pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Amendment, Major**	Application No.	**PA0096342 A-1**
Facility Type	**Municipal**	APS ID	**1082424**
Major / Minor	**Major**	Authorization ID	**1429358**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Fairchance-Georges Joint Municipal Sewage Authority**	Facility Name	**Fairchance-Georges STP**
Applicant Address	80 N Morgantown St.	Facility Address	141 Big Six Road
	Fairchance, PA 15436		Smithfield, PA 15478-1601
Applicant Contact	Mr. Benjamin Eicher	Facility Contact	Same as Applicant
Applicant Phone	(724) 564-1010	Facility Phone	Same as Applicant
Client ID	74949	Site ID	263584
Ch 94 Load Status	Not Overloaded	Municipality	Georges Township
Connection Status	No Limitations	County	Fayette
Date Application Received	February 28, 2023	EPA Waived?	No
Date Application Accepted	February 28, 2023	If No, Reason	Major Sewage Facility

Purpose of Application: Application for an amendment of an NPDES permit for the discharge of treated Sewage.

Summary of Review

The Fairchance-Georges Joint Municipal Sewage Authority (FGJMSA) operates and maintains the Fairchance-Georges STP. NPDES Permit No. PA0096342 authorizes the discharge of treated sewage to Georges Creek, which is currently classified as a WWF, located in State Watershed No. 19-G. The permit was effective on March 1, 2022 and will expire on February 28, 2027.

WQM Permit 2685407 A-3, issued on April 24, 2017, approved construction of an expanded STP with Hydraulic Design Capacity 1.5 MGD and organic capacity of 2,502 lbs/day. Construction was completed in March of 2020. The expanded treatment process consists of equalization tank, mechanically cleaned fine bar screen, 4 SBRs, aerobic sludge digestion, UV disinfection, belt filter press and effluent pump station (for use during flood conditions).

A Final WQBEL Compliance Report was submitted to the Department on October 31, 2022, as discussed in Part C.III.D of the NPDES Permit.

The purpose of this NPDES Permit Amendment is to re-evaluate the final permit effluent limits based upon site-specific data contained in the Final WQBEL Compliance Report, which resulted in changes to effluent limits for CBOD5, ammonia-nitrogen, total copper, free cyanide, and total zinc.

The following changes has been made to the Authority's existing NPDES Permit, as issued on January 28, 2022:

- Part A.I.A & Part A.I.B have been replaced by an updated Part A.I.A, which contains revised effluent limitation based upon updated model data. Effluent limitations are further discussed in the "Development of Effluent Limitation" section of this Fact Sheet.

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Environmental Engineering Specialist	June 1, 2023
x		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	June 5, 2023

Summary of Review

- Part C.III, Water Quality-Based Effluent Limitation for Toxic Pollutants, has been removed from the permit, as the Final WQBEL Compliance Report has been submitted to the Department, and the condition is no longer applicable.

- Part C.I.D, Chlorine Minimization, has been removed from the permit, as this condition is only applicable to facilities using chlorine for disinfection.

The applicant has complied with Act 14 Notifications and no comments were received.

Sludge use and disposal description and location(s): Aerobic sludge digestion tanks are used for the treatment of Class B biosolids. A belt filter press is then used for the dewatering of digested sludge and solids are disposed of at a municipal landfill.

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	1.5
Latitude	39º 48' 28.25"	Longitude	-79º 46' 5.79"
Quad Name	Smithfield	Quad Code	2007
Wastewater Description:	Sewage Effluent		
Receiving Waters	Georges Creek (WWF)	Stream Code	41340
NHD Com ID	99417118	RMI	13.3
Drainage Area	13.3	Yield (cfs/mi^2)	0.016691
Q_{7-10} Flow (cfs)	**0.222**	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	994	Slope (ft/ft)	
Watershed No.	19-G	Chapter 93 Class.	WWF
Existing Use	**All**	Existing Use Qualifier	None
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, SILTATION		
Source(s) of Impairment	ACID MINE DRAINAGE, ACID MINE DRAINAGE		
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)	7.93	Final WQBEL Compliance Report
Temperature (°F)		
Hardness (mg/L)	65.45	Final WQBEL Compliance Report
Other:		

Nearest Downstream Public Water Supply Intake		Southwester PA Water Authority	
PWS Waters	Monongahela River	Flow at Intake (cfs)	
PWS RMI	71.0	Distance from Outfall (mi)	13.7 linear miles

Changes Since Last Permit Issuance: Updates were made to DA, Q7/10 Flow, Elevation, LF Yield, Background pH & Background Hardness.

Other Comments: N/A

Treatment Facility Summary

Treatment Facility Name: Fairchance Georges STP

WQM Permit No.	Issuance Date
2685407 A-2 (Existing STP)	October 25, 2004
2685407 A-3 (Expanded STP)	April 24, 2017

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with Ammonia Reduction	Sequencing Batch Reactor	Ultraviolet	0.695 (Year: 2018)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.5	2,502	Not Overloaded	Aerobic Sludge Digestion & Belt Filter Press	Landfill

Changes Since Last Permit Issuance: Expanded STP went online on March 31, 2020.

Other Comments: N/A

Compliance History

DMR Data for Outfall 001 (from April 1, 2022 to March 31, 2023)

