> Temp	m pH	
e e nui	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)		
Q7-10 Q1-10 Q30-10	0.009	0.00 0.00 0.00	0.00 0.00 0.00	0.000 0.000 0.000	0.000 0.000 0.000	0.0	0.00	0.0	03	0.60	7.00	0.00	0.00	
					Di	ischarge	Data						7	
			Name	Pe	rmit Numbe	Existing Disc r Flow (mgd)	Permitt Disc Flow (mgd	ed Desi Dis Flo) (mg	gn c Res w Fa d)	E erve To ictor (Disc emp (°C)	Disc pH		
		Outfa	all 001	PA	0090301	0.014	4 0.000	0.0 0.0	000	0.000	31.00	7.00	-	
					Pa	arameter	Data							
				Doromoto	r Nama	Di C	isc · onc (Trib Conc	Stream Conc	Fate Coef				
				raramete	rivanie	(m	ng/L) (r	ng/L)	(mg/L)	(1/days)				
			CBOD5				3.00	2.00	0.00	1.50				
			Dissolved	Oxygen			3.00	8.24	0.00	0.00				
			NH3-N				0.47	0.00	0.00	0.70				

	SWF Basi	o Strea n Coo	am le	Stre	am Name		RMI	Elevat (ft)	ion E	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	20B	33	542 Trib 33	3542 to Si	xmile Run		0.01	10 80	00.00	1.57	0.06800	0.00	✓
					St	ream Dat	a						
Design	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	<u>T</u> Temp	<u>ributary</u> pH	Temp	<u>Stream</u> p pH	
Conu.	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)		
Q7-10	0.009	0.00	0.00	0.000	0.000	0.0	0.00	0.00	30.	60 7.0	0 0	.00 0.00	
Q1-10		0.00	0.00	0.000	0.000								
Q30-10		0.00	0.00	0.000	0.000								
					Di	scharge l	Data						
			Nama	Der	mit Number	Existing Disc	Permitte Disc	ed Design Disc	Reser	Dis rve Tem	c Dis np pH	c H	

Input Data WQM 7.0

Name	Permit Number	Disc Flow (mgd)	Di Flo (mg	sc ow gd)	Disc Flow (mgd)	Res Fa	erve T ctor	emp (°C)	pH
		0.0000	0.0	0000	0.0000) (0.000	25.00	7.00
	Pa	rameter Da	ata						
	Darameter Name	Dis Cor	c nc	Trib Con	Stre CC	am onc	Fate Coef		
	Farameter Name	(mg	/L)	(mg/l	.) (mg	g/L)	(1/days)		
CBOD5		2	5.00	2	.00	0.00	1.50		
Dissolve	d Oxygen	:	3.00	8.	24	0.00	0.00		
NH3-N		2	5.00	0.	00	0.00	0.70		

	SW	P Basin	Strea	m Code				Stream	Name			
		20B	3	3542			Trib 33	3542 to	Sixmile R	un		
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (ºC)	Analysis pH
07-1	Elow											
0.300	0.01	0.00	0.00	.0223	0.03500	0	0	0	0.00	0.000	0.00	0.00
Q1-1	0 Flow											
0.300	0.01	0.00	0.01	.0223	0.03500	NA	NA	NA	0.03	0.552	30.89	7.00
Q30-	10 Flow											
0.300	0.02	0.00	0.02	.0223	0.03500	NA	NA	NA	0.04	0.476	30.82	7.00

