pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0042021**
Facility Type	**Municipal**	APS ID	**1066362**
Major / Minor	**Minor**	Authorization ID	**1401250**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Milford - Trumbauersville Area Sewer Authority**	Facility Name	**Milford - Trumbauersville WWTP**
Applicant Address	1845 Rosenberger Road, P O Box 126	Facility Address	1825 Rosenberger Road
	Spinnerstown, PA 18967		Spinnerstown, PA 18968
Applicant Contact	Harold Koenig	Facility Contact	Harold Koenig
Applicant Phone	(215) 589-6036	Facility Phone	(215) 538-1417
Client ID	64462	Site ID	451862
Ch 94 Load Status	Not Overloaded	Municipality	Milford Township
Connection Status	No Limitations	County	Bucks
Date Application Received	June 22, 2022	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Permit Renewal

Summary of Review

The applicant requests renewal of an NPDES permit to discharge 0.8 MGD of treated sewage from a wastewater treatment plant. The treated effluent is discharged into Unami Creek, which is classified as HQ-TSF.

The facility consists of 2 aerated equalization lagoons, 4 extended aeration (DAVCO) units (active) with integral clarification and sludge holding units, 2 multimedia sand filters, chlorine contact basin, dechlorination contact basin and chemical addition for phosphorous removal.

Two DAVCO units are currently being rebuilt to working condition.

The wastewater chemicals used at the facility and listed in the application are: Aluminum sulfate (phosphorus removal), Polymer (phosphorus removal), Chlorine Gas (disinfection), and Sulfur Dioxide (de-chlorination)

The Municipalities served by the plant are Milford Township, and Trumbauersville Borough.

DMR review shows the discharge is in compliance with the existing permit limitations. No comments received from operations section.

There are no changes in the waste characteristics, receiving stream designation and flow quantity.

Monitoring for Total Nitrogen and E- Coli is included in the draft permit as per SOP.

Application reports a TDS concentration of 1280 mg/l (max) and 856 mg/l (average). TDS limit is included in the draft permit. Two-year compliance time is also incorporated in the draft permit.

Approve	Deny	Signatures	Date
X		*Sara Abraham* Sara Reji Abraham, E.I.T. / Project Manager	August 2, 2022
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	08/08/2022

Summary of Review

For fecal coliform the 10% rule doesn't apply due to anti-backsliding and special protection waters discharge.

The existing permit has Copper limits which are based on a WER and site-specific criteria study report dated February 2009. These limits were incorporated in the permit through a permit amendment in 2011. According to DEP SOP, a Part C condition is established in the draft permit that requires site-specific data collection and provide an option to conduct a new site-specific criteria study (SSCS). The new SSCS for Copper must be conducted using the Biotic Ligand Model. If the permittee chooses not to proceed with a new SSCS, water quality effluent limitations for Copper will be developed based on a statewide Copper Criteria and discharge and surface water characteristics for the subsequent reissuance of this permit.

A WQM model run was conducted and CBOD5 and NH3 limits are adjusted accordingly.

Influent monitoring for CBOD5, TSS and BOD5 are recommended in the draft permit to check compliance with the 85% removal requirement and Chapter 94 requirement. These monitoring requirements are consistent with the requirements of other similar discharges in the area.

There are various industrial - commercial users connected to the sewer system. However, no Significant Industrial or Non-Significant Categorical Industrial Users listed in the application.

Sludge use and disposal description and location(s): the facility is hauling away sludge to other POTWs.

Current permit includes bypass language, which is carried over to this renewal. In response to DEP's March 1, 2016 request that the Authority prepare a High Flow Maintenance Plan, a plan was developed. An update of the original report is included with the renewal application. Part C of the permit includes language requiring implementation of the plan.

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.