Parameter	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22
Flow (MGD) Average Monthly	0.64	0.588	0.873	0.566	0.527	0.493	0.616	0.624	0.507	0.575	0.639	0.665
Flow (MGD) Daily Maximum	2.363	0.908	2.317	1.329	1.189	1.541	1.136	1.302	0.83	1.757	1.637	1.322
pH (S.U.) Instantaneous Minimum	6.2	6.2	6.2	6.5	6.7	6.7	6.7	6.4	6.4	6.6	6.5	6.6
pH (S.U.) Instantaneous Maximum	6.9	6.9	6.9	7.0	7.2	7.3	7.3	7.1	7.1	7.1	6.9	7.2
DO (mg/L) Instantaneous Minimum	6.4	6.2	6.2	6.5	6.5	6.5	6.5	5.7	5.9	6.4	6.7	6.7
CBOD5 (lbs/day) Average Monthly	< 17	< 19	< 17	< 13.0	< 17.0	< 11.0	< 14.0	< 15	< 10	< 8.0	< 11	< 25
CBOD5 (lbs/day) Weekly Average	30	22	34	26.0	34.0	< 18.0	19	< 23	13	< 12.0	< 15	57.0
CBOD5 (mg/L) Average Monthly	< 3.4	< 3.8	< 2.5	< 3.1	< 3.8	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.3
CBOD5 (mg/L) Weekly Average	4.6	4.3	3.8	6.0	7.3	< 4.0	< 3.0	< 3.0	3.0	< 2.0	< 2.0	7.5
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	738	737	696	693	655	315	719	415	521	491	552	539
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	1330	1238	1033	922	1619	488	1106	730	724	738	792	980
BOD5 (mg/L) Raw Sewage Influent Average Monthly	136	133	97	141	140	80	132	82	126	113	106	93
TSS (lbs/day) Average Monthly	< 24	< 25	< 33	< 22.0	< 22.0	< 24	< 29.0	< 32.0	< 22	< 20.0	< 25	< 35
TSS (lbs/day) Raw Sewage Influent Average Monthly	858	825	670	704	672	678	989	814	757	938	569	770

TSS (lbs/day) Raw Sewage Influent Daily Maximum	1915	1283	1046	1421	1562	1285	1849	1651	1398	3393	752	1807
TSS (lbs/day) Weekly Average	< 32	< 27	< 46	< 23.0	< 32.0	< 46	< 40.0	< 43.0	< 26	< 25.0	< 33	< 59
TSS (mg/L) Average Monthly	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.2	< 5.0	< 5.2	< 5.0	< 6.3
TSS (mg/L) Raw Sewage Influent Average Monthly	157	154	97	144	145	152	184	140	183	201	109	137
TSS (mg/L) Weekly Average	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.5	< 5.0	< 6.0	< 5.0	< 8.0
Fecal Coliform (No./100 ml) Geometric Mean	< 2	11	< 3	< 5.0	< 3.0	20	< 43.0	< 9	< 20	< 6.0	8	43
Fecal Coliform (No./100 ml) Instantaneous Maximum	3	107	126	43.0	18.0	193	214	122	130	49	24	195
E. Coli (No./100 ml) Instantaneous Maximum	2.0	84	4.0	4.0	4.0	20.0	54.0	6.0	166	4.0	44	42
UV Transmittance (%) Instantaneous Minimum	65	65.0	65	65	65	65.0	65.0	65.0	65	65	65	65
Total Nitrogen (mg/L) Daily Maximum	15.764			9.64			1.19			5.99		
Ammonia (lbs/day) Average Monthly	6	12	3.0	< 6.0	< 0.1	< 1.0	< 11.0	< 9.0	9.0	< 0.5	14	< 11
Ammonia (mg/L) Average Monthly	1.2	2.3	0.4	< 1.3	< 0.5	< 0.3	< 2.1	< 1.3	2.5	< 0.1	3.2	< 1.7
Total Phosphorus (mg/L) Daily Maximum	1.2			1.6			2.31			2.2		
Total Boron (lbs/day) Average Monthly	0.8	0.8	0.8	0.8	1.0	1	1.0	1.0	0.9	0.7	0.8	0.9
Total Boron (lbs/day) Daily Maximum	0.9	0.9	1	0.9	1.0	2	2.0	2.0	1.0	1.0	0.9	1
Total Boron (mg/L) Average Monthly	0.17	0.18	0.15	0.18	0.23	0.22	0.21	0.2	0.2	0.18	0.18	0.18
Total Boron (mg/L) Daily Maximum	0.22	0.2	0.23	0.21	0.28	0.26	0.24	0.24	0.22	0.22	0.19	0.21
Total Copper (lbs/day) Average Monthly	< 0.2	< 0.04	< 0.05	< 0.04	< 0.05	< 0.05	< 0.06	< 0.05	0.01	< 0.04	< 0.06	< 0.05

Total Copper (lbs/day) Daily Maximum	< 0.5	< 0.05	< 0.06	0.05	< 0.07	< 0.1	< 0.09	< 0.08	0.02	< 0.05	0.08	< 0.06
Total Copper (ug/L) Average Monthly	< 0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.003	< 0.01	< 0.01	< 0.01
Total Copper (ug/L) Daily Maximum	< 0.1	< 0.01	< 0.01	0.01	< 0.01	0.01	< 0.01	0.01	0.004	< 0.01	0.02	< 0.01
Free Cyanide (lbs/day) Average Monthly	< 0.1	< 0.09	< 0.1	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1	< 0.04	< 0.08	< 0.1	< 0.1
Free Cyanide (lbs/day) Daily Maximum	< 0.2	< 0.09	< 0.1	< 0.09	< 0.1	< 0.3	< 0.2	< 0.02	< 0.05	< 0.1	< 0.1	< 0.1
Free Cyanide (ug/L) Average Monthly	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.0079	< 0.02	< 0.02	< 0.02
Free Cyanide (ug/L) Daily Maximum	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.0079	< 0.02	< 0.02	< 0.02
Dissolved Iron (lbs/day) Average Monthly	< 0.2	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2	< 0.2	< 0.2	0.2	< 0.3	< 0.3	< 0.2
Dissolved Iron (lbs/day) Daily Maximum	< 0.2	0.4	< 0.2	< 0.1	0.6	< 0.4	< 0.3	< 0.2	0.2	0.6	0.4	0.2
Dissolved Iron (mg/L) Average Monthly	< 0.03	< 0.05	< 0.03	< 0.03	< 0.04	< 0.03	< 0.03	< 0.03	0.04	< 0.07	< 0.06	< 0.03
Dissolved Iron (mg/L) Daily Maximum	< 0.03	0.08	0.03	< 0.03	0.1	0.04	0.04	< 0.03	0.06	0.2	0.09	0.04
Total Zinc (lbs/day) Average Monthly	< 0.05	< 0.04	< 0.2	0.02	0.1	< 0.09	< 0.06	0.2	186	< 0.1	< 0.06	< 0.1
Total Zinc (lbs/day) Daily Maximum	< 0.08	< 0.05	0.4	0.3	0.2	< 0.1	< 0.09	0.3	209	0.2	0.08	0.2
Total Zinc (ug/L) Average Monthly	< 0.01	< 0.01	< 0.03	0.05	0.03	< 0.02	< 0.01	0.03	41.5	< 0.03	< 0.01	< 0.03
Total Zinc (ug/L) Daily Maximum	< 0.01	< 0.01	0.09	0.08	0.06	0.03	< 0.01	0.04	54.0	0.07	0.02	0.06