WQM 7.0 Hydrodynamic Outputs

Version 1.0b

WQM 7.0 Modeling Specifications

Parameters	NH3-N	Use Inputted Q1-10 and Q30-10 Flows	\checkmark
WLA Method	EMPR	Use Inputted W/D Ratio	
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	~
D.O. Saturation	90.00%	Use Balanced Technology	✓
D.O. Goal	6		

		l	WQM	7.	0 Wast	eload	A	llocatio	ons	
	SWP Basin	Strea	am Code				St	ream Name		
	20B	3	3542			Trib 3	354	42 to Sixmile	Run	
NH3-N	Acute Alloc	ation	s							
RMI	Discharge	Name	Baseline Criterior (mg/L)	; 1	Baseline WLA (mg/L)	Multiple Criterio (mg/L)	n	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.30	0 Outfall 001		4.5	51	.94	4.	51	.94	0	0
NH3-N	Chronic All	ocati	ons							
RMI	Discharge N	ame	Baseline Criterion (mg/L)		Baseline WLA (mg/L)	Multiple Criterion (mg/L)		Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.30	0 Outfall 001			.9	.47		.9	.47	0	0

Version 1.0b

SWP Basin S	tream Code	Stream Name	
RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
Reach Width (ft)	Reach Depth (ft)	Reach WDRatio	Reach Velocity (fps)
Reach CBOD5 (mg/L)	Reach Kc (1/days)	Reach NH3-N (mg/L)	Reach Kn (1/days)
Reach DO (mg/L)	Reach Kr (1/days)	Kr Equation	Reach DO Goal (mg/L)
Reach Travel Time (days)			

WQM 7.0 D.O.Simulation

	SWP Basin	Stream Code		Stream Name	e ile Run			
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)	
0.300	Outfall 001	PA0090301	0.014	CBOD5	999	0.94		
				Dissolved Oxygen	0.47	0.04	NA	

WQM 7.0 Effluent Limits

Appendix D Chapter 93 Stream Designation

25 § 93.9w ENVIRONMENTAL PROTECTION Pt. I

 Stream
 Zone
 County
 Exceptions

 3—Streets Run
 Basin
 Allegheny
 WWF:
 None

 Delete PWS

Authority

The provisions of this § 93.9v amended under sections 5(b)(1) and 402 of The Clean Streams Law (35 P. S. §§ 691.5(b)(1) and 691.402); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

Source

The provisions of this § 93.9v adopted March 6, 1992, effective March 7, 1992, 22 Pa.B. 1037; amended May 14, 1993, effective May 15, 1993, 23 Pa.B. 2325; amended November 19, 1993, effective November 20, 1993, 23 Pa.B. 5529; amended November 17, 2000, effective November 18, 2000, 30 Pa.B. 6059; amended September 27, 2002, effective September 28, 2002, 32 Pa.B. 4695; corrected December 27, 2002, effective December 7, 2002, 32 Pa.B. 6381; amended November 12, 2004, effective November 13, 2004, 34 Pa.B. 6133; amended January 5, 2007, effective January 6, 2007, 37 Pa.B. 11; amended May 15, 2009, effective May 16, 2009, 39 Pa.B. 2523. Immediately preceding text appears at serial pages (272199) to (272206) and (324923) to (324926).

Cross References

This section cited in 25 Pa. Code § 16.51 (relating to table); 25 Pa. Code § 93.1 (relating to definitions); 25 Pa. Code § 93.4 (relating to Statewide water uses); and 25 Pa. Code § 93.7 (relating to specific water quality criteria).

§ 93.9w. Drainage List W.

Ohio River Basin in Pennsylvania Ohio River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
1—Ohio River	Main Stem, Confluence of Allegheny and Monongahela Rivers to PA-OH State Border	Beaver	WWF; Add N	See Orsanco Pollution Control Standards
2—Unnamed Tributaries to Ohio River	Basins, Confluence of Allegheny and Monongahela Rivers to PA-OH State Border	Allegheny- Beaver	WWF	None
2-Sawmill Run	Basin	Allegheny	WWF	None
2-Chartiers Creek	Main Stem	Allegheny	WWF	None

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25 § 93.9w ENVIRONMENTAL PROTECTION

