pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0045021**
Facility Type	**Industrial**	APS ID	**955602**
Major / Minor	**Minor**	Authorization ID	**1207512**

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

Applicant and Facility Information

Applicant Name	**Brightsmith, LLC**	Facility Name	**Brightsmith IWWTP**
Applicant Address	120 Enterprise Avenue	Facility Address	120 Enterprise Avenue
	Morrisville, PA 19067		Morrisville, PA 19067
Applicant Contact	Jim Bus	Facility Contact	Jim Bus
Applicant Phone	(215) 295-4158	Facility Phone	(215) 295-4158
Client ID	269026	Site ID	710
SIC Code	3479	Municipality	Falls Township
SIC Description	Manufacturing - Metal Coating and Allied Services	County	Bucks
Date Application Received	November 13, 2017	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Permit Renewal.

Summary of Review

The applicant requests approval for renewal of an NPDES permit to discharge 0.0334 MGD (0.02 MGD of treated industrial wastewater and 0.0134 MGD of NCCW) treated wastewater into a unnamed tributary to Biles Creek from their facility located in Falls Township, Bucks County. Biles Creek, which is a tidal tributary ultimately discharges into the Delaware River Estuary Zone 2.

Brightsmith, LLC (formerly Material Science Corporation (MSC)) is primarily a Coil Coating (metal finishing industry) with an applicable EPA effluent limitation guideline category of 40 C.F.R. 465, Subparts A, B, and C. Brightsmith is actively involved in pollution prevention and minimization process.

Sources of Wastewater:

Brightsmith LLC operation consists of one coil coating line, which applies organic and water-based coatings to steel, galvanized and aluminum metal coils in a continuous process. Prior to the application of the coating, the metal surface gets alkaline cleaning, rinsing, brushing, phosphating/conversion treatment, and corrosion prevention chrome treatment. From this preparation process, wastewater containing oils, dirt, surface metals, hydroxides, acids, and chrome overflow into the continuous wastewater treatment system.

Also, Brightsmith has some air compressor and cooling towers, which also discharge non-contact cooling water.

Treatment Process:

The wastewater treatment system consists of three major processes.

1. Oil Separation

Approve	Deny	Signatures	Date
		Ketan Thaker / Project Manager	
		Pravin C. Patel, P.E. / Environmental Engineer Manager	

Summary of Review

2. Chrome Reduction
3. Metal Precipitation

The design capacity of the wastewater treatment system is 150,000 gpd. Due to production cut back and water conservation efforts only 33,400 gpd is discharged through the treatment plant.

The metals get cleaned by removing dirt and oil from the surface by putting into the hot bathtub containing alkaline solution. To minimize the accumulation of floatable oil in the bath, the solution is continuously pumped through a coalescer to remove the oil. To control the build-up of other impurities, a small portion of the solution is discharged into the oil separator. A significant amount of the oil in the alkaline solution is emulsified. Emulsified oil, which is dissolved in water, cannot be removed from the water by simple gravity separation. To convert the emulsified oil into floatable oil, sulfuric acid is added to lower the pH. Acidification occurs in the first stage of the oil separator.

After acidification, the oil-water mixture flows into two subsequent stages where separation of oil and water occurs under quiescent condition. The oil skimmer collects the floating oil and transfers it to a waste oil tank.

The wastewater discharges into two alkali holding tanks for further treatment. Wastewater contaminated with hexavalent chromium is pumped from the collection pit into the chrome holding tanks. This wastewater is then pumped into chromium reduction units. Sodium metabisulfite and sulfuric acid are added to reduce the hexavalent chromium to trivalent chromium. The trivalent chromium is later precipitated along with the other metal hydroxides in a clarifier.

The effluent from the chrome reduction unit is pumped into the alkaline holding tanks where it commingles with the other wastewater stream. From these tanks, the wastewater is pumped to a treatment unit that consists of five stages.

1. Oil Separation
2. Chrome Reduction
3. Lime Precipitation
4. Flocculation
5. Final Filtration

Hydrated lime is added to the third stage to raise the pH to 9-10 to precipitate the metals as hydroxides. Lime precipitation also removes the phosphates in the alkaline cleaner.

Following precipitation, polymer is added to coagulate and flocculate the metal bearing solids, which settles in the clarifier. The clarifier effluent is pumped into a sand filtration unit, which removes residual solids that are carried over from the clarifier effluent.
The sand filter effluent is then adjusted to a pH between 6-9, which is acceptable to the receiving stream.