Compliance History

Effluent Violations for Outfall 001, from: May 1, 2022 To: March 31, 2023

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Ammonia	05/31/22	Avg Mo	3.2	mg/L	2.0	mg/L
Ammonia	09/30/22	Avg Mo	< 2.1	mg/L	2.0	mg/L
Ammonia	07/31/22	Avg Mo	2.5	mg/L	2.0	mg/L

Other Comments: There are no Open Violations by Client ID for this facility.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.5
Latitude 39º 48' 28.25" **Longitude** -79º 46' 5.79"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: Impose the above Technology-Based Limitations for TSS, pH, and Fecal Coliform.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (Attachment 4 - TMS Version 1.4) determined the following parameters were candidates for limitations: Cyanide, Free.

The following limitations were determined through water quality modeling (Attachments 2, 3 & 4):

Parameter	Limit (mg/l)	SBC	Model
CBOD5 Nov 1 – Apr 30	21.0	Average Monthly	WQM 7.0 Version 1.1
CBOD5 May 1 – Oct 31	14.0	Average Monthly	WQM 7.0 Version 1.1
Ammonia-Nitrogen Nov 1 – Apr 30	3.62	Average Monthly	WQM 7.0 Version 1.1
Ammonia-Nitrogen May 1 – Oct 31	2.02	Average Monthly	WQM 7.0 Version 1.1
Dissolved Oxygen	5.0	Minimum	WQM 7.0 Version 1.1
Cyanide, Free (ug/L)	4.29	Average Monthly	TMS Version 1.4

Comments: The TMS Model Results recommended Monitoring be established for Total Boron, Total Copper, Dissolved Iron, and Total Zinc, as the discharge concentration of those parameters is greater than 10 % of the governing WQBELs (no RP).

Best Professional Judgment (BPJ) Limitations

Comments: N/A

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) 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 exceptions to the anti-backsliding regulations are stated in 40 CFR 122.44(l)(2)(i) as, *"A permit…may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if –*

(A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation;
(B) (i) Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or
(ii) The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section;
(C) A less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;"
(D) The permittee has received a permit modification under section 1311(c), 1311(g), 1311(h), 1311(i), 1311(k), 1311(n), or 1326(a) of this title; or
(E) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification). Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of this chapter or for reasons otherwise unrelated to water quality.

The facility is seeking to revise the previously permitted WQBELs for total copper, free cyanide, and total zinc. A Final WQBEL Compliance Report was submitted to the Department on October 31, 2022, which provided site specific data that was not available at time of permit issuance. Per applicability of 40 CFR 122.44(l)(2)(i)(B)(i) & Department's current SOPs (Section II.A, SOP for Clean Water Program, Establishing WQBELs and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers, Final January 10, 2019, Revised May 20, 2021, Version 1.5) the WQBELs of the requested parameters were re-evaluated.

The re-evaluation of existing WQBELs (WQM 7.0 was rerun to reflect updated Q7/10 stream flow data based upon USGS StreamStats) resulted in changes to the final WQBELs for CBOD5, ammonia-nitrogen, and free cyanide. The TMS Model also recommended Monitoring be established for total boron, total copper, dissolved iron, and total zinc, as discussed above.

Additional Considerations

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001).

For POTWs, mass loading limits will be established for CBOD5, TSS, NH3-N, and where necessary Total P and Total N. In general, average monthly mass loading limits will be established for CBOD5, TSS, NH3-N, and where necessary Total P and Total N, and average weekly mass loading limits will be established for CBOD5 and TSS (Section IV, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9).

For POTWs with design flows greater than 2,000 GPD and for non-municipal sewage facilities that service municipalities or portions thereof, the application manager will establish influent BOD5 and TSS monitoring in the permit using the same frequency and sample type as is used for other effluent parameters (Section IV.E.8, SOP for Clean Water Program, New and Reissuance Sewage Individual NPDES Permit Applications, Final November 9, 2012, Revised February 3, 2022, Version 2.0).

Where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but Part A will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm2 or mWs/cm2 or mjoules/cm2) or UV intensity (µW/cm2 or mW/cm2) at the same monitoring frequency that would be used for TRC (Section I.A, Note 4, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9).

Sewage discharges will include monitoring, at a minimum, for *E. Coli*, in new and reissued permits, with a monitoring frequency of 1/month for facilities with design flows of >= 1 MGD per Chapter 92a.61(11)(12).

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). A 1/quarter monitoring requirement for Total N & Total P has been added to the permit per Chapter 92a.61(7)(8).