Pt. I

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
3-Service Creek	Basin, Source to	Beaver	HQ-CWF	None
3—Service Creek	Basin, J. C. Bacon Dam Mouth	Beaver	WWF	None
3-Frames Run	Basin	Beaver	WWF	None
3—Tramomill Run	Basin	Beaver	WWF	None
3_Gums Run	Basin	Beaver	WWF	None
3—Fishpot Run	Basin	Beaver	WWF	None
2—Fourmile Run	Basin	Beaver	WWF	None
2-Squirrel Run	Basin	Beaver	WWF	None
2-Sixmile Run	Basin	Beaver	WWF	None
2-Wolf Run	Basin	Beaver	WWF	None
2—Haden Run	Basin	Beaver	WWF	None
2—Peggs Run	Basin	Beaver	WWF	None
2-Smiths Run	Basin	Beaver	WWF	None
2-Upper Dry Run	Basin	Beaver	WWF	None
2-Little Beaver Creek	Main Stem (all sections in PA)	Beaver	WWF	None
3-Unnamed Tributaries	Basins (all	Lawrence-	WWF	None
to Little Beaver Creek	sections in PA)	Beaver		
3—North Fork Little Beaver Creek	Basin (all sections in PA)	Beaver	HQ-CWF	None
3-Bieler Run	Basin (all sections in PA)	Beaver	WWF	None
3-Island Run	Basin	Beaver	WWF	None
2-Mill Creek	Basin (all sections in PA)	Beaver	TSF	None
1-Ohio River (OH/WV)				
2—Unnamed Tributaries to Enlow Fork	Basins (all sections in PA), PA-WV State Border to Con- fluence with Dunkard Fork	Washington- Greene	WWF	None
2—North Fork Tomlinson Run	Basin (all sections in PA)	Beaver	WWF	None
2—South Fork Tomlinson Run	Basin (all sections in PA)	Beaver	WWF	None
2-Kings Creek	Basin (all sections in PA)	Washington	CWF	None
2—Harmon Creek	Basin (all sections in PA)	Washington	WWF	None
2-Cross Creek	Basin, Source to Avella Water Intake	Washington	HQ-WWF	None

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Appendix E U.S.G.S. StreamStats

StreamStats Report

 Region ID:
 PA

 Workspace ID:
 PA20200402173154577000

 Clicked Point (Latitude, Longitude):
 40.66764, -80.38666

 Time:
 2020-04-02 13:32:23 -0400



PA0090301 - Solid Waste Disposal Inc. Landfill

Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.49	square miles
ELEV	Mean Basin Elevation	1139.6	feet

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.49	square miles	2.26	1400
ELEV	Mean Basin Elevation	1139.6	feet	1050	2580
One or more of the p	arameters is outside the suggested	d range. Estimat	es were extrapolated	with unknown er	rors
One or more of the p Low-Flow Statistics Flow	arameters is outside the suggested	d range. Estimat	es were extrapolated	with unknown er	rors
One or more of the p Low-Flow Statistics Flow Statistic	arameters is outside the suggested w Report[Low Flow Region 4]	d range. Estimat	es were extrapolated Value	with unknown er	rors
One or more of the p Low-Flow Statistics Flow Statistic 7 Day 2 Year Low Fl	arameters is outside the suggested w Report[Low Flow Region 4] IO W	d range. Estimat	ves were extrapolated Value 0.0424	with unknown er U	nit ^3/s

Statistic	Value	Unit
7 Day 10 Year Low Flow	0.013	ft^3/s
30 Day 10 Year Low Flow	0.027	ft^3/s
90 Day 10 Year Low Flow	0.0535	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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Application Version: 4.3.11

StreamStats Report

Region ID: PA Workspace ID: PA20200923155541206000 Clicked Point (Latitude, Longitude): 40.66290, -80.38939 Time: 2020-09-23 11:55:58 -0400 Rd Country Club 2 Bright Broakust O. Ran Ohioville Sagiview D Hawthorne Valley Golf Club Fairiana Upper Dry Run

Downstream

Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	7.06	square miles
ELEV	Mean Basin Elevation	1150	feet