The solids in the clarifier are pumped into a sludge-thickening tank, which increases the solids content of the sludge by gravity. The sludge is then pumped from the bottom of the sludge-thickening tank into filter press for further de-watering. The sludge cake is further processed in sludge dryer to reduce the volume prior to disposal off the site as hazardous waste.

Effluent Limitations:

All the mass limitations are based on Federal Register 40 C.F.R. Part 465 “Coil Coating Point Source Category” for steel, Galvanized and Aluminum Materials, Subparts A, B, and C, respectively.

Both Best Available Technology (BAT) and Water Quality (WQ) based effluent limits were calculated. The Brightsmith commingles treated process wastewater (0.02 MGD) and NCCW (0.0134 MGD) prior to monitoring and discharges. Therefore, all mass limits (BAT) are converted into concentration by using both flows (0.0334 MGD).

The Brightsmith is recirculating its waste stream, thus by reducing quantities of water being discharged into the stream. However, the concentration of pollutant is getting higher in the waste stream. Therefore, the mass limit for the WQ based effluent parameters were calculated allowing benefit of dilution of NCCW. Biles Creek at a point of discharge is tidal and discharges into the Delaware Estuary Zone 2, DRBC criteria are also considered in calculating effluent limits. As production rates are not expected to change significantly, BAT limits are calculated based on production rate (average monthly) of the previous permit cycle. Discharge is generally in compliance with existing permit limits. Effluent limits for all the parameters are carried over in this permit renewal. Monitoring requirements for Selenium is removed for this permit renewal.

Summary of Review

BAT limits were calculated based on the following average Monthly Production Rate:

Raw Material	Quantity	Production days/month
Aluminum Based	2,669,000 Square Feet	21 days/month
Steel Based	13,770,000 Square Feet	21 days/month
Galvanized Based	18,970,000 Square Feet	21 days/month

Higher Daily Production rate of 1.2 million square feet per day for Cold Roll Steel, 1.3 million square feet per day for Galvanized Steel and 0.6 million square feet per day for Aluminum were used for calculating BAT limits in the permit.

Following are effluent limits:

PARAMETER	EFFLUENT LIMITS (AV. MO in mg/l)	BASIS
Total Residual Chlorine	0.5	25 Pa Code 92a.47-48
pH (SU)	6.0 to 9.0 SU	25 Pa Code 95.2
Total Suspended Solids	30	DRBC Docket D-1985-059-3
Total Dissolved Solids	2500	DRBC Docket D-1985-059-3
Temperature (˚F)	110 ˚F	DRBC Docket D-1985-059-3
Oil & Grease	15	25 Pa Code 95.2
Total Aluminum	2.05 (I. Max)	ELG 40 CFR Part 465 Subpart A, B, C
Hexavalent Chromium	0.04 (Daily Max)	PENTOX Model
Total Chromium	Report	ELG 40 CFR Part 465 Subpart A, B, C
Total Copper	1.63 (Daily Max)	ELG 40 CFR Part 465 Subpart A, B, C
Free Available Cyanide	Report	ELG 40 CFR Part 465 Subpart A, B, C
Total Cyanide	0.70 (I. Max)	ELG 40 CFR Part 465 Subpart A, B, C
Total Iron	2.5 (I. Max)	ELG 40 CFR Part 465 Subpart A, B, C
Dissolved Iron	1.43 (Daily Max)	PENTOX Model
Total Zinc	3.13 (Daily Max)	ELG 40 CFR Part 465 Subpart A, B, C
PCBs (Dry Weather) (pg/l)	Report	DRBC Docket D-1985-059-3

PCB Minimization Plan: On December 15, 2003, the U.S. EPA Regions 2 and 3 adopted a Total Maximum Daily Load (TMDL) for PCBs for Zones 2, 3, 4, and 5 of the tidal Delaware River. The TMDL requires that the facilities identified as discharging PCBs to the Delaware River prepare and implement a PCB Waste Minimization and Reduction Program also known as Pollution Minimization Plan (PMP). This facility has been identified as a Group 2 discharger. WLA for Total PCBs for Brightsmith WWTP is 2.26 ug/day. Effluent loading for Total PCBs from the Facility is 133.32 ug/day. Therefore, once per year monitoring requirements for PCBs will continue in the permit (one sample for dry weather). Permittee submitted PMP plan on November 8, 2012. The Department reviewed the PMP plan and found it acceptable.