Act 14 Notifications:

Milford Township	-	April 25, 2022
Trumbauersville Borough	-	April 25, 2022
Bucks County	-	April 26, 2022

Permit Requirements:

A. No Storm Water
B. Acquire Necessary Property Rights
C. Proper Sludge Disposal
D. Chlorine Optimization
E. Small Stream Discharge
F. Operator Notification
G. Operation and Maintenance Plan
H. High Flow Management Plan
I. Bypass Requirements
J. TDS Determination Condition
K. Solids Management
L. Site Specific Criteria Study

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.8
Latitude	40º 25' 8.14"	Longitude	-75º 24' 30.69"
Quad Name	Milford Square	Quad Code	1542
Wastewater Description:	Treated Sewage Effluent		
Receiving Waters	Unami Creek (HQ-TSF)	Stream Code	001362
NHD Com ID	25981730	RMI	10.1
Drainage Area	18.1 square miles		
Q_{7-10} Flow (cfs)	0.656	Q_{7-10} Basis	USGS streamstats
Elevation (ft)	435	Slope (ft/ft)	0.0013
Watershed No.	3-E	Chapter 93 Class.	HQ-TSF
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	Aqua PA – Wetherill Dam – Perkiomen Creek		

Treatment Facility Summary

Treatment Facility Name: Milford-Trumbauersville WWTP

WQM Permit No.	Issuance Date
0993405	10/15/1993
0996414	12/23/1996

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Activated Sludge With Solids Removal	Chlorine With Dechlorination	0.8

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.8	1334	Not Overloaded	Aerobic Digestion	Other WWTP

Compliance History

DMR Data for Outfall 001 (from June 1, 2021 to May 31, 2022)

Parameter	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21
Flow (MGD) Average Monthly	0.732	0.779	0.674	0.741	0.630	0.489	0.593	0.514	0.447	0.579	0.589	0.660
Flow (MGD) Daily Maximum	1.023	1.089	0.943	1.245	1.037	0.604	1.016	1.041	0.773	1.064	0.809	1.059
pH (S.U.) Instantaneous Minimum	6.5	6.4	6.4	6.2	6.1	6.1	6.5	6.6	6.6	6.1	6.2	6.5
pH (S.U.) Instantaneous Maximum	7.1	7.0	7.0	7.3	7.9	7.2	7.2	7.3	7.8	7.8	7.5	7.6
DO (mg/L) Instantaneous Minimum	7.9	7.5	8.4	7.1	7.5	6.7	8.2	7.7	7.4	7.5	8.1	6.9
TRC (mg/L) Average Monthly	0.0016	0.001	0.0001	0.0018	0.0052	0.0026	0.016	0.0042	0.0033	0.0074	0.0074	0.0053
TRC (mg/L) Instantaneous Maximum	0.02	0.02	0.02	0.01	0.03	0.03	0.03	0.02	0.02	0.03	0.04	0.02
CBOD5 (lbs/day) Average Monthly	12.0	16.1	11.4	26.0	17.6	13.2	9.4	8.8	7.6	11.2	9.1	10.7
CBOD5 (lbs/day) Weekly Average	15.8	17.85	12.0	65.4	28.3	19.1	10.5	11.2	10.5	11.9	11.2	12.8
CBOD5 (mg/L) Average Monthly	2.0	2.4	2.0	3.4	3.2	3.3	2.0	2.0	2.0	2.0	2.0	2.0
CBOD5 (mg/L) Weekly Average	2.0	3.8	2.0	7.1	4.4	5.2	2.0	2.0	2.0	2.0	2.0	2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	620	645	707	914	687	554	473	664	960	979	711	1209
BOD5 (mg/L) Raw Sewage Influent Average Monthly	101	85.0	126	120	125.5	116	92.9	170	113	175	154	209
TSS (lbs/day) Average Monthly	23.9	29.5	29.7	46.3	45.3	28.5	23.4	24.7	20.8	42.1	23.9	23.1