Parameter Code	Parameter Name	Value	Units	Min L	imit	Max Limi
DRNAREA	Drainage Area	7.06	square miles	2.26		1400
ELEV	Mean Basin Elevation	1150	feet	1050		2580
PII: Prediction Interval-I report)	Lower, Plu: Prediction Interval-Upp	er, SEp: Stand	ard Error of Pred	iction, SE: Sta	ndard Err	or (other)
PII: Prediction Interval- report) Statistic	Lower, Plu: Prediction Interval-Upp	er, SEp: Stand Val	ard Error of Pred ue	iction, SE: Sta Unit	ndard Err SE	or (other) SEp
Pil: Prediction Interval- eport) Statistic 7 Day 2 Year Low Fl	Lower, Plu: Prediction Interval-Upp OW	er, SEp: Stand Val 0.2	ard Error of Pred ue 51	iction, SE: Sta Unit ft^3/s	ndard Err SE 43	or (other : SEp 43
Pil: Prediction Interval- eport) Statistic 7 Day 2 Year Low Fi 30 Day 2 Year Low F	Lower, Plu: Prediction Interval-Upp OW	er, SEp: Stand Val 0.2 0.4	ard Error of Pred ue 51 41	iction, SE: Sta Unit ft*3/s ft*3/s	ndard Err SE 43 38	or (other SEp 43 38
PII: Prediction Interval-I report) Statistic 7 Day 2 Year Low FI 30 Day 2 Year Low F 7 Day 10 Year Low F	Lower, Plu: Prediction Interval-Upp OW Flow	er, SEp: Stand Val 0.2 0.4	ard Error of Pred ue 51 41 893	iction, SE: Sta Unit ft*3/s ft*3/s ft*3/s	ndard Err SE 43 38 66	or (other SEp 43 38 66

Statistic	Value	Unit	SE	SEp
90 Day 10 Year Low Flow	0.303	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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Appendix F Effluent Limitation Guideline

Electronic Code of Federal Regulations

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Title 40: Protection of Environment

PART 445—LANDFILLS POINT SOURCE CATEGORY

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§445.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). §445.24 New source performance standards (NSPS).

AUTHORITY: Secs. 301, 304, 306, 307, 308, 402 and 501 of the Clean Water Act, as amended (33 U.S.C. 1311, 1314, 1316, 1317, 1318, 1342 and 1361)

SOURCE: 65 FR 3048, Jan. 19, 2000, unless otherwise noted.

§445.1 General applicability.

(a) As defined more specifically in each subpart and except as provided in paragraphs (b) through (h) of this section, this part applies to discharges of wastewater from landfill units.

(b) The provisions of this part do not apply to wastewater discharges from land application or land treatment units, surface impoundments, underground injection wells, waste piles, salt dome formations, salt bed formations, underground mines or caves as these terms are defined in 40 CFR 257.2 and 260.10.

(c) The provisions of this part do not apply to wastewater generated off-site of a landfill facility, including wastewater generated off-site from washing vehicles or from waste transfer stations.

(d) The provisions of this part do not apply to discharges of contaminated ground water or wastewater from recovery pumping wells.

(e) This part does not apply to discharges of landfill wastewater from landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operation directly associated with the landfill.

(f) This part does not apply to discharges of landfill wastewater from landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes provided the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR subchapter N as the industrial or commercial operation or the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation.

(g) This part does not apply to landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR part 437 so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills.

(h) This part does not apply to landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

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§445.2 General definitions.

In addition to the definitions set forth in 40 CFR 122.2, 257.2, 258.2, 264.10, 265.10, 401.11, and 403.3 the following definitions apply to this part:

(a) Contaminated ground water means water below the land surface in the zone of saturation which has been contaminated by activities associated with waste disposal.

(b) *Contaminated storm water* means storm water which comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in paragraph (f) of this section. Some specific areas of a landfill that may produce contaminated storm water include (but are not limited to): the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment or machinery that has been in direct contact with the waste; and waste dumping areas.

(c) Landfill directly associated with an industrial or commercial operation means:

(1) A landfill located on the same site as industrial or commercial operations; and

(2) A landfill not located on the same site as the industrial or commercial operations (off-site), but "whollyowned" by the industrial or commercial facility and primarily dedicated to receiving waste from the related industrial or commercial facility.