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: Falls township received Act-14 notification through certified mail dated January 3, 2018.
Bucks County received Act-14 notification through certified mail dated January 5, 2018.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0334
Latitude	40Âº 10' 32.88"	Longitude	-74Âº 45' 16.58"
Quad Name		Quad Code	
Wastewater Description:	IW Process Effluent with ELG		

Receiving Waters	Biles Creek (WWF, MF)	Stream Code	
NHD Com ID	25486838	RMI	1.5700
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

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

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0
Latitude	40Âº 10' 32.42"	Longitude	-74Âº 45' 16.02"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Biles Creek (WWF, MF)	Stream Code	
NHD Com ID	25486838	RMI	1.5600
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

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

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0
Latitude	40Âº 10' 32.63"	Longitude	-74Âº 45' 16.28"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Biles Creek (WWF, MF)	Stream Code	
NHD Com ID	25486838	RMI	1.5700
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	2-E	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Delaware River Estuary PCB TMDLs

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

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Compliance History

DMR Data for Outfall 001 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	0.0251	0.0264	0.0195	0.0183	0.0165	0.0211	0.0224	0.0209	0.0221	0.0243	0.0198	0.0205
Flow (MGD) Daily Maximum	0.03267	0.0313	0.0226	0.0207	0.0222	0.0263	0.0296	0.0247	0.0261	0.0375	0.0265	0.0238
pH (S.U.) Instantaneous Minimum	6.42	6.33	7.04	7.00	6.77	6.71	6.31	6.19	6.23	6.09	6.03	6.37
pH (S.U.) Instantaneous Maximum	6.87	7.34	7.61	7.26	7.32	6.99	6.97	7.1	6.67	6.63	7.61	7.14
TRC (mg/L) Average Monthly	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
TRC (mg/L) Instantaneous Maximum	< 0.02	< 0.02	0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Temperature (ºF) Instantaneous Maximum	101	96	85	90	87	94	97	100	106	109.8	106	109
TSS (lbs/day) Average Monthly	< 0.3	< 0.3	< 0.2	< 0.3	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.2	< 0.2	< 0.3
TSS (lbs/day) Daily Maximum	< 0.3	< 0.4	< 0.2	< 0.3	< 0.2	< 0.3	< 0.4	< 0.2	< 0.3	< 0.2	< 0.3	< 0.3
TSS (mg/L) Average Monthly	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
TSS (mg/L) Daily Maximum	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Total Dissolved Solids (lbs/day) Average Monthly	23	69	16	19	16	22	17	20	19	23	55	26
Total Dissolved Solids (lbs/day) Daily Maximum	27	206	29	22	22	42	23	22	27	37	136	33
Total Dissolved Solids (mg/L) Average Monthly	108	337	102	126	114	116	96	113	100	115	369	151
Total Dissolved Solids (mg/L) Daily Maximum	129	1030	155	148	124	194	118	141	125	173	944	168