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	2/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - Apr 30	260	385	XXX	21.0	31.0	42	2/week	24-Hr Composite
CBOD5 May 1 - Oct 31	175	260	XXX	14.0	21.0	28	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/week	24-Hr Composite
TSS	310	465	XXX	25.0	37.0	50	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	45.28	XXX	XXX	3.62	XXX	7.24	2/week	24-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia-Nitrogen May 1 - Oct 31	25.27	XXX	XXX	2.02	XXX	4.04	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Boron (ug/L)	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Total Copper (ug/L)	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Free Cyanide (ug/L)	0.054	0.084 Daily Max	XXX	4.29	6.69 Daily Max	10.7	1/week	24-Hr Composite
Dissolved Iron (ug/L)	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Total Zinc (ug/L)	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite

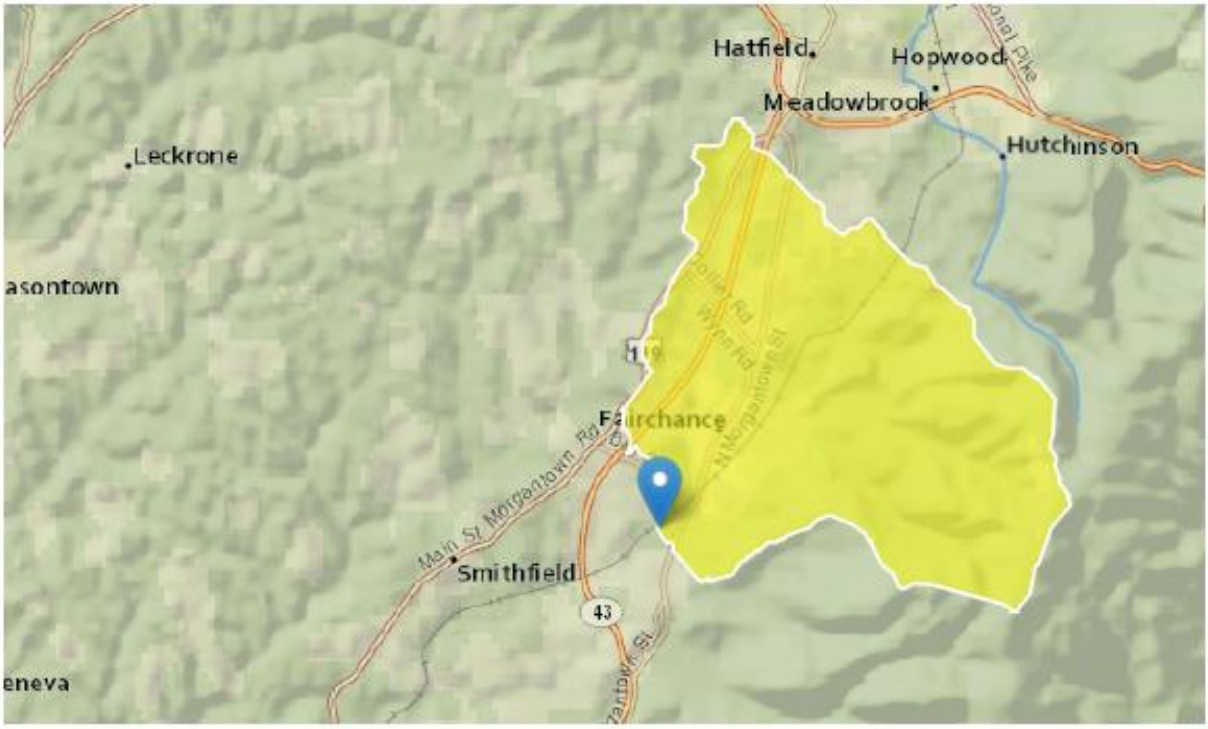
Compliance Sampling Location: Outfall 001

Other Comments: N/A

Attachment 1 – USGS StreamStats Report

StreamStats Report - PA0096342

Region ID: PA
Workspace ID: PA20230510150745609000
Clicked Point (Latitude, Longitude): 39.80770, -79.76853
Time: 2023-05-10 11:08:09 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	13.3	square miles
ELEV	Mean Basin Elevation	1452	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	13.3	square miles	2.26	1400
ELEV	Mean Basin Elevation	1452	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.628	ft^3/s	43	43
30 Day 2 Year Low Flow	1.09	ft^3/s	38	38
7 Day 10 Year Low Flow	0.222	ft^3/s	66	66
30 Day 10 Year Low Flow	0.399	ft^3/s	54	54
90 Day 10 Year Low Flow	0.751	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/)

Application Version: 4.14.0

Attachment 2 – WQM 7.0 Version 1.1 – Warmer Period

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41340	GEORGES CREEK	**13.300**	994.00	13.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.017	0.00	0.00	0.000	0.000	0.0	21.31	0.51	25.00	7.93	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
FGJMSA STP	PA0096342	0.0000	1.5000	1.5000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41340	GEORGES CREEK	**12.100**	978.00	14.10	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.017	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

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 (°C)	Analysis pH
Q7-10 Flow												
13.300	0.22	0.00	0.22	2.3205	0.00253	.51	21.31	41.78	0.23	0.313	20.44	7.03
Q1-10 Flow												
13.300	0.14	0.00	0.14	2.3205	0.00253	NA	NA	NA	0.23	0.324	20.29	7.02
Q30-10 Flow												
13.300	0.30	0.00	0.30	2.3205	0.00253	NA	NA	NA	0.24	0.304	20.58	7.05

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
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	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
13.300	FGJMSA STP	16.04	17.02	16.04	17.02	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
13.300	FGJMSA STP	1.78	2.02	1.78	2.02	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
13.30	FGJMSA STP	14.52	14.52	2.02	2.02	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
13.300	1.500	20.437	7.035
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
21.310	0.510	41.784	0.234
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
13.42	0.858	1.84	0.724
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.283	5.672	Tsivoglou	5
Reach Travel Time (days)			
0.313			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.031	13.06	1.80	5.23
0.063	12.71	1.76	5.20
0.094	12.36	1.72	5.20
0.125	12.03	1.68	5.21
0.157	11.70	1.64	5.24
0.188	11.39	1.61	5.27
0.219	11.08	1.57	5.32
0.251	10.78	1.54	5.37
0.282	10.49	1.50	5.43
0.313	10.20	1.47	5.50

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
13.300	FGJMSA STP	PA0096342	0.000	CBOD5	14.52		
				NH3-N	2.02	4.04	
				Dissolved Oxygen			5

Attachment 3 – WQM 7.0 Version 1.1 – Colder Period

Input Data WQM 7.0

	SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	19G	41340	GEORGES CREEK	**13.300**	994.00	13.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.033	0.00	0.00	0.000	0.000	0.0	21.31	0.51	5.00	7.93	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
FGJMSA STP	PA0096342	0.0000	1.5000	1.5000	0.000	15.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	12.51	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19G	41340	GEORGES CREEK	**12.100**	978.00	14.10	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.033	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

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 (°C)	Analysis pH
Q7-10 Flow												
13.300	0.44	0.00	0.44	2.3205	0.00253	.51	21.31	41.78	0.25	0.288	13.39	7.07
Q1-10 Flow												
13.300	0.28	0.00	0.28	2.3205	0.00253	NA	NA	NA	0.24	0.306	13.91	7.04
Q30-10 Flow												
13.300	0.60	0.00	0.60	2.3205	0.00253	NA	NA	NA	0.27	0.273	12.94	7.09

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
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	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
13.300	FGJMSA STP	23.17	26	23.17	26	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
13.300	FGJMSA STP	2.87	3.62	2.87	3.62	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
13.30	FGJMSA STP	21.49	21.49	3.62	3.62	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
13.300	1.500	13.394	7.066
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
21.310	0.510	41.784	0.254
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
18.36	1.263	3.04	0.421
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.367	5.218	Tsivoglou	5
Reach Travel Time (days)			
0.288			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.029	17.87	3.00	5.24
0.058	17.40	2.96	5.16
0.086	16.94	2.93	5.10
0.115	16.49	2.89	5.07
0.144	16.05	2.86	5.07
0.173	15.62	2.82	5.08
0.202	15.21	2.79	5.11
0.231	14.80	2.75	5.15
0.259	14.41	2.72	5.20
0.288	14.03	2.69	5.26

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19G	41340	GEORGES CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
13.300	FGJMSA STP	PA0096342	0.000	CBOD5	21.49		
				NH3-N	3.62	7.24	
				Dissolved Oxygen			4

Attachment 4 – TMS Version 1.4

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Fairchance-Georges STP** NPDES Permit No.: **PA0096342** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Sewage Effluent**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.5	131	7.2	1	1				

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		760									
	Chloride (PWS)	mg/L		85.5									
	Bromide	mg/L		0.424									
	Sulfate (PWS)	mg/L		48.3									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		40									
	Total Antimony	µg/L		0.58									
	Total Arsenic	µg/L		0.64									
	Total Barium	µg/L		47									
	Total Beryllium	µg/L		0.3									
	Total Boron	µg/L		250.645709			0.1645						
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L		0.4									
	Hexavalent Chromium	µg/L	<	1									
	Total Cobalt	µg/L		1									
	Total Copper	µg/L		4.1989553		1.33	0.2468						
	Free Cyanide	µg/L		2.4		1							
	Total Cyanide	µg/L		8.7									
	Dissolved Iron	µg/L		49.1187228		77.5	0.4242						
	Total Iron	µg/L		67.7403658		442.5	0.5859						
	Total Lead	µg/L		0.38									
	Total Manganese	µg/L		50									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		2									
	Total Phenols (Phenolics) (PWS)	µg/L	<	2									
	Total Selenium	µg/L	<	2									
	Total Silver	µg/L	<	0.5									
	Total Thallium	µg/L	<	0.5									
	Total Zinc	µg/L		69.4322101		2.845	0.3219						
	Total Molybdenum	µg/L		2									
	Acrolein	µg/L	<	2									
	Acrylamide	µg/L											
	Acrylonitrile	µg/L	<	5									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	0.5									

Group 3	Carbon Tetrachloride	µg/L	<	0.23										
	Chlorobenzene	µg/L		0.5										
	Chlorodibromomethane	µg/L	<	0.5										
	Chloroethane	µg/L	<	1										
	2-Chloroethyl Vinyl Ether	µg/L	<	5										
	Chloroform	µg/L		0.89										
	Dichlorobromomethane	µg/L	<	0.5										
	1,1-Dichloroethane	µg/L	<	0.5										
	1,2-Dichloroethane	µg/L	<	0.5										
	1,1-Dichloroethylene	µg/L	<	0.5										
	1,2-Dichloropropane	µg/L	<	0.5										
	1,3-Dichloropropylene	µg/L	<	0.47										
	1,4-Dioxane	µg/L	<	0.5										
	Ethylbenzene	µg/L	<	0.51										
	Methyl Bromide	µg/L	<	0.69										
	Methyl Chloride	µg/L	<	1										
	Methylene Chloride	µg/L	<	0.5										
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5										
	Tetrachloroethylene	µg/L	<	0.5										
	Toluene	µg/L	<	0.5										
	1,2-trans-Dichloroethylene	µg/L	<	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	µg/L	<	0.5										
Group 4	2-Chlorophenol	µg/L	<	3.1										
	2,4-Dichlorophenol	µg/L	<	3.1										
	2,4-Dimethylphenol	µg/L	<	3.1										
	4,6-Dinitro-o-Cresol	µg/L	<	6.3										
	2,4-Dinitrophenol	µg/L	<	6.3										
	2-Nitrophenol	µg/L	<	3.1										
	4-Nitrophenol	µg/L	<	3.1										
	p-Chloro-m-Cresol	µg/L	<	3.1										
	Pentachlorophenol	µg/L	<	6.3										
	Phenol	µg/L	<	8.3										
	2,4,6-Trichlorophenol	µg/L	<	3.1										
Group 5	Acenaphthene	µg/L	<	1.6										
	Acenaphthylene	µg/L	<	1.6										
	Anthracene	µg/L	<	1.6										
	Benzidine	µg/L	<	4.2										
	Benzo(a)Anthracene	µg/L	<	1.6										
	Benzo(a)Pyrene	µg/L	<	1.6										
	3,4-Benzofluoranthene	µg/L	<	1.6										
	Benzo(ghi)Perylene	µg/L	<	1.6										
	Benzo(k)Fluoranthene	µg/L	<	1.6										
	Bis(2-Chloroethoxy)Methane	µg/L	<	3.1										
	Bis(2-Chloroethyl)Ether	µg/L	<	3.1										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	3.1										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	3.1										
	4-Bromophenyl Phenyl Ether	µg/L	<	3.1										
	Butyl Benzyl Phthalate	µg/L	<	3.1										
	2-Chloronaphthalene	µg/L	<	3.1										
	4-Chlorophenyl Phenyl Ether	µg/L	<	3.1										
	Chrysene	µg/L	<	1.6										
	Dibenzo(a,h)Anthrancene	µg/L	<	1.6										
	1,2-Dichlorobenzene	µg/L	<	1										
	1,3-Dichlorobenzene	µg/L	<	1										
	1,4-Dichlorobenzene	µg/L	<	1										
	3,3-Dichlorobenzidine	µg/L	<	3.1										
	Diethyl Phthalate	µg/L	<	3.1										
	Dimethyl Phthalate	µg/L	<	3.1										
	Di-n-Butyl Phthalate	µg/L	<	3.1										
	2,4-Dinitrotoluene	µg/L	<	3.1										

