pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0003026**
Facility Type	**Non-Municipal**	APS ID	**1063081**
Major / Minor	**Minor**	Authorization ID	**1395779**

Applicant and Facility Information

Applicant Name	**US Bronze Foundry & Machine, Inc.**	Facility Name	**US Bronze Foundry & Machine**
Applicant Address	18649 Brake Shoe Road, P.O. Box 458	Facility Address	18649 Brake Shoe Road
	Meadville, PA 16335-9603		Meadville, PA 16335-9603
Applicant Contact	Tom Seringer	Facility Contact	Tom Seringer
Applicant Phone	(814) 337-4234	Facility Phone	(814) 337-4234
Client ID	27485	Site ID	237049
Ch 94 Load Status	Not Overloaded	Municipality	Woodcock Township
Connection Status		County	Crawford
Date Application Received	May 10, 2022	EPA Waived?	Yes
Date Application Accepted	May 16, 2022	If No, Reason	
Purpose of Application	Renewal of an NPDES Permit for existing discharges of treated domestic sewage and stormwater associated with industrial activities.		

Summary of Review

This facility is a ferrous and non-ferrous casting foundry and machine shop. U.S. Bronze Foundry & Machine, Inc. manufactures castings from various copper-based alloys and then machines to customer's specifications. Discharges from the facility consists of treated domestic sewage and stormwater associated with industrial activities.

Facility is currently registered to use eDMR for reporting.

The facility discharges to French Creek, which is known to contain threatened and endangered mussel species. A summary of threatened and endangered mussel species concerns and considerations is included on page 8 of this Fact Sheet.

There are currently no open violations listed in EFACTS for this client (1/4/2024).

PPC Plan was submitted with the application and was last updated in November 2021.

Sludge use and disposal description and location(s): Sewage sludge is hauled offsite to another WWTP for disposal.

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.

Approve	Deny	Signatures	Date
X		Adam J. Pesek Adam J. Pesek, E.I.T. / Project Manager	January 4, 2024
X		Chad W. Yurisic, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0
Latitude	41º 41' 25"	Longitude	80º 9' 56"
Outfall No.	005	Design Flow (MGD)	0.017
Latitude	41º 41' 66"	Longitude	80º 9' 55"
Quad Name	Meadville	Quad Code	02034
Wastewater Description:	Stormwater associated with industrial activities (002) and treated sewage (005)		

Receiving Waters	French Creek	Stream Code	51591
NHD Com ID	127350493	RMI	36.44 (002), 36.45 (005)
Drainage Area	687.9	Yield (cfs/mi^2)	0.070
Q_{7-10} Flow (cfs)	24.13 (48.27 – 100%)	Q_{7-10} Basis	USGS #03023100
Elevation (ft)	1085	Slope (ft/ft)	
Watershed No.	16-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Mercury		
Source(s) of Impairment	Source Unknown		
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)	7.6	USGS 03022000
Temperature (°C)	20	Default (WWF)
Hardness (mg/L)		
Other: NH_3-N	0.1	Default

Nearest Downstream Public Water Supply Intake		Aqua Pennsylvania, Inc. - Emlenton	
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI	90.0	Distance from Outfall (mi)	60

Changes Since Last Permit Issuance:

Other Comments: 50% of the Q_{7-10} was used as a conservative stream flow during modeling because there is an island in French Creek at and extending below the discharge point which splits flows.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0
Latitude	41º 41' 27"	Longitude	80º 9' 44"
Outfall No.	004	Design Flow (MGD)	0
Latitude	41º 41' 15"	Longitude	80º 10' 0"
Quad Name	Meadville	Quad Code	02034
Wastewater Description:	Stormwater associated with industrial activities		

Receiving Waters	Unnamed tributary to French Creek	Stream Code	52669
NHD Com ID	127350496	RMI	0.1
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)	1108	Slope (ft/ft)	
Watershed No.	16-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	Aqua Pennsylvania, Inc. – Emlenton		
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI	90.0	Distance from Outfall (mi)	60