(d) Facility means all contiguous property owned, operated, leased or under the control of the same person or entity.

(e) *Landfill unit* means an area of land or an excavation in which wastes are placed for permanent disposal, that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, a salt bed formation, an underground mine or a cave as these terms are defined in 40 CFR 257.2, 258.2 and 264.10.

(f) Landfill wastewater means all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas which have come in direct contact with solid waste at the landfill facility.

(g) Non-contaminated storm water means storm water which does not come in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater that is defined in paragraph (f) of this section. Non-contaminated storm water includes storm water which flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

(h) Off-site means outside the boundaries of a facility.

(i) On-site means within the boundaries of a facility.

(j) *Public service* means the provision of landfill waste disposal services to individual members of the general public, publicly-owned organizations (schools, universities, government agencies, municipalities) and not-for-profit organizations for which the landfill does not receive a fee or other remuneration.

(k) The regulated parameters for this part, numbered (P) and listed with approved methods of analysis in Table 1B at 40 CFR 136.3, are defined as follows:

(1) Ammonia (as N) means ammonia reported as nitrogen. P4.

(2) BOD₅ means 5-day biochemical oxygen demand. P9.

(3) Arsenic means total arsenic. P6.

(4) Chromium means total chromium. P19.

(5) Zinc means total zinc. P75.

(I) The regulated parameters for this part, numbered (P) and listed with approved methods of analysis in Table 1C at 40 CFR 136.3, are as follows:

(1) Naphthalene. P68.

(2) Phenol. P85.

(m) The regulated parameters for this part listed with approved methods of analysis in the attachments to Methods 625 and 1625B in appendix A at 40 CFR part 136 are as follows:

(1) Aniline.

(2) Benzoic acid.

(3) p-Cresol.

(4) Pyridine.

(5) a-Terpineol.

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§445.3 General pretreatment standards.

Any source subject to this part that introduces wastewater pollutants into a publicly owned treatment works (POTW) must comply with 40 CFR part 403.

Subpart B—RCRA Subtitle D Non-Hazardous Waste Landfill

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§445.20 Applicability.

Except as provided in §445.1, this subpart applies to discharges of wastewater from landfills subject to the provisions of 40 CFR part 258, *Criteria for Municipal Solid Waste Landfills;* and 40 CFR part 257, *Criteria for Classification of Solid Waste Disposal Facilities and Practices.*

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§445.21 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BPT:

Regulated parameter	Maximum daily ¹	Maximum monthly avg. ¹
BOD	140	37
TSS	88	27
Ammonia (as N)	10	4.9
α-Terpineol	0.033	0.016
Benzoic acid	0.12	0.071
<i>p</i> -Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
рН	(2)	(²)

EFFLUENT LIMITATIONS

¹Milligrams per liter (mg/L, ppm)

²Within the range 6 to 9.

[65 FR 3048, Jan. 19, 2000; 65 FR 14344, Mar. 16, 2000]

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§445.22 Effluent limitations attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BCT: Limitations for BOD₅, TSS and pH are the same as the corresponding limitations specified in §445.21.

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§445.23 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30-125.32, any existing point source subject to this subpart must achieve the following effluent limitations which represent the application of BAT: Limitations for ammonia (as N), a-terpineol, benzoic acid, p-cresol, phenol and zinc are the same as the corresponding limitations specified in §445.21.

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§445.24 New source performance standards (NSPS).

Any new source subject to this subpart must achieve the following performance standards: Standards are the same as those specified in §445.21.