	2,6-Dinitrotoluene	µg/L	<	3.1									
	Di-n-Octyl Phthalate	µg/L	<	3									
	1,2-Diphenylhydrazine	µg/L	<	3.1									
	Fluoranthene	µg/L	<	1.6									
	Fluorene	µg/L	<	1.6									
	Hexachlorobenzene	µg/L	<	3.1									
	Hexachlorobutadiene	µg/L	<	0.5									
	Hexachlorocyclopentadiene	µg/L	<	3.1									
	Hexachloroethane	µg/L	<	3.1									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1.6									
	Isophorone	µg/L	<	3.1									
	Naphthalene	µg/L	<	1.6									
	Nitrobenzene	µg/L	<	3.1									
	n-Nitrosodimethylamine	µg/L	<	3.1									
	n-Nitrosodi-n-Propylamine	µg/L	<	3.1									
	n-Nitrosodiphenylamine	µg/L	<	3.1									
	Phenanthrene	µg/L	<	1.6									
	Pyrene	µg/L	<	1.6									
	1,2,4-Trichlorobenzene	µg/L	<	0.43									
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Fairchance-Georges STP, NPDES Permit No. PA0096342, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Georges Creek**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	041340	13.3	994	13.3			Yes
End of Reach 1	041340	12.1	978	14.1			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	13.3	0.0166917			41.78	21.31	0.51	0.27				65.45	7.93		
End of Reach 1	12.1	0.0166917													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	13.3														
End of Reach 1	12.1														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Fairchance-Georges STP, NPDES Permit No. PA0096342, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
13.3	0.22		0.22	2.321	0.003	0.51	21.31	41.78	0.27	0.272	0.259
12.1	0.24		0.235								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
13.3	1.99		1.99	2.321	0.003	0.644	21.31	33.11	0.363	0.202	5.124
12.1	2.098		2.10								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.259 PMF: 1 Analysis Hardness (mg/l): 125.28 Analysis pH: 7.23

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (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	
Total Aluminum	0	0		0	750	750	822	
Total Antimony	0	0		0	1,100	1,100	1,205	
Total Arsenic	0	0		0	340	340	373	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	23,009	
Total Boron	0	0		0	8,100	8,100	8,875	
Total Cadmium	0	0		0	2.507	2.68	2.94	Chem Translator of 0.935 applied
Total Chromium (III)	0	0		0	685.251	2,169	2,376	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	17.9	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	104	
Total Copper	1.33	0		0	16.618	17.3	18.8	Chem Translator of 0.96 applied
Free Cyanide	1	0		0	22	22.0	24.0	

Dissolved Iron	77.5	0		0	N/A	N/A	N/A	
Total Iron	442.5	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	82.467	109	119	Chem Translator of 0.758 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.8	Chem Translator of 0.85 applied
Total Nickel	0	0		0	566.581	568	622	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	4.740	5.58	6.11	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	71.2	
Total Zinc	2.845	0		0	141.834	145	159	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.29	
Acrylonitrile	0	0		0	650	650	712	
Benzene	0	0		0	640	640	701	
Bromoform	0	0		0	1,800	1,800	1,972	
Carbon Tetrachloride	0	0		0	2,800	2,800	3,068	
Chlorobenzene	0	0		0	1,200	1,200	1,315	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	19,722	
Chloroform	0	0		0	1,900	1,900	2,082	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	16,435	
1,1-Dichloroethylene	0	0		0	7,500	7,500	8,218	
1,2-Dichloropropane	0	0		0	11,000	11,000	12,052	
1,3-Dichloropropylene	0	0		0	310	310	340	
Ethylbenzene	0	0		0	2,900	2,900	3,177	
Methyl Bromide	0	0		0	550	550	603	
Methyl Chloride	0	0		0	28,000	28,000	30,679	
Methylene Chloride	0	0		0	12,000	12,000	13,148	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,096	
Tetrachloroethylene	0	0		0	700	700	767	
Toluene	0	0		0	1,700	1,700	1,863	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	7,451	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,287	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,725	
Trichloroethylene	0	0		0	2,300	2,300	2,520	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	614	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,863	
2,4-Dimethylphenol	0	0		0	660	660	723	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	87.7	
2,4-Dinitrophenol	0	0		0	660	660	723	
2-Nitrophenol	0	0		0	8,000	8,000	8,765	
4-Nitrophenol	0	0		0	2,300	2,300	2,520	
p-Chloro-m-Cresol	0	0		0	160	160	175	
Pentachlorophenol	0	0		0	11.014	11.0	12.1	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	504	

Acenaphthene	0	0		0	83	83.0	90.9	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	329	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.55	
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	32,870	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,931	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	296	
Butyl Benzyl Phthalate	0	0		0	140	140	153	
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	820	820	898	
1,3-Dichlorobenzene	0	0		0	350	350	383	
1,4-Dichlorobenzene	0	0		0	730	730	800	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,383	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,739	
Di-n-Butyl Phthalate	0	0		0	110	110	121	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,753	
2,6-Dinitrotoluene	0	0		0	990	990	1,085	
1,2-Diphenylhydrazine	0	0		0	15	15.0	16.4	
Fluoranthene	0	0		0	200	200	219	
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	11.0	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.48	
Hexachloroethane	0	0		0	60	60.0	65.7	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	10,957	
Naphthalene	0	0		0	140	140	153	
Nitrobenzene	0	0		0	4,000	4,000	4,383	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	18,626	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	329	
Phenanthrene	0	0		0	5	5.0	5.48	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	142	