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary

Treatment Facility Name: U.S. Bronze Foundry & Machine

WQM Permit No.	Issuance Date
2073408 T-1 A-1	6/07/2013

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with Phosphorus Reduction, Tertiary	Chemical, Extended Aeration with Solids Removal	Hypochlorite	0.017

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.017		Not Overloaded	Holding Tank	Other WWTP

Other Comments: Treatment consists of comminutor and bypass barscreen, 16,000-gallon aeration tank, 3700 gallon clarifier, 869 gallon dosing tank with alternating dose pumps, chemical (alum) feed for phosphorus removal, 2 – 697 sq. ft. subsurface sand filters, liquid chlorination 1045-gallon contact tank, and V-notch weir.

Compliance History	
Summary of DMRs:	There were 9 effluent violations at Outfall 005 in the last 5 years. (2 pH, 4 TRC, 2 D.O., 1 TSS)
Summary of Inspections:	A site inspection was conducted on 2/5/2020 identified vegetation covering both sand beds, deteriorating concrete around sand bed perimeters, and a brown foamy discharge at stormwater outfall 004. A NOV was subsequently issued for these issues on 2/20/2020. A follow up site inspection was conducted on 6/5/2020. The inspection report noted that vegetation was removed from the sand filters, but the concrete barriers were still awaiting repairs. Outfall 004 was not visible during the inspection due to vegetation growth.

Other Comments: It is suspected that the reported flows are a result of inaccurate flow readings as the there are only 30-35 people employed at the plant. There is also potential for stormwater/groundwater infiltration in the sand filter beds

Compliance History

DMR Data for Outfall 002 (from November 1, 2022 to October 31, 2023)

Parameter	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22
TSS (mg/L) Daily Maximum					8						< 5	
Total Aluminum (mg/L) Daily Maximum					< 0.05						< 0.05	
Total Copper (mg/L) Daily Maximum					0.04						0.12	
Total Iron (mg/L) Daily Maximum					< 0.05						< 0.05	
Total Lead (mg/L) Daily Maximum					0.01						0.03	
Total Zinc (mg/L) Daily Maximum					0.10						0.27	

DMR Data for Outfall 003 (from November 1, 2022 to October 31, 2023)

Parameter	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22
TSS (mg/L) Daily Maximum					< 5						< 5	
Total Aluminum (mg/L) Daily Maximum					< 0.05						< 0.05	
Total Copper (mg/L) Daily Maximum					0.07						0.12	
Total Iron (mg/L) Daily Maximum					< 0.05						< 0.05	
Total Lead (mg/L) Daily Maximum					0.02						0.02	
Total Zinc (mg/L) Daily Maximum					0.30						0.38	

DMR Data for Outfall 004 (from November 1, 2022 to October 31, 2023)

Parameter	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22
TSS (mg/L) Daily Maximum					12.1						9.80	
Total Aluminum (mg/L) Daily Maximum					0.43						0.32	
Total Copper (mg/L) Daily Maximum					0.23						0.16	
Total Iron (mg/L) Daily Maximum					0.46						0.32	
Total Lead (mg/L) Daily Maximum					0.07						0.05	
Total Zinc (mg/L) Daily Maximum					0.16						0.09	

DMR Data for Outfall 005 (from November 1, 2022 to October 31, 2023)

Parameter	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22
Flow (MGD) Average Monthly	0.002228	0.001129	0.002777	0.00345	0.004628	0.005359	0.005761	0.002087	0.001346	0.001747	0.000968	0.003435
Flow (MGD) Daily Maximum	0.022092	0.002833	0.015149	0.018425	0.018425	0.015149	0.018425	0.015149	0.002833	0.002833	0.001086	0.015149
pH (S.U.) Daily Minimum	7.24	7.24	7.17	7.05	7.07	7.16	6.69	6.0	6.04	6.15	6.55	6.67
pH (S.U.) Daily Maximum	7.87	7.82	7.82	7.57	7.51	7.88	7.7	7.9	7.35	7.25	7.79	8.33
DO (mg/L) Daily Minimum	8.3	7.4	6.8	7.1	7.1	7.2	6.8	6.5	6.3	6.1	7.7	6.9
TRC (mg/L) Average Monthly	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.4	0.4
TRC (mg/L) Instantaneous Maximum	1.1	0.63	0.53	0.14	0.2	0.21	0.22	0.35	0.73	1.1	0.68	1.74
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.6	< 3.6	< 2.8	< 5.8	< 2.7	< 2.5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TSS (mg/L) Average Monthly	< 5.0	< 5.0	< 40.5	< 5.0	< 5.0	< 5.0	7.0	9.5	9.0	12.5	5.0	< 5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1	< 1	< 5	23	< 1	< 1	< 1.0	< 1	< 1	< 1.0	< 1	< 1