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Minimum

Appendix G Table 6-4: Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits

Table 6-4

Self-Monitoring Requirements for Industrial Dischargers

Waste Stream Type	Parameter	Recommended <u>Sample Type</u>	Sample <u>Frequency</u>		
a. Process Wastewater	Flow Temperature pH Oil & Grease BOD5 SS	meter I.S. grab grab 24-hour composite 24-hour composite	daily daily daily daily 1/week 1/week		
	Priority Pollutants				
	Metals, CN & Phenols Acid fractions Base/Neutral Fraction Volatile Fraction Pesticide Fraction PCB's	24 hr. composite 24 hr. composite 24 hr. composite *4 grab Comp. 24 hr. composite 24 hr. composite	1/week 1/week 1/week 1/week 1/week		
b. Cooling Water - contact	Flow pH Temperature BOD5 SS	meter grab I.S. 24 hr. composite 24 hr. composite	daily daily daily 1/week 1/week		
	Priority Pollutants				
	Metals, CN & Phenol Acid Fractions Metals, CN & Phenol Base/Neutral Fraction Volatile Fraction Pesticide Fraction PCB's	24 hr. composite 24 hr. composite 24 hr. composite 24 hr. composite *4 grab Comp. 24 hr. composite 24 hr. composite	1/week 1/week 1/week 1/week 1/week 1/week		
- non-contact	Flow >100,000 GPD	meter pH Temperature	daily grab daily I.S. daily		
	20,000 - 100,000 GPD	Flow pH Temperature	meter 1/week grab 1/week I.S. 1/week		
	<20,000 GPD	Flow pH Temperature	meter 1/month grab 1/month I.S. 1/month		

Table 6-4

Self-Monitoring Requirements for Industrial Dischargers (Continued)

Wa	aste Stream Type	<u>Parameter</u>	Recommended <u>Sample Type</u>	Minimum Sample <u>Frequency</u>	Recommended Sampling <u>Frequency</u>
C.	Stormwater Runoff				
	1. For those discharg 122.26(6)(14) (see	ges <u>not</u> considered storm e Appendix 2c)	water associated with ir	ndustrial activity a	is defined by 40 CFR
	- contaminated				
		pH**	grab	1/year	1/year
		Suspended Solids	grab	1/year	1/year
		Oil and grease	grab	1/year	1/year
		Others as needed	grab	1/year	1/year
	- uncontaminated	The statement, "Th ", shall be us sample frequencies	ere shall be only uncon ed as a permit conditior s are generally necessa	taminated runoff n. No parameters ry.	discharged from outfall s, sample types or

- For dischargers considered storm waster associated with Industrial activity as defined by 40CFR 122.26(b)(14), see Appendix 2c.
- * Four grab samples should be collected during actual hours of discharge over a 24 hour period and need not be flow proportioned. The four samples will be combined at the laboratory immediately before analysis. Only one analysis is required, not four.
- ** Use "monitor only" and no numerical limits since it has been documented across the state that rainfall pH is below pH 6.

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Appendix G Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies, Issued April 19, 1996 by U.S. EPA

PERFORMANCE-BASED REDUCTION OF MONITORING FREQUENCIES

Table 1

Ratio of Long Term Effluent Average to Monthly Average Limit

Baseline Monitoring	75-66%	<u>65-50%</u>	<u>49-25%</u>	<25%		
7/wk	5/wk	4/wk	3/wk	1/wk		
6/wk	4/wk	3/wk	2/wk	1/wk		
5/wk	4/wk	3/wk	2/wk	1/wk		
4/wk	3/wk	2/wk	1/wk	1/wk		
3/wk	3/wk	2/wk	1/wk	1/wk		
2/wk	2/wk	1/wk	2/mo	1/mo		
1/wk	1/wk	1/wk	2/mo	1/2mos		
2/month	2/mo	2/mo	2/mo	1/quarter		
1/month	1/mo	1/mo	1/quarter	1/6mos		
			-			

Note: See above eligibility requirements.

- New permittees should go through one permit cycle (5 years) before being eligible for consideration for reduced monitoring.
- Facilities would not normally be considered for reductions in monitoring frequencies below once per quarter, except in unusual circumstances of reliable performance at the requisite levels and outstanding compliance/enforcement histories.
- Facilities which satisfy the entry criteria but are not experiencing discharges of 75% or less
 of their permitted levels of water quality-based parameters may still be eligible for
 reductions in monitoring/reporting frequencies at the discretion of the permitting
 authority. To control an increased risk of undetected violations, monitoring should only
 be reduced for such parameters if the applicant can demonstrate a very low variation in the
 concentrations being discharged.

Parameters that show a long-term (2 year) average discharge between the permitted concentration and 76% of a water quality-based permit limit should demonstrate a coefficient of variation (ratio of standard deviation to average) of 20% or less. An additional safeguard should stipulate that parameters which showed any exceedance of the monthly average limitation during the two year averaging period would not be subject to

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Parameter	Current Effluent Limitation	Proposed Effluent Limitation	Average Monthly/ IMAX	Ratio of Data to Most Stringent Limitation	21-Nov	21-Oct	21-Sep	21-Aug	21-Jul	21-Jun	21-May	21-Apr	21-Mar	21-Feb	21-Jan	20-Dec
Flow (MGD)	Monitor	Monitor	N/A	N/A	0.007	0.01296	0.00684	0.00525	0.00432	0.00504	0.0108	0.01224	0.01224	0.00648	0.01296	0.00432
Average Monthly																
Daily Maximum	Monitor	Monitor	N/A	N/A	0.013	0.0144	0.0108	0.00625	0.00576	0.00576	0.0144	0.0144	0.0144	0.00864	0.0144	0.00432
pH (SU)																
Instantaneous Minimum	6.0	6.0	7.80	N/A	7.8	7.8	8.05	8.2	7.2	7.2	7.6	7.4	8.2	8	7.9	8.2
pH (S.U.)			7.00		7.0	7.0	0.40			7.0	7.0	7.0				
Instantaneous Maximum	9.0	9.0	7.98	N/A	7.9	7.8	8.16	8.3	ŏ	1.2	7.8	7.6	8.3	ö	8.1	8.6
CBOD5 (mg/L)	25	25	2 92	12%	< 2.00	3.1	24	23	4.2	4 1	29	< 2	< 3	< 3	< 3	< 3
Average Monthly			2.02	.2.70	. 2.00	0.1		2.0			2.0					
CBOD5 (mg/L)	50	50	3.24	6%	< 2	4.3	2.7	3.1	4.6	5.2	3	< 2	< 3	< 3	< 3	< 3
Instantaneous Maximum																
Average Monthly	27	27	5.875	22%	< 5	< 5	< 5	< 5	< 3	8.5	9.5	12	7	4.5	< 3	< 3
TSS (mg/L)																
Instantaneous Maximum	60	60	7.25	12%	< 5	< 5	< 5	< 5	< 3	11	11	19	11	6	< 3	< 3
Fecal Coliform (CFU/100 ml)	200	200	50 CA	200/			0.0	46	65.7	444.4	60 G					
Geometric Mean: May - Sept	200	200	50.04	2370			5.0	40	05.7		00.0					
Fecal Coliform (No./100 ml)	14000	2000	19.06	1%	35	48.5						6.1	9.8	1.4	19.6	13
Geometric Mean: Oct - April																
Ammonia (mg/L): May - Oct	3.0	3.0	0.277	9%		0.2675	0.365	0.144	0.3355	0.273	0.276					
Average Monthly Ammonia (mg/L): May - Oct																
Instantaneous Maximum	6.0	6.0	0.348	6%		0.3	0.4	0.15	0.51	0.45	0.28					
Ammonia (mg/L): Nov - April	4.0		0.77076	4094	0.025							0.400	0.05	0.0005	0.44	0.005
Average Monthly	4.9	4.9	0.77375	10%	0.235							0.100	2.05	0.0305	0.14	0.395
Ammonia (mg/L): Nov - April	10.0	10.0	1 2583333	13%	0.37							0 24	5 27	0.91	0 15	0.61
Instantaneous Maximum				.0.0	0.01							0.21	0.21	0.01	0.10	0.01
Total Cadmium (mg/L)	0.005	0.00043	0.003	698%	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002
Average Monthly																
Instantaneous Maximum	0.01	0.00107	0.003	280%	< 0.005	< 0.005	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002
Total Iron (mg/L)																
Average Monthly	4.0	4.0	0.484	12%	0.243	0.605	0.496	0.661	0.727	0.926	0.629	0.506	0.265	0.265	0.255	0.234
Total Iron (mg/L)	7.0	7.0	0.585	8%	0.257	0.964	0.569	0 726	0 759	11	0.662	0.781	0 377	0.283	0.203	0.254
Instantaneous Maximum	1.0	1.0	0.505	0 //	0.231	0.304	0.505	0.720	0.155	1.1	0.002	0.701	0.311	0.203	0.233	0.234
Total Manganese (mg/L)	1.0	1.0	0.247	25%	0.057	0.181	0.151	0.548	0.514	0.615	0.16	0.332	0.063	0.072	0.044	0.224
Average Monthly																
Instantaneous Maximum	2.0	2.0	0.320	16%	0.086	0.284	0.161	0.581	0.625	0.661	0.178	0.611	0.106	0.09	0.047	0.41
Total Nickel (mg/L)																
Average Monthly	0.35	0.35	0.015	4%	< 0.005	0.007	< 0.02	< 0.02	< 0.02	< 0.02	< 0.010	< 0.005	< 0.02	0.0075	< 0.02	< 0.02
Total Nickel (mg/L)	0.70	0.70	0.015	20/	< 0.005	0.008	< 0.02	< 0.02	< 0.02	< 0.02	< 0.010	< 0.005	< 0.02	0.008	< 0.02	< 0.02
Instantaneous Maximum	0.70	0.70	0.015	2 /0	< 0.005	0.000	< 0.02	< 0.02	< 0.0Z	< 0.02	< 0.010	< 0.005	< 0.02	0.000	< 0.02	< 0.02
Total Zinc (mg/L)	0.11	0.11	0.02	18%	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02
Average Monthly																
Instantaneous Maximum	0.20	0.20	0.02	10%	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02
Phenol (mg/L)																
Average Monthly	0.015	0.015	0.003	20%	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
Phenol (mg/L)	0.026	0.026	0.002	100/	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
Instantaneous Maximum	0.020	0.020	0.003	12.70	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
a-Terpineol (mg/L)	0.016	0.016	0.00525	33%	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.010	< 0.010	< 0.001	< 0.010
Average Monthly																
a-lerpineol (mg/L)	0.033	0.033	0.00525	16%	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.010	< 0.010	< 0.001	< 0.010
Benzoic Acid (mg/L)																
Average Monthly	0.071	0.071	0.0255	36%	< 0.050	< 0.050	< 0.050	< 0.005	< 0.050	< 0.001	< 0.001	< 0.050	< 0.001	< 0.001	< 0.001	< 0.001
Benzoic Acid (mg/L)	0.15	0.15	0.0000													
Instantaneous Maximum	0.12	0.12	0.0255	21%	< 0.050	< 0.050	< 0.050	< 0.005	< 0.050	< 0.001	< 0.001	< 0.050	< 0.001	< 0.001	< 0.001	< 0.001
p-Cresol (mg/L)	0.014	0.014	0.003	21%	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001
Average Monthly	0.014	0.014	0.000	21/0	- 0.003	~ 0.003	- 0.003	~ 0.003	- 0.003	~ 0.001	- 0.001	- 0.003	~ 0.001	~ 0.001	~ 0.001	
Total Phenolics (mg/L)	0.75	0.75	0.261	35%	< 0.25	< 0.25	0.313	0.275	0.193	0.313	< 0.25	0.548	0.578	< 0.010	< 0.010	0.156
Average Monthly	_			_												
Instantaneous Maximum	1.5	1.5	0.349	23%	< 0.25	< 0.25	0.375	0.295	0.335	0.375	< 0.25	0.835	0.895	< 0.010	< 0.010	0.302