TSS (lbs/day) Weekly Average	31.6	35.7	38.5	110.6	87.5	56.9	36.9	30.4	41.6	125.6	43.9	25.3
TSS (mg/L) Average Monthly	4.0	4.0	5.2	6.5	8.2	7.3	5.0	5.8	5.7	6.9	5.5	4.4
TSS (mg/L) Raw Sewage Influent Average Monthly	43.5	36.0	42.7	65.4	44.5	63.0	48.0	54.0	46.4	53.0	43.6	45.4
TSS (mg/L) Weekly Average	4.0	4.0	6.4	12.0	13.6	15.5	8.0	7.6	14.4	18.5	11.6	5.6
Total Dissolved Solids (mg/L) Daily Maximum			1040			689			928			1020
Fecal Coliform (No./100 ml) Geometric Mean	1.0	2.83	7.62	7.18	1.86	2.43	7.0	7.4	1.70	3.15	3.02	2.213
Fecal Coliform (No./100 ml) Instantaneous Maximum	1.0	32.0	33.0	148	6.0	17.0	37.0	16.0	14.0	14.0	7.0	4.0
Ammonia (lbs/day) Average Monthly	1.16	2.67	3.24	10.1	0.53	0.40	0.47	0.44	0.38	0.56	0.45	0.54
Ammonia (mg/L) Average Monthly	0.24	0.35	0.55	1.42	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Total Phosphorus (lbs/day) Average Monthly	4.39	10.63	7.79	10.45	6.81	5.67	5.77	1.86	2.54	3.2	3.97	2.95
Total Phosphorus (mg/L) Average Monthly	0.75	1.48	1.36	1.42	1.25	1.42	1.25	0.45	0.66	0.55	0.89	0.58
Total Copper (lbs/day) Average Monthly	0.0949	0.1124	0.0946	0.1094	0.0861	0.0709	0.0961	0.0630	0.0686	0.0973	0.0862	0.0846
Total Copper (mg/L) Average Monthly	0.0163	0.0158	0.0166	0.0153	0.0163	0.0176	0.0205	0.0148	0.0182	0.0178	0.0184	0.0158

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .8
Latitude 40º 25' 7.95" **Longitude** -75º 24' 30.51"
Wastewater Description: Treated Sewage Effluent

The following limitations apply

Parameters	Monthly Ave. Conc (mg/l)	Weekly Ave Conc. (mg/l)	Inst. Max. (mg/l)	Basis
$CBOD_5$ (5/1 to 10/31)	7.2	10.8	14.4	WQM 7.0*
$CBOD_5$ (11/1 to 4/30)	14.4	21.6	28.8	seasonal limit
Dissolved Oxygen			6.0 (inst. Min.)	Existing/ WQM 7.0*
TRC	0.04		0.13	Existing
Total Suspended Solids	20	30	40	Existing/BPJ
TDS	1000	2000 (Daily Max.)	2500	DRBC**
NH_3–N (05/01 to 10/31)	2.2		4.4	WQM 7.0*
NH_3–N (11/1 to 4/30)	6.6		13.2	seasonal limit
Total N	Report			Data Collection/SOP
Total P (4/1 to 10/31)	1.0		2.0	Existing/BPJ
Total P (11/1 to 3/31)	2.0		4.0	Existing (seasonal limit)
Fecal Coliform (# / 100ml)	200 (Geo.Mean)		1000	Ch. 92a /DRBC
E. Coli			Report	Ch. 92a***
PH	6.0 to 9.0 std. units at all times			Ch. 93
Copper, Total	0.042		0.084	Existing****

* See attached WQM model report. CBOD5 and NH3 limits are more stringent compared to the existing limits. Based on the review of DMRs, the facility is able to meet the new limits easily.

** DRBC Regulation 3.10.4.D.2 includes an end-of-pipe TDS limit of 1,000 ppm. 25 Pa Code 93.7 includes TDS criteria, applicable at PWS intakes, of 500 mg/l as a monthly average, and a maximum of 750 mg/l. No public water supply nearby, downstream of the point of discharge.

***E. Coli monitoring is included in the draft permit according to the DEP SOP guidance (Chapter 92.a.61). This is a new requirement and is consistent with the requirements of other similar discharges in the area.

***Effluent concentrations for Copper reported in the application are 0.037 mg/l (max.) 0.017 (average). The existing permit limit is based on a past WER and continued in the draft permit.

Input Data WQM 7.0

Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
1362	UNAMI CREEK	**10.100**	435.00	18.10	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 (ºC)	Tributary pH	Stream Temp (ºC)	Stream pH
Q7-10	0.100	0.00	0.66	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (ºC)	Disc pH
Mil Trum STP	PA0042021	0.0000	0.0000	0.8000	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	10.00	2.00	0.00	1.50
Dissolved Oxygen	6.00	8.24	0.00	0.00
NH3-N	2.30	0.00	0.00	0.70

Input Data WQM 7.0

Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
1362	UNAMI CREEK	**8.940**	424.73	19.10	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	0.100	0.00	0.68	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Input Data WQM 7.0

Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
1362	UNAMI CREEK	**7.750**	411.93	28.10	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	0.100	0.00	1.25	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°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
03E	1362	UNAMI 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 (ºC)	Analysis pH
Q7-10 Flow												
10.100	0.66	0.00	0.66	1.2376	0.00168	.588	22.19	37.73	0.15	0.489	23.27	7.00
8.940	0.68	0.00	0.68	1.2376	0.00204	.587	22.27	37.93	0.15	0.495	23.22	7.00
Q1-10 Flow												
10.100	0.42	0.00	0.42	1.2376	0.00168	NA	NA	NA	0.13	0.526	23.73	7.00
8.940	0.44	0.00	0.44	1.2376	0.00204	NA	NA	NA	0.14	0.535	23.70	7.00
Q30-10 Flow												
10.100	0.89	0.00	0.89	1.2376	0.00168	NA	NA	NA	0.15	0.457	22.91	7.00
8.940	0.93	0.00	0.93	1.2376	0.00204	NA	NA	NA	0.16	0.463	22.86	7.00

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
03E	1362	UNAMI CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
10.100	Mil Trum STP	7.4	4.6	7.4	4.6	0	0
8.940		NA	NA	7.42	NA	NA	NA

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
10.100	Mil Trum STP	1.56	2.3	1.56	2.3	0	0
8.940		NA	NA	1.56	NA	NA	NA

Dissolved Oxygen Allocations

		CBOD5		NH3-N		Dissolved Oxygen		Critical	Percent
RMI	Discharge Name	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Reach	Reduction
10.10	Mil Trum STP	7.24	7.24	2.17	2.17	6	6	0	0
8.94		NA	NA	NA	NA	NA	NA	NA	NA

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
03E	1362	UNAMI CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
10.100	0.800	23.268	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
22.192	0.588	37.734	0.145
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.42	0.904	1.42	0.900
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.777	2.498	Tsivoglou	5
Reach Travel Time (days)			
0.489			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.049	5.15	1.36	6.34
0.098	4.89	1.30	5.99
0.147	4.65	1.24	5.71
0.195	4.42	1.19	5.49
0.244	4.20	1.14	5.32
0.293	3.99	1.09	5.19
0.342	3.79	1.04	5.10
0.391	3.60	1.00	5.05
0.440	3.42	0.96	5.02
0.489	3.25	0.91	5.02

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
8.940	0.800	23.224	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
22.269	0.587	37.933	0.147
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
3.23	0.782	0.90	0.897
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.062	3.068	Tsivoglou	5
Reach Travel Time (days)			
0.495			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.050	3.09	0.86	5.20
0.099	2.95	0.83	5.34
0.149	2.82	0.79	5.47
0.198	2.70	0.75	5.60
0.248	2.58	0.72	5.73
0.297	2.47	0.69	5.85

0.347	2.36	0.66	5.96
0.396	2.25	0.63	6.07
0.446	2.16	0.60	6.18
0.495	2.06	0.58	6.28

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
03E	1362	UNAMI CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
10.100	Mil Trum STP	PA0042021	0.000	CBOD5	7.24		
				NH3-N	2.17	4.34	
				Dissolved Oxygen			6

Anti-Backsliding

N/A

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	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.04	XXX	0.13	1/day	Grab
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
CBOD5 Nov 1 - Apr 30	96	144	XXX	14.4	21.6	28.8	1/week	24-Hr Composite
CBOD5 May 1 - Oct 31	48	72	XXX	7.2	10.8	14.4	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	133	200	XXX	20.0	30.0	40	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Dissolved Solids (years 1 & 2)	Report Avg Qrtly	Report Daily Max	XXX	Report Avg Qrtly	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Dissolved Solids (years 3, 4 & 5)	6672 Avg Qrtly	13344 Daily Max	XXX	1000.0 Avg Qrtly	2000 Daily Max	2500	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab

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	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	44.0	XXX	XXX	6.6	XXX	13.2	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	14.7	XXX	XXX	2.2	XXX	4.4	1/week	24-Hr Composite
Total Phosphorus Nov 1 - Mar 30	13.3	XXX	XXX	2.0	XXX	4	1/week	24-Hr Composite
Total Phosphorus Apr 1 - Oct 31	7.0	XXX	XXX	1.0	XXX	2	1/week	24-Hr Composite
Total Copper	0.280	XXX	XXX	0.042	XXX	0.084	2/month	24-Hr Composite