Fecal Coliform (CFU/100 ml) Instantaneous Maximum	< 1	< 1	28	102	1	1	< 1.0	< 1	< 1	< 1.0	< 1	< 1
Total Nitrogen (mg/L) Average Monthly	69.8	49.7	32.8	39.2	64.4	52.1	55.6	45.2	48	54.4	35.8	24.7
Ammonia (mg/L) Average Monthly	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Phosphorus (mg/L) Average Monthly	0.3	0.4	0.3	0.3	0.2	0.2	< 0.1	0.2	< 0.1	0.2	< 0.1	0.2

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	0
Latitude	41º 41' 25.00"	**Longitude**	80º 9' 56.00"
Outfall No.	003	**Design Flow (MGD)**	0
Latitude	41º 41' 27.00"	**Longitude**	80º 9' 44.00"
Outfall No.	004	**Design Flow (MGD)**	0
Latitude	41º 41' 15.00"	**Longitude**	80º 10' 0.00"

Wastewater Description: Stormwater associated with industrial activities

Technology-Based Limitations

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

Comments: None apply

Water Quality-Based Limitations

Comments: No modeling done for stormwater discharges

Best Professional Judgment (BPJ) Limitations

Comments: In accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Industrial Permits," semi-annual monitoring requirements for TSS, oil & grease, total nitrogen, total phosphorus, aluminum, copper, total iron, lead, and zinc were added to the permit based on the Department's PAG-03 NPDES General Permit for Discharges Associated with Industrial Stormwater, Appendix B.

Anti-Backsliding

N/A

Development of Effluent Limitations

Outfall No. 005 **Design Flow (MGD)** 0.017
Latitude 41º 41' 66.00" **Longitude** 80º 9' 55"
Wastewater Description: Treated domestic sewage

Technology-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	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)
E. Coli	Report (No./100 ml)	IMAX	-	92a.61

Comments: Monitoring for E. Coli is placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia Nitrogen	14	Average Monthly	Previous WQM Modeling
TRC	1.2	IMAX	Previous TRC Spreadsheet

Comments: Due to the observation that average discharge flows are much less than the design flow (average flows are less than 0.002 MGD) and the significant amount of dilution available in the receiving stream, no WQM modeling was done for this renewal. The seasonal multiplier for ammonia nitrogen produces a wintertime effluent limitation well above the performance based BPJ for ammonia nitrogen for domestic sewage of 25 mg/l so ammonia nitrogen will receive monitoring for the wintertime period.

Best Professional Judgment (BPJ) Limitations

Comments: A dissolved oxygen limit of a minimum of 4.0 mg/l and monitoring for total nitrogen was placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

A total phosphorus average monthly limit of 2.0 mg/l was previously placed in the permit and will be retained in this NPDES Permit renewal due to anti-backsliding provisions.

Additional Considerations

Discharge flow used for previous modeling/setting limits was based on actual flow for the facility at a time that predates a 1991 permit amendment because the plant is/was oversized for the current workforce.

Monitoring frequencies were retained from the previous permit cycle for all parameters due to the small flows (average less than 0.002 MGD) discharged from the plant and relatively good performance history of the treatment plant. Total nitrogen frequency was made the same as for phosphorus (1/month).

This discharge is not expected to contribute to the stream impairment as the only source of wastewater is sewage and the water supply is private wells.

Anti-Backsliding

N/A

Threatened and Endangered Mussel Species Concerns and Considerations

The main segment of French Creek from the Union City Reservoir to the confluence with the Allegheny River was designated by the United States Fish and Wildlife Services (USFWS) as "Critical Habitat" for the rabbitsfoot mussel, a federally listed threatened species, and is known to also contain other threatened and endangered mussel species. Due to this being a direct discharge to French Creek, potential impacts were evaluated.

The USFWS has indicated in comment letters on other NPDES permits that in order to protect threatened and endangered mussel species, wastewater discharges containing ammonia-nitrogen (NH_3-N), chloride (Cl^-) and nickel, *dissolved zinc, and total copper* where mussels or their habitat exist, can be no more than 1.9 mg/l, 78 mg/l and 7.3 ug/l, *13 ug/l and 10 ug/l* respectively.

This existing 17,000 gallons per day (0.017 MGD) permitted discharge is from a sewage treatment facility servicing a small industry consisting of wastewater treatment aeration tanks, open sand filters, phosphorus control and chlorine disinfection. Actual flows over the last couple years have been averaging less than 0.002 MGD.

Although the subject discharger currently has seasonal summer effluent limitations and monitoring requirements for Ammonia-Nitrogen, NPDES permits for sewage facilities of this nature do not, generally, include routine monitoring requirements for pollutants such as chloride and nickel. Therefore, with exception of the sampling for ammonia-nitrogen, the Department lacked sufficient data to support its assumption that a properly constructed, operated and maintained minor sewage facility of this size is expected to produce an effluent that would be protective of all the uses of the receiving stream including threatened and endangered mussels.

Accordingly, the Department requested that US Bronze Foundry & Machine, Inc. complete an effluent sample for chloride and nickel in the previous permit renewal to determine what impact, if any, the discharge may be having on threatened and endangered mussel species in French Creek. A summary of the chloride and nickel sample, as well as DMR data for ammonia-nitrogen, is as follows:

Ammonia-Nitrogen (NH_3-N) Sampling Data (eDMR Reporting as of 10/5/2017)													
Ammonia-Nitrogen (NH_3-N) 8-hour composite sample (mg/L)	Year	January	February	March	April	May	June	July	August	September	October	November	December
	2020	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
	2021	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
	2022	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
	2023	<0.8	<0.8	<0.8	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	-
Note: US Bronze Foundry & Machine's current NPDES permit has 1/month NH3-N monitoring with a Summer (May-October) average monthly limit of 14 mg/L (28 mg/L IMAX) and Winter (November-April) monitoring.													

Chloride and Nickel Sampling Data		
Parameter	Date Sample Taken	Results
Chloride	1/25/2017	74.0 mg/l
Nickel	1/25/2017	< 0.005 mg/l

Based on this sampling data, the existing discharge from the US Bronze Foundry & Machine, Inc. sewage treatment facility is not believed to be having any adverse effects on threatened or endangered mussel species in French Creek considering that the discharge appears to be meeting the criteria established by the USFWS at the end of pipe and actual effluent flows being less than 0.002 MGD on average.

There have been no known changes to the characteristics of the waste stream or the receiving waters since the last renewal and Chloride and Dissolved Nickel are not expected to adversely affect threatened or endangered mussel species in French Creek. Therefore, no monitoring will be included with the renewed permit.

Dissolved Zinc and Total Copper:

Dissolved Zinc and Total Copper are parameters of interest the USFWS has added since the last permit renewal cycle. As there are no sampling results available for this or similar size/type facilities, monitoring at a frequency of 1 per year has been added to the renewed permit to collect data for consideration in future permit cycles. CWY 1/9/2024

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 002, 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 002 (prior to mixing with any other waters)

Other Comments:

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 003, 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 003 (prior to mixing with any other waters)

Other Comments:

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 004, 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 004 (prior to mixing with any other waters)

Other Comments:

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 005, 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	3/week	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	3/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	3/week	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	1/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60	1/month	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	14.0	XXX	28	1/month	Grab
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4	1/month	Grab
Dissolved Zinc	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Copper	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: Outfall 005 (after disinfection)