Oil and Grease (lbs/day) Average Monthly	< 0.5	< 0.5	< 0.4	< 0.4	< 0.3	< 0.5	< 0.6	< 0.4	< 0.5	< 0.5	< 0.4	< 0.5
Oil and Grease (mg/L) Average Monthly	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Oil and Grease (mg/L) Instantaneous Maximum	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Total Aluminum (lbs/day) Average Monthly	< 0.031	0.071	< 0.024	< 0.023	< 0.021	< 0.0226	< 0.028	< 0.026	< 0.028	0.087	< 0.025	< 0.020
Total Aluminum (lbs/day) Daily Maximum	< 0.033	0.161	< 0.028	< 0.026	< 0.028	< 0.0247	< 0.037	< 0.031	< 0.033	0.310	< 0.033	< 0.030
Total Aluminum (mg/L) Average Monthly	< 3.00	0.341	< 0.300	< 0.300	< 0.300	< 0.026	< 0.300	< 0.300	< 0.300	0.502	< 0.300	< 0.200
Total Aluminum (mg/L) Instantaneous Maximum	< 3.00	0.802	< 0.300	< 0.300	< 0.300	< 0.033	< 0.300	< 0.300	< 0.300	0.674	< 0.300	< 0.200
Hexavalent Chromium (lbs/day) Average Monthly	< 0.0001	0.0014	0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00002	0.00006	0.0001	0.0013	0.000
Hexavalent Chromium (lbs/day) Daily Maximum	< 0.0001	0.0052	0.0002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	0.00013	0.0003	0.005	0.000
Hexavalent Chromium (mg/L) Average Monthly	< 0.00500	0.014	0.00067	< 0.00050	0.00014	< 0.00052	< 0.0005	< 0.00050	0.0003	0.0006	0.00004	< 0.0050
Hexavalent Chromium (mg/L) Daily Maximum	< 0.00500	0.026	0.00094	< 0.00050	0.00014	< 0.00052	< 0.0005	0.00027	0.0007	0.0013	0.00017	< 0.0050
Hexavalent Chromium (mg/L) Instantaneous Maximum	< 0.00500	0.026	0.00094	< 0.00050	0.00014	< 0.00052	< 0.0005	0.00027	0.0007	0.0013	0.00017	< 0.0050
Total Chromium (lbs/day) Average Monthly	< 0.0016	0.0027	< 0.0012	< 0.0011	< 0.0010	< 0.0013	< 0.014	< 0.0013	< 0.0014	0.0231	0.0017	< 0.0013
Total Chromium (lbs/day) Daily Maximum	< 0.0017	0.0058	< 0.0014	< 0.0013	< 0.0014	< 0.0016	< 0.0019	< 0.0015	< 0.0016	0.1093	0.0029	< 0.0015
Total Chromium (mg/L) Average Monthly	< 0.0150	0.013	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	0.141	0.0106	< 0.0015

Total Chromium (mg/L) Instantaneous Maximum	< 0.0150	0.029	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	< 0.0150	0.674	0.0198	< 0.0015
Total Copper (lbs/day) Average Monthly	0.0086	0.00666	0.00446	0.00470	0.00356	0.00542	0.00500	0.0053	0.00411	0.00430	0.0031	0.00372
Total Copper (lbs/day) Daily Maximum	0.0111	0.01002	0.00534	0.00548	0.00465	0.00607	0.00618	0.0065	0.00555	0.00711	0.0047	0.00405
Total Copper (mg/L) Average Monthly	0.0412	0.0297	0.0275	0.0305	0.0269	0.0273	0.0270	0.0308	0.0231	0.0195	0.0196	0.0198
Total Copper (mg/L) Daily Maximum	0.0539	0.0384	0.0290	0.0317	0.0316	0.0305	0.0332	0.0336	0.0278	0.0234	0.02072	0.0240
Total Copper (mg/L) Instantaneous Maximum	0.0539	0.0384	0.0290	0.0317	0.0316	0.0305	0.0332	0.0336	0.0278	0.0234	0.0272	0.0240
Free Cyanide (lbs/day) Average Monthly			< 0.0001			< 0.0001			< 0.001			0.000
Free Cyanide (lbs/day) Daily Maximum			< 0.0001			< 0.0001			< 0.001			0.000
Free Cyanide (mg/L) Average Monthly			< 0.010			< 0.010			< 0.010			< 0.010
Free Cyanide (mg/L) Daily Maximum			< 0.010			< 0.010			< 0.010			< 0.010
Free Cyanide (mg/L) Instantaneous Maximum			< 0.010			< 0.010			< 0.010			< 0.010
Total Cyanide (lbs/day) Average Monthly			< 0.0001			< 0.0001			< 0.0001			0.000
Total Cyanide (lbs/day) Daily Maximum			< 0.0001			< 0.0001			< 0.0001			0.000
Total Cyanide (mg/L) Average Monthly			< 0.010			< 0.010			< 0.010			< 0.010
Total Cyanide (mg/L) Instantaneous Maximum			< 0.010			< 0.010			< 0.010			< 0.010
Dissolved Iron (lbs/day) Average Monthly	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	E	< 0.000	0.000	0.000
Dissolved Iron (lbs/day) Daily Maximum	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	E	< 0.000	0.000	0.000