☑ ***CFC*** CCT (min): 0.259 PMF: 1 Analysis Hardness (mg/l): 125.28 Analysis pH: 7.23

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (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	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	241	
Total Arsenic	0	0		0	150	150	164	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,492	
Total Boron	0	0		0	1,600	1,600	1,753	
Total Cadmium	0	0		0	0.288	0.32	0.35	Chem Translator of 0.9 applied
Total Chromium (III)	0	0		0	89.137	104	114	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	11.4	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	20.8	
Total Copper	1.33	0		0	10.858	11.3	12.3	Chem Translator of 0.96 applied
Free Cyanide	1	0		0	5.2	5.2	5.6	
Dissolved Iron	77.5	0		0	N/A	N/A	N/A	
Total Iron	442.5	0		0	1,500	1,500	1,601	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	3.214	4.24	4.64	Chem Translator of 0.758 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.99	Chem Translator of 0.85 applied
Total Nickel	0	0		0	62.930	63.1	69.2	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	5.47	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	14.2	
Total Zinc	2.845	0		0	142.994	145	159	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.29	
Acrylonitrile	0	0		0	130	130	142	
Benzene	0	0		0	130	130	142	
Bromoform	0	0		0	370	370	405	
Carbon Tetrachloride	0	0		0	560	560	614	
Chlorobenzene	0	0		0	240	240	263	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,835	
Chloroform	0	0		0	390	390	427	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,397	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,644	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,410	
1,3-Dichloropropylene	0	0		0	61	61.0	66.8	
Ethylbenzene	0	0		0	580	580	635	
Methyl Bromide	0	0		0	110	110	121	
Methyl Chloride	0	0		0	5,500	5,500	6,026	
Methylene Chloride	0	0		0	2,400	2,400	2,630	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	230	
Tetrachloroethylene	0	0		0	140	140	153	
Toluene	0	0		0	330	330	362	

1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,534	
1,1,1-Trichloroethane	0	0		0	610	610	668	
1,1,2-Trichloroethane	0	0		0	680	680	745	
Trichloroethylene	0	0		0	450	450	493	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	121	
2,4-Dichlorophenol	0	0		0	340	340	373	
2,4-Dimethylphenol	0	0		0	130	130	142	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	17.5	
2,4-Dinitrophenol	0	0		0	130	130	142	
2-Nitrophenol	0	0		0	1,600	1,600	1,753	
4-Nitrophenol	0	0		0	470	470	515	
p-Chloro-m-Cresol	0	0		0	500	500	548	
Pentachlorophenol	0	0		0	8.450	8.45	9.26	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	99.7	
Acenaphthene	0	0		0	17	17.0	18.6	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	64.6	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.11	
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	6,574	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	997	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	59.2	
Butyl Benzyl Phthalate	0	0		0	35	35.0	38.3	
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	175	
1,3-Dichlorobenzene	0	0		0	69	69.0	75.6	
1,4-Dichlorobenzene	0	0		0	150	150	164	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	877	
Dimethyl Phthalate	0	0		0	500	500	548	
Di-n-Butyl Phthalate	0	0		0	21	21.0	23.0	
2,4-Dinitrotoluene	0	0		0	320	320	351	
2,6-Dinitrotoluene	0	0		0	200	200	219	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.29	
Fluoranthene	0	0		0	40	40.0	43.8	
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	2.19	

Hexachlorocyclopentadiene	0	0		0	1	1.0	1.1	
Hexachloroethane	0	0		0	12	12.0	13.1	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,301	
Naphthalene	0	0		0	43	43.0	47.1	
Nitrobenzene	0	0		0	810	810	887	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,725	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	64.6	
Phenanthrene	0	0		0	1	1.0	1.1	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	28.5	

☑ ***THH*** CCT (min): 0.259 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (ug/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (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	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	6.14	
Total Arsenic	0	0		0	10	10.0	11.0	
Total Barium	0	0		0	2,400	2,400	2,630	
Total Boron	0	0		0	3,100	3,100	3,397	
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	1.33	0		0	N/A	N/A	N/A	
Free Cyanide	1	0		0	4	4.0	4.29	
Dissolved Iron	77.5	0		0	300	300	321	
Total Iron	442.5	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	1,096	
Total Mercury	0	0		0	0.050	0.05	0.055	
Total Nickel	0	0		0	610	610	668	
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	0.26	
Total Zinc	2.845	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	3.29	
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	100	100.0	110	
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	5.7	5.7	6.25	
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	36.2	
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	68	68.0	74.5	
Methyl Bromide	0	0		0	100	100.0	110	
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	57	57.0	62.5	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	110	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,957	
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	30	30.0	32.9	
2,4-Dichlorophenol	0	0		0	10	10.0	11.0	
2,4-Dimethylphenol	0	0		0	100	100.0	110	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.19	
2,4-Dinitrophenol	0	0		0	10	10.0	11.0	
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	4,000	4,000	4,383	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	76.7	
Anthracene	0	0		0	300	300	329	
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	200	200	219	
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	0.1	0.1	0.11	
2-Chloronaphthalene	0	0		0	800	800	877	
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	1,000	1,000	1,096	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.67	
1,4-Dichlorobenzene	0	0		0	300	300	329	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	657	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,191	
Di-n-Butyl Phthalate	0	0		0	20	20.0	21.9	
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	20	20.0	21.9	
Fluorene	0	0		0	50	50.0	54.8	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	4.38	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	37.3	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	11.0	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	21.9	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.077	

☑ ***CRL*** CCT (min): 5.124 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (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	
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	1.33	0		0	N/A	N/A	N/A	
Free Cyanide	1	0		0	N/A	N/A	N/A	
Dissolved Iron	77.5	0		0	N/A	N/A	N/A	
Total Iron	442.5	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	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	2.845	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	0.11	
Benzene	0	0		0	0.58	0.58	1.08	
Bromoform	0	0		0	7	7.0	13.0	
Carbon Tetrachloride	0	0		0	0.4	0.4	0.74	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	1.49	
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	0.95	0.95	1.77	
1,2-Dichloroethane	0	0		0	9.9	9.9	18.4	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	1.67	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.5	
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	20	20.0	37.2	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.37	
Tetrachloroethylene	0	0		0	10	10.0	18.6	
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	0.55	0.55	1.02	
Trichloroethylene	0	0		0	0.6	0.6	1.12	
Vinyl Chloride	0	0		0	0.02	0.02	0.037	
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	0.030	0.03	0.056	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	2.79	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.0002	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.002	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0002	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.002	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.019	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.056	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.59	
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	0.12	0.12	0.22	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.0002	
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	0.05	0.05	0.093	
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	0.093	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.093	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.056	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.0001	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.019	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.19	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.002	
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	0.0007	0.0007	0.001	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.009	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	6.14	

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	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Boron	Report	Report	Report	Report	Report	µg/L	1,753	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	12.3	CFC	Discharge Conc > 10% WQBEL (no RP)
Free Cyanide	0.054	0.084	4.29	6.69	10.7	µg/L	4.29	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	321	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	145	AFC	Discharge Conc > 10% WQBEL (no 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)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	750	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	6.14	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	11.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	2,630	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Cadmium	0.35	µg/L	Discharge Conc < TQL
Total Chromium (III)	114	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	11.4	µg/L	Discharge Conc < TQL
Total Cobalt	20.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Total Iron	1,601	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	4.64	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	1,096	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.055	µg/L	Discharge Conc < TQL
Total Nickel	69.2	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	5.47	µg/L	Discharge Conc < TQL

Total Silver	5.58	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	0.26	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.11	µg/L	Discharge Conc < TQL
Benzene	1.08	µg/L	Discharge Conc < TQL
Bromoform	13.0	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	0.74	µg/L	Discharge Conc < TQL
Chlorobenzene	110	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	1.49	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,835	µg/L	Discharge Conc < TQL
Chloroform	6.25	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	1.77	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	18.4	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	36.2	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	1.67	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.5	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	74.5	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	110	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	6,026	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	37.2	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	0.37	µg/L	Discharge Conc < TQL
Tetrachloroethylene	18.6	µg/L	Discharge Conc < TQL
Toluene	62.5	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	110	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	668	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	1.02	µg/L	Discharge Conc < TQL
Trichloroethylene	1.12	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.037	µg/L	Discharge Conc < TQL
2-Chlorophenol	32.9	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	11.0	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	110	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.19	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	11.0	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,753	µg/L	Discharge Conc < TQL
4-Nitrophenol	515	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.056	µg/L	Discharge Conc < TQL
Phenol	4,383	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	2.79	µg/L	Discharge Conc < TQL
Acenaphthene	18.6	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS

Anthracene	329	µg/L	Discharge Conc < TQL
Benzidine	0.0002	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.002	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0002	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.002	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.019	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.056	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	219	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	0.59	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	59.2	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.11	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	877	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.22	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0002	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	175	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	7.67	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	164	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	0.093	µg/L	Discharge Conc < TQL
Diethyl Phthalate	657	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	548	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	21.9	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.093	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.093	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.056	µg/L	Discharge Conc < TQL
Fluoranthene	21.9	µg/L	Discharge Conc < TQL
Fluorene	54.8	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.0001	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.019	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.1	µg/L	Discharge Conc < TQL
Hexachloroethane	0.19	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.002	µg/L	Discharge Conc < TQL
Isophorone	37.3	µg/L	Discharge Conc < TQL
Naphthalene	47.1	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	11.0	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.001	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.009	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	6.14	µg/L	Discharge Conc < TQL
Phenanthrene	1.1	µg/L	Discharge Conc < TQL
Pyrene	21.9	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.077	µg/L	Discharge Conc < TQL

Attachment 5 – TOXCON Input

Facility:	Fairchance-Georges STP
NPDES #:	PA0096342
Outfall No:	001
n (Samples/Month):	4
Reviewer/Permit Engineer:	W. Mitchell

Parameter Name	Total Boron	Total Copper	Dissolved Iron	Total Iron	Total Zinc	Free Cyanide
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Detection Limit	100	2	20	20	5	2
Sample Date	*When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)*					
06/28/22	230	3	20	30	70.2	ND
07/04/22	170	4	20	20	45.3	ND
07/12/22	220	3	40	60	54	ND
07/21/22	190	2	20	20	41.4	ND
07/26/22	210	3	40	40	57.3	ND
08/02/22	200	4	50	30	45.2	ND
08/11/22	220	4	20	20	57.1	ND
08/16/22	270	4	ND	ND	65.2	2.4
08/23/22	160	3	20	20	35.4	ND
08/28/22	220	3	30	30	51.1	ND
09/14/22	160	3	50	100	23.9	ND
09/20/22	240	2	40	50	31.5	ND

Attachment 6 – TOXCON Output

Reviewer/Permit Engineer: W. Mitchell

Facility: Fairchance-Georges STP
NPDES #: PA0096342
Outfall No: 001
n (Samples/Month): 4

Parameter	Distribution Applied	Coefficient of Variation (daily)	Avg. Monthly
Total Boron (µg/L)	Lognormal	0.1645146	250.6457089
Total Copper (µg/L)	Lognormal	0.2467660	4.1989553
Dissolved Iron (µg/L)	Delta-Lognormal	0.4241847	49.1187228
Total Iron (µg/L)	Delta-Lognormal	0.5859172	67.7403658
Total Zinc (µg/L)	Lognormal	0.3218632	69.4322101
Free Cyanide (µg/L)	Delta-Lognormal	#DIV/0!	#DIV/0!