Dissolved Iron (mg/L) Average Monthly	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	E	< 0.200	< 0.200	< 0.200
Dissolved Iron (mg/L) Daily Maximum	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.02	< 0.200	E	< 0.200	< 0.200	< 0.200
Dissolved Iron (mg/L) Instantaneous Maximum	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.02	< 0.200	E	< 0.200	< 0.200	< 0.200
Total Iron (lbs/day) Average Monthly	< 0.021	< 0.022	< 0.016	< 0.015	< 0.014	< 0.018	< 0.019	< 0.017	< 0.018	< 0.020	0.020	< 0.017
Total Iron (lbs/day) Daily Maximum	< 0.022	< 0.026	< 0.019	< 0.017	< 0.019	< 0.022	< 0.025	< 0.021	< 0.022	< 0.031	0.030	< 0.020
Total Iron (mg/L) Average Monthly	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	0.127	< 0.200
Total Iron (mg/L) Instantaneous Maximum	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	0.208	< 0.200
Total Selenium (lbs/day) Average Monthly	< 0.0001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.0001	< 0.0000	0.000	0.000
Total Selenium (lbs/day) Daily Maximum	< 0.0001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001	< 0.0000	0.000	0.000
Total Selenium (mg/L) Average Monthly	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.050	< 0.0500	< 0.0200
Total Selenium (mg/L) Daily Maximum	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.050	< 0.0500	< 0.0200
Total Selenium (mg/L) Instantaneous Maximum	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.050	< 0.0500	< 0.0200
Total Zinc (lbs/day) Average Monthly	< 0.0021	< 0.0022	< 0.0016	< 0.0015	< 0.0014	< 0.0018	< 0.0019	< 0.0017	< 0.0018	0.0048	0.0019	< 0.017
Total Zinc (lbs/day) Daily Maximum	< 0.0022	< 0.0026	< 0.0019	< 0.0017	< 0.0019	< 0.0022	0.0025	< 0.0021	< 0.0022	0.0156	0.0022	< 0.020
Total Zinc (mg/L) Average Monthly	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	0.0273	0.0137	< 0.0200
Total Zinc (mg/L) Daily Maximum	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.02	< 0.0200	< 0.0200	0.0965	0.0247	< 0.0200
Total Zinc (mg/L) Instantaneous Maximum	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.02	< 0.0200	< 0.0200	0.0965	0.0247	< 0.0200
PCBs (Dry Weather) (pg/L) Daily Maximum						851						

DMR Data for Outfall 003 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
pH (S.U.) Daily Maximum						7.1						
CBOD5 (mg/L) Daily Maximum						2.4						
COD (mg/L) Daily Maximum						< 50						
TSS (mg/L) Daily Maximum						4.3						
Oil and Grease (mg/L) Daily Maximum						< 5						
TKN (mg/L) Daily Maximum						< 1						
Total Phosphorus (mg/L) Daily Maximum						< 0.1						
Dissolved Iron (mg/L) Daily Maximum						0.25						

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	Daily Maximum	Average Monthly	Average Quarterly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	0.5	XXX	XXX	1.2	1/week	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	XXX	110	1/week	I-S
TSS	8.4	16.7	30	XXX	60	75	2/month	24-Hr Composite
Total Dissolved Solids	698	1396	2500	XXX	5000	6250	1/week	24-Hr Composite
Oil and Grease	4.2	XXX	15	XXX	XXX	30	2/month	Grab
Total Aluminum	0.228	0.552	Report	XXX	XXX	2.05	1/week	24-Hr Composite
Hexavalent Chromium	0.006	0.012	0.02	XXX	0.04	0.05	1/week	24-Hr Composite
Total Chromium	0.11	0.271	Report	XXX	XXX	0.97	1/week	24-Hr Composite
Total Copper	0.240	0.450	0.887	XXX	1.63	2.21	2/month	24-Hr Composite
Free Cyanide	Report Avg Qrtly	Report	XXX	Report	Report	XXX	1/quarter	24-Hr Composite
Total Cyanide	0.078 Avg Qrtly	0.188	XXX	Report	XXX	0.70	1/quarter	24-Hr Composite
Dissolved Iron	0.2	0.4	0.72	XXX	1.43	1.80	1/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	Daily Maximum	Average Monthly	Average Quarterly	Daily Maximum	Instant. Maximum		
Total Iron	0.336	0.659	Report	XXX	XXX	2.50	1/week	24-Hr Composite
Total Zinc	0.380	0.867	1.37	XXX	3.13	3.42	1/week	24-Hr Composite
PCBs (Dry Weather) (pg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	24-Hr Composite

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 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		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
CBOD5	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
TKN	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Dissolved Iron	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab