AUTHORIZATION TO DISCHARGE UNDER
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, 33 U.S.C. §§ 1251 et seq. (the "CWA"),

Bird, Incorporated d/b/a CertainTeed

is authorized to discharge from a facility located at

Bird, Incorporated d/b/a CertainTeed
1077 Pleasant Street
Norwood, MA 02062

to receiving water named

Neponset River (MA73-01)
Boston Harbor Watershed

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This Permit shall become effective on the first day of the calendar month immediately following 60 days after signature.[1]

This Permit expires at midnight, five years from the last day of the month preceding the effective date.

This Permit supersedes the Permit issued on January 13, 2015.

This Permit consists of this **cover page(s)**, **Part I**, **Attachment A** (Freshwater Acute Toxicity Test Procedure and Protocol, February 2011), **Attachment B** (PFAS Analyte List) and **Part II** (NPDES Part II Standard Conditions, April 2018).

Signed this day of

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Ken Moraff, Director
Water Division
Environmental Protection Agency
Region 1
Boston, MA

[1] Pursuant to 40 Code of Federal Regulations (CFR) § 124.15(b)(3), if no comments requesting a change to the Draft Permit are received, the Permit will become effective upon the date of signature. Procedures for appealing EPA's Final Permit decision may be found at 40 CFR § 124.19.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated contact cooling water through Outfall Serial Number 001 to the Neponset River. The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	**Effluent Limitations**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Flow Rate[6]	0.04 MGD	Report MGD	Continuous	Meter
Total Flow[6]	Report MGal/Month	Report MGal/Month	When Discharging	Meter
Total Suspended Solids (TSS)	40 mg/L 46 lbs/day	70 mg/L 68 lbs/day	1/Month	Grab
pH[7]	6.5 - 8.3 S.U.		1/Week	Grab
Oil and Grease	---	15 mg/L	1/Month	Grab
Temperature[8]	83° F	84° F	1/Week	Grab
Aluminum	2.6 mg/L	Report mg/L	1/Week	Grab
Copper	Report mg/L	Report mg/L	1/Month	Grab
Lead	Report mg/L	Report mg/L	1/Month	Grab
Total Residual Chlorine (TRC)[9]	0.24 mg/L	0.41 mg/L	1/Week	Grab
Iron	---	Report mg/L	2/year	Grab
Manganese	---	Report mg/L	2/year	Grab
Chromium	---	Report mg/L	2/year	Grab
Calcium	---	Report mg/L	2/year	Grab
Magnesium	---	Report mg/L	2/year	Grab
Phosphorus	---	Report mg/L	2/year	Grab
PFAS Analytes[11]	---	Report ng/L	4/Year	Grab

Effluent Characteristic	Effluent Limitations		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Adsorbable Organic Fluorine[12]	---	Report ng/L	4/Year	Grab
Whole Effluent Toxicity (WET) Testing[13,14]				
LC_{50}	---	≥ 100%	2/year	Grab
Hardness	---	Report mg/L	2/year	Grab
Ammonia Nitrogen	---	Report mg/L	2/year	Grab
Total Aluminum[9]	---	Report mg/L	2/year	Grab
Total Cadmium	---	Report mg/L	2/year	Grab
Total Copper[10]	---	Report mg/L	2/year	Grab
Total Nickel	---	Report mg/L	2/year	Grab
Total Lead[11]	---	Report mg/L	2/year	Grab
Total Zinc	---	Report mg/L	2/year	Grab
Alkalinity	---	Report mg/L	2/year	Grab
pH	---	Report S.U.	2/year	Grab
Specific Conductance	---	Report µmhos/cm	2/year	Grab
Total Solids	---	Report mg/L	2/year	Grab
Total Organic Carbon	---	Report mg/L	2/year	Grab

Ambient Characteristic[15]	Reporting Requirements		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Hardness	---	Report mg/L	1/quarter	Grab
Ammonia Nitrogen	---	Report mg/L	2/year	Grab
Total Aluminum	---	Report mg/L	2/year	Grab
Total Cadmium	---	Report mg/L	2/year	Grab

Ambient Characteristic[15]	Reporting Requirements		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Total Copper	---	Report mg/L	2/year	Grab
Total Nickel	---	Report mg/L	2/year	Grab
Total Lead	---	Report mg/L	2/year	Grab
Total Zinc	---	Report mg/L	2/year	Grab
Alkalinity	---	Report mg/L	2/year	Grab
pH[16]	---	Report S.U.	2/year	Grab
Temperature[16]	---	Report °C	2/year	Grab
Specific Conductance		Report µmhos/cm	2/year	Grab
Total Organic Carbon	---	Report mg/L	2/year	Grab
Iron		Report mg/L	2/year	Grab
Manganese		Report mg/L	2/year	Grab
Chromium		Report mg/L	2/year	Grab
Calcium		Report mg/L	2/year	Grab
Magnesium		Report mg/L	2/year	Grab
Phosphorus		Report mg/L	2/year	Grab

2. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated process water, non-contact cooling water, boiler condensate, boiler blowdown, and stormwater through Outfall Serial Number 002 to the Neponset River. The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	**Effluent Limitations**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Flow Rate[6]	Report MGD	Report MGD	When discharging	Estimate
Number of Events	Report		When discharging	Count
Total Suspended Solids (TSS)	20 mg/L	30 mg/L	1/Month	Grab
pH[7]	6.5 - 8.3 S.U.		1/Month	Grab
Ammonia Nitrogen	Report mg/L	Report mg/L	1/Month	Grab
Total Phosphorus	Report mg/L	Report mg/L	1/Month	Grab
Polycyclic Aromatic Hydrocarbons (PAHs)[10]	Report mg/L	Report mg/L	1/Month	Grab
PFAS Analytes[11]	---	Report ng/L	1/Year	Grab
Adsorbable Organic Fluorine[12]	---	Report ng/L	1/Year	Grab
Iron	---	Report mg/L	2/year	Grab
Manganese	---	Report mg/L	2/year	Grab
Chromium	---	Report mg/L	2/year	Grab
Calcium	---	Report mg/L	2/year	Grab
Magnesium	---	Report mg/L	2/year	Grab
Whole Effluent Toxicity (WET) Testing[13,14]				
LC_{50}	---	Report %	2/year	Grab
Hardness	---	Report mg/L	2/year	Grab
Total Residual Chlorine	---	Report mg/L	2/year	Grab

Effluent Characteristic	Effluent Limitations		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Alkalinity	---	Report mg/L	2/year	Grab
pH	---	Report mg/L	2/year	Grab
Specific Conductance	---	Report µmhos/cm	2/year	Grab
Total Solids	---	Report mg/L	2/year	Grab
Total Dissolved Solids	---	Report mg/L	2/year	Grab
Total Organic Carbon	---	Report mg/L	2/year	Grab
Ammonia Nitrogen	---	Report mg/L	2/year	Grab
Total Aluminum	---	Report mg/L	2/year	Grab
Total Cadmium	---	Report mg/L	2/year	Grab
Total Copper	---	Report mg/L	2/year	Grab
Total Lead	---	Report mg/L	2/year	Grab
Total Nickel	---	Report mg/L	2/year	Grab
Total Zinc	---	Report mg/L	2/year	Grab

Ambient Characteristic[15]	Reporting Requirements		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Hardness	---	Report mg/L	2/year	Grab
Ammonia Nitrogen	---	Report mg/L	2/year	Grab
Total Aluminum	---	Report mg/L	2/year	Grab
Total Cadmium	---	Report mg/L	2/year	Grab
Total Copper	---	Report mg/L	2/year	Grab
Total Nickel	---	Report mg/L	2/year	Grab
Total Lead	---	Report mg/L	2/year	Grab

Ambient Characteristic[15]	Reporting Requirements		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Total Zinc	---	Report mg/L	2/year	Grab
pH[16]	---	Report S.U.	2/year	Grab
Temperature[16]	---	Report °C	2/year	Grab

3. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated stormwater through Outfall Serial Number 003 to the Neponset River. The discharge shall be limited and monitored as specified below:

Effluent Characteristic	**Effluent Limitations**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Flow Rate[6]	---	20 gpm	When discharging	Estimate
Total Flow[6]	Report MGal/Month		When discharging	Meter
Number of Events	Report		Monthly	Count
Total Suspended Solids (TSS)	10 mg/L	15 mg/L	1/Month	Grab
pH[7]	6.5 - 8.3 S.U.		1/Month	Grab
Oil and Grease	---	15 mg/L	1/Month	Grab
Polycyclic Aromatic Hydrocarbons (PAHs)[10]	---	Report mg/L	1/Month	Grab
Ammonia Nitrogen	---	Report mg/L	2/Year	Grab
Total Phosphorus	---	Report mg/L	2/Year	Grab

4. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated stormwater through Outfall Serial Number 004 to the Neponset River. The discharge shall be limited and monitored as specified below:

Effluent Characteristic	**Effluent Limitations**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Flow Rate[6]	---	100 gpm	When discharging	Estimate
Total Flow[6]	Report MGal/Month		When discharging	Meter
Number of Events	Report		When discharging	Count
Total Suspended Solids (TSS)	10 mg/L	15 mg/L	1/Month	Grab
pH[7]	6.5 - 8.3 S.U.		1/Month	Grab
Oil and Grease	---	15 mg/L	1/Month	Grab
Polycyclic Aromatic Hydrocarbons (PAHs)[10]	---	Report mg/L	1/Month	Grab
Ammonia Nitrogen	---	Report mg/L	2/Year	Grab
Total Phosphorus	---	Report mg/L	2/Year	Grab

Footnotes for Parts I.A.1 through 4:

1. Effluent samples shall yield data representative of the discharge. A routine sampling program shall be developed in which samples for Outfall 001 are taken after treatment in the concrete settling ponds; samples for Outfall 002 are taken after treatment in the detention pond at the cylindrical overflow structure, before the effluent mixes with stormwater from the municipal drainage system from Pleasant Street, samples for Outfalls 003 and 004 shall be conducted after treatment in the oil/water separator before the effluent mixes with stormwater from other areas of the Facility. Only stormwater is permitted to be discharged through Outfalls 003 and 004. Changes in sampling location(s) must be approved in writing by the Environmental Protection Agency Region 1 (EPA). The Permittee shall report the results to EPA and the Massachusetts Department of Environmental Protection (the "State") of any additional testing above that required herein, if testing is done in accordance with 40 CFR Part 136.

2. In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

3. When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the ML for that parameter (e.g., < 50 µg/L, if the ML for a parameter is 50 µg/L). For calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).

4. Sampling frequency of continuous is defined as sampling of the effluent once per hour. Sampling frequency 1/week is defined as the sampling of one

discharge event during every week of each calendar month when discharge occurs. The sampling frequency of 1/month is defined as the sampling of one discharge event in each calendar month, when discharge occurs. 2/year sampling shall be performed concurrently with the with the monthly monitoring event during January through June, inclusive, and July through December, inclusive. If no qualifying event occurs in those months, then the biannual sample shall be collected during the next discharge event. If no discharge occurs during a monitoring period, the Permittee must report an appropriate No Data Indicator Code.

5. Grab samples shall be taken during the first 15 minutes of initiation of the discharge where practicable, but in no case later than within the first hour of discharge. If collection of sample(s) during the first 15 minutes of discharge is impracticable, the Permittee shall submit a description of why the collection of the sample(s) during the first 15 minutes was impracticable.

6. The flow rate for Outfalls 001 and 002 is to be measured in the units of million gallons per day (MGD), and Outfalls 003 and 004 in gallons per minute (gpm). The flow rates for Outfalls 001, 003 and 004 shall be based upon flow meter results from an approved flow measuring device collected at the same time and on the same day each week. The Permittee shall report total flow recorded by the flow meters for Outfalls 001, 003 and 004 in the units of million gallons per month. The flow rate for Outfall 002 shall be an estimate based upon the duration of discharge and volume of the detention pond and or appurtenances.

7. The pH shall be within the specified range at all times. The minimum and maximum pH sample measurement values for the month shall be reported in standard units (S.U.).

8. The temperature shall be collected for Outfall 0001 at the same time and on the same day each week and in conjunction with flow rate, pH, and total recoverable aluminum measurements, above.

9. Monitoring for total residual chlorine (TRC) is only required for discharges that have been previously chlorinated or that contain residual chlorine.

10. Monitoring is required for 16 individual PAHs identified at Appendix A to 40 CFR 423: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo(k)fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenz[a,h]anthracene.

11. Per- and polyfluoroalkyl substances (PFAS) analytes include those listed in Attachment B (40 parameters) and are listed separately in NetDMR. Report in nanograms per liter (ng/L). Until there is an analytical method approved in 40 CFR Part 136 for PFAS, monitoring shall be conducted using Method 1633A, as shown in Attachment B. The reporting requirement for the listed PFAS parameters takes effect the first full calendar quarter following six months after the effective date of the permit.

After one year of monitoring, if all samples are non-detect for all forty PFAS compounds, using a method in 40 CFR Part 136 or Method 1633A, the Permittee may request to remove the requirements for PFAS monitoring. The written request shall include a summary of the monitoring data and include the attached analytical reports. Until written notice is received from EPA indicating that the monitoring requirements have been changed, the Permittee is required to continue the monitoring specified in this Permit.

12. Report in nanograms per liter (ng/L). Until there is an analytical method approved in 40 CFR Part 136 for Adsorbable Organic Fluorine (AOF), monitoring shall be conducted using Method 1621. This reporting requirement takes effect the first full calendar quarter following six months after the effective date of the permit.

After one year of monitoring, if all samples are non-detect for AOF, using a method in 40 CFR Part 136 or Method 1621, the Permittee may request to remove the requirements for AOF monitoring. The written request shall include a summary of the monitoring data and include the attached analytical reports. Until written notice is received from EPA indicating that the monitoring requirements have been changed, the Permittee is required to continue the monitoring specified in this Permit.

13. The Permittee shall conduct acute toxicity tests (LC_{50}) 2/year in accordance with test procedures and protocols specified in **Attachment A** of this permit. LC_{50} is defined in Part II.E. of this permit. The Permittee shall test the daphnid, *Ceriodaphnia dubia*. The complete report for each toxicity test shall be submitted as an attachment to the DMR submittal that includes the results for that toxicity test.

For Outfall 002, once the permittee submits two test results, no additional testing is required during this permit term.

14. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the

receiving water to be toxic or unreliable, the Permittee shall follow procedures outlined in **Attachment A**, Section IV., DILUTION WATER. Even where alternate dilution water has been used, the results of the receiving water control (0% effluent) analyses must be reported. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

15. For Part I.A.1., Ambient Characteristic, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the receiving water sample collected as part of the WET testing requirements. Such samples shall be taken from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location, as specified in **Attachment A**. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

16. A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols.

Part I.A. continued.

5. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify EPA as soon as they know or have reason to believe (40 CFR § 122.42):

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) 100 micrograms per liter (µg/L);
(2) 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (mg/L) for antimony;
(3) Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
(4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) 500 µg/L;
(2) One mg/L for antimony;
(3) 10 times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
(4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall(s) listed in Part I.A.1, in accordance with the terms and conditions of this Permit. Discharges of wastewater from any other point sources are not authorized by this Permit and shall be reported in accordance with Part II.D.1.e.(1) of this Permit (24-hour reporting).

2. The discharge of any sludge and/or bottom deposits from any storage tank or basin at the Facility to the receiving water is prohibited.

C. SPECIAL CONDITIONS

1. Best Management Practices (BMPs)

The Permittee shall design, install, and implement control measures to minimize the discharge of pollutants from the operations at the Facility to the receiving water. At a minimum, the Permittee must implement control measures, both structural controls (e.g., OWS, containment areas, holding tanks) and non-structural (e.g., operational procedures and operator training).

a. The Permittee must comply with the following limitations described in Part 2.1.2 of EPA's Multi-Sector General Permit (MSGP):

(1) Minimize exposure of processing and material storage areas to stormwater discharges;
(2) Design good housekeeping measures to maintain areas that are potential sources of pollutants;
(3) Implement preventative maintenance programs to avoid leaks, spills, and other releases of pollutants to stormwater that is discharged to receiving waters;
(4) Implement spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur. The Permittee shall report immediately the appearance of any size sheen attributable to the discharge from the Terminal to the appropriate U.S. Coast Guard Officer in accordance with Section 311 of the Clean Water Act (CWA);
(5) Design of erosion and sediment controls to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants;
(6) Utilize runoff management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff;
(7) Develop proper handling procedures for salt or materials containing chlorides that are used for snow and ice control;
(8) Conduct employee training to ensure personnel understand the requirements of this permit;
(9) Evaluate for the presence of non-stormwater discharges. Any non-stormwater discharges not explicitly authorized in the Permit or covered by another NPDES permit must be eliminated.
(10) Minimize dust generation and vehicle tracking of industrial materials;

b. In addition to the general limitations described above, the Permittee must design, install, and implement the following BMPs:

(1) The Permittee shall comply with the inspection requirements in Part 3.1 and 3.2 of the 2021 MSGP and the corrective action requirements in Part 5.1 of the 2021 MSGP.[2] For the purposes of this permit, the following must be included: areas exposed to stormwater, potential pollutant sources, discharge points, and control measures.
(2) The Permittee shall comply with the control measure requirements in Part 2.1 and 2.1.1 of the 2021 MSGP in order to identify pollutant sources and select, design, install and maintain the pollution control technology necessary to meet the effluent limitations in the Permit that ensure dilution is not used as a form of treatment;
(3) The Permittee shall comply with sector specific non-numeric technology-based effluent limitations included in Sector D (Asphalt Paving and Roofing Materials and Lubricant Manufacturing) and Sector E (Glass, Clay, Cement, Concrete and Gypsum Products) of the 2021 MSGP;
(4) The Permittee shall document the measures and methods used to control flow through both the stormwater and groundwater treatment systems to ensure that the design flow of the treatment system is not exceeded; and
(5) The Permittee shall document monitoring requirements, sample analysis procedures, a schedule for the review of sample results and data validation and reporting processes.

3. Stormwater Pollution Prevention Plan (SWPPP)

The Permittee shall update, and continue to implement and maintain a Stormwater Pollution Prevention Plan (SWPPP) to document the selection, design and installation of control measures, including BMPs, selected to meet the effluent limitations required in this permit, and, with Parts 2.1.2, 8.D.3, and 8.E.2-4 of the 2021 MSGP, to minimize the discharge of pollutants from the operations at the Facility to the receiving water. The SWPPP shall be a written document and consistent with the terms of this Permit.

a. The SWPPP shall be updated and signed consistent with the signatory requirements in Part II.D.2 of this Permit within 90 days after the effective date of this Permit.

b. The SWPPP shall be consistent with the general provisions for SWPPPs included in Part 6 of EPA's 2021 MSGP. The SWPPP shall be prepared in accordance with good engineering practices and manufacturer's specifications. The SWPPP must identify potential sources of pollution that may reasonably be expected to affect the quality of the stormwater discharges and document the implementation of non-numeric technology based effluent limitations in Part I.C.1 that will be used

2 Where the MSGP refers to limitations, conditions or benchmarks, including the SWPPP, for the purposes of this Permit, these shall refer to the limitations and conditions in this Permit.

to reduce the pollutants and assure compliance with this Permit, including any corrective action taken when non-compliance occurs. Specifically, the SWPPP shall contain the elements listed in Parts 6.2.1 through 6.2.5 of the 2021 MSGP and briefly described below:

(1) Stormwater pollution prevention team;
(2) Site description;
(3) Drainage area site map;
(4) Summary of potential pollutant sources;
(5) Description of all stormwater control measures; and
(6) Schedules and procedures pertaining to implementation of stormwater control measures, inspections and assessments, and monitoring.

c. The Permittee shall amend and update the SWPPP within 14 days of any changes at the facility affecting the SWPPP. Changes that may affect the SWPPP include, but are not limited to: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR § 302; a determination by the Permittee or EPA that the SWPPP appears to be ineffective in achieving the general objective of controlling pollutants in stormwater discharges associated with industrial activity; and revisions or improvements are made to the stormwater management program based on new information and experiences with wet weather events. Any amended or new versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in Part II.D.2 of this Permit.

d. The Permittee shall certify at least annually that the previous year's required inspections, corrective actions, control measures, and training activities were conducted, results were recorded, and records were maintained, as described. If the facility is not in compliance with any limitations and/or BMPs, the annual certification shall state the non-compliance and the remedies that are or will be undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in Part II.D.2 of this Permit. The Permittee shall keep a copy of the current SWPPP and all SWPPP certifications (i.e., the initial certification, recertifications, and annual certifications) signed during the effective period of this Permit at the Facility and shall make them available for inspection by EPA. All documentation of SWPPP activities shall be kept at the Facility for at least three years and provided to EPA upon request.

4. Discharges of Chemicals and Additives

The discharge of any chemical or additive, including chemical substitution that was not reported in the application submitted to EPA or provided through a subsequent written notification submitted to EPA is prohibited. Upon the effective date of this Permit, chemicals and/or additives that have been disclosed to EPA may be discharged up to the frequency and level disclosed, provided that such discharge does not violate §§ 307 or 311 of the CWA or applicable State water quality standards. Discharges of a new chemical or additive are authorized under this Permit 30 days following written notification to EPA unless otherwise notified by EPA. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA in accordance with Part I.D.3 of this permit. The written notification must include the following information, at a minimum:

a. The following information for each chemical and/or additive that will be discharged:

(1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
(2) Purpose or use of the chemical/additive;
(3) Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
(4) The frequency (e.g., hourly, daily), magnitude (i.e., maximum application concentration), duration (e.g., hours, days), and method of application for the chemical/additive;
(5) If available, the vendor's reported aquatic toxicity (i.e., NOAEL and/or LC_{50} in percent for aquatic organism(s)).

b. Written rationale that demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) will not add any pollutants in concentrations that exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

D. REPORTING REQUIREMENTS

Unless otherwise specified in this Permit, the Permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs Using NetDMR

The Permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and the State electronically using NetDMR no later than the 15th day of the month following the monitoring period. When the Permittee

submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this Permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. Because the due dates for reports described in this Permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month following the monitoring period), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this Permit.

3. Submittal of Requests and Reports to EPA Water Division (WD)

The following requests, reports, and information described in this Permit shall be submitted to the EPA WD at R1NPDESReporting@epa.gov:

(1) Transfer of Permit notice;
(2) Request for changes in sampling location;
(3) BMP/SWPPP reports and certifications, if required;
(4) Request to discharge new chemicals or additives;
(5) Request for pH effluent limitation adjustment;
(6) Request for change in WET testing or discontinuation of PFAS or AOF sampling (*see* Part I.A.1, footnotes 11 and 12, and Part I.C.6.) requirements; and
(7) Report on unacceptable dilution water/request for alternative dilution water for WET testing.

4. Written Notifications

Written notifications required by Part II, Standard Conditions must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system that will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

5. State Reporting

Duplicate signed copies of all WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606

5. Verbal Reports and Verbal Notifications

a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this Permit, shall be made to both EPA and to the State. This includes verbal reports and notifications that require reporting within 24 hours (e.g., Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.).

b. Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division (ECAD) at:

617-918-1510

c. Verbal reports and verbal notifications shall be made to the State's Emergency Response at:

888-304-1133

E. STATE 401 CERTIFICATION CONDITIONS

This Permit is in the process of receiving State water quality certification issued by the State under § 401(a) of the CWA and 40 CFR § 124.53. EPA will incorporate all appropriate State water quality certification requirements (if any) into the Final Permit.

Attachment A - USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) definitive 48 hour test.**
- **Fathead Minnow (Pimephales promelas) definitive 48 hour test.**

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

https://www.epa.gov/cwa-methods/whole-effluent-toxicity-methods

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6^{o}C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**.

Written requests for use of ADW with supporting documentation must be sent electronically to the NPDES Applications Coordinator in EPA Water Division (WD) at the following email address:

R1NPDESReporting@epa.gov

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the EPA Region 1 website at https://www.epa.gov/aboutepa/epa-region-1-new-england (click on NPDES, EPA Permit Attachments, Self-Implementing Alternate Dilution Water Guidance) for important details on alternate dilution water substitution requests.

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS[1]

1.	Test type	Static, non-renewal
2.	Temperature (^{o}C)	20 + 1^{o}C or 25 + 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and Selenastrum to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	≥ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.

16.	Effect measured	Mortality-no movement of body or appendages on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection.
19.	Sample volume required	Minimum 1 liter

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW (PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST[1]

1.	Test Type	Static, non-renewal
2.	Temperature (^{o}C)	20 + 1 ^{o} C or 25 + 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hr light, 8 hr dark
5.	Size of test vessels	250 mL minimum
6.	Volume of test solution	Minimum 200 mL/replicate
7.	Age of fish	1-14 days old and age within 24 hrs of each other
8.	No. of fish per chamber	10
9.	No. of replicate test vessels per treatment	4
10.	Total no. organisms per concentration	40
11.	Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12.	Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13.	dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	> 0.5, must bracket the permitted RWC

15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16.	Effect measured	Mortality-no movement on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19.	Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3]	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 2340B (hardness by calculation)
     - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 4500-CL E Low Level Amperometric Titration
     - Method 4500-CL G DPD Colorimetric Method
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

Attachment B - PFAS Analyte List

	NPDES Permit Number	Facility Name	Outfall Number

EFFLUENT PARAMETERS FOR POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Ammonia (as N)							☐ ML ☐ MDL
Chlorine (total residual, TRC)[2]							☐ ML ☐ MDL
Dissolved oxygen							☐ ML ☐ MDL
Nitrate/nitrite							☐ ML ☐ MDL
Kjeldahl nitrogen							☐ ML ☐ MDL
Oil and grease							☐ ML ☐ MDL
Phosphorus							☐ ML ☐ MDL
Total dissolved solids							☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See 40 CFR 122.21(e)(3).

[2] Facilities that do not use chlorine for disinfection, do not use chlorine elsewhere in the treatment process, and have no reasonable potential to discharge chlorine in their effluent are not required to report data for chlorine.

	NPDES Permit Number	Facility Name	Outfall Number

EFFLUENT PARAMETERS FOR POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Metals, Cyanide, and Total Phenols							
Hardness (as $CaCO_3$)							☐ ML ☐ MDL
Antimony, total recoverable							☐ ML ☐ MDL
Arsenic, total recoverable							☐ ML ☐ MDL
Beryllium, total recoverable							☐ ML ☐ MDL
Cadmium, total recoverable							☐ ML ☐ MDL
Chromium, total recoverable							☐ ML ☐ MDL
Copper, total recoverable							☐ ML ☐ MDL
Lead, total recoverable							☐ ML ☐ MDL
Mercury, total recoverable							☐ ML ☐ MDL
Nickel, total recoverable							☐ ML ☐ MDL
Selenium, total recoverable							☐ ML ☐ MDL
Silver, total recoverable							☐ ML ☐ MDL
Thallium, total recoverable							☐ ML ☐ MDL
Zinc, total recoverable							☐ ML ☐ MDL
Cyanide							☐ ML ☐ MDL
Total phenolic compounds							☐ ML ☐ MDL
Volatile Organic Compounds							
Acrolein							☐ ML ☐ MDL
Acrylonitrile							☐ ML ☐ MDL
Benzene							☐ ML ☐ MDL
Bromoform							☐ ML ☐ MDL

	NPDES Permit Number	Facility Name	Outfall Number

EFFLUENT PARAMETERS FOR POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Carbon tetrachloride							☐ ML ☐ MDL
Chlorobenzene							☐ ML ☐ MDL
Chlorodibromomethane							☐ ML ☐ MDL
Chloroethane							☐ ML ☐ MDL
2-chloroethylvinyl ether							☐ ML ☐ MDL
Chloroform							☐ ML ☐ MDL
Dichlorobromomethane							☐ ML ☐ MDL
1,1-dichloroethane							☐ ML ☐ MDL
1,2-dichloroethane							☐ ML ☐ MDL
trans-1,2-dichloroethylene							☐ ML ☐ MDL
1,1-dichloroethylene							☐ ML ☐ MDL
1,2-dichloropropane							☐ ML ☐ MDL
1,3-dichloropropylene							☐ ML ☐ MDL
Ethylbenzene							☐ ML ☐ MDL
Methyl bromide							☐ ML ☐ MDL
Methyl chloride							☐ ML ☐ MDL
Methylene chloride							☐ ML ☐ MDL
1,1,2,2-tetrachloroethane							☐ ML ☐ MDL
Tetrachloroethylene							☐ ML ☐ MDL
Toluene							☐ ML ☐ MDL
1,1,1-trichloroethane							☐ ML ☐ MDL
1,1,2-trichloroethane							☐ ML ☐ MDL

	NPDES Permit Number	Facility Name	Outfall Number

EFFLUENT PARAMETERS FOR POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Trichloroethylene							☐ ML ☐ MDL
Vinyl chloride							☐ ML ☐ MDL
Acid-Extractable Compounds							
p-chloro-m-cresol							☐ ML ☐ MDL
2-chlorophenol							☐ ML ☐ MDL
2,4-dichlorophenol							☐ ML ☐ MDL
2,4-dimethylphenol							☐ ML ☐ MDL
4,6-dinitro-o-cresol							☐ ML ☐ MDL
2,4-dinitrophenol							☐ ML ☐ MDL
2-nitrophenol							☐ ML ☐ MDL
4-nitrophenol							☐ ML ☐ MDL
Pentachlorophenol							☐ ML ☐ MDL
Phenol							☐ ML ☐ MDL
2,4,6-trichlorophenol							☐ ML ☐ MDL
Base-Neutral Compounds							
Acenaphthene							☐ ML ☐ MDL
Acenaphthylene							☐ ML ☐ MDL
Anthracene							☐ ML ☐ MDL
Benzidine							☐ ML ☐ MDL
Benzo(a)anthracene							☐ ML ☐ MDL
Benzo(a)pyrene							☐ ML ☐ MDL
3,4-benzofluoranthene							☐ ML ☐ MDL

	NPDES Permit Number	Facility Name	Outfall Number

EFFLUENT PARAMETERS FOR POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
Benzo(ghi)perylene							☐ ML ☐ MDL
Benzo(k)fluoranthene							☐ ML ☐ MDL
Bis (2-chloroethoxy) methane							☐ ML ☐ MDL
Bis (2-chloroethyl) ether							☐ ML ☐ MDL
Bis (2-chloroisopropyl) ether							☐ ML ☐ MDL
Bis (2-ethylhexyl) phthalate							☐ ML ☐ MDL
4-bromophenyl phenyl ether							☐ ML ☐ MDL
Butyl benzyl phthalate							☐ ML ☐ MDL
2-chloronaphthalene							☐ ML ☐ MDL
4-chlorophenyl phenyl ether							☐ ML ☐ MDL
Chrysene							☐ ML ☐ MDL
di-n-butyl phthalate							☐ ML ☐ MDL
di-n-octyl phthalate							☐ ML ☐ MDL
Dibenzo(a,h)anthracene							☐ ML ☐ MDL
1,2-dichlorobenzene							☐ ML ☐ MDL
1,3-dichlorobenzene							☐ ML ☐ MDL
1,4-dichlorobenzene							☐ ML ☐ MDL
3,3-dichlorobenzidine							☐ ML ☐ MDL
Diethyl phthalate							☐ ML ☐ MDL
Dimethyl phthalate							☐ ML ☐ MDL
2,4-dinitrotoluene							☐ ML ☐ MDL
2,6-dinitrotoluene							☐ ML ☐ MDL

	NPDES Permit Number	Facility Name	Outfall Number

EFFLUENT PARAMETERS FOR POTWS

Pollutant	Maximum Daily Discharge		Average Daily Discharge			Analytical Method[1]	ML or MDL (include units)
	Value	Units	Value	Units	Number of Samples		
1,2-diphenylhydrazine							☐ ML ☐ MDL
Fluoranthene							☐ ML ☐ MDL
Fluorene							☐ ML ☐ MDL
Hexachlorobenzene							☐ ML ☐ MDL
Hexachlorobutadiene							☐ ML ☐ MDL
Hexachlorocyclo-pentadiene							☐ ML ☐ MDL
Hexachloroethane							☐ ML ☐ MDL
Indeno(1,2,3-cd)pyrene							☐ ML ☐ MDL
Isophorone							☐ ML ☐ MDL
Naphthalene							☐ ML ☐ MDL
Nitrobenzene							☐ ML ☐ MDL
N-nitrosodi-n-propylamine							☐ ML ☐ MDL
N-nitrosodimethylamine							☐ ML ☐ MDL
N-nitrosodiphenylamine							☐ ML ☐ MDL
Phenanthrene							☐ ML ☐ MDL
Pyrene							☐ ML ☐ MDL
1,2,4-trichlorobenzene							☐ ML ☐ MDL

[1] Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See 40 CFR 122.21(e)(3).

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)[1]

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[1] Updated July 17, 2018 to fix typographical errors.

A. GENERAL REQUIREMENTS

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

b. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (83 Fed. Reg. 1190-1194 (January 10, 2018) and the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note. See Pub. L.114-74, Section 701 (Nov. 2, 2015)). These requirements help ensure that EPA penalties keep pace with inflation. Under the above-cited 2015 amendments to inflationary adjustment law, EPA must review its statutory civil penalties each year and adjust them as necessary.

(1) Criminal Penalties

(a) *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than 2 years, or both.

(b) *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

(c) *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing

endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(d) *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(2) *Civil Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(3) *Administrative Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:

(a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit

condition.

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

5. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

6. Confidentiality of Information

a. In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

(1) The name and address of any permit applicant or Permittee;
(2) Permit applications, permits, and effluent data.

c. Information required by NPDES application forms provided by the Director under 40 C.F.R. § 122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

7. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The Permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

8. State Authorities

Nothing in Parts 122, 123, or 124 precludes more stringent State regulation of any activity

covered by the regulations in 40 C.F.R. Parts 122, 123, and 124, whether or not under an approved State program.

9. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

(1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

(2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. *Bypass not exceeding limitations.* The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this Section.

c. Notice

(1) *Anticipated bypass*. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by state law.

(2) *Unanticipated bypass*. The Permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or required to do so by law.

d. *Prohibition of bypass.*

(1) Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The Permittee submitted notices as required under paragraph 4.c of this Section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 4.d of this Section.

5. Upset

a. *Definition*. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or

improper operation.

b. *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph B.5.c. of this Section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in paragraph D.1.e.2.b. (24-hour notice).
(4) The Permittee complied with any remedial measures required under B.3. above.

d. *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING REQUIREMENTS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. Subchapters N or O.

e. The Clean Water Act provides that any person who falsifies, tampers with, or

knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. *Planned Changes*. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).

(3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. *Anticipated noncompliance*. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.

d. *Monitoring reports*. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by State law.

(2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. § 136, or another method required for an industry-specific waste stream under 40 C.F.R. Subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. *Twenty-four hour reporting.*

(1) The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all

reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit. *See* 40 C.F.R. § 122.41(g).
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. *See* 40 C.F.R. § 122.44(g).

(3) The Director may waive the written report on a case-by-case basis for reports under paragraph D.1.e. of this Section if the oral report has been received within 24 hours.

f. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. *Other noncompliance.* The Permittee shall report all instances of noncompliance not reported under paragraphs D.1.d., D.1.e., and D.1.f. of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph D.1.e. of this Section. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in paragraph D.1.e. and the applicable required data in Appendix A to 40 C.F.R. Part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), §122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this Section.

h. *Other information.* Where the Permittee becomes aware that it failed to submit any

relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

i. *Identification of the initial recipient for NPDES electronic reporting data*. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Director shall be signed and certified. *See* 40 C.F.R. §122.22.

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under paragraph A.6. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

E. DEFINITIONS AND ABBREVIATIONS

1. General Definitions

For more definitions related to sludge use and disposal requirements, see EPA Region 1's NPDES Permit Sludge Compliance Guidance document (4 November 1999, modified to add regulatory definitions, April 2018).

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in

"approved States," including any approved modifications or revisions.

Approved program or *approved State* means a State or interstate program which has been approved or authorized by EPA under Part 123.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass see B.4.a.1 above.

C-NOEC or *"Chronic (Long-term Exposure Test) – No Observed Effect Concentration" means* the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 C.F.R. § 501.2, required to have an approved pretreatment program under 40 C.F.R. § 403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 C.F.R. § 403.10 (e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. § 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483and Public Law 97-117, 33 U.S.C. 1251 *et seq*.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any

other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct Discharge means the "discharge of a pollutant."

Director means the Regional Administrator or an authorized representative. In the case of a permit also issued under Massachusetts' authority, it also refers to the Director of the Division of Watershed Management, Department of Environmental Protection, Commonwealth of Massachusetts.

Discharge

(a) When used without qualification, *discharge* means the "discharge of a pollutant."

(b) As used in the definitions for "interference" and "pass through," *discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Act.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by Permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection

Agency.

Grab Sample means an individual sample collected in a period of less than 15 minutes.

Hazardous substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Indirect discharger means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

Interference means a discharge (see definition above) which, alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

LC_{50} means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC_{50} = 100% is defined as a sample of undiluted effluent.

Maximum daily discharge limitation means the highest allowable "daily discharge."

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 C.F.R. § 257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be

publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

Municipality

(a) When used without qualification *municipality* means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

(b) As related to sludge use and disposal, *municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under Section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in Section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an "approved program."

New Discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants;"

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Director in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Director shall consider the factors specified in 40 C.F.R. §§ 125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge (see definition above) which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (40 C.F.R § 122.28). "Permit" does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25° Centigrade or measured at another temperature and then converted to an equivalent value at 25° Centigrade.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 C.F.R. § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials

(except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq*.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), *modified* 12 E.R.C. 1833 (D.D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works (POTW) means a treatment works as defined by Section 212 of the Act, which is owned by a State or municipality (as defined by Section 504(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary industry category means any industry which is not a "primary industry category."

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does

not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 C.F.R. § 122.2.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substance designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 C.F.R. §§ 110.10 and 117.21) or Section 102 of CERCLA (*see* 40 C.F.R. § 302.4).

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA, and is required to obtain a permit under 40 C.F.R. § 122.1(b)(2).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in the regulations which meets the requirements of 40 C.F.R. § 123.31.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Director may designate any person subject to the standards for sewage sludge use and

disposal in 40 C.F.R. Part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 C.F.R. Part 503.

Upset see B.5.a. above.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Waste pile or *pile* means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

    (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;

    (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    (3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test.

*Zone of Initial Dilution (*ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, provided that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards.

2. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl_2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)
TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont.	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M^3/day	Cubic meters per day
DO	Dissolved oxygen

kg/day	Kilograms per day
lbs/day	Pounds per day
mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH_3-N	Ammonia nitrogen as nitrogen
NO_3-N	Nitrate as nitrogen
NO_2-N	Nitrite as nitrogen
NO_3-NO_2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	"Whole effluent toxicity"
ZID	Zone of Initial Dilution

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: MA0003531

PUBLIC NOTICE START AND END DATES: January 22, 2026 - February 23, 2026

NAME AND MAILING ADDRESS OF APPLICANT:

Bird, Incorporated d/b/a CertainTeed
1077 Pleasant Street
Norwood, MA 02062

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Bird, Incorporated d/b/a CertainTeed
1077 Pleasant Street
Norwood, MA 02062

RECEIVING WATER AND CLASSIFICATION:

Neponset River (Segment MA73-01)
Boston Harbor Watershed
Class B, Warm Water

SIC CODE: 2952 (Asphalt Felts and Coatings)
3295 (Minerals and Earths, Ground or Otherwise Treated)
NAICS CODE: 32412 (Asphalt Felts and Coatings)
327992 (Ground or Treated Mineral and Earth)

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1.0 Proposed Action

Bird, Incorporated d/b/a CertainTeed (the "Permittee," "CertainTeed") has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to authorize pollutant discharges from the CertainTeed Facility (the "Facility") into the Neponset River.

The permit currently in effect was issued by EPA on January 13, 2015 with an effective date of April 1, 2015 and expired on March 31, 2020 (the "2015 Permit"). The Permittee filed an application seeking NPDES permit reissuance from EPA dated October 2, 2019, as required by 40 Code of Federal Regulations (CFR) § 122.6. Since the permit application was deemed timely and complete by EPA on November 24, 2020, the Facility's 2015 Permit has been administratively continued pursuant to 40 CFR § 122.6 and § 122.21(d).

The permit does not address stormwater discharges from this site authorized under the Stormwater Multi-Sector General Permit for Industrial Activities (MSGP) with tracking number MAR05EA93 and will not be discussed further in this Fact Sheet.

2.0 Statutory and Regulatory Authority for Setting NPDES Permit Requirements

Congress enacted the Federal Water Pollution Control Act, codified at 33 U.S.C. §§ 1251 – 1387 and commonly known as the Clean Water Act (CWA), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except to the extent authorized under specific provisions of the CWA, one of which is § 402. *See* CWA §§ 301(a), 402(a). Section 402(a) established one of the CWA's principal permitting programs, the NPDES Permit Program. Under this section, EPA may "issue a permit for the discharge of any pollutant or combination of pollutants" on the condition that the discharge will comply with the standards specified in certain other provisions of the statute (e.g., CWA §§ 301, 306 and 403). CWA § 402(a)(1). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. *See* CWA § 402(a)(1) and (2). The regulations governing EPA's NPDES permit program are generally found in 40 CFR Parts 122, 124, 125, and 136.

"Congress has vested in the Administrator [of EPA] broad discretion to establish conditions for NPDES permits" in order to achieve the statutory mandates of Sections 301 and 402 of the CWA. *Arkansas v. Oklahoma,* 503 U.S. 91, 105 (1992). Technology-based effluent limitations (TBELs) represent the minimum level of pollutant discharge control that must be satisfied under Sections 301(b) and 402(a)(1) of the CWA. *See also* 40 CFR § 125.3(a). When limits more stringent than technology-based limits are needed to maintain or achieve compliance with state water quality standards (WQS), then NPDES permit must include water quality-based effluent limits (QBELs). *See* CWA §§ 301(b)(1)(C) and 401; 40 CFR §§ 122.4(d), 122.44(d)(1) and (5), 124.53, and 124.55.

2.1 Technology-Based Requirements

NPDES permit limits must, at a minimum, satisfy applicable federal technology standards under the CWA. CWA §§ 301(b), 304(b) and 402(a); 40 CFR § 125.3(a). The statute specifies several different narrative technology standards that apply to different types of pollutants. Technology-based effluent limitations are set to reflect the greatest degree of pollution control that can be achieved by using a technology that satisfies the applicable technology standard. Effluent limitations based on the best practicable control technology currently available (BPT) standard apply to "conventional pollutants" under certain circumstances, while effluent limitations applied to conventional pollutants are otherwise based on the best conventional control technology standard (BCT). *See* CWA §§ 301(b)(2)(E) and 304(a)(4), (b)(1) and (b)(4). *See also* 40 CFR §§ 125.3(a)(2)(i) and (ii). Effluent limitations based on the best available technology economically achievable (BAT) apply to toxic and non-conventional pollutants. *See* CWA § 301(b)(1)(A) and (b)(2)(A) – (D) and (F), and 304(b)(2); 40 CFR §§ 125.3(a)(iii) and (iv); and 401.12. If a discharger is a "new source" under Section 306 of the CWA, 33 U.S.C. § 1316, however, then it must meet new source standards based on the "best available demonstrated technology" (BADT). *See also* 40 CFR §§ 122.2 (definition of "new source") and 122.29.

Subpart A of 40 CFR Part 125 establishes criteria and standards for developing and applying technology-based requirements in permits under § 301(b) and 402(a) of the CWA. Where EPA has established national effluent limitation guidelines (ELGs) for an industrial category or subcategory, permit *limits* for a facility within that category are set by applying the limits from the national guideline. 40 CFR § 125.3(c)(1). *See also* CWA § 402(a)(1)(A). Where EPA has not yet promulgated an applicable national ELG, then the permitting authority develops permit limits based on a facility-specific, Best Professional Judgment (BPJ) application of the relevant technology standard. 40 CFR § 125.3(c)(2). *See also* CWA § 402(a)(1)(B). Where national ELGs have been promulgated for some, but not all, of the pollutants regulated by the permit, limits are set using the appropriate approach for each pollutant. 40 CFR § 125.3(c)(3). Section 402(p) of the CWA, 33 U.S.C. § 1342(p) requires stormwater discharges associated with industrial activity to be authorized by a NPDES permit. *See also* 40 CFR § 122.26(a)(1)(ii).

Discharges from facilities other than publicly owned sewage treatment plants must generally comply with technology standards as expeditiously as practicable but in no case later than either three years after the date such limitations are established or March 31, 1989, whichever comes first. *See* 40 CFR § 125.3(a)(2). NPDES permits may not include compliance schedules inconsistent with a CWA statutory compliance deadline. *See* 40 CFR§ 122.47(a)(1).

2.2 Water Quality-Based Requirements

The CWA and EPA regulations require that NPDES permits include effluent limits based on water quality considerations when such limits are necessary to meet state or federal WQS that apply to the body of water that receives the discharge. Such water quality-based limits are necessary when TBELs would be less stringent and would interfere with the attainment or

maintenance of WQS in the receiving water. *See* CWA § 301(b)(1)(C) and 40 CFR §§ 122.44(d)(1),122.44(d)(5), 125.84(e) and 125.94(i).

In the Draft Permit, EPA is proposing changes to previous water quality-based permit requirements to comport with the Supreme Court's decision in *City and County of San Francisco v. EPA*, No. 23-753 (S. Ct. Mar. 4, 2025). At issue in that case were two broad narrative provisions prohibiting discharges that cause or contribute to violations of applicable water quality standards. The Supreme Court's opinion refers to these narrative provisions as "end-result" requirements, explaining them as "permit provisions that do not spell out what a permittee must do or refrain from doing but instead make a permittee responsible for the quality of the water in the body of water into which the permittee discharges pollutants." *San Francisco v. EPA*, No. 23-753, *slip op.* at 2. The Supreme Court held that the Clean Water Act "does not authorize EPA to include 'end-result' provisions in NPDES permits." *Id.* At 20. Consistent with this holding in *San Francisco v. EPA*, EPA is not including language in the Draft Permit that is analogous to the permit text rejected by the Court (i.e., "The discharge shall not cause a violation of the water quality standards of the receiving water."). Specifically, these analogous requirements that have been removed in the Draft Permit are in Part I.A.5-10 of the 2015 Permit.

In the development of the Draft Permit, EPA conducted a thorough reasonable potential analysis on all pollutants of concern (*i.e.*, all pollutants identified in the past five years of monthly Discharge Monitoring Reports [DMRs] and in the most recent permit application) using all available information to ensure that all pollutants of concern were either already consistently below levels that may violate applicable water quality standards (WQS) or received a protective WQBEL in the permit if the data demonstrated the reasonable potential to cause or contribute to an excursion of WQS. Some of EPA's pollutant-specific reasonable potential calculations for specific pollutants of concern are shown in Appendix D of this Fact Sheet, though a reasonable potential analysis was conducted for all pollutants identified in the DMRs and/or permit application. Additionally, the Whole Effluent Toxicity (WET) testing limitations in the Draft Permit operate as a surrogate for other potential sources of toxicity and the recent DMR data show consistent compliance with these WET limits.

Based on this information, EPA has determined that the permit is fully protective of all applicable water quality standards based on all currently available information. The narrative water quality-based requirements in previous iterations of this permit (*e.g.*, "The discharge shall not cause a violation of the water quality standards of the receiving waters") were not in lieu of any more specific water quality requirements. To be clear, the Draft Permit without these generic narrative conditions is sufficiently stringent to ensure compliance with water quality standards under current conditions and their removal does not allow for any associated lowering of water quality in the effluent. Therefore, these conditions are not necessary given

EPA's determination that the limits in this permit are sufficient to meet WQS, and thus they are not included in the Draft Permit as requirements based on CWA Section 301(b)(1)(C).[1]

2.2.1 Water Quality Standards

The CWA requires that each state develop water quality standards (WQSs) for all water bodies within the state. *See* CWA § 303 and 40 CFR §§ 131.10 - 131.12. Generally, WQSs consist of three parts: 1) beneficial designated uses for a water body or a segment of a water body; 2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and 3) antidegradation requirements to ensure that once a use is attained it will not be degraded and to protect high quality and National resource waters. *See* CWA § 303(c)(2)(A) and 40 CFR § 131.12. In this case, the applicable state WQSs are found in Title 314 of the Code of Massachusetts Regulations, Chapter 4 (314 CMR 4.00).

As a matter of state law, state WQSs specify different water body classifications, each of which is associated with certain designated uses and particular numeric and narrative water quality criteria intended to help attain the designated uses. Then the state assigns one of the water body classifications to each water body in the state. When using chemical-specific numeric criteria to develop permit limitations, acute and chronic aquatic life criteria and human health criteria are used and expressed in terms of maximum allowable in-stream pollutant concentrations. In general, aquatic-life acute criteria are considered applicable to daily time periods (maximum daily limit) and aquatic-life chronic criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific human health criteria are typically based on lifetime chronic exposure and, therefore, are typically applicable to monthly average limits.

When permit effluent limit(s) are necessary to ensure that the receiving water meets narrative water quality criteria, the permitting authority must establish effluent limits in one of the following three ways: 1) based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use," 2) based on a "case-by-case" assessment using CWA § 304(a) recommended water quality criteria supplemented as necessary by other relevant information; or 3) in certain circumstances, based on use of an indicator parameter. *See* 40 CFR § 122.44(d)(1)(vi)(A) – (C). Furthermore, when CWIS requirements are needed to ensure that state WQS are satisfied, the permitting authority should establish those requirements on a case-by-case basis. *See* CWA § 301(b)(1)(C); 40 CFR §§ 125.84(e) and 125.94(i).

2.2.2 Antidegradation

[1] Given that the removal of these provisions is not considered relaxation of the permit, this change is consistent with CWA § 402(o) and § 303(d)(4).

Federal regulations found at 40 CFR § 131.12 require states to develop and adopt a statewide antidegradation policy that maintains and protects existing in-stream water uses and the level of water quality necessary to protect these existing uses. In addition, the antidegradation policy ensures maintenance of high-quality waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water, unless the State finds that allowing degradation is necessary to accommodate important economic or social development in the area in which the waters are located.

Massachusetts' statewide antidegradation policy, entitled "Antidegradation Provisions," is found in the State's WQSs at 314 CMR 4.04. Massachusetts guidance for the implementation of this policy is in an associated document entitled "Implementation Procedures for the Antidegradation Provisions of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00," dated October 21, 2009. According to the policy, no lowering of water quality is allowed, except in accordance with the antidegradation policy, and all existing in-stream uses, and the level of water quality necessary to protect the existing uses of a receiving water body must be maintained and protected.

This permit is being reissued with effluent limitations sufficiently stringent to satisfy the State's antidegradation requirements, including the protection of the existing uses of the receiving water.

2.2.3 Assessment and Listing of Waters and Total Maximum Daily Loads

The objective of the CWA is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. To meet this goal, the CWA requires states to develop information on the quality of their water resources and report this information to EPA, the U.S. Congress, and the public. To this end, EPA released guidance on November 19, 2001, for the preparation of an integrated "List of Waters" that could combine reporting elements of both § 305(b) and § 303(d) of the CWA. The integrated list format allows states to provide the status of all their assessed waters in one list. States choosing this option must list each water body or segment in one of the following five categories: 1) unimpaired and not threatened for all designated uses; 2) unimpaired waters for some uses and not assessed for others; 3) insufficient information to make assessments for any uses; 4) impaired or threatened for one or more uses but not requiring the calculation of a Total Maximum Daily Load (TMDL); and 5) impaired or threatened for one or more uses and requiring a TMDL.

A TMDL is a planning tool and potential starting point for restoration activities with the ultimate goal of attaining water quality standards. A TMDL essentially provides a pollution budget designed to restore the health of an impaired water body. A TMDL typically identifies the source(s) of a pollutant from point sources and non-point sources, determines the maximum load of the pollutant that the water body can tolerate while still attaining WQSs for the designated uses, and allocates that load among the various sources, including point source discharges, subject to NPDES permits. *See* 40 CFR § 130.7.

For impaired waters where a TMDL has been developed for a particular pollutant and the TMDL includes a waste load allocation (WLA) for a NPDES permitted discharge, the effluent limitation in the permit must be "consistent with the assumptions and requirements of any available WLA". 40 CFR § 122.44(d)(1)(vii)(B).

2.2.4 Reasonable Potential

Pursuant to CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C), and 40 CFR § 122.44(d)(1), NPDES permits must include any requirements in addition to TBELs that are necessary to achieve water quality standards established under § 303 of the CWA. In addition, permit limits "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality." 40 CFR § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 CFR § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain WQBELs for that pollutant. *See* 40 CFR § 122.44(d)(1)(i).

2.2.5 State Certification

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate the State's WQSs, or the State waives, or is deemed to have waived, its right to certify. *See* 33 U.S.C. § 1341(a)(1). Regulations governing state certification are set forth in 40 CFR § 124.53 and § 124.55. EPA has requested permit certification by the State pursuant to 40 CFR § 124.53 and expects that the Draft Permit will be certified.

If the State believes that conditions more stringent than those contained in the Draft Permit are necessary to meet the requirements of either CWA §§ 208(e), 301, 302, 303, 306 and 307, or applicable requirements of State law, the State should include such conditions in its certification. The only exception to this is that the permit conditions/requirements regulating sewage sludge management and implementing CWA § 405(d) are not subject to the State certification requirements. Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through EPA's permit appeal procedures of 40 CFR Part 124.

In addition, the State may provide a statement of the extent to which any condition of the Draft Permit can be made less stringent without violating the requirements of State law, including water quality standards.

It should be noted that under CWA § 401, EPA's duty to defer to considerations of State law is intended to prevent EPA from relaxing any requirements, limitations or conditions imposed by State law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 CFR § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." *Id.* EPA regulations pertaining to permit limitations based upon WQSs and State requirements are contained in 40 CFR §§ 122.4(d) and 122.44(d).

Note that the draft state certification will also be made available for public comment[2] by the State separately from this Draft Permit as part of the permit reissuance process. EPA does not have authority to make changes to the state certification conditions. Any comments regarding the draft state certification conditions should be made directly to MassDEP as part of that separate public notice.

2.3 Effluent Flow Requirements

Generally, EPA uses a discharger's effluent flow volume both to determine whether an NPDES permit needs certain effluent limitations and to calculate the effluent limitations themselves. EPA practice is to use effluent flow as a reasonable and important worst-case condition in its reasonable potential and WQBEL calculations to ensure compliance with WQSs under CWA § 301(b)(1)(C). Should a facility's effluent flow exceed the flow assumed in these calculations, the in-stream dilution would be reduced, and the calculated effluent limitations might not be sufficiently protective (i.e., might not meet WQSs). Further, pollutants that do not have the reasonable potential to exceed WQSs at a lower discharge flow may have a reasonable potential to do so at a higher flow due to the decreased dilution in the receiving water (which, conversely, means there will be a higher concentration of the pollutants). In order to ensure that the assumptions underlying EPA's reasonable potential analyses and permit effluent limitation derivations remain sound for the duration of the permit, EPA may ensure the validity of its "worst-case" effluent flow assumptions through imposition of permit conditions for effluent flow.[3] In this regard, the effluent flow limitation is a component of any WQBELs

[2] Once the public notice period for the MassDEP's draft 401 certification begins, it will be posted here: https://www.mass.gov/info-details/massdep-permits-approvals-for-comment. Following MassDEP's public notice period, the draft certification will be moved to here: https://www.mass.gov/info-details/massachusetts-draft-individual-surface-water-discharge-permits-and-associated-documents.

[3] EPA's regulations regarding "reasonable potential" require EPA to consider "where appropriate, the dilution of the effluent in the receiving water," *id.* 40 CFR §122.44(d)(1)(ii). *Both* the effluent flow and receiving water flow may be considered when assessing reasonable potential. *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 599 (EAB 2010). EPA guidance directs that this "reasonable potential" analysis be based on "worst-case" conditions. *See In re Washington Aqueduct Water Supply Sys.,* 11 E.A.D. 565, 584 (EAB 2004).

because the WQBELs are premised on a maximum flow level. The effluent flow limit may also be necessary to ensure that other pollutants remain at levels that do not have a reasonable potential to exceed WQSs.

Setting limits on effluent flow volumes is within EPA's authority to condition a permit to carry out the objectives and satisfy the requirements of the CWA. *See* CWA §§ 402(a)(2) and 301(b)(1)(C); 40 CFR §§ 122.4(a) and (d), 122.43 and 122.44(d). Regulating the quantity of pollutants in the discharge through a restriction on the quantity of effluent is also consistent with EPA's authorities under the CWA.

As provided in Part II.B.1 (Standard Conditions) of the proposed permit and 40 CFR § 122.41(e), the Permittee is required to properly operate and maintain all facilities and systems of treatment and control. Improper operation and maintenance may result in non-compliance with permit effluent limitations. Consequently, an effluent flow limit is a permit condition that relates to the Permittee's duty to mitigate (*i.e.*, minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment) and to properly operate and maintain the treatment works. *See* 40 CFR §§ 122.41(d), (e).

2.4 Monitoring and Reporting Requirements

2.4.1 Monitoring Requirements

Sections 308(a) and 402(a)(2) of the CWA and the implementing regulations at 40 CFR Parts 122, 124, 125, and 136 authorize EPA to include monitoring and reporting requirements in NPDES permits.

The monitoring requirements included in this permit have been established to yield data representative of the Facility's discharges in accordance with CWA §§ 308(a) and 402(a)(2), and consistent with 40 CFR §§ 122.41(h), (j) and (1)(9), 122.43(a), 122.44(i) and 122.48. The Draft Permit specifies routine sampling and analysis requirements to provide ongoing, representative information on the levels of regulated constituents in the discharges. The monitoring program is needed to enable EPA and the State to assess the characteristics of the Facility's effluent, whether Facility discharges are complying with permit limits, and whether different permit conditions may be necessary in the future to ensure compliance with technology-based and water quality-based standards under the CWA. EPA and/or the State may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to CWA § 304(a)(1), State water quality criteria, and any other appropriate information or data, to develop numeric effluent limitations for any pollutants, including, but not limited to, those pollutants listed in Appendix D of 40 CFR Part 122.

NPDES permits require that the approved analytical procedures found in 40 CFR Part 136 be used for sampling and analysis unless other procedures are explicitly specified. *See* 40 CFR §

122.41(j)(4). Permits also include requirements necessary to comply with the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule*.[4] This Rule requires that where EPA-approved methods exist, NPDES applicants must use sufficiently sensitive EPA-approved analytical methods when quantifying the presence of pollutants in a discharge. Further, the permitting authority must prescribe that only sufficiently sensitive EPA-approved methods be used for analyses of pollutants or pollutant parameters under the permit. The NPDES regulations at 40 CFR § 122.21(e)(3) (completeness), 40 CFR § 122.44(i)(1)(iv) (monitoring requirements) and/or as cross referenced at 40 CFR § 136.1(c) (applicability) indicate that an EPA-approved method is sufficiently sensitive where:

- The method minimum level[5] (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or
- In the case of permit applications, the ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or parameter in the discharge; or
- The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

2.4.2 Reporting Requirements

The Draft Permit requires the Permittee to report monitoring results obtained during each calendar month to EPA and the State electronically using NetDMR. The Permittee must submit a Discharge Monitoring Report (DMR) for each calendar month no later than the 15th day of the month following the completed reporting period.

NetDMR is a national web-based tool enabling regulated CWA permittees to submit DMRs electronically via a secure internet application to EPA through the Environmental Information Exchange Network. NetDMR has eliminated the need for participants to mail in paper forms to EPA under 40 CFR §§ 122.41 and 403.12. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/. Further information about NetDMR can be found on EPA's NetDMR support portal webpage.[6]

[4] Fed. Reg. 49,001 (Aug. 19, 2014).
[5] The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor. EPA is considering the following terms related to analytical method sensitivity to be synonymous: "quantitation limit," "reporting limit," "level of quantitation," and "minimum level." *See* Fed. Reg. 49,001 (Aug. 19, 2014).
[6] https://netdmr.zendesk.com/hc/en-us

With the use of NetDMR, the Permittee is no longer required to submit hard copies of DMRs and reports to EPA and the State unless otherwise specified in the permit. In most cases, reports required under the permit shall be submitted to EPA as an electronic attachment through NetDMR. Exceptions are provided in the permit such as for providing certain reports, information, and requests to EPA's NPDES Applications Coordinator in the Water Division and written notifications required under Part II Standard Conditions.

2.5 Standard Conditions

The Standard Conditions, included as Part II of the Draft Permit, are based on applicable regulations found in EPA's NPDES permitting regulations. *See* 40 CFR § 122.41. *See also, generally,* 40 CFR Part 122.

2.6 Anti-backsliding

The CWA's anti-backsliding requirements prohibit a permit from being renewed, reissued or modified with conditions less stringent than the corresponding conditions in a previous permit issued to the same facility unless doing so is authorized by one of the specified exceptions to the anti-backsliding requirements. *See* CWA §§ 402(o) and 303(d)(4) and 40 CFR § 122.44(*l*). Anti-backsliding provisions apply to effluent limits based on technology, water quality, and/or State certification requirements.

All proposed limitations in the Draft Permit are at least as stringent as limitations included in the 2015 Permit unless specific conditions exist to justify relaxation in accordance with CWA § 402(o) or § 303(d)(4). Discussion of any less stringent limitations and corresponding exceptions to anti-backsliding provisions is provided in the sections that follow.

3.0 Description of Facility and Discharge

3.1 Location and Type of Facility

The Facility is located on an industrial site along Pleasant Street, adjacent to the Neponset River, in Norwood, Massachusetts (See Figure 1). The portion of the Facility located on the northwest side of Pleasant Street consists of a roofing material manufacturing operation located in the central portion of the property (the "roofing plant"), covered storage and production buildings located roughly north and south of the roofing plant, an aboveground storage tank (AST) farm (the "tank farm"), an asphalt blow still AST farm (the "still yard"), and paved storage, parking and access areas. The portion of the Facility located on the southeast side of Pleasant Street consists of a granule processing plant (the "granule plant"), a stone pile, an office building, covered storage buildings, and paved parking and access areas. The Solaris plant that was located on this portion of the Facility is no longer in operation. The Neponset River flows along the northwestern portion of the Facility property. The Facility is located downstream of Hollingsworth & Vose Pond ("H & V Pond") and upstream of Hawes Brook. The

approximate latitudes and longitudes for each outfall authorized by this permit are presented in Table 1. The site plan for the Facility is found in Figure 2.

Table 1: Summary of Outfall Locations

Outfall Number	Source	Latitude	Longitude
001	Contact Cooling Water	42° 10’ 8” N	71° 12’ 23” W
002	Contact and Non-Contact Process Water and Stormwater	42° 10’ 9” N	71° 12’ 22” W
003	Stormwater	42° 10’ 8” N	71° 12’ 27” W
004	Stormwater	42° 10’ 7” N	71° 12’ 23” W

CertainTeed manufactures roofing shingles. Key constituents in the in the production are fiberglass, crushed stone, asphalts and process oils as raw materials. The bulk of the raw materials are transported to the site, except for the crushed stone, which is processed at the on-site crushing plant seperated from the roofing plant by Pleasant Street. The Facility produces 95% of the ceramic-coated granules on-site. Raw materials used to produce granules include quarry rock, kaolin clay, inorganic pigments, and mineral oil. The Facility uses municipal water supplied to the Town of Norwood by the Massachusetts Water Resources Authority (“MWRA”). There are no water withdrawals from the Neponset River.

3.1.1 Effluent Limitation Guidelines

EPA has promulgated technology-based Effluent Limitation Guidelines (ELGs) for BPT in 40 CFR § 443.32 and for BAT in 40 CFR § 443.33 for process water in the Paving and Roofing Materials (Tars and Asphalt) Point Source Category, Subpart C, Asphalt Roofing Subcategory for existing sources.

3.1.2 Measure of Production

In accordance with 40 CFR § 122.45(b)(2), EPA based the calculation of effluent limitations applicable under the ELGs for BPT in 40 CFR § 443.32 and for BAT in 40 CFR § 443.33 upon a reasonable measure of actual production of the Facility. EPA determined that the measure of production appropriate for this Facility is the average pounds of product produced per day. The Permittee provided the total product produced per month and the number of production days each month from January 2020 through August 2025.[7] Therefore, the average pounds of product produced per day is calculated as follows:

[7] Mary Kluit, CertainTeed/St. Gobain to Michele Barden, EPA. September 9, 2025, Subject: “NPDES Permit MA0003531, CertainTeed, Copies of 2019 & 2020 Permit Application Materials,” Attachment CT NW NPDES Roofing Production monthly data From 2020 thru YTD 2025 vdays.xlsx.

Table 2: Production and days of operation by year

Year	Roofing Production (in lbs.)	Production Days
2020	627,168,000	234
2021	631,456,000	256
2022	613,796,000	261
2023	563,476,400	229
2024	620,588,980	263
2025 (Through August)	431,513,600	196
Totals	3,487,998,980	1439

$$\frac{\text{3,487,998,980 pounds produced}}{\text{1,439 production days}} = \text{2,423,905 pounds per day}$$

3.2 Location and Type of Discharge

The Draft Permit authorizes discharges to the Neponset River via: 1) Outfall 001, which consists of contact cooling water; 2) Outfall 002, which consists of process water and stormwater; 3) Outfall 003, which consists of stormwater; and 4) Outfall 004, which also consists of stormwater. These are the same outfalls authorized by the 2015 Permit. The discharge from Outfall 001 consists of contact cooling water from the roofing manufacturing process at the roofing plant. The discharge from Outfall 002 consists of contact process water, non-contact cooling water, boiler condensate, boiler blowdown, and stormwater from the granule plant and surrounding site. The discharge from Outfall 003 consists of stormwater from the tank farm. The discharge from Outfall 004 consists of stormwater from the still yard. Each outfall and treatment process are described below.

Outfall 001

The discharge from Outfall 001 consists of contact cooling water from the roofing manufacturing process at the roofing plant (See Figure 3).

Roofing materials are manufactured at the roofing plant by drawing a fiberglass mat over a series of steel rollers. The fiberglass mat is heated, followed by application of hot asphalt that is mixed with limestone. Ceramic-coated, pigmented rock granules are then applied over the asphalt coated web to the top of the web. Mylar tape and sand are then applied to the back of the sheet. The web is then pressed through rolls, cooled by surface evaporative cooling and by closed loop, non-contact cooling water in the rolls. Latex paint and/or biocide coating may also be applied to select roofing materials. Contact cooling water supplied by the Town of Norwood municipal system is used to prevent roofing materials from sticking to the equipment and to cool the final manufactured product. This contact cooling water drains through a grated trough to a rectangular pit. The rectangular pit is divided into two sections: The first section is where the sand screw fed the pit then the water with sediment goes over divider wall into the second

chamber. This second section is cleaned regularly ("east pit"); approximate area below discharge pipe is 32.6 cubic feet (3.08' x 4.17' x 2.54'). The pit discharges by gravity overflow through a subsurface pipe to the settling basins and then to the Neponset River via outfall 001. The closed loop, non-contact cooling water is cycled through a single fanned cooling tower. Make up water is supplied by the Town of Norwood.

The treatment process for the contact cooling water consists of sedimentation in two rectangular concrete basins approximately 40 feet wide by 60 feet long by 12 feet deep (See Figure 4). Each basin has a holding capacity of 215,000 gallons and a retention time of 5.3 days. The influent water travels down a channel between the basins and enters each basin at the end furthest from the outfall sampling location. Water passes through a turbidity curtain in each basin. The overflow from each basin combines at the sampling location for Outfall 001 and discharges via the outfall pipe to the Neponset River. The sediment, consisting primarily of granules, filler and sand, is mechanically removed using a front-end loader or similar equipment approximately once annually. The sediment removed from the basins is staged in the adjacent property away from the river following generally accepted silt containment practices until it can be transported further as a solid waste and disposed off-site. The trench and pit is cleaned approximately once per month and the material removed is dried prior to disposal off-site.

Outfall 002

Contact process water, non-contact cooling water, boiler condensate, boiler blowdown, and stormwater, all from the granule plant, are treated through sedimentation in the detention basin associated with Outfall 002, located on the north side of Pleasant Street (See Figure 5). The discharge waters enter the detention basin through a pipe at the end furthest from the cylindrical outlet structure and sampling location for Outfall 002. The permittee has been authorized by MassDEP to pump water out of the detention pond in advance of large storms into a wooded area on the back side of the granule plant site. When the water level in the pond exceeds the elevation of the top of the outlet structure, it drains to a subsurface pipe and combines with municipal stormwater prior to discharging to the Neponset River. The facility reports that discharges to Outfall 002 are infrequent, estimated by the permittee as once every three years, due to groundwater infiltration and evaporation. The sediment, consisting primarily of granule rock dust is mechanically removed from the detention basin using a front-end loader or similar equipment when maintenance is completed. The sediment removed from the detention basin is transported as a solid waste and disposed of off-site.

Outfalls 003 and 004

Stormwater that accumulates inside the concrete dikes of both the tank farm and the still yard is treated through two Oil Water Separators (OWSs). The OWS in the tank farm is 5'7" long, 2'2" wide and 4' high and the transfer pump has a design flow capacity of 20 gallons per minute (gpm) (See Figure 6). The OWS in the still yard is 10' long, 2' wide and 6' high. Two transfer pumps are used for the still yard OWS with a total design flow capacity of 80 gpm (See Figure

7). One pump with a design flow capacity of 20 gpm is used during normal precipitation events. The second pump has a design flow capacity of 60 gpm and is used if the design flow capacity of the first pump is exceeded. Treated stormwater from both the tank farm and still yard comingles with additional stormwater from the Facility parking areas prior to reaching the Neponset River.

A quantitative description of the discharges in terms of effluent parameters, based on monitoring data submitted by the Permittee, including Discharge Monitoring Reports (DMRs), from August 2020 through July 2025, is provided in Appendix A of this Fact Sheet.

As previously stated, the permit does not address stormwater discharges from this site authorized under the Stormwater Multi-Sector General Permit for Industrial Activities (MSGP) with tracking number MAR05EA93.

4.0 Description of Receiving Water and Dilution

4.1 Receiving Water

The Facility discharges to the Neponset River (Segment ID MA0073-01). This segment is 13.2 miles in length from the outlet of the Neponset Reservoir in Foxborough to the confluence with the East Branch in Canton. The Facility is approximately one quarter mile upstream of the confluence between the Neponset River and Hawes Brook and downstream of the Hollingworth and Vose Pond.

The Neponset River is classified as a Class B, warm water fishery in the Massachusetts WQSs, 314 Code of Massachusetts Regulations (CMR) 4.06. Class B waters are described in the Commonwealth of Massachusetts Surface Water Quality Standards at 314 CMR 4.05(3)(b) as follows: *"designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment (Treated Water Supply). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value."*

The Neponset River is listed in the *Final Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle* ("303(d) List") as a Category 5 "Waters Requiring a TMDL."[8] The pollutants and conditions requiring a TMDL are cadmium, dichlorodiphenyltrichloroethane (DDT) in fish tissue, dissolved oxygen (DO), *Escherichia Coli* (*E. coli*), nutrient/eutrophication biological indicators, PCBs in fish tissue, total phosphorus and unspecified metals in sediment. A

[8] Final *Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle*. MassDEP Division of Watershed Management
Watershed Planning Program, Worcester, Massachusetts; May 2023; CN: 568.1. Available at: https://www.epa.gov/system/files/documents/2023-10/2022-ma-303d-list-report.pdf .

total maximum daily load (TMDL) has been prepared and approved for *E. coli*.[9] The additional impairments not requiring a TMDL are curly-leaf pondweed, fish passage barrier, and non-native aquatic plants.

The status of each designated use described in the Neponset River Watershed 2004 Quality Assessment Report (February 2010)[10] is presented in Table 2.

Table 3: Summary of Designated Uses and Listing Status for Neponset River, Segment MA73-01

Designated Use	Status
Aquatic Life	Impaired
Aesthetics	Not Assessed
Primary Contact Recreation	Impaired
Secondary Contact Recreation	Support
Fish Consumption	Impaired

According to the *Neponset River Watershed 2004 Water Quality Assessment Report*, this water body segment is not attaining designated uses for fish, other aquatic life and wildlife, primary contact recreation and fish consumption, while designated uses for secondary contact recreation are supported, and aesthetics have not been assessed. The Neponset River is included in the Massachusetts Department of Public Health fish consumption advisory for mercury in all species.[11]

The facility does not engage in activities that would be expected to generate a significant source of DDT, *E. coli*, or PCBs, noted above, since the majority of effluent consists of treated contact cooling water, non-contact cooling water and stormwater. However, EPA has included effluent limitations and/or monitoring requirements necessary to address discharges of cooling water (including limits on temperature as that can affect DO) and nutrients (including impairments resulting from total phosphorus and DO). Effluent limits for aluminum and monitoring requirements for other metals are also included and may address the impairment of unspecified metals in the sediments.

4.2 Ambient Data

A summary of the ambient data collected in the receiving water in the vicinity of the Facility that is referenced in this Fact Sheet can be found in Appendix B of this Fact Sheet.

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[9] Total Maximum Daily Load of Bacteria for the Neponset River Basin. MassDEP Division of Watershed Management. May 2002: CN: 121.0. Available at: https://attains.epa.gov/attains-public/api/documents/actions/MA_DEP/2592/107144.

[10] Neponset River Watershed 2004 Water Quality Assessment Report. MassDEP Division of Watershed Management, Worcester, Massachusetts; February 2010, Report Number: CN170.4. http://mass.gov/eea/docs/dep/water/resources/71wqar09/73wqar10.pdf

[11] Freshwater Fish Consumption Advisory List. Massachusetts Department of Public Health Bureau of Environmental Health; July, 2019. https://www.mass.gov/lists/fish-consumption-advisories

4.3 Available Dilution

To ensure that discharges do not cause or contribute to violations of WQSs under all expected conditions, WQBELs are derived assuming critical conditions for the receiving water.[12] The critical flow is a measure of the low flow of the receiving water and may stipulate the magnitude, duration, and frequency of allowable excursions from the magnitude component of criteria in order to prevent adverse impacts of discharges on existing and designated uses. State WQSs specify the hydrologic condition at which water quality criteria must be applied.

For Rivers and Streams in Massachusetts:
(a) for rivers and streams, the lowest flow condition at and above which aquatic life criteria must be applied is the lowest mean flow for seven consecutive days, recorded once in 10 years, or 7-day 10-year low flow (7Q10). *See* 314 CMR 4.03(3)(a).
(b) in waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the State. The State has determined that the lowest flow in this case is the 7Q10. *See* 314 CMR 4.03(3)(b).
(d) for rivers and streams and waters where flows are regulated by dams or similar structures, human health criteria may be applied at the harmonic mean flow. *See* 314 CMR 4.03(3)(d).

MassDEP[13] calculated the available dilution at the location of Outfalls 001 and 002 as follows.

7Q10 and 30Q10 Streamflow Analysis

The 7Q10 and 30Q10 flows for the Neponset River at the Facility were extrapolated by using the data (flow and drainage area) from the nearby downstream U.S. Geological Survey gage, Station 01105000, Neponset River at Norwood, MA ("USGS 01105000") and the drainage area at the point of discharge. The 30Q10 is the 30-day mean low flow with a 10-year recurrence interval. The 7Q10 and 30Q10 flows were calculated using the following data:

- Analysis from USGS Hydrologic Toolbox v1.1.0 of the last 30 years of streamflow data (4/1/1995 - 3/31/2025) at USGS 01105000
- Drainage area of the Neponset River at USGS 01105000 based on information from USGS is 34.7 mi^2
- Drainage area of the Neponset River at the Facility based on StreamStats v4.29.2 is 25.7 mi^2

Table 3 shows the 7Q10 and 30Q10 calculations for the Facility.

Table 4: 7Q10 and 30Q10 Calculations for the Facility

[12] EPA Permit Writer's Manual, Section 6.2.4
[13] MassDEP. September 8, 2025. Memo to the File. Subject: CertainTeed Corporation NPDES Permit (MA0003531) 7Q10 Flow Analysis

	7Q10 Flow (cfs)	30Q10 Flow (cfs)	Comments
A. Flow at USGS 01105000	1.66	2.81	Period of record: 4/1/1995 - 3/31/2025 calculated from USGS Hydrologic Toolbox v1.1.0
Flow at Facility	**1.23**	**2.08**	**Flow at Facility = (A/34.7 mi^2)*25.7mi^2**

Harmonic Mean Streamflow Analysis

The Harmonic Mean flow for the Neponset River at the Facility was also extrapolated by using the data (flow and drainage area) from nearby downstream U.S. Geological Survey gage station 01105000, Neponset River at Norwood, MA ("USGS 01105000") and the drainage area at the point of discharge. The Harmonic Mean flow was calculated using the following data:

- Analysis from USGS Hydrologic Toolbox v1.1.0 of the last 70 years of streamflow data (4/1/1955 - 3/31/2025) at USGS 01105000
- Drainage area of the Neponset River at USGS 01105000 based on information from USGS is 34.7 mi^2

Drainage area of the Neponset River at the Facility based on StreamStats v4.29.2 is 25.7 mi^2

Table 4 shows the Harmonic Mean calculation for the Facility.

Table 5: Harmonic Mean Calculation for the Facility

	Harmonic Mean Flow (cfs)	Comments
B. Flow at USGS 01105000	20.37	Period of record: 4/1/1955 - 3/31/2025 calculated from USGS Hydrologic Toolbox v1.1.0
Flow at Facility	**15.08**	**Flow at Facility = (B/34.7 mi^2)*25.7mi^2**

Dilution Factor

The dilution factor was calculated as follows:

7Q10 Dilution Factor = (Qs + Qe)/Qe

Where:
Qs= 7Q10 flow of Neponset River at the Facility = 1.23 cfs
Qe= Design flow of the Facility = 0.04 MGD = 0.06 cfs

7Q10 Dilution Factor= (1.23 cfs + 0.06 cfs) / 0.06 cfs = 21.5

The 2015 Permit used a dilution factor of 55:1 in evaluating reasonable potential and calculating effluent limitations. This dilution factor was calculated with flow data from the same USGS gage station 01105000; however, the fact sheet did not specify the timeframe of data used for the 7Q10 flow calculation. Given that USGS began collecting data at this station on October 1, 1939, it's likely that the 7Q10 was determined using the entire dataset, a common approach at that time. In 2018, EPA published the handbook, Low Flow Statistics Tools – A How-To Handbook for NPDES Permit Writers,[14] which provides updated guidance for calculating the dilution factor for NPDES permits and recommends using the most recent 30 years of data to adequately capture representative data. Therefore, based on more recent flow data, the dilution factor of the Neponset River has been found to have decreased, reflecting significant hydrologic changes from decades of human activity (*e.g.*, development of local water supply wells and centralized out of basin sewerage).

EPA used this dilution factor (DF) in its quantitative derivation of WQBELs for pollutants in the Draft Permit.

5.0 Proposed Effluent Limitations and Conditions

The proposed effluent limitations and conditions derived under the CWA and State WQSs are described below. These proposed effluent limitations and conditions, the basis of which is discussed throughout this Fact Sheet, may be found in Part I of the Draft Permit.

In accordance with 40 CFR § 122.45(b)(2), EPA based the calculation of effluent limitations upon a reasonable measure of actual production of the Facility, or flow. For effluent limitations established based on the ELGs for BPT in 40 CFR §443.32 and for BAT in 40 CFR §443.33 for process water in the Paving and Roofing Materials Point Source Category, Subpart C., Asphalt Roofing Subcategory for existing sources, EPA determined that the measure appropriate for this Facility is the average pounds of product produced per day. For water quality-based effluent limitations, the average effluent flow of 0.04 MGD is used. The average effluent flow reflects the average monthly limit of treated contact cooling water through Outfall 001. Average effluent flow is also the effluent flow value used to calculate the dilution factor for the discharge.

5.1 Effluent Limitations and Monitoring Requirements

The State and Federal regulations, data regarding discharge characteristics, and data regarding ambient characteristics described above, were used during the effluent limitations development process. Discharge and ambient data are included in Appendix A and B. EPA's

[14] EPA, Office of Water. October 2018. "Low Flow Statistic Tools: A How-To Handbook for NPDES Permit Writers," EPA-833-B-18-001. Available at: https://www.epa.gov/sites/default/files/2018-11/documents/low_flow_stats_tools_handbook.pdf

Reasonable Potential Analysis is included in Appendix C and results are discussed in the applicable sections below.

5.1.1 Outfall 001

5.1.1.1 Effluent Flow

The Facility's 2015 Permit includes an average monthly flow rate limit of 40,000 GPD (0.04 MGD) and reporting requirement for the daily maximum flow rate of treated contact cooling water through Outfall 001. From August 1, 2020 through July 31, 2025 (Appendix A), the average monthly effluent flow rate has ranged from 0.0068 MGD to 0.034 MGD. Under normal operating conditions, and as indicated by DMR data, the maximum daily flow rate is typically no greater than 0.042 MGD with a median of 0.0297 MGD for the reporting period. The Draft Permit continues to limit flow rate from Outfall 001 to an average monthly flow rate limit of 40,000 gpd and the reporting of the daily maximum flow rate. The monitoring frequency remains continuous.

The 2015 Permit also requires the Permittee to report the Total Flow in million gallons per month (MGal/mo) from Outfall 001. From August 1, 2020 through July 31, 2025, the monthly average total flow ranged from 0 to 1.0311 million gallons per month and the maximum daily total flow ranged from 0.0225 to 0.8479 million gallons per month. The Draft Permit proposes a total monthly reporting requirement in the unit of millions of gallons per month. This is a simple sum of the volume of flow for each month. The monitoring frequency is when discharging.

5.1.1.2 Total Suspended Solids

Solids could include inorganic (e.g., silt, sand, clay, and insoluble hydrated metal oxides) and organic matter (e.g., flocculated colloids and compounds that contribute to color). Solids can clog fish gills, resulting in an increase in susceptibility to infection or asphyxiation. Suspended solids can increase turbidity in receiving waters and reduce light penetration through the water column or settle to form bottom deposits in the receiving water. Suspended solids also provide a medium for the transport of other adsorbed pollutants, such as metals, which may accumulate in settled deposits that can have a long-term impact on the water column through cycles of re-suspension.

The 2015 Permit contains concentration-based effluent limitations of a maximum daily limit of 70 mg/L and a monthly average limit of 40 mg/L for TSS and mass-based effluent limits of 46 lbs/day and 68 lbs/day, respectively. These limits are based on the Effluent Limit Guidelines (ELGs) in the Paving and Roofing Materials Point Source Category, Subpart C, Asphalt Roofing Subcategory. Additionally, mass-based limits are calculated using the appropriate measure of production in pounds produced per day and the applicable factor in pounds per 1,000 pounds produced as follows:

BPT:

Maximum Daily TSS:

$$\frac{2{,}423{,}905\ pounds\ produced}{day} \times \frac{0.056\ pounds}{1{,}000\ pounds\ produced} = 136\frac{lbs}{day}$$

Average Monthly TSS:

$$\frac{2{,}423{,}905\ pounds\ produced}{day} \times \frac{0.038\ pounds}{1{,}000\ pounds\ produced} = 92\frac{lbs}{day}$$

BAT:

Maximum Daily TSS:

$$\frac{2{,}423{,}905\ pounds\ produced}{day} \times \frac{0.028\ pounds}{1{,}000\ pounds\ produced} = 68\ lbs/day$$

Average Monthly TSS:

$$\frac{2{,}423{,}905\ pounds\ produced}{day} \times \frac{0.019\ pounds}{1{,}000\ pounds\ produced} = 46\frac{lbs}{day}$$

Because the TSS limits calculated for BAT are more stringent than BPT, the 2015 Permit and the Draft Permit include a mass-based maximum daily limit of 68 lbs/day and a mass-based average monthly limit of 46 lbs/day for TSS based on BAT limitations. These limits were evaluated based on the current measure of production (See Section 3.1.2). The Draft Permit carries forward these limits as they are appropriate under the ELGs and current production rates. The monitoring frequency is maintained as monthly. EPA is also maintaining the concentration-based effluent limitations of 40 mg/L as an average monthly limit and 70 mg/L as a maximum daily limit. This is consistent with anti-backsliding regulations at 40 CFR §122.44(l)(1).

There were no exceedances of the monthly average concentration-based limits from August 1, 2020 through July 31, 2025 (Appendix A). The daily maximum total suspended solids (TSS) concentrations have ranged from 2.103 mg/L to 92 mg/L with two exceedances. There were no exceedances of the monthly average or daily maximum mass-based limits for the same period.

5.1.1.3 pH

The hydrogen-ion concentration in an aqueous solution is represented by the pH using a logarithmic scale of 0 to 14 standard units (S.U.). Solutions with pH 7.0 S.U. are neutral, while

those with pH less than 7.0 S.U. are acidic and those with pH greater than 7.0 S.U. are basic. Discharges with pH values markedly different from the receiving water pH can have a detrimental effect on the environment. Not only can sudden pH changes kill aquatic life, but pH can also affect the toxicity of other pollutants in the water.

From August 1, 2020 through July 31, 2025 (Appendix A), the pH values reported for Outfall 001 ranged from 6.5 to 7.4 S.U. from Outfall 001. There have been no exceedances of the pH limitations. National ELGs for process water from asphalt roofing point sources (40 CFR §443.32 and §443.33) require effluent pH to be between 6.0 and 9.0 SU at all times. However, the pH limitations in the Permit are based on the State WQSs for Inland Waters, Class B at 314 CMR 4.05(3)(b)3, which require that the pH of the receiving water be in the range of 6.5 to 8.3 S.U. The Draft Permit continues the requirements for a pH range of 6.5 to 8.3 S.U. when the Facility is discharging, monitored weekly by grab samples.

5.1.1.4 Oil and Grease

Oil and Grease is not a single chemical constituent but includes a large range of organic compounds that can be both petroleum-related (e.g., hydrocarbons) and non-petroleum (e.g., vegetable and animal oils and greases, fats, and waxes). These compounds have varying physical, chemical, and toxicological properties. Generally, oils and greases in surface waters either float on the surface, are solubilized or emulsified in the water column, adsorb onto floating or suspended solids and debris, or settle on the bottom or banks. Oil and grease, or certain compounds within an oil and grease mixture, can be lethal to fish, benthic organisms and water-dwelling wildlife.

Massachusetts Surface WQSs, 314 CMR 4.05(3)(b)(7), state “These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.” A concentration of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish (EPA Water Quality Criteria, 1972).

From August 1, 2020 to July 31, 2025, Oil & Grease levels have ranged from 1.9 to 6.4 mg/L at Outfall 001. The Draft Permit maintains a maximum daily limit for oil and grease of 15 mg/L for Outfall 001 to ensure compliance with Massachusetts WQSs. The monitoring frequency is maintained as monthly.

5.1.1.5 Temperature

Section 502(6) of the Clean Water Act defines heat as a “pollutant.” *See* 33 U.S.C. § 1362(6). Water temperature affects the metabolic and reproductive activities of aquatic organisms and can determine which fish and macroinvertebrate species can survive or thrive in a water body. Certain cold-blooded species cannot regulate their body temperature through

physiological means, so their body temperatures reflect the temperatures of the water they inhabit. In addition, rapid changes (increases or decreases) in ambient water temperature can directly affect aquatic life, particularly fish. Ambient water temperature can indirectly affect aquatic life by influencing other water quality parameters such as dissolved oxygen, by which the solubility of oxygen decreases as water temperature increases.

Cooling water is used to spray asphalt-coated roofing shingles and cool steel rollers during the manufacturing process. The portion used in the steel rollers re-circulates through two closed-cycle cooling fans at the Facility. The water sprayed on the asphalt shingles is discharged to the Neponset River through Outfall 001 after treatment in the settling pools. The 2015 Permit temperature limit was based on Massachusetts WQSs for class B waters (314 CMR 4.05(3)(b)) pertaining to warm water fisheries which states:

a. "Temperature shall not exceed 83°F (28.3°C) in warm water fisheries. The rise in temperature due to a discharge shall not exceed…5°F (2.8°C) in rivers and streams designated as warm water fisheries (based on the minimum expected flow for the month);" and
b. "natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained. There shall be no changes from natural background conditions that would impair any use assigned to this Class, including those conditions necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms."

The 2015 Permit contained a daily maximum temperature limit of 90°F (32.2° C), and an average monthly temperature limit of 83°F (28.3° C). From August 1, 2020 through July 31, 2025, the maximum daily and average monthly temperature of the effluent has ranged from 0 to 80° F and 0 to 72.8° F, respectively.

EPA used a standard mixing equation to determine the instantaneous mixing expected in the Neponset River as a result of the discharge from Outfall 001 to verify that the discharge does not cause an instream temperature of greater than 83° F as required by Massachusetts WQSs (See Appendix C). Based on this analysis, EPA has determined that the current temperature limit of 90° F, included in the 2015 Permit, is no longer protective and is expected to cause or contribute to an increase in temperature above 83°F in the Neponset River.

EPA calculated a new daily maximum effluent temperature limit based on the revised 7Q10 flow and the reported maximum upstream receiving water temperature of 82.8 F.[15] The proposed daily maximum effluent limit is 84° F. The average monthly temperature limit remains 83°F.

[15] EPA reviewed available ambient temperature data from the Neponset River Watershed Association (May 2020-August 2025). The maximum temperature identified at the nearest upstream sampling location, the Hollingsworth and Vose dam, Walpole, was 28.2° C (82.8° F) recorded August 13, 2020.

In the event that temperature monitoring data indicate conditions which violate Massachusetts WQS, the permit may be modified pursuant to 40 CFR §122.62.

5.1.1.6 Metals

Metals are naturally occurring constituents in the environment and generally vary in concentration according to local geology. Metals are neither created nor destroyed by biological or chemical processes. However, metals can be transformed through processes including adsorption, precipitation, co-precipitation, and complexation. Some metals are essential nutrients at low levels for humans, animals, plants and microorganisms, but toxic at higher levels (e.g., copper and zinc). Other metals have no known biological function (e.g., lead). The environmental chemistry of metals strongly influences their fate and transport in the environment and their effects on human and ecological receptors. In aquatic systems, metal bioavailability refers to the concentration of soluble metal that adsorb onto, or absorb into and across, membranes of living organisms. The greater the bioavailability, the greater the potential for bioaccumulation, leading to increased toxicological effects. Toxicity results when metals are biologically available at toxic concentrations affecting the survival, reproduction and behavior of an organism.

The 2015 Permit includes a monthly average limit of 2.6 mg/L for aluminum. It also includes monthly monitoring for copper and lead. Additionally, the 2015 Permit requires semi-annual effluent and ambient monitoring for cadmium, copper, lead, nickel, zinc, as well as aluminum, antimony, iron, manganese, chromium, and magnesium in the discharge and the receiving water in conjunction with Whole Effluent Toxicity (WET) testing.

For Outfall 001, from August 1, 2020, through July 31, 2025 (Appendix A), total recoverable cadmium, zinc and antimony were not detected above laboratory minimum levels. However, aluminum, copper, lead, nickel, chromium, iron, magnesium and manganese were detected in the discharge. EPA notes that several of these parameters are monitored in addition to the standard parameters required in EPA Region 1's Toxicity Test Procedure and Protocols.[16] The parameters of antimony, chromium, iron, manganese, and magnesium were added as monitoring requirements in the 2015 Permit because they were identified in process materials used at the Facility.

There are no ELGs for metals in process wastewater in the Paving and Roofing Materials Point Source Category, Subpart C., Asphalt Roofing Subcategory. The MA WQS require that effluent limitations for metals be based upon the criteria published in the National Recommended Water Quality Criteria (WQC): EPA-822-R-02-047, 2002, unless site specific criteria are established or MassDEP determines that natural background concentrations are higher than the criteria (see 314 CMR 4.05(5)(e)).

[16] https://www.epa.gov/system/files/documents/2025-07/freshwateracutetoxtest-rev2011-updated-links-addresses-2023.pdf

Using the data submitted by the Permittee in DMRs and WET testing reports (Appendices A & B), EPA completed an analysis to determine if discharge of these pollutants cause, or have a reasonable potential to cause, or contribute to an excursion above State WQSs using EPA's 2002 *National Recommended Water Quality Criteria* for metals (Appendix D). State WQSs contain minimum criteria applicable to all surface waters for toxic pollutants, which requires the use of EPA's *National Recommended Water Quality Criteria: 2002, EPA 822-R-02-047, November 2002* where a specific pollutant is not otherwise listed in 314 CMR 4.00. *See* 314 CMR 4.05(5)(e).

The acute and chronic freshwater aluminum criteria for the Boston Harbor Coastal Drainage and the acute and chronic EPA *National Recommended Water Quality Criteria* for copper, lead, nickel, chromium, and iron are as follows:

Aluminum (Default Criteria for the Boston Harbor Watershed from MA WQS):
Freshwater Acute = 978 µg/L
Freshwater Chronic = 380 µg/L

Copper:
Freshwater acute (Class A or B) = 8.52 µg/L
Freshwater chronic (Class A or B) = 5.94 µg/L

Lead:
Freshwater acute (Class A or B) = 65 µg/L
Freshwater chronic (Class A or B) = 2.5 µg/L

Nickel:
Freshwater acute (Class A or B) = 470 µg/L
Freshwater chronic (Class A or B) = 52 µg/L

Chromium:
Freshwater acute (Class A or B) = 16 µg/L
Freshwater chronic (Class A or B) = 11 µg/L

Iron:
Freshwater chronic (Class A or B) = 1,000 µg/L

The results of EPA's analysis indicate that no other metals (besides aluminum which already has a limit) cause or have a reasonable potential to cause or contribute to an excursion above WQSs. As a result, EPA has maintained an average monthly aluminum limitation of 2.6 mg/L and the daily maximum reporting requirement. The monitoring frequency remains weekly. See discussion below.

Since the results of EPA's analyses indicate discharges of cadmium, copper, lead, nickel, zinc, antimony, chromium and iron do not cause, or have a reasonable potential to cause, or contribute to an excursion above the acute aquatic life water quality criteria, the Draft Permit does not contain an effluent limitations for those pollutants. The Draft Permit removes the monitoring requirements for antimony as all data reported in the review period was less than the detection limit. The Draft Permit retains the monitoring requirements for cadmium, copper, lead, nickel, zinc, chromium and iron in the discharge and the receiving water continue to be required in conjunction with Whole Effluent Toxicity Testing, as discussed further below.

Aluminum

Elevated aluminum concentrations can cause sub-lethal or lethal effects for animals such as fish, amphibians, and invertebrates. Aluminum targets the gills of fish, which can cause death due to respiratory, osmoregulatory, and ionoregulatory issues.[17] Aluminum enters surface waters through atmospheric deposition, weathering, discharges, and soil mobilization. Aluminum bioavailability is affected by water chemistry parameters, including pH, total hardness, and dissolved organic carbon (DOC). Increased DOC and total hardness reduce aluminum's bioavailability, while acidic (pH < 6) and basic (pH > 8) conditions increase aluminum bioavailability to freshwater organisms.[18]

In 2018, EPA updated the 1988 national recommended ambient water quality criteria for acute and chronic aluminum exposure in freshwater.[19] The criteria recommendations are in the form of a calculator[20], which calculates instantaneous acute and chronic total recoverable aluminum criteria values based on multiple linear regression models with three inputs: pH, total hardness, and DOC. The models are based on aluminum toxicity studies with variable pH, total hardness, and DOC concentrations. To aid water quality standards implementation, the calculator provides instantaneous criteria values that are protective of surface waters if the acute one-hour average is not exceeded more than once every three years and the chronic four-day concentration is not exceeded more than once every three years.

The Massachusetts Department of Environmental Protection (MassDEP) amended the Massachusetts Surface Water Quality Standards (314 CMR 4.00) in 2021. The amendments to the Surface Water Quality Standards included adoption of EPA's 2018 guidance for aluminum in freshwater.

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[17] Exley C, Chappell JS, Birchall JD. A mechanism for acute aluminium toxicity in fish. J Theor Biol. 1991 Aug 7;151(3):417-28. doi: 10.1016/s0022-5193(05)80389-3. PMID: 1943151.

[18] U.S. EPA, December 2018. "Fact Sheet: Final 2018 Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwaters," EPA 822-F-18-003. Available at: https://www.epa.gov/sites/default/files/2018-12/documents/aluminum-criteria-final-factsheet.pdf

[19] U.S. EPA, December 2018. "Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018" EPA-822-18-001. Available at: https://www.epa.gov/sites/default/files/2018-12/documents/aluminum-final-national-recommended-awqc.pdf

[20] Available at: https://www.epa.gov/sites/default/files/2018-12/aluminum-criteria-calculator-v20.xlsm

In addition, MassDEP adopted default freshwater aluminum criteria by watershed.[21] MassDEP consulted with EPA to develop the methodology used to derive the watershed default aluminum criteria values. If data are not available to generate site-dependent final criteria values for aluminum, the watershed default criteria are used as in this case.

The 2015 Permit includes a monthly average effluent limitation of 2.6 mg/L for aluminum and a reporting requirement for maximum daily. The monitoring frequency is weekly. DMR data for aluminum submitted by the Permittee for the period of August 1, 2020 through July 31, 2025 ranged from 0.25 to 2.8 mg/L as a monthly average. There was one exceedance of the effluent limit of 2.6 mg/L in February 2024. The daily maximum data for aluminum for the same period ranged from 0.32 to 4.8 mg/L. Additionally, aluminum was identified in the 2014 Fact Sheet as occuring in process materials. Since the Permittee has stated that operations have not changed, it is assumed that aluminum still occurs in the process materials at the Facility. The results of EPA's analysis indicate discharges of aluminum do cause or have a reasonable potential to cause or contribute to an excursion above WQSs. As a result, EPA has maintained an average monthly limitation of 2.6 mg/L and a daily maximum reporting requirement. The monitoring frequency remains weekly.

5.1.1.7 Total Residual Chlorine

Chlorine and chlorine compounds are toxic to aquatic life. Free chlorine is directly toxic to aquatic organisms and can react with naturally occurring organic compounds in receiving waters to form toxic compounds such as trihalomethane. Potable water sources are typically chlorinated to minimize or eliminate pathogens. 40 CFR § 141.72 stipulates that a public water system's residual disinfectant concentration in the water entering the distribution system cannot be less than 0.2 mg/L for more than four hours. Discharges from the Facility contain total residual chlorine (TRC) because the Facility uses potable water for its process water supply. As a result, the 2015 Permit included monitoring requirements for TRC once per month from Outfall 001. From August 1, 2020 through July 31, 2025, the values for total residual chlorine range from less than the minimum detection limit to 0.64 mg/L.

The *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*, dated February 23, 1990, states that waters shall be protected from unnecessary discharges of excess chlorine. Massachusetts WQS require the use of federal WQC where a specific pollutant could reasonably be expected to adversely affect existing or designated uses (314 CMR 4.05 (5)(e)). The National Recommended freshwater acute and chronic WQC for TRC are 19 µg/L (0.019 mg/L), and 11 µg/L (0.011 mg/L), respectively. Using the calculated available dilution in the Neponset River (21.5:1), EPA calculated the TRC effluent limits as follows:

[21] MassDEP, December 2021. "Fresh Water Aquatic Life Water Quality Criteria for Aluminum: Methodology for Deriving Watershed Default Criteria. CN 561.0. Available at: https://www.mass.gov/doc/fresh-water-aquatic-life-water-quality-criteria-for-aluminum-methodology-for-deriving-watershed-default-criteria-cn-5610/download

Acute TRC limit = 19 µg/L * 21.5 = 408 µg/l = 0.41 mg/L
Chronic TRC limit = 11 µg/L * 21.5 = 236.5 µ/L = 0.24 mg/L.

The maximum reported value exceeds both the acute and chronic application criteria for total residual chlorine. The results of EPA's analysis indicate discharges of total residual chlorine do cause, or have a reasonable potential to cause, or contribute to an excursion above water quality standards. As a result, the Draft Permit includes effluent limitations for total residual chlorine with an average monthly limit of 0.24 mg/L and a maximum daily limit of 0.41 mg/L. The monitoring frequency has been increased to once per week to ensure consistent compliance.

5.1.1.8 Nutrients

Ammonia nitrogen and phosphorus may stimulate algal blooms which can impact the receiving water's dissolved oxygen level. Nutrients can also be toxic at elevated levels. Based on information provided in the DMR data concentrations of ammonia range from below laboratory PQLs to 0.022mg/L and concentrations of total phosphorus ranged from below laboratory PQLs to 0.0215 mg/L in discharges from Outfall 001.

EPA notes that the Neponset River in the vicinity of the Outfall 001 discharge is impaired for both DO and total phosphorus. TMDLs have yet to be completed for either pollutant.

Ammonia

Ammonia (NH_3) is the unionized form of ammonia nitrogen. Elevated levels of ammonia can be toxic to aquatic life. Temperature and pH affect the toxicity of ammonia to aquatic life. The toxicity of ammonia increases as temperature increases and ammonia concentration and toxicity increase as pH increases. Ammonia can affect fish growth, gill condition, organ weights and hematocrit, and can result in excessive plant and algal growth that can cause eutrophication. Ammonia can also affect dissolved oxygen through nitrification, in which oxygen is consumed as ammonia is oxidized. Low oxygen levels can then, in turn, increase ammonia by inhibiting nitrification. Total ammonia-nitrogen concentrations in surface waters tends to be lower during summer than during winter due to uptake by plants and decreased ammonia solubility at higher temperatures.

EPA's recommended chronic criteria for ammonia are based on temperature, pH and the presence of salmonids in the Genus *Oncorhynchus* in the receiving water. Available temperature data for the Neponset River collected by the Neponset River Watershed Association between 2020 and 2025 indicate that summer surface water temperatures upstream of Outfall 001 in the Neponset River are as high as 82.8° F. The maximum allowable instream water temperature under Massachusetts WQS is 83° F. The Draft Permit limits the pH of the effluent to a maximum of 8.3 S.U. According to the 2013 Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater, the ammonia limits decrease as pH and temperature increase. Therefore, EPA considered ammonia under worst case conditions, that

is, the maximum allowable pH, 8.3 S.U., and the maximum allowable temperature, 83° F, for the presence and absence of salmonids in the Genus *Oncorhynchus*.

Based on the 2013 Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater, when salmonids are present, the pH of the receiving water is 7.25 SU and the maximum receiving water temperature is 28.2° C (82.8° F), the recommended warm water acute criterion value is 6.6 mg/L. When the pH of the receiving water is 7.25 SU and the maximum receiving water temperature is 28.2° C (82.8° F), the recommended chronic criterion value is 1.0 mg/L.

The results of EPA's reasonable potential analysis indicate discharges of ammonia do not cause, or have a reasonable potential to cause, or contribute to an excursion above water quality standards. Monitoring for ammonia remains a permit requirement in coordination with WET test as is required by the Region 1 Policy and Protocols for WET testing. The monitoring frequency remains semi-annual.

Total Phosphorus

While phosphorus is an essential nutrient for the growth of aquatic plants, it can stimulate rapid plant growth in freshwater ecosystems when it is present in high quantities. The excessive growth of aquatic plants and algae within freshwater systems negatively impacts water quality and can interfere with the attainment of designated uses by: 1) increasing oxygen demand within the water body to support an increase in both plant respiration and the biological breakdown of dead organic (plant) matter; 2) causing an unpleasant appearance and odor; 3) interfering with navigation and recreation, for instance, by fouling engines and propellers, making waters unappealing to swimmers, and interfering with fishing lures and equipment; 4) reducing water clarity; 5) reducing the quality and availability of suitable habitat for aquatic life; and 6) producing toxic cyanobacteria during certain algal blooms. Cultural (or accelerated) eutrophication is the term used to describe dense and excessive plant growth in a water body that results from nutrients entering the system as a result of human activities. Discharges from municipal and industrial wastewater treatment plants, agriculture runoff, and stormwater are examples of human-derived (i.e., anthropogenic) sources of nutrients in surface waters. See generally, Nutrient Criteria Technical Guidance Manual – Rivers and Streams, EPA July 2000 [EPA-822-B-00-002], Chapters 1 and 3.

The MA WQS under 314 CMR 4.05(5)(c) requires that, unless naturally occurring, surface waters must be free from nutrients that cause or contribute to impairment of the existing or designated uses, and the concentration of phosphorus may not exceed site specific criteria developed in a TMDL. Nutrients are also prohibited in concentrations that would cause or contribute to cultural eutrophication. Cultural eutrophication also results in exceedances of other nutrient-related water quality standards such as low dissolved oxygen, decreased water clarity, objectionable odors, and surface scum. The MA WQS at 314 CMR 4.05(3)(b)(1) requires that dissolved oxygen not be less than 6.0 mg/L in cold water fisheries or 5.0 mg/L in warm water fisheries. Further, the MA WQS at 4.05(3)(b)(5), (6) and (8) state that waters must be free from "floating, suspended, and settleable solids," free from "color and turbidity in

concentrations or combinations that are aesthetically objectionable…", and have no taste and odor "in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to this Class, or that would cause tainting or undesirable flavors in the edible portions of aquatic life." To prevent cultural eutrophication, the MA WQS at 4.05(5)(c) states that "Any existing point source discharge containing nutrients in concentrations that would cause or contribute to cultural eutrophication, including the excessive growth of aquatic plants or algae, in any surface water shall be provided with the most appropriate treatment as determined by the Department, including, where necessary, highest and best practical treatment (HBPT) for POTWs and BAT for non POTWs, to remove such nutrients to ensure protection of existing and designated uses." Also see Part 2.2.2 of this Fact Sheet above regarding antidegradation and existing uses which may be impacted by nutrient over-enrichment.

When permitting nutrient discharges, EPA analyzes available information from a reasonably conservative standpoint, as it regards one key function of a nutrient limit as preventative. This protective approach is appropriate because, once begun, the cycle of eutrophication can be difficult to reverse due to the tendency of nutrients to be retained in the sediments. For this reason, time is of the essence when permitting for nutrients, so EPA acts on the best information reasonably available when developing the draft permit and does not generally delay permit issuance pending collection of new data or development of new models. This approach is also consistent with the requirement for NPDES permits to be revisited and reissued at regular intervals, with permit terms not to exceed five years.

When translating narrative phosphorus criteria into numeric values (and establishing WQBELs, if necessary), EPA looks to a wide range of materials, including nationally recommended criteria and other relevant materials, such as EPA nutrient technical guidance and information published under Section 304(a) of the CWA, peer-reviewed scientific literature and site-specific surveys and data to determine instream targets that are protective of water quality. See 40 CFR § 122.44(d)(1)(vi)(A), (B).

EPA has produced several guidance documents, described below, that recommend a range of total ambient phosphorus concentrations that are sufficiently stringent to control cultural eutrophication and other adverse nutrient-related impacts, with 0.1 mg/L representing the upper end of this range. These guidance documents recommend protective in-stream phosphorus concentrations based on two different analytical approaches. An effects-based approach provides a threshold value above which adverse effects (i.e., water quality impairments) are likely to occur. This approach applies empirical observations of a causal variable (i.e., phosphorus) and a response variable (i.e., chlorophyll-a as a measure of algal biomass) associated with designated use impairments. Alternatively, reference-based values are statistically derived from a comparison within a population of rivers in the same ecoregion class. They are a quantitative set of river characteristics (physical, chemical and biological) that represent conditions in waters in that ecoregion that are minimally impacted by human activities (i.e., reference conditions), and thus by definition representative of water without

cultural eutrophication. Dischargers in Massachusetts and New Hampshire are located within either Ecoregion VIII, Nutrient-Poor, Largely Glaciated Upper Midwest and Northeast or Ecoregion XIV, Eastern Coastal Plains. The recommended total phosphorus criteria for these ecoregions are 10 µg/L and 31.25 µg/L, respectively. While reference conditions reflect in-stream phosphorus concentrations that are sufficiently low to meet the requirements necessary to support designated uses, they may also represent levels of water quality beyond what is necessary to support such uses.

EPA follows an effects-based approach. EPA's 1986 Quality Criteria for Water (the "Gold Book") recommends maximum threshold concentrations that are designed to prevent or control adverse nutrient-related impacts from occurring. Specifically, the Gold Book recommends in-stream phosphorus concentrations of no greater than 0.1 mg/L for any stream not discharging directly to lakes or impoundments 0.05 mg/L in any stream entering a lake or reservoir, and 0.025 mg/L within a lake or reservoir. In this case, EPA is applying a target concentration of 0.1 mg/L because the receiving water is a stream/river not discharging directly to a lake or impoundment.

As the Gold Book notes, there are natural conditions of a water body that can result in either increased or reduced eutrophic response to phosphorus inputs; in some waters more stringent phosphorus reductions may be needed, while in some others a higher total phosphorus threshold could be assimilated without inducing a eutrophic response. In this case, EPA is not aware of any site-specific factors relevant to the receiving water that would result in it being unusually more or less susceptible to phosphorus loading.

The 2015 Permit required the Permittee to monitor and report effluent and ambient total phosphorus in association with semi-annual WET testing.

Table 6: Effluent and Ambient Total Phosphorus Data for Outfall 001

Date	Effluent TP (mg/L)	Ambient TP (mg/L)
October 2020	0.043	0
May 2021	0.072	0.013
October 2021	0.022	0.028
May 2022	0.21	0.051
October 2022	0.01	0.012
May 2023	0.07	0.094
October 2023	0.021	0.017
May 2024	0.038	0.018
October 2024	0	0
May 2025	0	0

In determining whether the discharge has the reasonable potential to cause or contribute to excursions above the instream water quality criteria for phosphorus, EPA used the mass balance equation presented in Appendix D to project the phosphorus concentration

downstream of the discharge. If there is reasonable potential, this mass balance equation is also used to determine the limit that is required in the permit.

The results of EPA's reasonable potential analysis indicate discharges of total phosphorus do not cause, or have a reasonable potential to cause, or contribute to an excursion above water quality standards. Monitoring for total phosphorus remains a monitoring requirement in coordination with WET testing as is required by the Region 1 Policy and Protocols for WET testing. The monitoring frequency remains semi-annual.

5.1.1.9 Per- and polyfluoroalkyl substances (PFAS)

As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products including asphalt roofing materials. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects.[22] EPA is collecting information to evaluate the potential impacts that discharges of PFAS from certain industrial facilities and wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

On October 20, 2020, MassDEP published final regulations establishing a drinking water standard, or a Maximum Contaminant Level (MCL) of 20 parts per trillion (ppt) for the sum of the following six PFAS. *See* 310 CMR 22.00.

- Perfluorohexanesulfonic acid (PFHxS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluorodecanoic acid (PFDA)

Although the Massachusetts Surface Water Quality Standards do not include numeric criteria for PFAS, the Massachusetts narrative criterion for toxic substances at 314 CMR 4.05(5)(e) states:

> All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

[22] EPA, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan,* EPA 823R18004, February 2019. Available at: https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

The narrative criterion is further elaborated at 314 CMR 4.05(5)(e)2, which states:

> Human Health Risk Levels. Where EPA has not set human health risk levels for a toxic pollutant, the human health-based regulation of the toxic pollutant shall be in accordance with guidance issued by the Department of Environmental Protection's Office of Research and Standards. The Department's goal is to prevent all adverse health effects which may result from the ingestion, inhalation or dermal absorption of toxins attributable to waters during their reasonable use as designated in 314 CMR 4.00.

The Agency published the *PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024 (PFAS Strategic Roadmap)*, in October 2021.[23] On page 14, of this document, EPA identifies categories known or suspected to discharge PFAS including: organic chemicals, plastics & synthetic fibers (OCPSF); metal finishing; electroplating; electric and electronic components; landfills; pulp, paper & paperboard; leather tanning & finishing; plastics molding & forming; textile mills; paint formulating, and airports. On December 5, 2022, EPA issued a memorandum addressing PFAS discharges in EPA-issued NPDES Permits with recommendations for monitoring requirements for different types of facilities (PFAS Memo). This memo explains that the list of categories known or suspected to discharge PFAS does not include all possible industrial sources that discharge PFAS. "For example, Centralized Waste Treatment (CWT) facilities may receive wastes from the aforementioned industries and should be considered for monitoring. There may also be categories of dischargers that do not meet the applicability criteria of any existing ELG; for instance, remediation sites, chemical manufacturing not covered by OCPSF, and military bases." [24]

Consistent with EPA's guidance,[25] given that PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, and to ensure there are adequate data to assess the presence and concentration of PFAS in discharges, the Draft Permit requires that the Facility conduct quarterly effluent sampling for PFAS chemicals. The quarterly monitoring shall begin the first full calendar year following the effective date of the permit.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this Facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility-specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

> SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or

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[23] See https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf

[24] Radhika Fox, Assistant Administrator, EPA to Water Division Directors, EPA Regions 1-10, December 5, 2022, Subject: "Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs." Available at: https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf

[25] *Id*.

> other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act—
>
> (A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require….

(See 40 CFR § 122.21(e)(3)(ii) and 40 CFR § 122.44(i)(1)(iv)(B)). In the absence of a final 40 CFR § 136 method for measuring PFAS in wastewater, the Draft Permit requires the use the multi-lab validated Method 1633.[26] Monitoring should include each of the 40 PFAS parameters detectable by Method 1633 (see Draft Permit Attachment B for list of PFAS parameters) and the monitoring frequency is annually. Reporting of all 40 PFAS analytes is necessary to address the emerging understanding and remaining uncertainties regarding sources and types of analytes of PFAS in wastewater and their impacts.

EPA has also recently published Method 1621 to screen for organofluorines in wastewater. Organofluorines (molecules with a carbon-fluorine bond) are rarely naturally occurring and the most common source of organofluorines are PFAS and non-PFAS fluorinated compounds such as pesticides and pharmaceuticals. The PFAS Memo states that the Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with Method 1633, if appropriate. The Permittee shall monitor Adsorbable Organic Fluorine using Method 1621 quarterly concurrently with PFAS monitoring to screen for a broader range of these types of emerging contaminants. This requirement also takes effect the first full calendar quarter following six months after the effective date of the permit.

All PFAS results must be reported on DMRs (see 40 CFR § 122.41)(l)(4)(i)). This approach is consistent with 40 CFR § 122.44(i)(1)(iv)(B) which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters. All monitoring results may be used by EPA in the next permit reissuance to ensure the discharge continues to protect designated uses.

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[26] https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substancespfas#method-1633.

5.1.1.10 Whole Effluent Toxicity

CWA §§ 402(a)(2) and 308(a) provide EPA and States with the authority to require toxicity testing. Section 308 specifically describes biological monitoring methods as techniques that may be used to carry out objectives of the CWA. Whole effluent toxicity (WET) testing is conducted to ensure that the additivity, antagonism, synergism, and persistence of the pollutants in the discharge do not cause toxicity, even when the individual pollutants are present at low concentrations in the effluent. The inclusion of WET requirements in the Final Permit will lead to the generation of data to assess whether the Facility discharges combinations of pollutants into the receiving water in amounts that would be toxic to aquatic life or human health.

In addition, under CWA § 301(b)(1)(C), discharges are subject to effluent limitations based on WQSs. Under CWA §§ 301, 303 and 402, EPA and the States may establish toxicity-based limitations to implement narrative water quality criteria calling for "no toxics in toxic amounts." *See also* 40 CFR § 122.44(d)(1). The Massachusetts WQSs at 314 CMR 4.05(5)(e) state, "All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife." EPA generally considers WET testing in addition to chemical specific criteria when evaluating whether discharges from a facility meet WQSs.

In accordance with current EPA guidance and State policy,[27] whole effluent chronic effects are regulated by limiting the highest measured continuous concentration of an effluent that causes no observed chronic effect on a representative standard test organism, known as the chronic No Observed Effect Concentration (C-NOEC). Whole effluent acute effects are regulated by limiting the concentration that is lethal to 50% of the test organisms, known as the $LC_{50.}$ For a Facility with a dilution factor between 20:1 and 100:1, EPA's *Technical Support Document for Water Quality-based Toxics Control* (1991) recommends either acute or chronic toxicity testing and recommends that toxicity testing be required even if the effluent is not determined to cause or contribute to an excursion above water quality criteria. Both EPA's *Technical Support Document for Water Quality-based Toxics Control* (1991) and the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) recommended criterion to prevent acutely toxic effects is 0.3 T.U.

The 2015 Permit requires an effluent limitation of LC_{50} greater than or equal to 100%, respectively, using the daphnid (*Ceriodaphnia dubia*) as the test species. From August 1, 2020 through July 31, 2025 (Appendix A), WET test results indicated no toxicity in any of the tests, and an LC_{50} % of 100. EPA completed an analysis to determine if these discharges cause, or have a reasonable potential to cause, or contribute to an excursion above State WQSs using the acute criterion of 0.3 T.U. specified in the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990)

[27] *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*. February 23, 1990.

(Appendix D). Because the projected downstream toxicity, 1 T.U., exceeds the acute toxicity criterion, 0.3 T.U., EPA has determined that discharges cause, or have a reasonable potential to cause, or contribute to an excursion above State WQSs.

Therefore, in accordance with 40 CFR § 122.44(d), the Draft Permit continues the effluent limits from the 2015 Permit. The monitoring frequency is twice per year. Toxicity testing must be performed in accordance with EPA Region 1's test procedures and protocols specified in **Attachment A,** *Freshwater Acute Toxicity Test Procedure and Protocol* (February 2011) of the Draft Permit.

5.1.2 Outfall 002

5.1.2.1 Flow Rate

The 2015 Permit requires reporting the average monthly flow rate and daily maximum flow rate of treated contact process water, non-contact cooling water, boiler condensate, boiler blowdown and stormwater through the cylindrical overflow structure to Outfall 002. From August 1, 2020 through July 31, 2025, the minimum flow rate reported was 0.002 MGD (2,000 gallons per day) and the maximum flow rate reported was 0.065 MGD (65,000 gallons per day). There were only 2 discharges reported from Outfall 002 and no discharge for 58 months of the 60-month review period. One flow rate measurement was reported for each discharge event, as allowed by the 2015 Permit. As a result, the daily maximum and monthly average values are the same. Additionally, the 2015 Permit requires the Permittee to report the number of discharge events each month.

The Draft Permit maintains the requirements to report the average monthly flow rate and the daily maximum flow rate when discharging from Outfall 002. The Draft Permit also requires the Permittee to report the number of discharge events each month from Outfall 002.

5.1.2.2 Total Suspended Solids (TSS)

The 2015 Permit includes a monthly average TSS limit of 20 mg/L and maximum daily limit of 30 mg/L continued under anti-backsliding regulations and are based on the treatment of the effluent by sedimentation. These limits were initially established in the permit issued September 31, 1997. From August 1, 2020 through July 31, 2025, TSS concentrations ranged from 23 to 68 mg/L. It is noted that there were only two discharge events during the 60-month review period and the events occurred in separate months. The Permit requires the collection of a monthly grab sample; therefore, the same value was reported for monthly average and maximum day for the month the discharge event occurred. Both monthly average values and one of the maximum daily values exceeded the effluent limitations.

The Draft Permit maintains the concentration-based limits for maximum daily and monthly average TSS of 30 mg/L and 20 mg/L, respectively. The Draft Permit also continues the

requirement from the 2015 Permit to incorporate solids minimization into its Stormwater Pollution Prevention Plan (SWPPP) for this outfall (See Section 5.2.2 of this Fact Sheet).

5.1.2.3 pH

From August 1, 2020 through July 31, 2025, the pH values reported for Outfall 002 range from 6.5-7.8 S.U. This outfall only discharged twice during the 60-month review period. Massachusetts Surface WQS, 314 CMR 4.05(3)(b)(3), for Class B waters require pH to be within the range of 6.5 to 8.3 SU and prohibit discharges that cause the in-stream pH to change more than 0.5 S.U. outside of the background range.

The Draft Permit maintains an effluent limit pH range of 6.5 to 8.3 S.U. and specifies that the pH cannot change the naturally occurring pH range by more than 0.5 S.U., consistent with Massachusetts WQSs. The monitoring frequency for pH has been maintained as monthly. Monthly sampling is defined as sampling one discharge event in each calendar month, when a discharge occurs.

5.1.2.4 Nutrients

The 2015 Permit requires the Permittee to monitor for ammonia and total phosphorus from Outfall 002 twice per year in conjunction with WET testing. During the review period from August 1, 2020 through July 31, 2025, the Permittee reported there were only 2 discharge events from Outfall 002. Neither of these discharge events coincided with WET sampling so there are no data to evaluate to determine if this discharge has reasonable potential to cause or contribute to am exceedance of WQS for ammonia or total phosphorus.

Given that the Neponset River continues to be the impaired for low DO, excessive phosphorus, and nutrient/eutrophication biological indicators, EPA proposes that monitoring for total phosphorus continue to be conducted monthly during discharge events from Outfall 002. Given the limited frequency of discharges from this outfall and the fact that no WET testing coincided with the two discharges that did occur during the review period, EPA also proposes that the Permittee continue to monitor ammonia nitrogen monthly during discharge events from Outfall 002. This data is important to evaluate the reasonable potential for ammonia toxicity especially given the high ambient water temperature. Monthly sampling is defined as sampling one discharge event in each calendar month, when a discharge occurs. Inclusion of monitoring for a pollutant (or indicator) for which the receiving water is impaired is consistent with EPA's MSGP.

5.1.2.5 Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are a group of semi-volatile organic compounds (SVOCs) that form through the incomplete combustion of hydrocarbons and are present in petroleum derivatives and residuals. Discharge of these materials can introduce PAHs into surface water where they may volatilize, photolyze, oxidize, biodegrade, bind to suspended

particles or sediments, or accumulate in aquatic organisms.[28] In soils, PAHs may also undergo degradation, accumulation in plants, or transport via groundwater. In an estuarine environment, volatilization and adsorption to suspended sediments with subsequent deposition are the primary removal processes for medium and high molecular weight PAHs. Several PAHs are well known animal carcinogens, while others can enhance the response of the carcinogenic PAHs.

There are 16 PAH compounds identified as priority pollutants under the CWA. *See* Appendix A to 40 CFR Part 423. Group I PAHs are comprised of seven known animal carcinogens. They are: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Group II PAHs are comprised of nine priority pollutant PAHs, which are not considered carcinogens, but which can enhance or inhibit the response of the carcinogenic PAHs. They are: acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

While the distillation process removes a greater proportion of Group I PAHs by weight, these compounds can still be present in low concentrations, particularly benzo(a)pyrene. Benzo(a)pyrene has been used extensively as a model carcinogen and as a positive control in a variety of risk assessment tests. EPA has designated this compound as a known animal carcinogen and probable human carcinogen. Relative to the other Group I PAHs, it is strongly carcinogenic. In 2015, EPA updated human health criteria for several Group I PAHs. The updated human health criteria are 0.0013 µg/L for benzo(a)anthracene, 0.00013 µg/L for benzo(a)pyrene, 0.0013 µg/L for benzo(b)fluoranthene, 0.013 µg/L for benzo(k)fluoranthene, 0.13 µg/L for chrysene, 0.00013 µg/L for dibenzo(a,h)anthracene, and 0.0013 µg/L for indeno(1,2,3-cd)pyrene for consumption of organisms only. These updated criteria replaced EPA's previously published values (i.e., 2002). The State issued proposed revised surface WQSs for public notice from October 4, 2019, through November 8, 2019, that would adopt the EPA criteria. The revised surface WQSs have not been finalized, however. If the proposed criteria are finalized prior to issuance of the Final Permit, EPA will consider the applicability of the criteria to discharges from this Facility when establishing the appropriate effluent limitation.

Of Group II PAHs, naphthalene, like benzo(a)pyrene poses high calculable risk relative to other PAHs. It is included as a priority pollutant under the CWA and is classified as a possible human carcinogen. In middle and heavy distillates, naphthalene is one of the most commonly found compounds, present in diesel fuel at up to approximately 0.8 and 0.4 percent by weight, respectively.[29] Naphthalene is only slightly soluble in water but is highly soluble in benzene and other solvents. The effluent limitation of 100 µg/L for naphthalene is based on EPA's lifetime health advisory value. In 2015, EPA updated human health criteria for several Group II PAHs. The updated human health criteria are 90 µg/L for acenaphthene, 400 µg/L for anthracene, 20 µg/L for fluoranthene, 70 µg/L for fluorene, and 30 µg/L for pyrene for consumption of

[28] Bioconcentration factors generally range from 10-10,000.
[29] See Agency for Toxic Substances and Disease Registry Toxic Substances Portal entries for naphthalene at http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=240&tid=43.

organisms only, and 20 µg/L for acenaphthene for organoleptic effect. These updated criteria replaced EPA's previously published values (i.e., 2002). The State issued proposed revised surface WQSs for public notice from October 4, 2019, through November 8, 2019, that would adopt the EPA criteria. The revised surface WQSs have not been finalized, however. If the proposed criteria are finalized prior to issuance of the Final Permit, EPA will consider the applicability of the criteria to discharges from this Facility when establishing the appropriate effluent limitation.

Part 8, Subpart D of the 2021 MSGP requires indicator monitoring for PAHs for facilities in the Asphalt Paving and Roofing Materials subsector. The Draft Permit proposes monthly reporting for PAHs.

5.1.2.6 Per- and polyfluoroalkyl substances (PFAS)

As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products including asphalt roofing materials. Specifically, PFAS may be used to coat asphalt shingle granules.[30] PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects.[31] EPA is collecting information to evaluate the potential impacts that discharges of PFAS from certain industrial facilities and wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

On October 20, 2020, MassDEP published final regulations establishing a drinking water standard, or a Maximum Contaminant Level (MCL) of 20 parts per trillion (ppt) for the sum of the following six PFAS. *See* 310 CMR 22.00.

- Perfluorohexanesulfonic acid (PFHxS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluorodecanoic acid (PFDA)

[30] https://greensciencepolicy.org/our-work/building-materials/pfas-in-building-materials/#roofing, accessed October 16, 2025.
[31] EPA, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan,* EPA 823R18004, February 2019. Available at: https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

Although the Massachusetts Surface Water Quality Standards do not include numeric criteria for PFAS, the Massachusetts narrative criterion for toxic substances at 314 CMR 4.05(5)(e) states:

> All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

The narrative criterion is further elaborated at 314 CMR 4.05(5)(e)2, which states:

> Human Health Risk Levels. Where EPA has not set human health risk levels for a toxic pollutant, the human health-based regulation of the toxic pollutant shall be in accordance with guidance issued by the Department of Environmental Protection's Office of Research and Standards. The Department's goal is to prevent all adverse health effects which may result from the ingestion, inhalation or dermal absorption of toxins attributable to waters during their reasonable use as designated in 314 CMR 4.00.

The Agency published the *PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024 (PFAS Strategic Roadmap)*, in October 2021.[32] On page 14, of this document, EPA identifies categories known or suspected to discharge PFAS including: organic chemicals, plastics & synthetic fibers (OCPSF); metal finishing; electroplating; electric and electronic components; landfills; pulp, paper & paperboard; leather tanning & finishing; plastics molding & forming; textile mills; paint formulating, and airports. On December 5, 2022, EPA issued a memorandum addressing PFAS discharges in EPA-issued NPDES Permits with recommendations for monitoring requirements for different types of facilities (PFAS Memo). This memo explains that the list of categories known or suspected to discharge PFAS does not include all possible industrial sources that discharge PFAS. "For example, Centralized Waste Treatment (CWT) facilities may receive wastes from the aforementioned industries and should be considered for monitoring. There may also be categories of dischargers that do not meet the applicability criteria of any existing ELG; for instance, remediation sites, chemical manufacturing not covered by OCPSF, and military bases." [33]

Consistent with EPA's guidance,[34] given that PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, and to ensure there are adequate data to assess the presence and concentration of PFAS in discharges, the Draft Permit requires that the Facility conduct annual effluent sampling for PFAS chemicals. The annual monitoring shall begin the first full calendar year following the effective date of the permit.

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[32] See https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf

[33] Radhika Fox, Assistant Administrator, EPA to Water Division Directors, EPA Regions 1-10, December 5, 2022, Subject: "Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs." Available at: https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf

[34] *Id*.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this Facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility-specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

> SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act—
>
> (B) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require….

(See 40 CFR § 122.21(e)(3)(ii) and 40 CFR § 122.44(i)(1)(iv)(B)). In the absence of a final 40 CFR § 136 method for measuring PFAS in wastewater, the Draft Permit requires the use the multi-lab validated Method 1633.[35] Monitoring should include each of the 40 PFAS parameters detectable by Method 1633 (see Draft Permit Attachment B for list of PFAS parameters) and the monitoring frequency is annually. Reporting of all 40 PFAS analytes is necessary to address the emerging understanding and remaining uncertainties regarding sources and types of analytes of PFAS in wastewater and their impacts.

EPA has also recently published Method 1621 to screen for organofluorines in wastewater. Organofluorines (molecules with a carbon-fluorine bond) are rarely naturally occurring and the most common source of organofluorines are PFAS and non-PFAS fluorinated compounds such as pesticides and pharmaceuticals. The PFAS Memo states that the Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with Method 1633, if appropriate. The Permittee shall monitor Adsorbable Organic Fluorine using Method 1621 once per year concurrently with PFAS monitoring to screen for a broader range of these types of emerging contaminants. This requirement also takes effect the first full calendar quarter following six months after the effective date of the permit.

[35] https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substancespfas#method-1633.

All PFAS results must be reported on DMRs (see 40 CFR § 122.41)(l)(4)(i)). This approach is consistent with 40 CFR § 122.44(i)(1)(iv)(B) which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters. All monitoring results may be used by EPA in the next permit reissuance to ensure the discharge continues to protect designated uses.

5.1.2.7 Whole Effluent Toxicity

The 2015 Permit required the Permittee to conduct acute WET testing twice per year to determine whether the discharge has the reasonable potential to cause or contribute to an excursion above state water quality criteria for toxicity at 314 CMR 4.05(5)(e). The 2015 Permit also noted that "Following one year of the effective date of the permit and two tests, if toxicity is not indicated in the effluent for Outfall 002, additional WET testing is not required for Outfall 002." WET testing on Outfall 002 discharge was conducted prior to the five-year review period looked at in this permit reissuance. The Permittee conducted four WET tests between January 2016 and January 2018. See Table

Table 7: Whole Effluent Toxicity (WET) Test Results at Outfall 002

Date	LC50, Static 48-hour Acute, *Ceriodaphnia dubia*, Report Only
1/10/2016	>100%
4/6/2017	72.5%
10/30/2017	>100%
1/23/2018	>100%

As detailed in the 2014 Fact Sheet, CertainTeed uses inorganic pigments, petroleum distilates and other bulk raw materials in processes at the granule plant. CertainTeed has said that there have been no changes to operations at this Facility, therefore, given the unknown cumulative toxicity of pollutants potentially present in the discharge to Outfall 002 and the possibility that the cumulative toxicity may be greater than the toxicity of any one constituent, the Draft Permit requires two acute WET tests per year to determine whether the discharge has the reasonable potential to cause or contribute to an excursion above state water quality criteria for toxicity at 314 CMR 4.05(5)(e). In addition, this toxicity monitoring requirement supports the narrative requirement at Part I.A.12 of the Draft Permit that prohibits the discharge of "materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving water." Given the low frequency of discharge via Outfall 002, the Draft Permit specifies that sampling occur in the first year of the permit, or the next discharge events if no discharge occurs in the first year.

Once the permittee submits two test results, no additional testing is required during this permit term.

Monitoring for certain chemical parameters is required in conjunction with WET testing in accordance with Attachment A to the Draft Permit, Freshwater Acute Toxicity Test Procedure and Protocol (2011), Part VI. Chemical Analysis. Based on the presence of additional metals in process materials at the granule plant, the presence of nutrients at elevated concentrations in discharges from the Facility, and impairments to the Neponset River for cadmium, DO, total phosphorus, nutrient/eutrophication biological indicators and unspecified metals in sediments, EPA is adding monitoring requirements to Part VI. Chemical Analysis for total phosphorus, antimony, iron, manganese, chromium, calcium, and magnesium to be conducted twice in conjunction with WET testing.

5.1.3 Outfalls 003 and 004

5.1.3.1 Flow Rate

The discharges from Outfalls 003 and 004 are stormwater discharges and are intermittent, occuring only during precipitation events. The Permittee uses oil water separators (OWSs) for treatment of stormwater runoff discharges via these outfalls. OWSs employ gravity to separate lower-density oils from water, resulting in an oil phase above the oil/water interface and a heavier particulate phase on the bottom of the separator. The sizing of an OWS is based on flow rate, density of the oil to be separated, desired percent removal of oil, and the operating temperature range. The OWS treating flows to Outfall 003 has a design flow capacity of 20 gallons per minute (gpm). The OWS treating flow to Outfall 004 has a design flow capacity of 100 gpm.

The 2015 Permit requires that the Permittee limit the flow rate from Outfall 003 to 20 gpm and from Outfall 004 to 100 gpm, the design capacity of the OWS, respectively. Additionally, the 2015 Permit requires the permittee to report the total flow in millions of gallons per month (MGal/Mo) for each outfall, when discharging.

From August 1, 2020 through July 31, 2025, the daily maximum flow rate from Outfall 003 was 20 gallons/min. There has been no exceedances for the review period. The Permittee also reported the average monthly flow from Outfall 003 ranged from 2,344 to 48,823 gallons/month. The daily maximum flow from Outfall 003 ranged from 1,197 to 30,521 gallons/month. For Outfall 004, the daily maximum flow rate has been 80 gallons per minute throughout the review period with no exceedances of the flow rate limit of 100 gallons/minute. The average monthly flow reported for Outfall 004 ranged from 4,395 to 91,543 gallons/month and a daily maximum that ranged from 2,244 to 57,226 gallons/month.

The Draft Permit proposes to maintain the flow rate limits of 20 gpm for Outfall 003 and 100 gpm for Outfall 004 and to continue to require the reporting of MGal/Mo for each outfall.

5.1.3.2 TSS

The 2015 Permit included effluent limits for TSS of 10 mg/L as an average monthly limit and 15 mg/L as a maximum daily limit. These limits were originally established in the 1997 Permit as technology-based limits based on BPJ.

From August 1, 2020 through July 31, 2025, the monthly average TSS concentration from Outfall 003 ranged from 0 to 14.35 mg/L with 1 exceedance of the effluent limit. The daily maximum from Outfall 003 for the same period ranged from 1 to 120 mg/L with 3 exceedances of the effluent limit. For Outfall 004, the monthly average TSS concentration ranged from 2.6 to 10 mg/L with no exceedances. The daily maximum from Outfall 004 range from 2.6 to 32 and there were 3 exceedances of the effluent limitation of 15 mg/L.

The Draft Permit proposes to maintain the TSS monthly average and maximum daily limits from the 2015 Permit of a monthly average limit of 10 mg/L and a maximum daily limit of 15 mg/L. This is in accordance with anti-backsliding requirements. The Permittee shall also review and update the solids minimization BMPs into its SWPPP for these outfalls. (See 5.2.2.)

5.1.3.3 pH

The 2015 Permit includes an effluent limitation range for pH of 6.5 to 8.3 S.U. based on the criteria found in the Massachusetts WQS at 314 CMR 4.05(3)(b)(3) for Class B waters.

From August 1, 2020 through July 31, 2025, the pH reported for Outfall 003 ranged from 6.5 to 7.3 S.U. From Outfall 004 for the same period, pH ranged from 6.5 to 7.4 S.U. There were no exceedances of the effluent limits for either Outfall 003 or 004.

The Draft Permit maintains the effluent limit range of a minimum limit of 6.5 S.U. and a maximum limit of 8.3 S.U. These limits are consistent with the Massachusetts WQS.

5.1.3.4 Oil and Grease

The 2015 Permit included a daily maximum limit of 15 mg/L for Oil and Grean at both Outfalls 003 and 004.

The drainage areas contributing to these outfalls are also subject to the Spill Prevention, Control, and Countermeasure (SPCC) Rule in 40 CFR Part 112, which require facilities that store certain quantities of oil to prepare, amend, and implement an SPCC Plan to prevent, prepare for and respond to oil discharges to waters of the United States.

From August 1, 2020 through July 31, 2025, the Oil and Grease levels from Outfall 003 ranged from below the laboratory Practical Quantification Limits (PQLs) to 6.3 mg/L. From Outfall 004

the oil and grease levels ranged from below the laboratory Practical Quantification Limits (PQLs) to 6.3 mg/L. There were no exceedances of the effluent limit at either outfall.

The Draft Permit maintains the effluent limitations of a daily maximum limit of 15 mg/L for both Outfall 003 and Outfall 004. This is in accordance with anti-backsliding requirements and Massachusetts WQS at 314 CMR 4.05(3)(b)7.

5.1.3.5 Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are a group of semi-volatile organic compounds (SVOCs) that form through the incomplete combustion of hydrocarbons and are present in petroleum derivatives and residuals. Discharge of these materials can introduce PAHs into surface water where they may volatilize, photolyze, oxidize, biodegrade, bind to suspended particles or sediments, or accumulate in aquatic organisms. In soils, PAHs may also undergo degradation, accumulation in plants, or transport via groundwater. In an estuarine environment, volatilization and adsorption to suspended sediments with subsequent deposition are the primary removal processes for medium and high molecular weight PAHs. Several PAHs are well known animal carcinogens, while others can enhance the response of the carcinogenic PAHs.

There are 16 PAH compounds identified as priority pollutants under the CWA. See Appendix A to 40 CFR Part 423. Group I PAHs are comprised of seven known animal carcinogens. They are: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Group II PAHs are comprised of nine priority pollutant PAHs, which are not considered carcinogens, but which can enhance or inhibit the response of the carcinogenic PAHs. They are: acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

While the distillation process removes a greater proportion of Group I PAHs by weight, these compounds can still be present in low concentrations, particularly benzo(a)pyrene. Benzo(a)pyrene has been used extensively as a model carcinogen and as a positive control in a variety of risk assessment tests. EPA has designated this compound as a known animal carcinogen and probable human carcinogen. Relative to the other Group I PAHs, it is strongly carcinogenic. In 2015, EPA updated human health criteria for several Group I PAHs. The updated human health criteria are 0.0013 µg/L for benzo(a)anthracene, 0.00013 µg/L for benzo(a)pyrene, 0.0013 µg/L for benzo(b)fluoranthene, 0.013 µg/L for benzo(k)fluoranthene, 0.13 µg/L for chrysene, 0.00013 µg/L for dibenzo(a,h)anthracene, and 0.0013 µg/L for indeno(1,2,3-cd)pyrene for consumption of organisms only. These updated criteria replaced EPA's previously published values (i.e., 2002). The State issued proposed revised surface WQSs for public notice from October 4, 2019, through November 8, 2019, that would adopt the EPA criteria. The revised surface WQSs have not been finalized, however. If the proposed criteria are finalized prior to issuance of the Final Permit, EPA will consider the applicability of the criteria to discharges from this Facility when establishing the appropriate effluent limitation.

Of Group II PAHs, naphthalene, like benzo(a)pyrene poses high calculable risk relative to other PAHs. It is included as a priority pollutant under the CWA and is classified as a possible human carcinogen. In middle and heavy distillates, naphthalene is one of the most commonly found compounds, present in diesel fuel at up to approximately 0.8 and 0.4 percent by weight, respectively. Naphthalene is only slightly soluble in water but is highly soluble in benzene and other solvents. The effluent limitation of 100 µg/L for naphthalene is based on EPA's lifetime health advisory value. In 2015, EPA updated human health criteria for several Group II PAHs. The updated human health criteria are 90 µg/L for acenaphthene, 400 µg/L for anthracene, 20 µg/L for fluoranthene, 70 µg/L for fluorene, and 30 µg/L for pyrene for consumption of organisms only, and 20 µg/L for acenaphthene for organoleptic effect. These updated criteria replaced EPA's previously published values (i.e., 2002). The State issued proposed revised surface WQSs for public notice from October 4, 2019, through November 8, 2019, that would adopt the EPA criteria. The revised surface WQSs have not been finalized, however. If the proposed criteria are finalized prior to issuance of the Final Permit, EPA will consider the applicability of the criteria to discharges from this Facility when establishing the appropriate effluent limitation.

EPA has added reporting requirement for PAHs for both Outfalls 003 and 004. This is consistent with the 2021 MSGP, Part 8, Subpart D, Sector D – Asphalt Paving and Roofing Materials which requires the reporting of indicator monitoring parameter PAHs in Table 8.D-1, Subsector D1.

5.1.3.6 Nutrients

The 2015 Permit required the Permittee to monitor ammonia and total phosphorus concentrations from both Outfall 003 and 004 twice a year. From August 1, 2020 through July 31, 2025, the concentrations of ammonia ranged from below the laboratory Practical Quantification Limits (PQLs) to 0.46 mg/L and concentrations of total phosphorus ranged from below the laboratory Practical Quantification Limits (PQLs) to 0.3 mg/l at Outfall 003. For the same period at Outfall 004, the concentrations of ammonia ranged from below the laboratory Practical Quantification Limits (PQLs) to 0.97 mg/L and concentrations for total phosphorus ranged from 0.056 to 3.41 mg/L.

Given that the Neponset River is impaired for DO, total phosphorus, and nutrient/eutrophication biological indicators, EPA proposes that the Permit continue the requirement for the Permittee to monitoring Outfalls 003 and 004 for ammonia nitrogen and total phosphorus twice per year.

5.2 Special Conditions

5.2.1 Best Management Practices

Best management practices (BMPs) may be expressly incorporated into a permit on a case-by-case basis where it is determined that they are necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the CWA under §402(a)(1). BMPs may be necessary to control or abate the discharge of pollutants when: 1) authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) authorized under CWA § 402(p) for the control of storm water discharges; 3) numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. *See* 40 CFR § 122.44(k). Pollutants may be present because they are generated during Facility operations, which could result in significant amounts of these pollutants reaching waters of the United States via discharges of wastewater and stormwater.

In this case, the Draft Permit requires the selection, design, installation, and implementation of control measures for stormwater associated with the Facility operations to comply with the non-numeric technology-based effluent limits in the Draft Permit. The Draft Permit requires the Permittee to implement and continually evaluate the Facility's structural controls (e.g., treatment systems, containment areas, holding tanks), and non-structural controls (operational procedures, site inspections, and operator training). Proper implementation of BMPs will minimize the potential discharge of pollutants related to inadequate treatment, human error, and/or equipment malfunction. The non-numeric limitations are consistent with the limitations specified in Part 2.1.2 and Part 8 (Asphalt Paving and Roofing Materials and Lubricant Manufacturing) of EPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (2021 MSGP), effective March 1, 2021.[36] Non-numeric limitations include:

- Minimize exposure of processing and material storage areas to stormwater discharges;
- Design good housekeeping measures to maintain areas that are potential sources of pollutants;
- Implement preventative maintenance programs to avoid leaks, spills, and other releases of pollutants to stormwater that is discharged to receiving waters;
- Implement spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur;
- Design of erosion and sediment controls to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants;
- Utilize runoff management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff;
- Develop proper handling procedures for salt or materials containing chlorides that are used for snow and ice control;
- Conduct employee training to ensure personnel understand the requirements of the

[36] The MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp.

permit;
- Evaluate for the presence of non-stormwater discharges. Any non-stormwater discharges not explicitly authorized in the Final Permit or covered by another NPDES permit must be eliminated (*see* Authorized Non-Stormwater Discharges in Part I.A.1 and I.A.2 for the non-stormwater discharges explicitly authorized, and Unauthorized Discharges in Part I.B. for non-stormwater discharges expressly prohibited, below;
- Minimize dust generation and vehicle tracking of industrial materials; and

In addition to the general limitations described above, the Draft Permit also includes BMPs based on EPA's 2021 MSGP, including Part 8, Sector D (Asphalt Paving and Roofing Materials and Lubricant Manufacturing) and Sector E (Glass, Clay, Cement, Concrete and Gypsum Products). *Id.* Additional BMPs are based on EPA's RGP.[37] BMP requirements include:

- The Draft Permit requires the Permittee to comply with the inspection requirements in Part 3.1 and 3.2 of the 2021 MSGP and the corrective action requirements in Part 5.1 of the 2021 MSGP;[38]
- The Draft Permit requires the Permittee to comply with the control measure requirements in Part 2.1 and 2.1.1 of the 2021 MSGP in order to identify pollutant sources and select, design, install and maintain the pollution control technology necessary to meet the effluent limitations in the permit that ensure dilution is not used as a form of treatment;[39]
- The Draft Permit requires the Permittee to comply with sector specific non-numeric technology-based effluent limitations included in Sector E (Glass, Clay, Cement, Concrete and Gypsum Products) of the 2021 MSGP;
- The Draft Permit requires the Permittee to document the measures and methods used to control flow through the treatment system to ensure that the design flow of the treatment system is not exceeded; and
- The Draft Permit requires the Permittee to document monitoring requirements, sample analysis procedures, a schedule for the review of sample results and data validation and reporting processes.

These non-numeric effluent limitations support, and are equally enforceable as, the numeric effluent limitations included in the Draft Permit. The purpose of these requirements is to reduce or eliminate the discharge of pollutants to waters of the United States. They have been selected on a case-by-case basis based on those appropriate for this specific Facility. *See* CWA

[38] Where the MSGP refers to limitations, conditions or benchmarks, including the SWPPP, for the purposes of this permit, these shall refer to the limitations and conditions in this permit.

[39] Page 7-113 of EPA-821-R-04-014 states, "[w]astewater requiring primary and/or secondary treatment (because it is contaminated with oil and grease and total petroleum hydrocarbons) is typically tank bottom water, loading/unloading rack water, a portion of the tank basin water, wastewater generated during remediation, and water used for hydrostatic testing." *See* Part 2.5.2.d of the 2017 RGP for example technologies and additional resources.

§§ 304(e) and 402(a)(1) and 40 CFR § 122.44(k). These requirements will also ensure that discharges from the Facility will meet State WQSs pursuant to CWA § 301(b)(1)(C) and 40 CFR § 122.44(d)(1). Unless otherwise stated, the Permittee may select, design, install, implement and maintain BMPs as the Permittee deems appropriate to meet the permit requirements. The selection, design, installation, implementation, and maintenance of control measures must be in accordance with good engineering practices and manufacturer's specifications.

5.2.2 Stormwater Pollution Prevention Plan

EPA first issued its general permit for stormwater discharges associated with industrial activity in 1992, which, among others, required all facilities to implement technology-based pollution prevention measures and to prepare a Stormwater Pollution Prevention Plan (SWPPP) documenting the implementation of these measures.[40]

The 2021 MSGP establishes a process whereby the operator of the industrial facility evaluates potential pollutant sources at the site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in stormwater runoff.[41] This Draft Permit contains BMPs for stormwater associated with industrial activity at the Facility based on the MSGP. In addition to BMPs, the Draft Permit also contains requirements for the Permittee to update, implement, and maintain a SWPPP for stormwater discharges associated with the manufacturing facility, granule plant, tank farm and still yard operations. These requirements are consistent with EPA's MSGP effective March 1, 2021. The Draft Permit specifies that the SWPPP must include the following, at a minimum:

- Stormwater pollution prevention team;
- Site description;
- Drainage area site map;
- Summary of potential pollutant sources;
- Description of all stormwater control measures, including a detailed stormwater collection infrastructure diagram, any BMP or pollution control technology schematics, and the specific control measures the operator uses to reduce the pollutants in discharges from the site; and
- Schedules and procedures pertaining to implementation of stormwater control measures, inspections and assessments, and monitoring.

The updating and implementation of the SWPPP is an enforceable element of the permit. The Draft Permit directs the Permittee to incorporate BMPs, as described above, directly into the

[40] Fed. Reg. 41264 (September 9, 1992).
[41] The 2021 MSGP is currently available at: https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp

SWPPP, which serves to document the selection, design and installation of control measures selected to meet the permit effluent limitations. The goal of the SWPPP is to reduce or prevent the discharge of pollutants to waters of the United States either directly or indirectly through stormwater runoff.

The Draft Permit requires the Permittee, within ninety (90) days of the effective date of the permit, to certify that the SWPPP is being implemented, meets the requirements of the permit, and documents the control measures, including BMPs, that have been implemented to reduce or eliminate the discharge of pollutants from stormwater associated with the manufacturing facility, the granule plant, the tank farm and the still yard operations. The Permittee must also certify at least annually that the Facility has complied with the BMPs described in the SWPPP, including inspections, maintenance, and training activities. The Permittee is required to amend and update the SWPPP if any change occurs at the Facility affecting the SWPPP, such as changes in the design, construction, operation, or maintenance of the Facility or revisions and improvements are made to the stormwater management program based on new information and experiences with wet weather events, including major storm events and extreme flooding conditions. The Permittee must continue to complete an annual summary report that describes all such amendments and updates and the change(s) that occurred and submit this report to EPA with the annual SWPPP and certification submittals. If EPA finds deficiencies in the SWPPP, or any subsequent revisions or summary reports, EPA will provide comments to the Permittee in writing to correct such deficiencies. The SWPPP must be maintained on site at the Facility and provided to EPA and/or the State upon request. All SWPPP records must be maintained on-site for at least three years.

5.2.3 Discharges of Chemicals and Additives

Chemicals and additives include, but are not limited to algaecides/biocides, antifoams, coagulants, corrosion/scale inhibitors/coatings, disinfectants, flocculants, neutralizing agents, oxidants, oxygen scavengers, pH conditioners, and surfactants. The Draft Permit allows the discharge of only those chemicals and additives specifically disclosed by the Permittee to EPA. The following chemicals and additives were disclosed to EPA:

- *A-202:* cooling water microbiocide
- *AIR CON SP*-760 FC: cooling water treatment
- Brommax 7.1: water treatment antimicrobial solution
- Floc Bloc, A 52: removes colloidal suspensions, outfall 001 settling ponds
- Floc Bloc, B 65: removes colloidal suspensions, outfall 001 settling ponds

However, EPA recognizes that chemicals and additives in use at a Facility may change during the term of the permit. As a result, the Draft Permit includes a provision that requires the Permittee to notify EPA in writing of the planned discharge of a new chemical or additive. Such notification allows for EPA review of the change. The Draft Permit specifies that for each

chemical or additive, the Permittee must submit the following information, at a minimum, in writing to EPA:

- Product name, chemical formula, general description, and manufacturer of the chemical/additive.
- Purpose or use of the chemical/additive.
- Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive.
- The frequency (e.g., hourly, daily), magnitude (e.g., maximum application concentration), duration (e.g., hours, days), and method of application for the chemical/additive.
- If available, the vendor's reported aquatic toxicity (i.e., NOAEL and/or LC_{50} in percent for aquatic organism(s)) for the chemical/additive.

The Permittee must also provide an explanation that demonstrates that the discharge of such chemical or additive: 1) will not add any pollutants in concentrations that exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to, those currently in this permit.

Assuming these requirements are met, discharges of a new chemical or additive is authorized under the permit upon notification to EPA unless otherwise notified by EPA.

6.0 Federal Permitting Requirements

6.1 Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority and imposes requirements on Federal agencies regarding species of fish, wildlife, or plants that have been federally listed as endangered or threatened (listed species) and regarding habitat of such species that has been designated as critical (critical habitat).

Section 7(a)(2) of the ESA requires every federal agency, in consultation with and with the assistance of the Secretary of Interior and the Secretary of Commerce, to ensure that any action it authorizes, funds or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for federally protected bird, terrestrial and freshwater species, while the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) administers Section 7 consultations for listed species of marine organisms (including marine mammals and reptiles), as well as for anadromous fish species.

The federal action being considered in this case is EPA's proposed reissuance of an NPDES permit for the CertainTeed facility. The Draft Permit is intended to replace the 2015 Permit in

governing the Facility. As the federal agency charged with authorizing the Facility's pollutant discharges, EPA assesses potential impacts to federally listed species and critical habitat and initiates consultation to the extent required under Section 7(a)(2) of the ESA.

EPA has researched whether federal endangered or threatened species of fish, wildlife, and plants are expected in the action area of the outfall(s) to determine if EPA's proposed NPDES permit could potentially impact any such listed species in this segment of the receiving water. There are no known federally listed threatened or endangered species or their critical habitat under the jurisdiction of NOAA Fisheries within the vicinity of the Facility's discharge(s).[42] Therefore, ESA consultation with NOAA Fisheries is not required for this federal action.

For protected species under the jurisdiction of the USFWS, two species proposed for listing, the proposed endangered tricolored bat (*Perimyotis subflavus*) and the proposed threatened monarch butterfly (*Danaus plexippus*), were identified as potentially occurring in the action area of the Facility's discharges.

According to the USFWS, the proposed endangered tricolored bat is found in "winter – mines and caves, summer – wide variety of forested habitats." Because the Facility's projected action area overlaps with the general range of the bat, EPA prepared a tricolored bat Determination Key for the Draft Permit and submitted it to USFWS. Based on the information submitted by EPA, the USFWS notified EPA by letter, dated 12/9/2025, that the USFWS has determined that the Draft Permit will have "No Effect" on the tricolored bat. The USFWS determination letter concluded EPA's consultation responsibilities for this permitting action under ESA Section 7(a)(2) with respect to the tricolored bat.

The monarch butterfly is a terrestrial insect species that undergoes long distance migration and serves the role of a pollinator in the ecosystem. The eastern North American migratory monarch population is the largest population of monarchs, in both individuals and range. The eastern population encompasses upwards of 70% of the total North American monarch range. Members of this population likely overlap with the facility's action area. In the fall, they may fly more than 2,000 miles (3,000 km) to reach overwintering sites in Mexico. Whether it's a field, roadside area, open area, wet area or urban garden, milkweed and flowering plants are needed for monarch habitat. Adult monarchs feed on the nectar of many flowers during breeding and migration, but they lay eggs on milkweed plants, as that is the only food the caterpillars can eat. In Massachusetts, these butterflies use milkweed plants to lay their eggs in June and July.

EPA has determined that CertainTeed's discharge to the Neponset River does not come in contact with and therefore does not have a negative impact on flowering plants and the milkweed plant. Also, monarch butterflies are not expected to come in direct contact with the discharge. Therefore, EPA has determined that the CertainTeed's effluent will have no effect,

[42] ESA mappers for USFWS https://ecos.fws.gov/ipac/ and
NMFS https://www.greateratlantic.fisheries.noaa.gov/protected/section7/index.html

either indirect or direct, on the proposed threatened monarch butterfly. No further ESA coordination with USFWS is required for the monarch butterfly.

Therefore, the proposed permit action is deemed to have no impact on USFWS-listed species and ESA consultation with USFWS is not required for this discharge.

At the beginning of the public comment period, EPA notified USFWS and NOAA Fisheries Protected Resources Division that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents. Initiation of consultation is required and shall be requested by EPA or by USFWS/NOAA Fisheries where discretionary federal involvement or control over the action has been retained or is authorized by law and if: 1) new information reveals that the action may affect listed species or critical habitat in a manner or to an extent not previously considered in the analysis; 2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the previous analysis; 3) a new species is listed or critical habitat designated that may be affected by the identified action; or 4) there is any incidental taking of a listed species that is not covered by an incidental take statement.

6.2 Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801, et seq., EPA is required to consult with NOAA Fisheries if proposed actions that EPA funds, permits, or undertakes, "may adversely impact any essential fish habitat." See 16 U.S.C. § 1855(b).

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". See 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH. 50 CFR § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. A New England Fishery Management Council's Omnibus Essential Fish Habitat Amendment in 2017 updated the descriptions. The information is included on the NOAA Fisheries website at: https://www.fisheries.noaa.gov/topic/habitat-conservation. In some cases, a narrative identifies rivers and other waterways that should be considered EFH due to present or historic use by federally managed species.

EPA has determined that the Neponset River is not covered by the EFH designation for riverine systems at the location of the Facility as determined by the NOAA EFH Mapper.[43] Therefore, consultation with NMFS under the Magnuson-Stevens Fishery Conservation and Management Act is not required.

At the beginning of the public comment period, EPA notified NOAA Fisheries Habitat and Ecosystem Services Division that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

7.0 Public Comments, Hearing Requests, and Permit Appeals

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the permit writer, Michele Barden at the following email address: barden.michele@epa.gov.

Prior to the close of the public comment period, any person may submit a written request to EPA for a public hearing to consider the Draft Permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held if the criteria stated in 40 CFR § 124.12 are satisfied. In reaching a final decision on the Draft Permit, EPA will respond to all significant comments in a Response to Comments document attached to the Final Permit and make these responses available to the public on EPA's website.

Following the close of the comment period, and after any public hearings, if such hearings are held, EPA will issue a Final Permit decision, forward a copy of the final decision to the applicant, and provide a copy or notice of availability of the final decision to each person who submitted written comments or requested notice. Within 30 days after EPA serves notice of the issuance of the Final Permit decision, an appeal of the federal NPDES permit may be commenced by filing a petition for review of the permit with the Clerk of EPA's Environmental Appeals Board in accordance with the procedures at 40 CFR § 124.19.

If for any reason, comments on the Draft Permit and/or a request for a public hearing cannot be emailed to the permit writer specified above, please contact them at telephone number: (617) 918-1539.

[43] NOAA EFH Mapper available at http://www.habitat.noaa.gov/protection/efh/efhmapper/

8.0 Administrative Record

The administrative record on which this Draft Permit is based may be accessed by contacting Michele Barden at 617-918-1539or via email to barden.michele@epa.gov.

_January 2026_____
Date

Ken Moraff, Director
Water Division
U.S. Environmental Protection Agency

Figure 1: Location Map

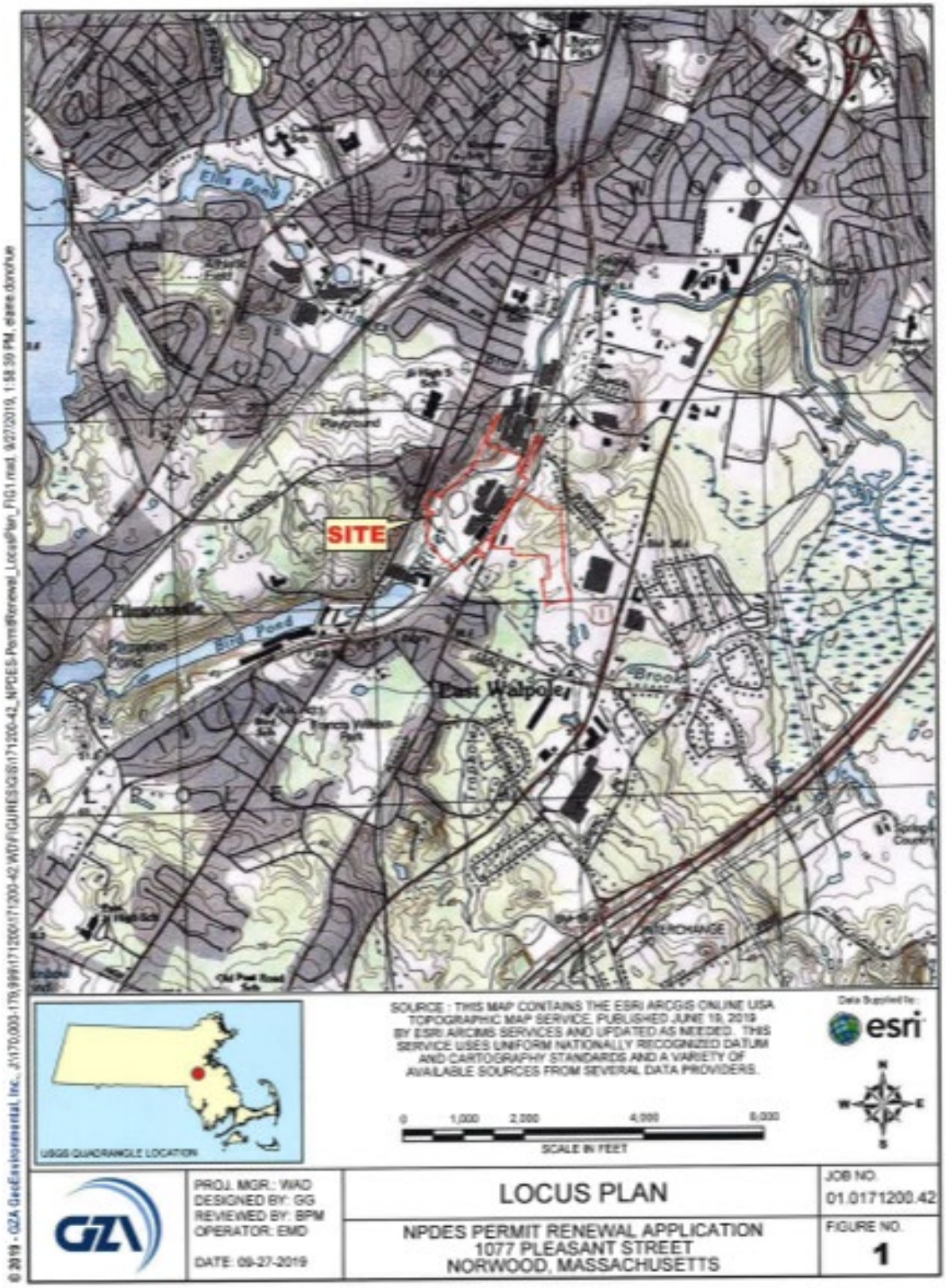


Figure 2: Site Plan

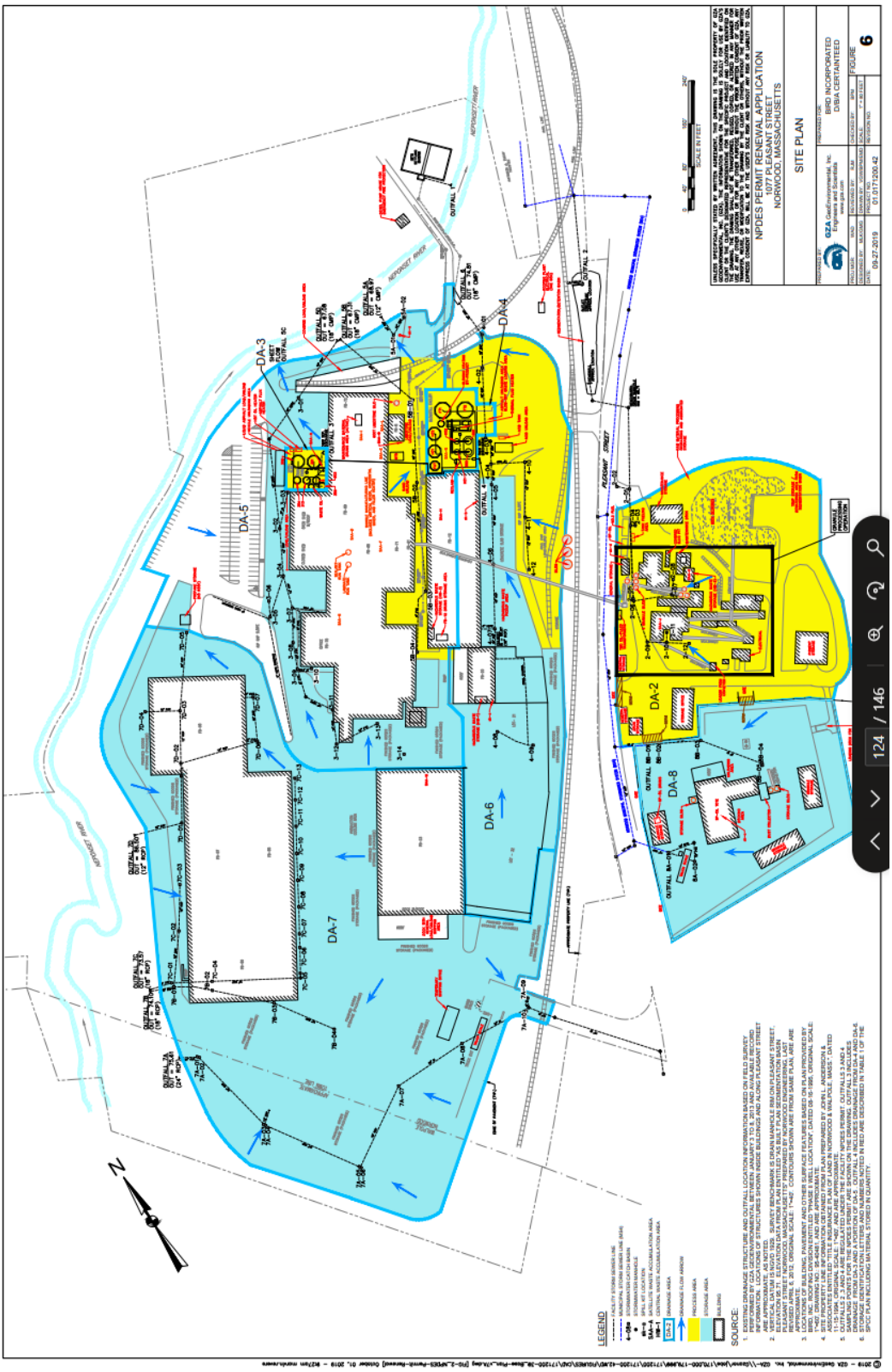


Figure 3: Process Schematic Roofing Plant

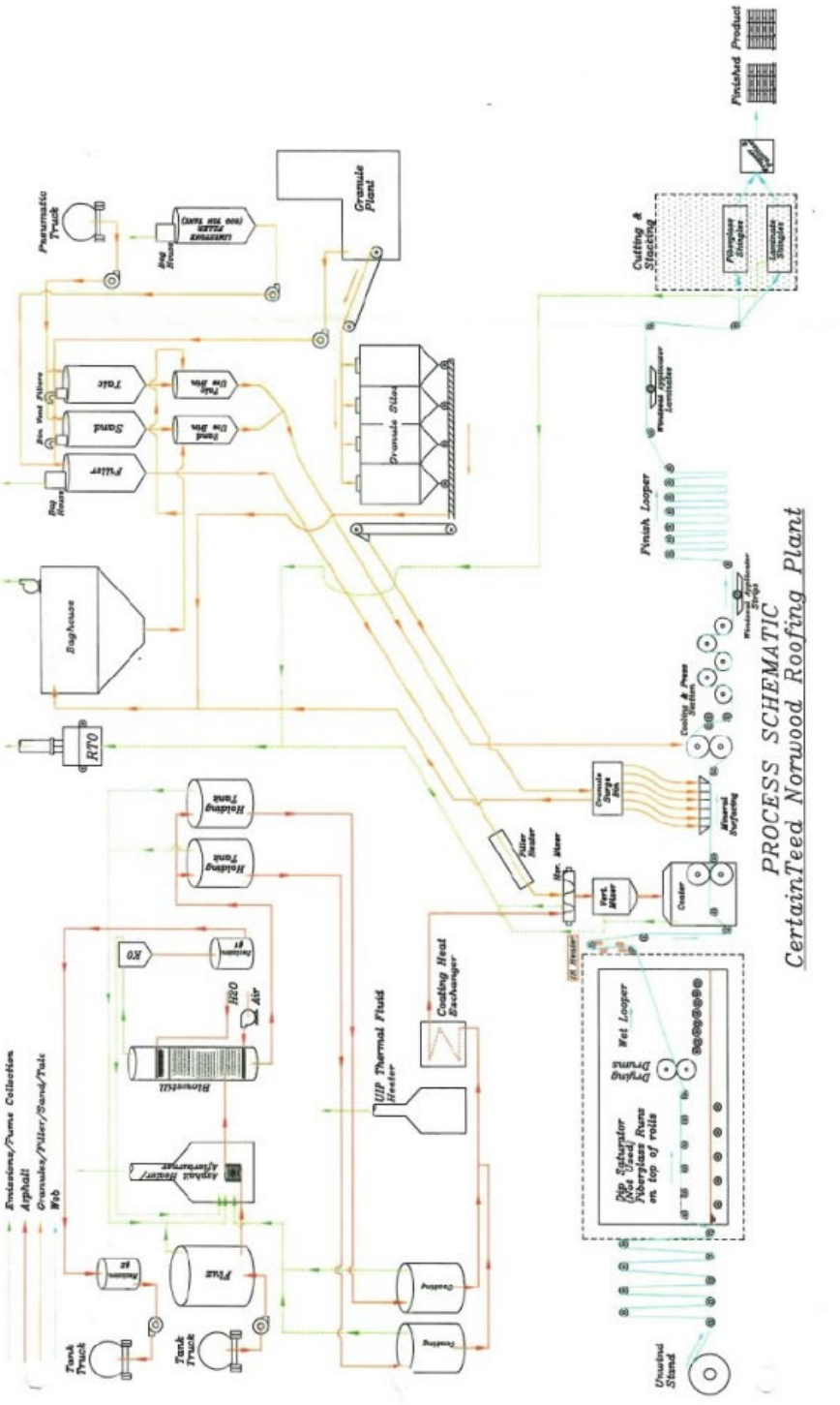


Figure 4: Schematic of Water Flow – Outfall 001

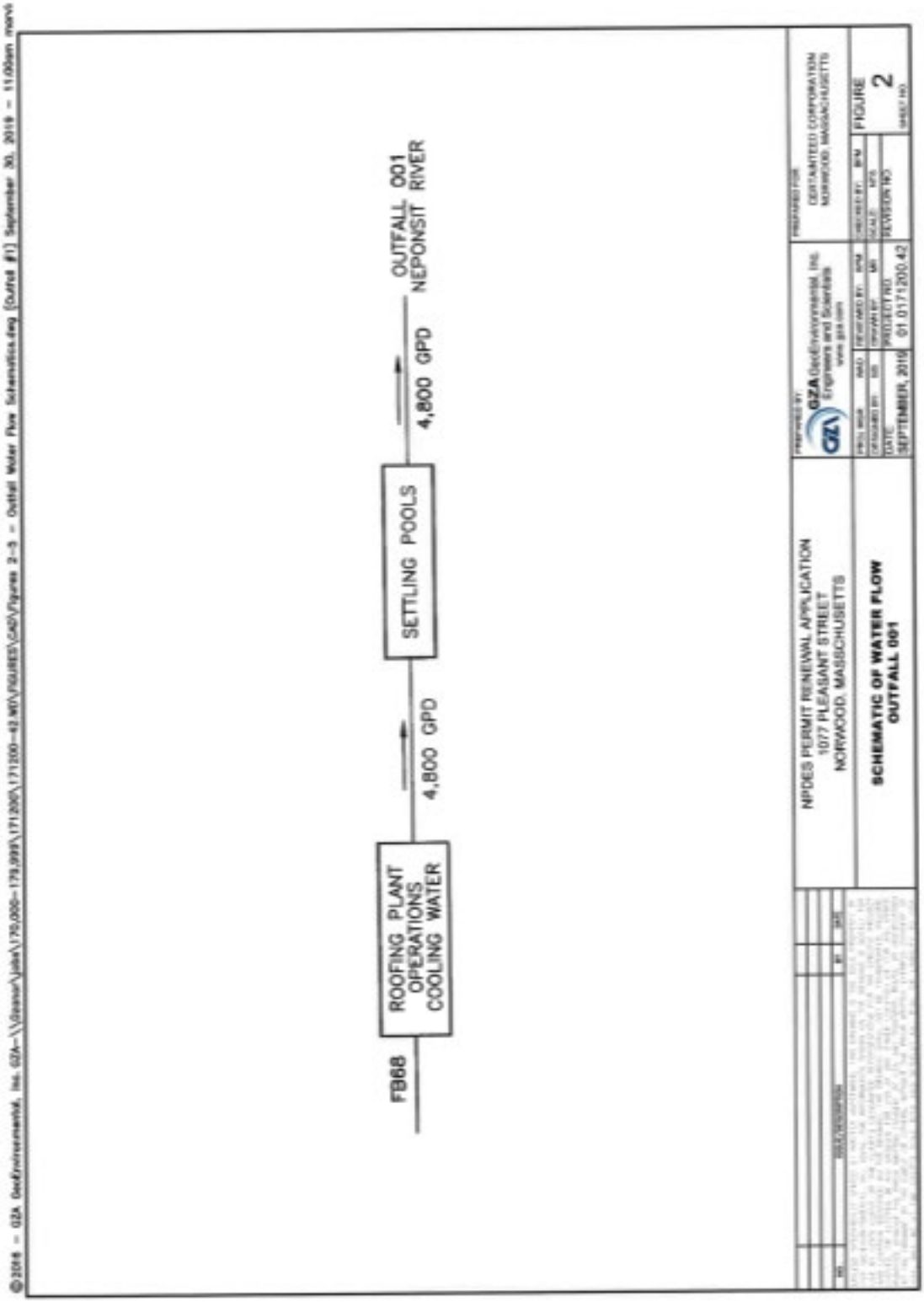


Figure 5: Schematic of Water Flow – Outfall 002

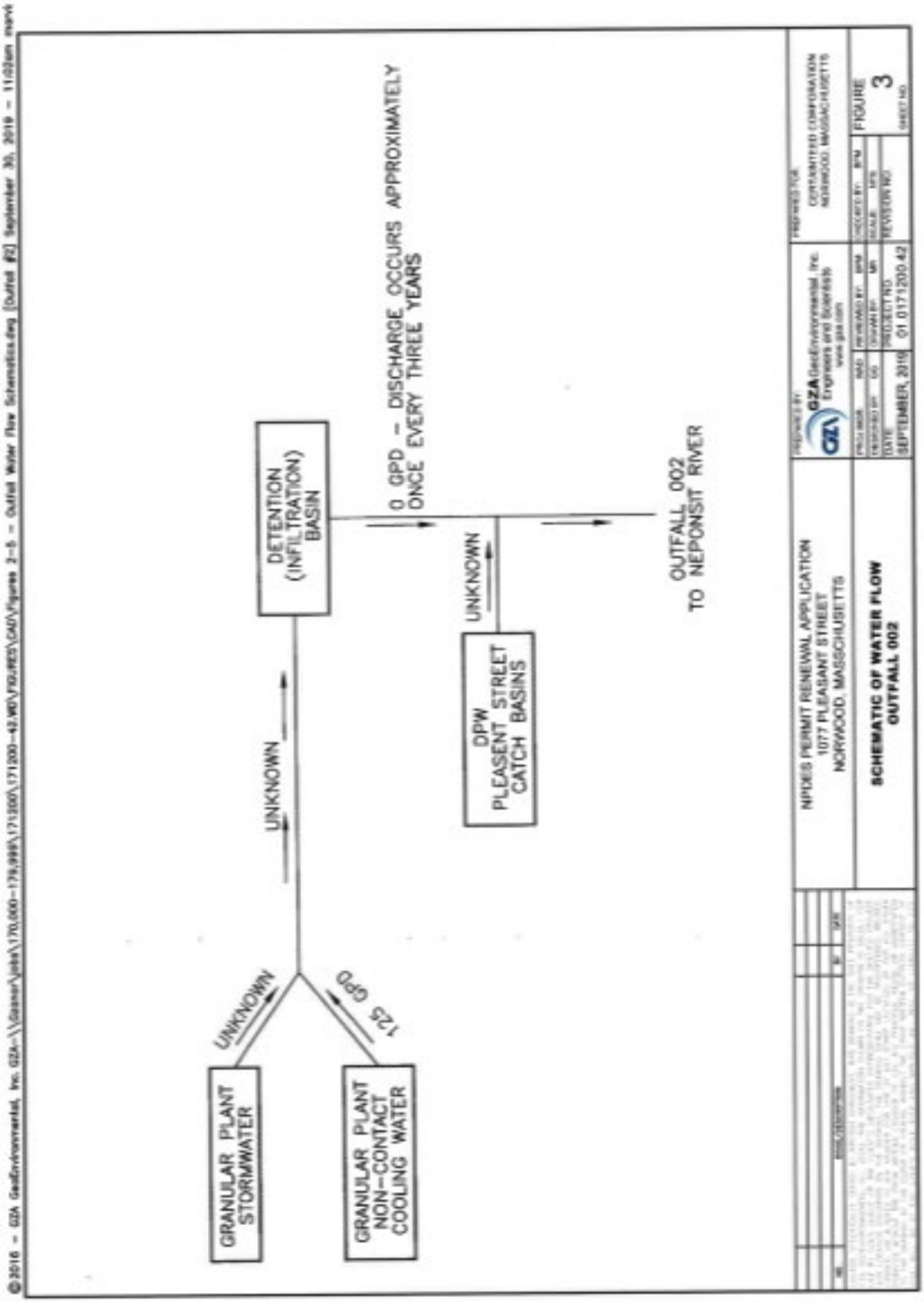


Figure 6: Schematic of Water Flow – Outfall 003

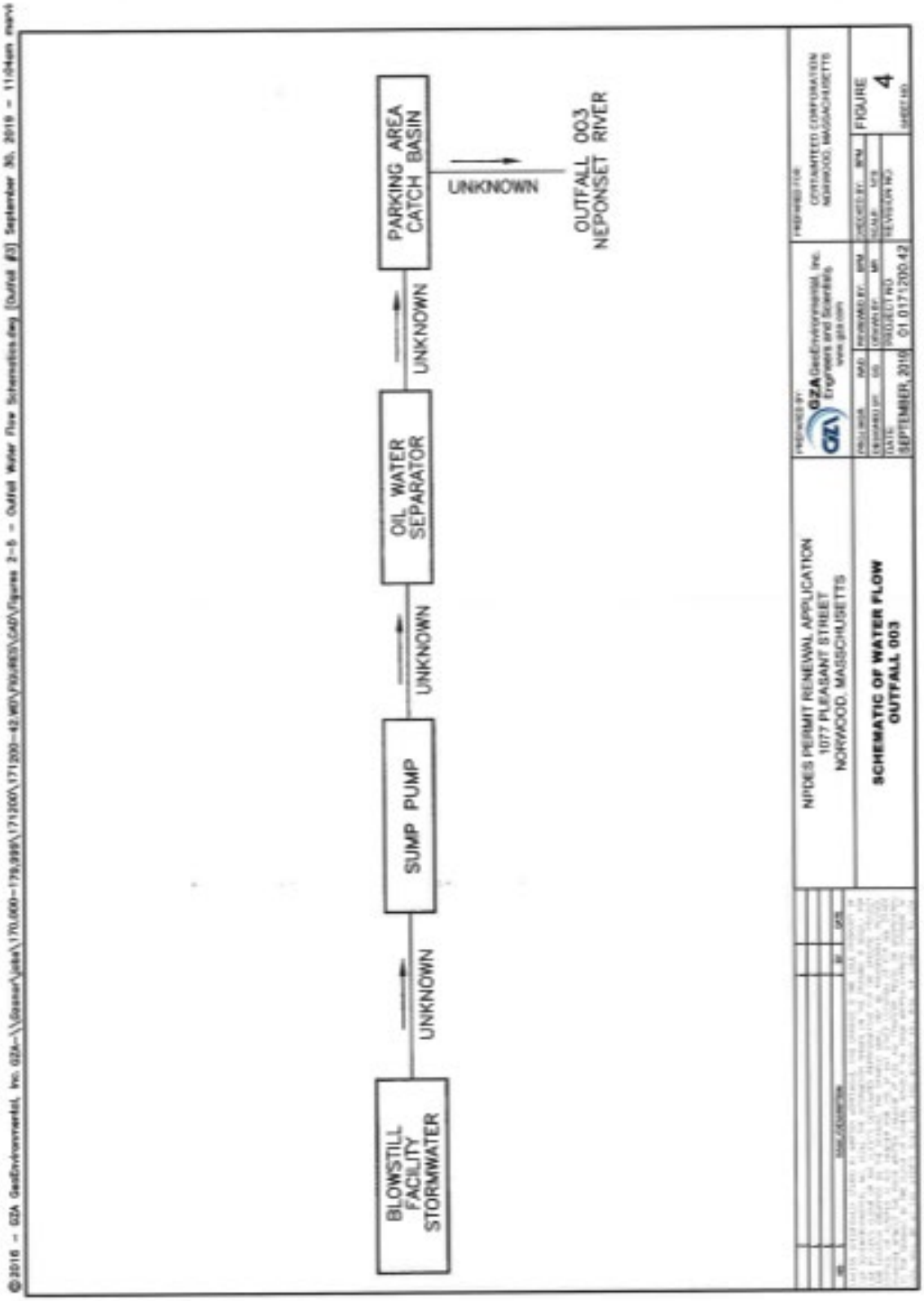
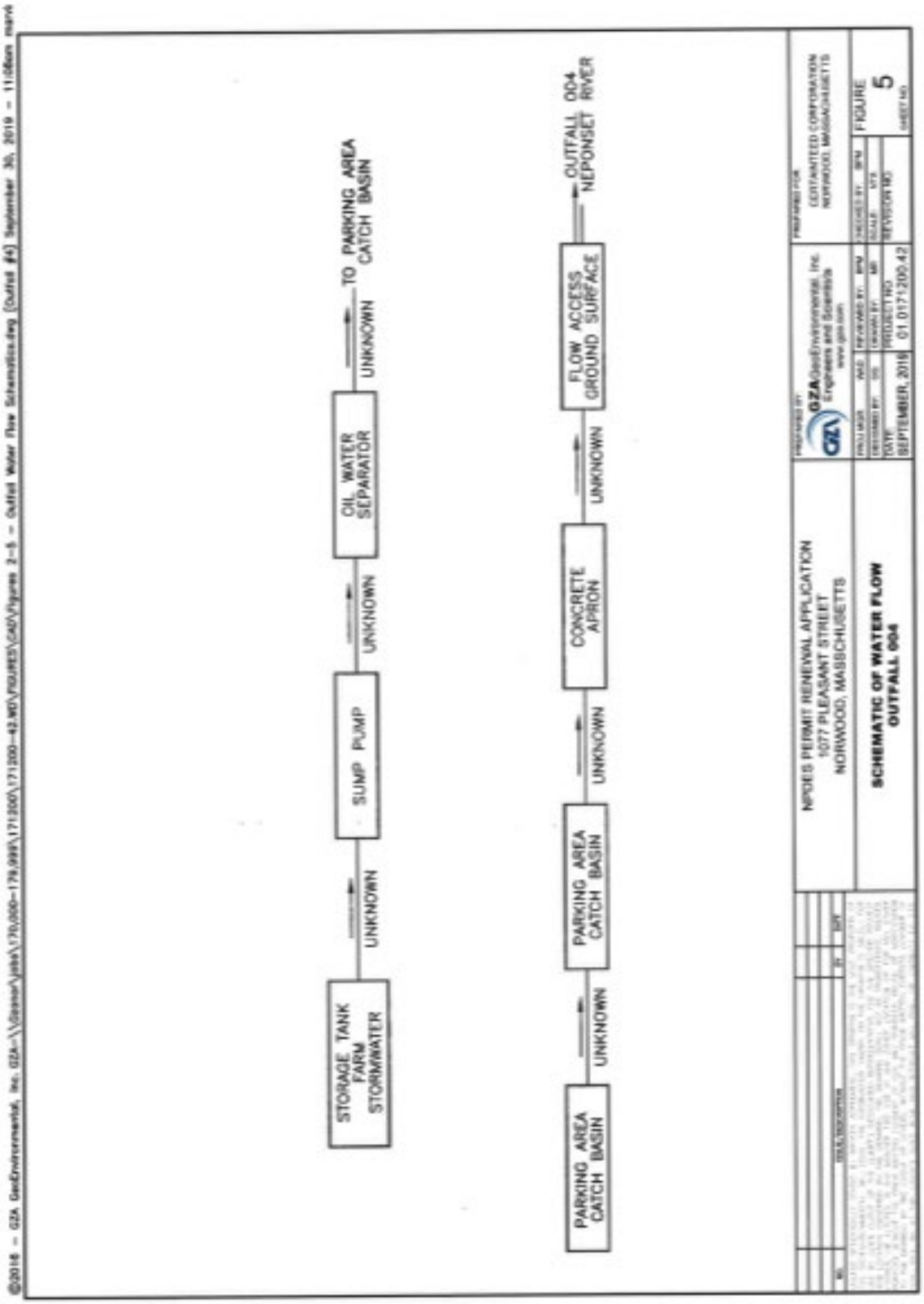


Figure 7: Schematic of Water Flow – Outfall 004



Appendix A: Discharge Monitoring Data

Outfall 001

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	Flow	Flow	TSS	TSS	TSS	TSS	pH	pH
	Monthly Avg	Daily Max	Monthly Avg	Monthly Avg	Daily Max	Daily Max	Minimum	Maximum
Units	Mgal/mo	Mgal/mo	lb/d	mg/L	lb/d	mg/L	SU	SU
Effluent Limit	Report	Report	46	40	68	70	6.5	8.3
Minimum	0.0164	0.0225	0.507	1.175	1.304	2.103	6.5	6.5
Maximum	1.0311	0.8479	19.8	37.25	46	92	6.7	7.4
Median	0.78905	0.0297	3.4695	13.375	6.5935	25	6.6	6.7
No. of Violations	N/A	N/A	0	0	0	2	28	0
Monitoring Period End Date								
8/31/2020	0.0284	0.0311	4.499	19	6.227	24	6.5	6.8
9/30/2020	0.029	0.0307	5.952	24.6	8.182	38	6.5	6.5
10/31/2020	0.0262	0.0294	4.375	20	6.767	37	6.5	6.7
11/30/2020	0.0274	0.0346	6.057	26.5	6.76	31	6.5	6.5
12/31/2020	0.0318	0.0395	8.223	31	11.655	44	6.5	7
1/31/2021	0.0274	0.0297	2	8.75	3.469	14	6.5	6.7
2/28/2021	0.74963	0.8456	2.79	12.5	5.377	25	6.5	6.7
3/31/2021	0.858	0.0287	2.51	10.9	3.353	14	6.5	6.7
4/30/2021	0.881775	0.0294	3.68	15	10.868	38	6.5	6.7
5/31/2021	1.0311	0.0358	4.37	15.75	5.564	21	6.5	6.5
6/30/2021	0.93462	0.0312	5.304	20.4	7.772	28	6.5	6.5
7/31/2021	0.0298	0.0317	3.534	14.2	7.407	28	6.5	6.7
8/31/2021	0.0258	0.0358	3.002	13.9	7.17	24	6.5	7
9/30/2021	0.6842	0.0242	2.398	12.6	4.441	22	6.5	6.6
10/31/2021	0.034	0.042	16.2	4.6	40	13.08	6.5	7
11/30/2021	0.9199	0.0358	19.8	5.067	46	11.167	6.5	6.6
12/31/2021	0.0164	0.5077	0.922	6.75	1.627	13	6.5	6.6
1/31/2022	0.0246	0.7631	2.79	12.9	4.411	25	6.6	6.7
2/28/2022	0.7958	0.0307	8.84	37.25	16.2	63	6.5	6.7
3/31/2022	0.9026	0.0316	4.283	17.63	9.755	38	6.5	6.6
4/30/2022	0.8409	0.0297	6.61	28.25	11.982	53	6.5	7
5/31/2022	0.9424	0.0368	8.474	33.4	16.797	69	6.5	6.6
6/30/2022	0.8455	0.0282	6.056	25.8	8.616	38	6.6	6.7
7/31/2022	0.08139	0.0291	4.811	21.25	8.078	40	6.6	6.7
8/31/2022	0.8215	0.0302	7.276	32.9	21.114	92	6.7	7
9/30/2022	0.8259	0.0302	4.2	18.3	10.03	46	6.5	6.6
10/31/2022	0.7233	0.0272	4.175	20.75	8.653	48	6.6	7
11/30/2022	0.4151	0.0282	1.424	6.17	1.529	7	6.6	6.6
12/31/2022	0.7067	0.0264	2.245	11.8	3.267	20	6.5	6.7

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	Flow	Flow	TSS	TSS	TSS	TSS	pH	pH
	Monthly Avg	Daily Max	Monthly Avg	Monthly Avg	Daily Max	Daily Max	Minimum	Maximum
Units	**Mgal/mo**	**Mgal/mo**	**lb/d**	**mg/L**	**lb/d**	**mg/L**	**SU**	**SU**
Effluent Limit	**Report**	**Report**	**46**	**40**	**68**	**70**	**6.5**	**8.3**
Minimum	**0.0164**	**0.0225**	**0.507**	**1.175**	**1.304**	**2.103**	**6.5**	**6.5**
1/31/2023	0.8436	0.02888	5.22	23	9.543	45	6.5	6.7
2/28/2023	0.39473	0.0262	0.72	6.13	2.075	9.5	6.6	6.6
3/31/2023	0.5928	0.0262	2.114	13.25	5.46	25	6.6	6.7
4/30/2023	0.9059	0.0388	1.827	7.25	2.671	12	6.6	6.7
5/31/2023	0.8289	0.0282	1.205	5.4	1.463	7	6.5	6.7
6/30/2023	0.8226	0.0292	4.662	20.38	14.855	61	6.6	6.7
7/31/2023	0.8183	0.0307	1.542	7	2.081	9	6.6	6.6
8/31/2023	0.82104	0.0353	3.015	13.2	10.305	35	6.6	7
9/30/2023	0.7823	0.0297	1.659	7.63	2.479	10	6.6	6.7
10/31/2023	0.747038	0.0277	2.514	12.5	4.326	24	6.6	6.7
11/30/2023	0.2025	0.0225	0.507	9	1.502	13	6.6	6.7
12/31/2023	0.7697	0.0272	1.14	5.5	1.567	7.5	6.7	6.8
1/31/2024	0.0265	0.823	1.329	6	2.267	10	6.6	6.7
2/29/2024	0.714415	0.0285	6.94	33.75	13.515	79	6.6	7
3/31/2024	0.88513	0.0353	7.863	33	12.235	56	6.5	6.7
4/30/2024	0.96	0.0385	5.528	20.7	13.494	42	6.6	7.1
5/31/2024	0.818292	0.0264	2.974	13.5	6.221	26	6.6	7.1
6/30/2024	0.633825	0.0257	6.67	1.175	7.5	2.103	6.6	6.6
7/31/2024	0.768	0.277	1.757	8.5	2.771	12	6.5	6.6
8/31/2024	0.891	0.0324	4.318	18	5.796	26	6.6	7.1
9/30/2024	0.8864	0.0328	3.206	12	7.653	28	6.6	7
10/31/2024	0.8199	0.0297	1.104	5.2	1.304	6	6.6	6.7
11/30/2024	0.4605	0.0297	0.939	7.33	2.873	12	6.6	6.7
12/31/2024	0.589124	0.0265	1.427	9	4.119	21	6.6	6.7
1/31/2025	0.800048	0.0276	1.981	9.2	3.048	14	6.6	6.7
2/28/2025	0.8036	0.0297	3.17	13.25	4.855	21	6.6	6.7
3/31/2025	0.8468	0.0282	2.774	8	1.824	12	6.6	6.6
4/30/2025	0.8104	0.0291	4.014	18.4	12.143	50	6.6	6.8
5/31/2025	0.0274	0.8479	7.076	31	11.77	50	6.5	6.6
6/30/2025	0.8122	0.0281	4.592	21	7.504	32	6.7	6.8
7/31/2025	0.8722	0.02962	3.405	14.5	6.427	26	6.7	7.4

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	TRC	Lead	Aluminum, total [as Al]	Flow rate	Temperature, water deg. fahrenheit	Aluminum, total [as Al]	Flow rate	Oil & Grease
	Daily Max	Daily Max	Monthly Avg	Monthly Avg	Monthly Avg	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	MGD	deg F	mg/L	MGD	mg/L
Effluent Limit	Report	Report	2.6	0.04	83	Report	Report	15
Minimum	0.001	0	0.25	0.0068	33.4	0.32	0.0225	1.9
Maximum	0.64	0.015	2.8	0.034	79.9	4.8	0.042	6.4
Median	0.001	0.000735	1.29	0.02725	52.85	1.85	0.0297	2.2
No. of Violations	N/A	N/A	1	0	0	N/A	N/A	0
Monitoring Period End Date								
8/31/2020	0.35	0.0016	1.37	0.0284	68.4	2	0.0311	6.4
9/30/2020	0.18	0.0013	1.44	0.029	58.1	1.8	0.0307	5.9
10/31/2020	0.12	0.00076	1.23	0.0262	54.8	1.6	0.0294	2.6
11/30/2020	0.2	0.0012	2.33	0.0274	41.5	3.2	0.0346	5.4
12/31/2020	0.2	0.0013	1.36	0.0318	40.4	2.1	0.0395	5.1
1/31/2021	0.001	0.0017	1.29	0.0274	33.8	2.1	0.0297	2.5
2/28/2021	0.001	0.0014	2.1	0.0268	35.6	3.3	0.0302	5.1
3/31/2021	0.001	<0.001	1.48	0.0277	34.6	1.8	0.0287	5
4/30/2021	0.2	0.0018	1.58	0.0294	46.4	2.5	0.03427	5.1
5/31/2021	0.042	0.0016	1.22	0.0333	56.5	1.6	0.0358	5.1
6/30/2021	0.2	0.0011	1.21	0.0312	57	1.5	0.0333	5.1
7/31/2021	0.1	0.0011	0.78	0.0298	65	0.99	0.0317	4.8
8/31/2021	0.001	<0.001	0.78	0.0258	72.8	1.3	0.0358	4.8
9/30/2021	0.01	<0.001	1.79	0.0228	70.5	4.3	0.0242	4.7
10/31/2021	0.03	0.00074	1.73	0.034	63.7	1.8	0.042	5
11/30/2021	0.001	0.0016	1.85	0.0307	42.6	2.3	0.0358	5.1
12/31/2021	0.001	0.001	1.23	0.0154	40	2.1	0.03	5
1/31/2022	0.001	0.0017	1.58	0.0246	43	4.8	0.0287	2
2/28/2022	0.1	<0.01	2	0.0284	40.4	4.1	0.0307	2
3/31/2022	0.001	<0.01	1.73	0.0291	45.2	3.2	0.0316	2.2
4/30/2022	0.001	<0.015	1.56	0.028	50.2	2	0.0297	2.4
5/31/2022	0.2	0.001	1.58	0.0304	50	2	0.0368	2.1
6/30/2022	0.001	<0.015	0.72	0.0281	54.5	1.5	0.0292	2.1
7/31/2022	0.001	<0.015	1.61	0.0271	67.8	2.7	0.0291	2
8/31/2022	0.1	<0.015	1.34	0.0265	73.1	2.2	0.0302	2.1
9/30/2022	0.001	<0.01	0.98	0.0275	72.3	1.4	0.0302	2
10/31/2022	0.015	0.015	0.65	0.0241	60.5	1	0.0272	2
11/30/2022	0.001	<0.01	0.79	0.0277	58.33	1.4	0.0282	2
12/31/2022	0.001	<0.01	1.03	0.0228	45.6	1.5	0.0264	2.7

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	TRC	Lead	Aluminum, total [as Al]	Flow rate	Temperature, water deg. fahrenheit	Aluminum, total [as Al]	Flow rate	Oil & Grease
	Daily Max	Daily Max	Monthly Avg	Monthly Avg	Monthly Avg	Daily Max	Daily Max	Daily Max
Units	**mg/L**	**mg/L**	**mg/L**	**MGD**	**deg F**	**mg/L**	**MGD**	**mg/L**
Effluent Limit	**Report**	**Report**	**2.6**	**0.04**	**83**	**Report**	**Report**	**15**
Minimum	**0.001**	**0**	**0.25**	**0.0068**	**33.4**	**0.32**	**0.0225**	**1.9**
1/31/2023	0.64	<0.015	1.52	0.0272	38.6	2.4	0.0288	2.4
2/28/2023	0.001	<0.015	0.86	0.0141	35.4	1.3	0.0262	2
3/31/2023	0.001	<0.015	0.77	0.0191	37.3	1.2	0.0262	1.9
4/30/2023	0.001	<0.015	0.69	0.0302	44.5	1	0.0388	1.9
5/31/2023	0.002	0.0012	1.29	0.0267	48.8	2.4	0.0282	1.9
6/30/2023	0.001	<0.015	1.69	0.0274	54	4.4	0.0292	1.9
7/31/2023	0.001	<0.015	0.52	0.0264	58.3	0.67	0.0307	2.2
8/31/2023	0.001	<0.015	0.72	0.0274	66.1	1.5	0.0353	2
9/30/2023	0.001	<0.015	0.84	0.0261	66.3	1.2	0.0297	2
10/31/2023	0.007	0.0032	0.72	0.0241	60.6	1.6	0.0277	2
11/30/2023	0.001	<0.015	0.25	0.0068	50.5	0.32	0.0225	2.1
12/31/2023	0.001	<0.015	0.56	0.0248	48.5	1.2	0.0272	2
1/31/2024	0.001	<0.015	1.3	0.0265	43	3.1	0.0282	4.3
2/29/2024	0.07	0.0023	2.8	0.0246	43.9	4.3	0.0285	4.2
3/31/2024	0.08	0.0023	2.48	0.0286	49.6	3.6	0.0353	2
4/30/2024	0.001	0.0017	2.06	0.032	50	3.8	0.0385	2.3
5/31/2024	0.001	0.001	2.06	0.0264	64.5	3.8	0.0287	2
6/30/2024	0.001	<0.0006	0.5	0.0211	64.3	0.78	0.0257	1.9
7/31/2024	0.001	0.00073	0.75	0.0248	70.4	1.5	0.0277	1.9
8/31/2024	0.001	0.0011	1.65	0.0287	74	1.9	0.0324	2.6
9/30/2024	0.001	0.0013	1.01	0.0295	67.6	1.5	0.0328	2.9
10/31/2024	0.02	<0.0006	0.59	0.0264	57.6	1	0.0297	2
11/30/2024	0.001	0.00062	0.38	0.0153	55.5	0.72	0.0297	5
12/31/2024	0.001	<0.0006	0.71	0.0189	41	1.9	0.0265	4.8
1/31/2025	0.001	0.00088	0.71	0.0258	33.4	0.95	0.0276	2.3
2/28/2025	0.001	<0.0006	1.45	0.0287	33.4	2.1	0.0297	4.4
3/31/2025	0.1	0.0045	0.92	0.0273	34.5	1.6	0.0282	1.9
4/30/2025	0.001	0.0017	1.45	0.0261	51.7	2.1	0.0291	1.9
5/31/2025	0.032	0.0025	2.05	0.0274	64.7	2.8	0.0282	2
6/30/2025	0.001	0.0038	1.51	0.0262	73.1	2.1	0.0282	2
7/31/2025	0.07	<0.0006	0.97	0.0281	79.9	1.4	0.02962	2

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	Temperature, water deg. fahrenheit
	Daily Max
Units	deg F
Effluent Limit	90
Minimum	34
Maximum	86.4
Median	59
No. of Violations	0
Monitoring Period End Date	
8/31/2020	76.5
9/30/2020	69.5
10/31/2020	62
11/30/2020	45
12/31/2020	49
1/31/2021	34
2/28/2021	42.4
3/31/2021	36
4/30/2021	57
5/31/2021	59
6/30/2021	80
7/31/2021	73
8/31/2021	78
9/30/2021	73.4
10/31/2021	67
11/30/2021	49
12/31/2021	47
1/31/2022	46
2/28/2022	45
3/31/2022	45
4/30/2022	59
5/31/2022	53
6/30/2022	57
7/31/2022	75
8/31/2022	76
9/30/2022	74
10/31/2022	62
11/30/2022	60
12/31/2022	53

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	Temperature, water deg. fahrenheit
	Daily Max
Units	**deg F**
Effluent Limit	**90**
Minimum	**34**
1/31/2023	43.1
2/28/2023	38
3/31/2023	38
4/30/2023	49
5/31/2023	53
6/30/2023	56
7/31/2023	62
8/31/2023	77.4
9/30/2023	68
10/31/2023	63
11/30/2023	52
12/31/2023	51
1/31/2024	48
2/29/2024	50
3/31/2024	52.2
4/30/2024	60.4
5/31/2024	75.4
6/30/2024	67
7/31/2024	75
8/31/2024	82.9
9/30/2024	77.2
10/31/2024	59
11/30/2024	59
12/31/2024	43
1/31/2025	34
2/28/2025	34
3/31/2025	35
4/30/2025	63.5
5/31/2025	73.8
6/30/2025	79.9
7/31/2025	86.4

Outfall - Monitoring Location - Limit Set: 001 - 1 - T

Parameter	Total Solids	TDS	pH	TRC	Aluminum	Cadmium	Copper	Lead
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	140	24	6.5	0.002	0.038	No Data	0.011	0.00034
Maximum	380	140	8.9	0.055	2.5	No Data	0.097	0.0032
Median	210	12	7.5	0.025	0.0835	No Data	Non-Detect	0.001
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	140	37	7.8	0.055	0.74	<0.0005	0.097	0.00076
6/30/2021	140	140	7.7	0.042	1.2	<0.0005	0.011	0.0016
12/31/2021	260	<4.0	6.5	0.03	0.04	<0.00025	<0.0025	0.00074
6/30/2022	220	69	8.1	0.04	1.1	<0.0005	0.014	0.001
12/31/2022	380	<5.0	7.4	0.015	0.038	<0.0005	<0.005	0.00034
6/30/2023	200	<5.0	7.6	0.002	0.045	<0.0005	<0.005	0.0012
12/31/2023	230	24	7.1	0.007	0.097	<0.0005	<0.005	0.0032
6/30/2024	190	<5.0	7.4	<0.0001	0.055	<0.0005	<0.005	0.001
12/31/2024	360	<5	7.4	0.02	0.07	<0.001	<0.004	<0.0006
6/30/2025	160	37	8.9	0.032	2.5	<0.001	0.021	0.0025

Outfall - Monitoring Location - Limit Set: 001 - 1 - T

Parameter	Nickel	Zinc	Specific Conductance	Alkalinity, total [as CaCO3]	Antimony, total recoverable	Calcium, total recoverable	Carbon, tot organic [TOC]	Chromium, total recoverable
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	um/sec	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	0.0014	No Data	250	20	No Data	5.9	2.3	0.0027
Maximum	0.0014	No Data	610	52	No Data	21	8.7	0.058
Median	Non-Detect	No Data	335	37	No Data	13	3.8	0.00135
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	<0.005	<0.02	270	44	<0.001	6.9	2.3	0.058
6/30/2021	<0.005	<0.02	293	51	<0.001	9.1	2.6	0.0098
12/31/2021	0.0014	<0.005	380	26	<0.00025	14	3.8	0.0027
6/30/2022	<0.005	<0.02	296	52	<0.001	10	2.5	0.0079
12/31/2022	<0.005	<0.02	610	36	<0.001	21	5.2	<0.002
6/30/2023	<0.005	<0.02	350	20	<0.001	13	8.2	<0.002
12/31/2023	<0.005	<0.02	320	26	<0.001	13	8.7	<0.002
6/30/2024	<0.005	<0.02	360	21	<0.001	13	4.5	<0.002
12/31/2024	<0.002	<0.02	560	38	<0.001	17	3.8	<0.004
6/30/2025	<0.002	<0.02	250	47	<0.001	5.9	3.1	0.015

Outfall - Monitoring Location - Limit Set: 001 - 1 - T

Parameter	Hardness, total [as CaCO3]	Iron, total recoverable	Magnesium, total recoverable	Manganese, total recoverable	Nitrogen, ammonia total [as N]	Phosphorus, Total	Total Organic Carbon % Removal	LC50 Static 48Hr Acute Ceriodaphnia dubia
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Min
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	100
Minimum	22	0.34	1.2	0.058	0.022	0.01	0.23	100
Maximum	89	1.9	5.8	0.32	0.2	0.21	8.7	100
Median	46	0.85	3.35	0.1065	0.0345	0.03	3.8	100
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10
Monitoring Period End Date								
12/31/2020	22	0.53	1.2	0.058	0.047	0.043	0.23	100
6/30/2021	30	0.98	1.5	0.087	0.2	0.072	2.6	100
12/31/2021	49	0.78	3.4	0.093	<0.02	0.022	3.8	100
6/30/2022	32	1.9	1.7	0.092	0.13	0.21	2.5	100
12/31/2022	89	0.34	5.4	0.12	<0.02	0.01	5.2	100
6/30/2023	50	0.87	3.6	0.17	0.083	0.07	8.2	100
12/31/2023	46	1.2	3.3	0.32	0.022	0.021	8.7	100
6/30/2024	46	0.83	3.4	0.12	0.051	0.038	4.5	100
12/31/2024	66	0.4	5.8	0.15	<0.1	<0.03	3.8	100
6/30/2025	24	1.5	1.2	0.091	<0.1	<0.05	3.1	100

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	Copper
Units	mg/L
Effluent Limit	Report
Minimum	0.00062
Maximum	0.083
Median	0.0135
No. of Violations	n/a
Monitoring Period End Date	
8/31/2020	0.011
9/30/2020	0.016
10/31/2020	0.0097
11/30/2020	0.014
12/31/2020	0.013
1/31/2021	0.031
2/28/2021	0.015
3/31/2021	0.012
4/30/2021	0.014
5/31/2021	0.011
6/30/2021	0.011
7/31/2021	0.014
8/31/2021	0.012
9/30/2021	0.013
10/31/2021	<0.0025
11/30/2021	0.023
12/31/2021	0.013
1/31/2022	0.017
2/28/2022	0.02
3/31/2022	0.018
4/30/2022	0.011
5/31/2022	0.014
6/30/2022	0.025
7/31/2022	0.016
8/31/2022	0.012
9/30/2022	<0.010
10/31/2022	<0.010
11/30/2022	<0.010
12/31/2022	0.015
1/31/2023	0.014
2/28/2023	0.015
3/31/2023	0.033
4/30/2023	<0.010

Outfall - Monitoring Location - Limit Set: 001 - 1 - A

Parameter	Copper
Units	mg/L
Effluent Limit	Report
Minimum	0.00062
5/31/2023	<0.005
6/30/2023	0.083
7/31/2023	<0.010
8/31/2023	<0.010
9/30/2023	<0.010
10/31/2023	<0.005
11/30/2023	0.014
12/31/2023	<0.010
1/31/2024	<0.015
2/29/2024	0.0023
3/31/2024	0.0023
4/30/2024	0.0017
5/31/2024	0.001
6/30/2024	<0.0006
7/31/2024	0.00073
8/31/2024	0.0011
9/30/2024	0.0013
10/31/2024	<0.0006
11/30/2024	0.00062
12/31/2024	<0.0006
1/31/2025	0.0068
2/28/2025	<0.004
3/31/2025	0.052
4/30/2025	0.0099
5/31/2025	0.021
6/30/2025	0.014
7/31/2025	0.0059

Outfall 002

Outfall - Monitoring Location - Limit Set: 002 - 1 - A

Parameter	TSS	TSS	pH	pH	Flow rate	Flow rate	Number of Events
	Monthly Avg	Daily Max	Minimum	Maximum	Monthly Avg	Daily Max	EVNT TOT
Units	mg/L	mg/L	SU	SU	MGD	MGD	#
Effluent Limit	20	30	6.5	8.3	Report	Report	Report
Minimum	0	0	0	0	0	0	0
Maximum	68	68	7.6	7.8	0.065	0.065	1
Median	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
No. of Violations	2	1	59	0	N/A	N/A	N/A
Monitoring Period End Date							
8/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2021	23	23	6.5	7	0.002	0.002	1
8/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C

Outfall - Monitoring Location - Limit Set: 002 - 1 - A

Parameter	TSS	TSS	pH	pH	Flow rate	Flow rate	Number of Events
	Monthly Avg	Daily Max	Minimum	Maximum	Monthly Avg	Daily Max	EVNT TOT
Units	mg/L	mg/L	SU	SU	MGD	MGD	#
Effluent Limit	20	30	6.5	8.3	Report	Report	Report
Minimum	0	0	0	0	0	0	0
3/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/29/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2025	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2025	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2025	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2025	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2025	68	68	7.6	7.8	0.065	0.065	1
6/30/2025	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2025	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C

Outfall - Monitoring Location - Limit Set: 002 - 1 - T

Parameter	Total Solids	TDS	pH	TRC	Aluminum	Cadmium	Copper	Lead	Nickel
1/10/2016	320	370		0.07	0.099	<0.0001	0.0044	0.0015	0.0019
4/6/2017	540	490		<0.05	8.2	0.00061	0.032	0.034	<0.005
10/30/2017	670	150		<0.05	4.6	0.0006	0.023	0.049	<0.005
1/23/2018	490	450		0.046	5.2	<0.0005	0.018	0.026	<0.005

Outfall - Monitoring Location - Limit Set: 002 - 1 - T

Parameter	Zinc	Specific Conductance	Alkalinity, total [as CaCO3]	Antimony, total recoverable	Calcium, total recoverable	Carbon, tot organic [TOC]	Chromium, total recoverable	Hardness, total [as CaCO3]	Iron, total recoverable
1/10/2016	0.12	460	97	<0.001	24	1.7	<0.002		0.1
4/6/2017	0.15	500	53	<0.001	8.8	<1.0	0.0055	29	7
10/30/2017	0.18	130	50	<0.001	13	2.6	0.0036	40	5
1/23/2018	0.16	570	58	<0.001	14	1.7	0.0022	44	5.8

Outfall - Monitoring Location - Limit Set: 002 - 1 - T

Parameter	Magnesium, total recoverable	Manganese, total recoverable	Nitrogen, ammonia total [as N]	Phosphorus, Total	Total Organic Carbon % Removal	LC50 Static 48Hr Acute Ceriodaphnia dubia
1/10/2016	0.8	0.16	<0.02	0.2	1.7	>100%
4/6/2017	1.7	0.36	<0.02	0.67	<1.0	72.50%
10/30/2017	1.5	0.36	<0.02	1.1	2.6	>100%
1/23/2018	2.3	0.24	<0.02	0.18	1.7	>100%

Outfall - Monitoring Location - Limit Set: 002 - 1 - T

Parameter	Total Solids	TDS	pH	TRC	Aluminum	Cadmium	Copper	Lead
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Maximum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Median	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2025	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F

Outfall - Monitoring Location - Limit Set: 002 - 1 - T

Parameter	Nickel	Zinc	Specific Conductance	Alkalinity, total [as CaCO3]	Antimony, total recoverable	Calcium, total recoverable	Carbon, tot organic [TOC]	Chromium, total recoverable
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	um/sec	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Maximum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Median	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2025	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F

Outfall - Monitoring Location - Limit Set: 002 - 1 - T

Parameter	Hardness, total [as CaCO3]	Iron, total recoverable	Magnesium, total recoverable	Manganese, total recoverable	Nitrogen, ammonia total [as N]	Phosphorus, Total	Total Organic Carbon % Removal	LC50 Static 48Hr Acute Ceriodaphnia dubia
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Min
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Maximum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Median	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2025	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F

Outfall 003

Parameter	Flow	Flow	TSS	TSS	pH	pH	Flow rate	Oil & Grease
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	**gal/mo**	**gal/mo**	**mg/L**	**mg/L**	**SU**	**SU**	**gal/min**	**mg/L**
Effluent Limit	**Report**	**Report**	**10**	**15**	**6.5**	**8.3**	**20**	**15**
Minimum	**2344**	**1197**	**0**	**1**	**6.5**	**6.5**	**20**	**1.9**
Maximum	**48823**	**30521**	**14.35**	**120**	**7.3**	**7.3**	**20**	**6.3**
Median	**15559.5**	**6982**	**5**	**5**	**6.6**	**6.6**	**20**	**2.1**
No. of Violations	**N/A**	**N/A**	**1**	**3**	**0**	**0**	**0**	**0**
Monitoring Period End Date								
8/31/2020	19350	9725	5.4	5.4	6.8	6.8	20	<4
9/30/2020	7780	4039	10	10	6.5	6.5	20	<4.8
10/31/2020	10672	5486	6.4	6.4	6.5	6.5	20	<5.3
11/30/2020	25135	8029	< 2.6	2.6	6.5	6.5	20	<2.6
12/31/2020	30620	10572	1	1	6.6	6.8	20	<2.6
1/31/2021	10473	7131	8	12	6.5	6.6	20	<2.6
2/28/2021	4139	16706	4	4	6.6	6.6	20	<5.4
3/31/2021	10323	3790	4	4	6.7	6.7	20	<5.2
4/30/2021	18701	6683	10	10	6.7	6.7	20	<5.3
5/31/2021	21644	8428	4	4	6.7	6.7	20	<5.2
6/30/2021	13216	3990	4	4	6.6	6.6	20	<5.3
7/31/2021	48823	14762	4.4	4.4	6.6	6.6	20	<4.7
8/31/2021	21993	7082	4	4	6.5	6.5	20	<4.7
9/30/2021	29772	11520	7.5	14	7	7	20	<4.8
10/31/2021	25833	7680	4	4	6.5	6.5	20	<5.2
11/30/2021	9525	5336	3.2	3.2	6.9	6.9	20	<2.1
12/31/2021	11919	2294	14.35	27	6.5	6.7	20	2.6
1/31/2022	11819	5785	10	10	6.5	6.5	20	<1.9
2/28/2022	23389	6882	4	4	6.7	6.7	20	<2.1
3/31/2022	12667	2942	9	9	6.5	6.5	20	<2.1
4/30/2022	15011	5536	8.2	8.2	6.6	6.6	20	<2
5/31/2022	7580	1945	5.3	5.3	6.6	6.6	20	<2
6/30/2022	14811	4488	10	10	6.5	6.5	20	2.7
7/31/2022	5137	1496	10	10	6.7	6.7	20	<2.1
8/31/2022	11520	4389	5	5	6.5	6.5	20	<2.1
9/30/2022	21344	8628	9.1	26	6.6	6.9	20	3.4
10/31/2022	21694	5336	5	5	6.7	6.7	20	<2
11/30/2022	17455	4638	5	5	6.6	6.6	20	<2
12/31/2022	23539	8129	5	5	6.6	6.8	20	<2
1/31/2023	5037	30521	6.5	6.5	6.7	6.7	20	6.3
2/28/2023	3042	7879	5	5	6.6	6.6	20	4.7

Parameter	Flow	Flow	TSS	TSS	pH	pH	Flow rate	Oil & Grease
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	**gal/mo**	**gal/mo**	**mg/L**	**mg/L**	**SU**	**SU**	**gal/min**	**mg/L**
Effluent Limit	**Report**	**Report**	**10**	**15**	**6.5**	**8.3**	**20**	**15**
Minimum	**2344**	**1197**	**0**	**1**	**6.5**	**6.5**	**20**	**1.9**
3/31/2023	28027	15759	5	5	6.6	6.6	20	3.8
4/30/2023	16657	8727	5	5	6.7	6.7	20	<2.1
5/31/2023	13116	5984	5	5	6.6	6.6	20	<2
6/30/2023	23738	11420	5	5	6.6	6.6	20	<1.9
7/31/2023	39472	10772	5	5	6.6	6.6	20	< 2
8/31/2023	29074	8129	5	5	6.6	6.6	20	<2.1
9/30/2023	29972	7897	8	11	6.6	6.8	20	<2.1
10/31/2023	10127	4937	5	5	6.7	6.7	20	<2
11/30/2023	10373	5835	5	5	6.7	6.7	20	<1.9
12/31/2023	36655	13415	5	5	6.8	6.8	20	3.5
1/31/2024	38649	10722	5	5	6.7	6.7	20	2.8
2/29/2024	5635	2095	6.75	7.5	6.9	7	20	<2
3/31/2024	45881	12767	5	5	6.6	6.6	20	<2
4/30/2024	21893	6084	5	5	6.6	6.6	20	<2
5/31/2024	27229	5386	5	5	6.8	6.8	20	<1.9
6/30/2024	22691	5786	5	5	6.7	6.7	20	2.4
7/31/2024	3541	10124	9.08	120	6.6	6.9	20	<1.9
8/31/2024	4339	1696	5	5	6.6	6.6	20	3.1
9/30/2024	7580	4688	5	5	6.6	6.6	20	<2
10/31/2024	2344	1197	5	5	6.6	6.6	20	<2
11/30/2024	14662	4289	5	5	6.6	6.6	20	<5
12/31/2024	21993	7331	10	10	6.6	6.6	20	<4.9
1/31/2025	8727	3840	10	10	6.5	6.5	20	2.6
2/28/2025	13656	9525	5	5	6.6	6.6	20	<2
3/31/2025	9625	23788	10	10	6.7	6.7	20	<1.9
4/30/2025	16108	2444	5	5	6.6	6.6	20	2.7
5/31/2025	35557	12767	10	10	7.3	7.3	20	<2
6/30/2025	9625	7630	10	10	7	7	20	<2
7/31/2025	29623	15360	5	5	6.6	6.6	20	<2

Parameter	Number of Events
	EVNT TOT
Units	#
Effluent Limit	Report
Minimum	4
Maximum	21
Median	10.5
No. of Violations	N/A
Monitoring Period End Date	
8/31/2020	10
9/30/2020	6
10/31/2020	6
11/30/2020	9
12/31/2020	10
1/31/2021	9
2/28/2021	12
3/31/2021	8
4/30/2021	11
5/31/2021	10
6/30/2021	10
7/31/2021	21
8/31/2021	9
9/30/2021	15
10/31/2021	11
11/30/2021	8
12/31/2021	12
1/31/2022	12
2/28/2022	11
3/31/2022	15
4/30/2022	13
5/31/2022	9
6/30/2022	8
7/31/2022	8
8/31/2022	10
9/30/2022	11
10/31/2022	12
11/30/2022	13
12/31/2022	9
1/31/2023	19
2/28/2023	8

Parameter	Number of Events
	EVNT TOT
Units	#
Effluent Limit	Report
Minimum	4
3/31/2023	13
4/30/2023	9
5/31/2023	9
6/30/2023	16
7/31/2023	11
8/31/2023	11
9/30/2023	13
10/31/2023	6
11/30/2023	8
12/31/2023	13
1/31/2024	12
2/29/2024	8
3/31/2024	15
4/30/2024	12
5/31/2024	13
6/30/2024	13
7/31/2024	12
8/31/2024	6
9/30/2024	6
10/31/2024	4
11/30/2024	6
12/31/2024	13
1/31/2025	6
2/28/2025	5
3/31/2025	9
4/30/2025	13
5/31/2025	15
6/30/2025	8
7/31/2025	12

Outfall - Monitoring Location - Limit Set: 003 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
Maximum	0.46	0.3
Median	Non-Detect	Non-Detect
No. of Violations	N/A	N/A
Monitoring Period End Date		
8/31/2020	NODI: 9	NODI: 9
9/30/2020	NODI: 9	NODI: 9
10/31/2020	0.11	0.06
11/30/2020	NODI: 9	NODI: 9
12/31/2020	NODI: 9	NODI: 9
1/31/2021	NODI: 9	NODI: 9
2/28/2021	NODI: 9	NODI: 9
3/31/2021	NODI: 9	NODI: 9
4/30/2021	0.08	0.038
5/31/2021	NODI: 9	NODI: 9
6/30/2021	NODI: 9	NODI: 9
7/31/2021	NODI: 9	NODI: 9
8/31/2021	NODI: 9	NODI: 9
9/30/2021	NODI: 9	NODI: 9
10/31/2021	<0.02	<0.01
11/30/2021	NODI: 9	NODI: 9
12/31/2021	NODI: 9	NODI: 9
1/31/2022	NODI: 9	NODI: 9
2/28/2022	NODI: 9	NODI: 9
3/31/2022	NODI: 9	NODI: 9
4/30/2022	0.46	0.3
5/31/2022	NODI: 9	NODI: 9
6/30/2022	NODI: 9	NODI: 9
7/31/2022	NODI: 9	NODI: 9
8/31/2022	NODI: 9	NODI: 9
9/30/2022	NODI: 9	NODI: 9
10/31/2022	0.19	0.04
11/30/2022	NODI: 9	NODI: 9
12/31/2022	NODI: 9	NODI: 9
1/31/2023	NODI: 9	NODI: 9

Outfall - Monitoring Location - Limit Set: 003 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
2/28/2023	NODI: 9	NODI: 9
3/31/2023	NODI: 9	NODI: 9
4/30/2023	<0.05	0.03
5/31/2023	NODI: 9	NODI: 9
6/30/2023	NODI: 9	NODI: 9
7/31/2023	NODI: 9	NODI: 9
8/31/2023	NODI: 9	NODI: 9
9/30/2023	NODI: 9	NODI: 9
10/31/2023	0.09	0.033
11/30/2023	NODI: 9	NODI: 9
12/31/2023	NODI: 9	NODI: 9
1/31/2024	NODI: 9	NODI: 9
2/29/2024	NODI: 9	NODI: 9
3/31/2024	NODI: 9	NODI: 9
4/30/2024	<0.1	<0.03
5/31/2024	NODI: 9	NODI: 9
6/30/2024	NODI: 9	NODI: 9
7/31/2024	NODI: 9	NODI: 9
8/31/2024	NODI: 9	NODI: 9
9/30/2024	NODI: 9	NODI: 9
10/31/2024	<0.1	<0.03
11/30/2024	NODI: 9	NODI: 9
12/31/2024	NODI: 9	NODI: 9
1/31/2025	NODI: 9	NODI: 9
2/28/2025	NODI: 9	NODI: 9
3/31/2025	NODI: 9	NODI: 9
4/30/2025	0.13	<0.1
5/31/2025	NODI: 9	NODI: 9

Outfall - Monitoring Location - Limit Set: 003 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
Maximum	0.46	0.3
Median	Non-Detect	Non-Detect
No. of Violations	N/A	N/A
Monitoring Period End Date		
8/31/2020	NODI: 9	NODI: 9
9/30/2020	NODI: 9	NODI: 9
10/31/2020	0.11	0.06
11/30/2020	NODI: 9	NODI: 9
12/31/2020	NODI: 9	NODI: 9
1/31/2021	NODI: 9	NODI: 9
2/28/2021	NODI: 9	NODI: 9
3/31/2021	NODI: 9	NODI: 9
4/30/2021	0.08	0.038
5/31/2021	NODI: 9	NODI: 9
6/30/2021	NODI: 9	NODI: 9
7/31/2021	NODI: 9	NODI: 9
8/31/2021	NODI: 9	NODI: 9
9/30/2021	NODI: 9	NODI: 9
10/31/2021	0	0
11/30/2021	NODI: 9	NODI: 9
12/31/2021	NODI: 9	NODI: 9
1/31/2022	NODI: 9	NODI: 9
2/28/2022	NODI: 9	NODI: 9
3/31/2022	NODI: 9	NODI: 9
4/30/2022	0.46	0.3
5/31/2022	NODI: 9	NODI: 9
6/30/2022	NODI: 9	NODI: 9
7/31/2022	NODI: 9	NODI: 9
8/31/2022	NODI: 9	NODI: 9
9/30/2022	NODI: 9	NODI: 9
10/31/2022	0.19	0.04
11/30/2022	NODI: 9	NODI: 9
12/31/2022	NODI: 9	NODI: 9
1/31/2023	NODI: 9	NODI: 9

Outfall - Monitoring Location - Limit Set: 003 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
2/28/2023	NODI: 9	NODI: 9
3/31/2023	NODI: 9	NODI: 9
4/30/2023	0	0.03
5/31/2023	NODI: 9	NODI: 9
6/30/2023	NODI: 9	NODI: 9
7/31/2023	NODI: 9	NODI: 9
8/31/2023	NODI: 9	NODI: 9
9/30/2023	NODI: 9	NODI: 9
10/31/2023	0.09	0.033
11/30/2023	NODI: 9	NODI: 9
12/31/2023	NODI: 9	NODI: 9
1/31/2024	NODI: 9	NODI: 9
2/29/2024	NODI: 9	NODI: 9
3/31/2024	NODI: 9	NODI: 9
4/30/2024	0	<0.03
5/31/2024	NODI: 9	NODI: 9
6/30/2024	NODI: 9	NODI: 9
7/31/2024	NODI: 9	NODI: 9
8/31/2024	NODI: 9	NODI: 9
9/30/2024	NODI: 9	NODI: 9
10/31/2024	0	0
11/30/2024	NODI: 9	NODI: 9
12/31/2024	NODI: 9	NODI: 9
1/31/2025	NODI: 9	NODI: 9
2/28/2025	NODI: 9	NODI: 9
3/31/2025	NODI: 9	NODI: 9
4/30/2025	0.13	0
5/31/2025	NODI: 9	NODI: 9

Outfall 004

monitoring Period End Date

Parameter	Flow	Flow	TSS	TSS	pH	pH	Flow rate	Oil & Grease
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	**gal/mo**	**gal/mo**	**mg/L**	**mg/L**	**SU**	**SU**	**gal/min**	**mg/L**
Effluent Limit	**Report**	**Report**	**10**	**15**	**6.5**	**8.3**	**100**	**15**
Minimum	**4395**	**2244**	**2.6**	**2.6**	**6.5**	**6.5**	**80**	**0.01**
Maximum	**91543**	**57226**	**10**	**32**	**7.4**	**7.4**	**80**	**11**
Median	**29174**	**11969**	**5**	**5**	**6.6**	**6.7**	**80**	**3.15**
No. of Violations	**N/A**	**N/A**	**0**	**3**	**0**	**0**	**0**	**0**
Monitoring Period End Date								
8/31/2020	36281	18281	5.3	5.3	7	7	80	<4
9/30/2020	14587	7574	4	4	6.5	6.5	80	<4.7
10/31/2020	20010	10286	10	10	7	7	80	<4.8
11/30/2020	47127	15055	4	4	6.5	6.5	80	<2.8
12/31/2020	57413	19823	6	6	6.6	6.8	80	2.7
1/31/2021	13371	19636	6.4	6.4	6.5	6.5	80	3
2/28/2021	7761	31325	4	4	6.7	6.7	80	<5.1
3/31/2021	19356	7106	4	4	6.6	6.6	80	<5.1
4/30/2021	35065	12530	7.5	11	7	7	80	<5.1
5/31/2021	40803	15803	4	4	6.6	6.6	80	<5.2
6/30/2021	24779	7481	4	4	6.5	6.5	80	<5.2
7/31/2021	91543	27678	7.5	11	6.6	6.6	80	<4.7
8/31/2021	41236	7082	9.6	9.6	6.6	6.6	80	<4.7
9/30/2021	55823	21600	7.7	32	6.5	7	80	<4.8
10/31/2021	48436	14400	4	4	6.5	6.5	80	<5.4
11/30/2021	17860	10005	2.6	2.6	6.8	6.8	80	<2
12/31/2021	22348	4301	3.7	3.7	6.6	6.6	80	3.5
1/31/2022	22161	10847	9.5	9.5	6.5	6.5	80	3.7
2/28/2022	43855	12904	7.15	11	6.6	6.6	80	4
3/31/2022	23751	5517	8.5	13	6.5	6.5	80	<2.1
4/30/2022	28145	10379	9	9	6.6	6.6	80	<2
5/31/2022	14213	3647	5.3	5.3	6.7	6.7	80	2.5
6/30/2022	27771	8416	6.36	**20**	6.5	6.9	80	3.6
7/31/2022	9631	2805	7.3	7.3	6.6	6.6	80	<2.1
8/31/2022	21600	8229	5	5	6.6	6.6	80	4.9
9/30/2022	40021	16177	10	10	6.5	6.5	80	7.3
10/31/2022	40675	10005	8	8	6.6	6.6	80	6.4
11/30/2022	33429	8696	9	**25**	6.7	6.8	80	2.1
12/31/2022	44135	15242	5	5	6.6	6.8	80	2.7
1/31/2023	9444	57226	5	5	6.6	6.6	80	4.3
2/28/2023	5704	17774	8	11	6.8	6.8	80	5

monitoring Period End Date

Parameter	Flow	Flow	TSS	TSS	pH	pH	Flow rate	Oil & Grease
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	gal/mo	gal/mo	mg/L	mg/L	SU	SU	gal/min	mg/L
Effluent Limit	Report	Report	10	15	6.5	8.3	100	15
Minimum	4395	2244	2.6	2.6	6.5	6.5	80	0.01
3/31/2023	52551	29548	5	5	6.6	6.6	80	5.1
4/30/2023	31231	16364	5	5	6.6	6.6	80	<2.1
5/31/2023	24592	11221	7	7	6.7	6.7	80	3.5
6/30/2023	44509	21413	5	5	6.7	6.7	80	3
7/31/2023	74010	20197	5	5	6.7	6.7	80	11
8/31/2023	54514	15242	5	5	6.5	6.5	80	<1.9
9/30/2023	56197	14774	6	6	6.7	6.7	80	3.6
10/31/2023	18982	9257	5	5	6.6	6.6	80	<2
11/30/2023	19449	10490	5	5	6.7	6.7	80	<1.9
12/31/2023	68727	25153	5	5	6.7	6.7	80	2.7
1/31/2024	72468	20104	5	5	6.6	6.6	80	5.6
2/29/2024	10566	3927	5.75	6.5	6.8	7	80	<2.3
3/31/2024	86026	23938	5	5	6.7	6.7	80	2.1
4/30/2024	41049	11408	5	5	6.7	6.7	80	2.3
5/31/2024	51055	10099	9.5	9.5	6.8	6.8	80	<2.0
6/30/2024	42545	10286	5	5	6.6	6.6	80	5.8
7/31/2024	18982	6639	5	5	6.8	6.8	80	<1.9
8/31/2024	8135	3179	5	5	6.6	6.7	80	5
9/30/2024	14213	8790	5	5	6.6	6.6	80	2.7
10/31/2024	4395	2244	5	5	6.6	6.6	80	<1.9
11/30/2024	27491	8042	5	5	6.7	6.7	80	<5
12/31/2024	41236	13745	5	5	6.6	6.6	80	5.5
1/31/2025	16364	7200	5	5	6.7	6.7	80	<1.9
2/28/2025	25434	17860	5	5	6.7	6.7	80	2.3
3/31/2025	18047	44603	5	5	6.6	6.6	80	2.2
4/30/2025	30203	4582	5	5	6.7	6.7	80	2.5
5/31/2025	66670	22938	10	10	7.4	7.4	80	2.2
6/30/2025	18421	14306	5	5	6.8	6.8	80	3.3
7/31/2025	55543	28800	5	5	6.8	6.8	80	<2

monitoring Period End Date

Parameter	Number of Events
	EVNT TOT
Units	#
Effluent Limit	Report
Minimum	4
Maximum	21
Median	10.5
No. of Violations	N/A
Monitoring Period End Date	
8/31/2020	10
9/30/2020	6
10/31/2020	6
11/30/2020	9
12/31/2020	10
1/31/2021	9
2/28/2021	12
3/31/2021	8
4/30/2021	11
5/31/2021	10
6/30/2021	10
7/31/2021	21
8/31/2021	9
9/30/2021	15
10/31/2021	11
11/30/2021	8
12/31/2021	12
1/31/2022	12
2/28/2022	11
3/31/2022	15
4/30/2022	13
5/31/2022	9
6/30/2022	8
7/31/2022	8
8/31/2022	10
9/30/2022	11
10/31/2022	12
11/30/2022	14
12/31/2022	9
1/31/2023	19
2/28/2023	8

monitoring Period End Date

Parameter	Number of Events
	EVNT TOT
Units	#
Effluent Limit	Report
Minimum	4
3/31/2023	13
4/30/2023	9
5/31/2023	9
6/30/2023	16
7/31/2023	11
8/31/2023	11
9/30/2023	13
10/31/2023	6
11/30/2023	8
12/31/2023	13
1/31/2024	12
2/29/2024	8
3/31/2024	15
4/30/2024	12
5/31/2024	13
6/30/2024	13
7/31/2024	12
8/31/2024	6
9/30/2024	6
10/31/2024	4
11/30/2024	6
12/31/2024	13
1/31/2025	6
2/28/2025	5
3/31/2025	9
4/30/2025	13
5/31/2025	15
6/30/2025	9
7/31/2025	12

Outfall - Monitoring Location - Limit Set: 004 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
Maximum	0.97	3.41
Median	Non-Detect	Non-Detect
No. of Violations	N/A	N/A
Monitoring Period End Date		
8/31/2020	NODI: 9	NODI: 9
9/30/2020	NODI: 9	NODI: 9
10/31/2020	0.39	0.54
11/30/2020	NODI: 9	NODI: 9
12/31/2020	NODI: 9	NODI: 9
1/31/2021	NODI: 9	NODI: 9
2/28/2021	NODI: 9	NODI: 9
3/31/2021	NODI: 9	NODI: 9
4/30/2021	0.16	0.41
5/31/2021	NODI: 9	NODI: 9
6/30/2021	NODI: 9	NODI: 9
7/31/2021	NODI: 9	NODI: 9
8/31/2021	NODI: 9	NODI: 9
9/30/2021	NODI: 9	NODI: 9
10/31/2021	0.06	1.5
11/30/2021	NODI: 9	NODI: 9
12/31/2021	NODI: 9	NODI: 9
1/31/2022	NODI: 9	NODI: 9
2/28/2022	NODI: 9	NODI: 9
3/31/2022	NODI: 9	NODI: 9
4/30/2022	0.97	3.41
5/31/2022	NODI: 9	NODI: 9
6/30/2022	NODI: 9	NODI: 9
7/31/2022	NODI: 9	NODI: 9
8/31/2022	NODI: 9	NODI: 9
9/30/2022	NODI: 9	NODI: 9
10/31/2022	0.62	0.81
11/30/2022	NODI: 9	NODI: 9
12/31/2022	NODI: 9	NODI: 9
1/31/2023	NODI: 9	NODI: 9

Outfall - Monitoring Location - Limit Set: 004 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
2/28/2023	NODI: 9	NODI: 9
3/31/2023	NODI: 9	NODI: 9
4/30/2023	0.22	0.99
5/31/2023	NODI: 9	NODI: 9
6/30/2023	NODI: 9	NODI: 9
7/31/2023	NODI: 9	NODI: 9
8/31/2023	NODI: 9	NODI: 9
9/30/2023	NODI: 9	NODI: 9
10/31/2023	0.06	0.38
11/30/2023	NODI: 9	NODI: 9
12/31/2023	NODI: 9	NODI: 9
1/31/2024	NODI: 9	NODI: 9
2/29/2024	NODI: 9	NODI: 9
3/31/2024	NODI: 9	NODI: 9
4/30/2024	<0.1	1.3
5/31/2024	NODI: 9	NODI: 9
6/30/2024	NODI: 9	NODI: 9
7/31/2024	NODI: 9	NODI: 9
8/31/2024	NODI: 9	NODI: 9
9/30/2024	NODI: 9	NODI: 9
10/31/2024	<0.1	0.056
11/30/2024	NODI: 9	NODI: 9
12/31/2024	NODI: 9	NODI: 9
1/31/2025	NODI: 9	NODI: 9
2/28/2025	NODI: 9	NODI: 9
3/31/2025	NODI: 9	NODI: 9
4/30/2025	0.35	2.1
5/31/2025	NODI: 9	NODI: 9

Outfall - Monitoring Location - Limit Set: 004 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
Maximum	0.97	3.41
Median	Non-Detect	Non-Detect
No. of Violations	N/A	N/A
Monitoring Period End Date		
8/31/2020	NODI: 9	NODI: 9
9/30/2020	NODI: 9	NODI: 9
10/31/2020	0.39	0.54
11/30/2020	NODI: 9	NODI: 9
12/31/2020	NODI: 9	NODI: 9
1/31/2021	NODI: 9	NODI: 9
2/28/2021	NODI: 9	NODI: 9
3/31/2021	NODI: 9	NODI: 9
4/30/2021	0.16	0.41
5/31/2021	NODI: 9	NODI: 9
6/30/2021	NODI: 9	NODI: 9
7/31/2021	NODI: 9	NODI: 9
8/31/2021	NODI: 9	NODI: 9
9/30/2021	NODI: 9	NODI: 9
10/31/2021	0.06	1.5
11/30/2021	NODI: 9	NODI: 9
12/31/2021	NODI: 9	NODI: 9
1/31/2022	NODI: 9	NODI: 9
2/28/2022	NODI: 9	NODI: 9
3/31/2022	NODI: 9	NODI: 9
4/30/2022	0.97	3.41
5/31/2022	NODI: 9	NODI: 9
6/30/2022	NODI: 9	NODI: 9
7/31/2022	NODI: 9	NODI: 9
8/31/2022	NODI: 9	NODI: 9
9/30/2022	NODI: 9	NODI: 9
10/31/2022	0.62	0.81
11/30/2022	NODI: 9	NODI: 9
12/31/2022	NODI: 9	NODI: 9
1/31/2023	NODI: 9	NODI: 9

Outfall - Monitoring Location - Limit Set: 004 - 1 - Y

Parameter	Ammonia nitrogen, total, [as N] 30 day	Phosphorus, total [as P]
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	0	0
2/28/2023	NODI: 9	NODI: 9
3/31/2023	NODI: 9	NODI: 9
4/30/2023	0.22	0.99
5/31/2023	NODI: 9	NODI: 9
6/30/2023	NODI: 9	NODI: 9
7/31/2023	NODI: 9	NODI: 9
8/31/2023	NODI: 9	NODI: 9
9/30/2023	NODI: 9	NODI: 9
10/31/2023	0.06	0.38
11/30/2023	NODI: 9	NODI: 9
12/31/2023	NODI: 9	NODI: 9
1/31/2024	NODI: 9	NODI: 9
2/29/2024	NODI: 9	NODI: 9
3/31/2024	NODI: 9	NODI: 9
4/30/2024	0	1.3
5/31/2024	NODI: 9	NODI: 9
6/30/2024	NODI: 9	NODI: 9
7/31/2024	NODI: 9	NODI: 9
8/31/2024	NODI: 9	NODI: 9
9/30/2024	NODI: 9	NODI: 9
10/31/2024	0	0.056
11/30/2024	NODI: 9	NODI: 9
12/31/2024	NODI: 9	NODI: 9
1/31/2025	NODI: 9	NODI: 9
2/28/2025	NODI: 9	NODI: 9
3/31/2025	NODI: 9	NODI: 9
4/30/2025	0.35	2.1
5/31/2025	NODI: 9	NODI: 9

Appendix B: Ambient Monitoring Data

Outfall 001

Outfall - Monitoring Location - Limit Set: 001 - RW - T

Parameter	Alkalinity, total [as CaCO3]	Antimony, total recoverable	Calcium, total recoverable	Carbon, tot organic [TOC]	Chromium, total recoverable	Hardness, total [as CaCO3]	Iron, total recoverable	Magnesium, total recoverable
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	18	No Data	13	3.6	0.0029	46	0.32	3.2
Maximum	48	No Data	23	9.1	0.0029	86	1.5	6.7
Median	29	No Data	14	6.8	Non-Detect	56	0.89	3.65
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	48	<0.001	23	3.6	<0.002	86	0.45	6.7
6/30/2021	28	<0.001	14	9	<0.002	56	0.91	3.8
12/31/2021	26	<0.012	14	9.1	0.0029	49	0.9	3.4
6/30/2022	30	<0.001	18	5.2	<0.002	63	0.88	4.4
12/31/2022	36	<0.001	22	5.2	<0.002	83	0.32	5.6
6/30/2023	18	<0.001	14	8.4	<0.002	46	1.4	3.5
12/31/2023	20	<0.001	13	8.8	<0.002	46	1	3.4
6/30/2024	19	<0.001	13	4.4	<0.002	46	0.86	3.5
12/31/2024	45	<0.001	17	4.1	<0.004	66	0.62	5.9
6/30/2025	32	<0.001	13	8.6	<0.004	56	1.5	3.2

Outfall - Monitoring Location - Limit Set: 001 - RW - T

Parameter	pH	Aluminum	Cadmium	Copper	Lead	Nickel	Zinc	Specific Conductance
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	um/sec
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	6.9	0.017	No Data	No Data	0.00039	No Data	No Data	300
Maximum	7.5	0.097	No Data	No Data	0.0043	No Data	No Data	610
Median	7.25	0.0335	No Data	No Data	0.00105	No Data	No Data	446
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	7.5	0.017	<0.0005	<0.005	0.00039	<0.005	<0.02	584
6/30/2021	7.2	0.041	<0.0005	<0.005	0.001	<0.005	<0.02	402
12/31/2021	6.9	0.03	<0.00025	<0.0025	0.00088	<0.001	<0.005	380
6/30/2022	7.5	0.029	<0.0005	<0.005	0.001	<0.005	<0.02	503
12/31/2022	7.3	<0.01	<0.0005	<0.005	<0.0003	<0.005	<0.02	610
6/30/2023	7.2	0.097	<0.0005	<0.005	0.0043	<0.005	<0.02	360
12/31/2023	7.3	0.058	<0.0005	<0.005	0.0015	<0.005	<0.02	300
6/30/2024	7.4	0.037	<0.0005	<0.005	0.0011	<0.005	<0.02	320
12/31/2024	7	0.022	<0.001	<0.004	0.0017	<0.002	<0.02	570
6/30/2025	7	0.078	<0.001	<0.004	0.0021	<0.002	<0.02	490

Outfall - Monitoring Location - Limit Set: 001 - RW - T

Parameter	Manganese, total recoverable	Nitrogen, ammonia total [as N]	Phosphorus, Total	Total Organic Carbon % Removal
	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report
Minimum	0.065	0.02	0.012	3.6
Maximum	0.44	0.11	0.094	9.1
Median	0.16	0.0295	0.015	6.8
No. of Violations	N/A	N/A	N/A	N/A
Monitoring Period End Date				
12/31/2020	0.2	0.042	<0.01	3.6
6/30/2021	0.14	0.023	0.013	9
12/31/2021	0.065	0.02	0.028	9.1
6/30/2022	0.15	0.036	0.051	5.2
12/31/2022	0.12	<0.02	0.012	5.2
6/30/2023	0.44	0.094	0.094	8.4
12/31/2023	0.17	0.02	0.017	8.8
6/30/2024	0.13	0.066	0.018	4.4
12/31/2024	0.19	0.11	<0.03	4.1
6/30/2025	0.4	<0.1	<0.05	8.6

Outfall 002

Outfall - Monitoring Location - Limit Set: 002 - RW - T

Parameter	pH	Aluminum	Cadmium	Copper	Lead	Nickel	Zinc	Specific Conductance
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	um/sec
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Maximum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Median	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2025	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F

Outfall - Monitoring Location - Limit Set: 002 - RW - T

Parameter	Alkalinity, total [as CaCO3]	Antimony, total recoverable	Calcium, total recoverable	Carbon, tot organic [TOC]	Chromium, total recoverable	Hardness, total [as CaCO3]	Iron, total recoverable	Magnesium, total recoverable
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Maximum	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Median	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9	NODI: 9
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2025	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F	NODI: F

Outfall - Monitoring Location - Limit Set: 002 - RW - T

Parameter	Manganese, total recoverable	Nitrogen, ammonia total [as N]	Phosphorus, Total	Total Organic Carbon % Removal
	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report
Minimum	No Data	No Data	No Data	No Data
Maximum	No Data	No Data	No Data	No Data
Median	No Data	No Data	No Data	No Data
No. of Violations	N/A	N/A	N/A	N/A
Monitoring Period End Date				
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2021	NODI: 9	NODI: 9	NODI: 9	NODI: 9
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2024	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2025	NODI: F	NODI: F	NODI: F	NODI: F

Outfall - Monitoring Location - Limit Set: 002 - RW - T

Parameter	pH	Aluminum	Cadmium	Copper	Lead	Nickel	Zinc	Specific Conductance	Alkalinity, total [as CaCO3]
1/10/2016	7.3	0.077	<0.0001	0.003	0.0036	0.0018	<0.020	500	28
4/6/2017	6.9	0.083	<0.0005	<0.005	0.0012	<0.005	<0.020	350	14
10/30/2017	7.4	0.35	<0.0005	0.0072	0.015	<0.005	0.023	470	31
1/23/2018	6.4	0.17	<0.0005	<0.005	0.0029	<0.005	0.2	460	22

Outfall - Monitoring Location - Limit Set: 002 - RW - T

Parameter	Antimony, total recoverable	Calcium, total recoverable	Carbon, tot organic [TOC]	Chromium, total recoverable	Hardness, total [as CaCO3]	Iron, total recoverable	Magnesium, total recoverable	Manganese, total recoverable	Nitrogen, ammonia total [as N]
1/10/2016	<0.001	18	7.4	<0.002	63	0.84	4.6	0.27	0.12
4/6/2017	<0.001	11	7.5	<0.002	41	0.26	3.1	0.46	<0.02
10/30/2017	<0.001	18	7.3	0.0022	65	3.6	4.8	0.75	<0.02
1/23/2018	<0.001	17	5.7	<0.002	62	0.69	4.6	0.15	0.062

Outfall - Monitoring Location - Limit Set: 002 - RW - T

Parameter	Phosphorus, Total	Total Organic Carbon % Removal
1/10/2016	<0.01	
4/6/2017	0.024	
10/30/2017	0.017	
1/23/2018	0.016	

Appendix C: Temperature Calculations

EPA used the permitted maximum effluent temperature and flow rate and maximum allowable ambient temperature in a steady-state mixing equation to determine if the discharge has reasonable potential to cause or contribute to a violation of WQC under critical conditions. EPA used the Massachusetts WQC for maximum temperature and one-third of the receiving water's 7Q10 to determine reasonable potential to be conservative.

$$Tr = [TdQd + TsQs] / Qr$$

Where:

Tr	=	Downstream temperature (°F)
Td	=	Effluent temperature (°F) = 90° F (permitted daily maximum)
Qd	=	Effluent flow rate (cfs) = 0.062 cfs (maximum permitted flow rate, 0.04 MGD * 1.55 to convert to cfs)
Ts	=	Temperature of the receiving water (°F) = 82.8° F (maximum allowable, which exceeds maximum recorded)[1]
Qs	=	Receiving water flow rate (cfs) = 0.4059 cfs (⅓ of 7Q10)
Qr	=	Downstream flow rate (cfs) = Qd + Qs = 0.062 cfs + 0.4059 cfs = 0.4679 cfs

Therefore: Tr = [(90 x 0.062) + (82.8 x 0.4059)] / 0.4679
Tr = 83.8° F

The temperature limit of 90° F included in the 2015 Permit is no longer protective and would result in an increase of temperature of greater than 83° F in the Neponset River.

EPA then rearranged the formula to determine an effluent limit.

$$Td = [(QrTr)-(QsTs)]/Qd$$

Where:

Td = Effluent temperature (°F) (permitted daily maximum)
Qr = Downstream flow rate (cfs) = Qd + Qs = 0.062 cfs + 0.4059 cfs = 0.4679 cfs
Tr = Downstream Temperature (°F) = 83°F (maximum allowable based on MA WQS)
Qs = Receiving water flow rate (cfs) = 0.4059 cfs (1/3 of 7Q10)
Ts = Upstream Temperature (°F) = 82.8°F (maximum recorded)[1]
Qd = Effluent flow rate (cfs) = 0.062 cfs

Td = [(QrTr)-(QsTs)]/Qd

Td=[(0.4679 x 83) – (0.4059 x 82.8)]/0.062

Td = 84.3° F

Therefore, a maximum daily limit of 84° F ensures that the receiving water will not exceed 83° F.

[1] EPA reviewed available ambient temperature data from the Neponset River Watershed Association (May 2020-August 2025). The maximum temperature identified at the nearest upstream sampling location, the Hollingsworth and Vose dam, Walpole, was 28.2° C (82.8° F) recorded August 13, 2020.

Appendix D: Reasonable Potential Analysis

Methodology

A reasonable potential analysis is completed using a single set of critical conditions for flow and pollutant concentrations that will ensure the protection of water quality standards. To determine the critical condition of the effluent, EPA projects an upper bound of the effluent concentration based on the observed monitoring data and a selected probability basis. EPA generally applies the quantitative approach found in Appendix E of the *Technical Support Document for Water Quality-based Toxics Control* (TSD)[2] to determine the upper bound of the effluent data. This methodology accounts for effluent variability based on the size of the dataset and the occurrence of non-detects (i.e., sample results in which a parameter is not detected above laboratory minimum levels). EPA used this methodology to calculate the 95th percentile.

EPA uses the calculated upper bound of the effluent data, along with a concentration representative of the parameter in the receiving water, the critical effluent flow, and the critical upstream flow to project the downstream concentration after complete mixing using the following simple mass-balance equation:

$$Q_s C_s + Q_e C_e = Q_d C_d$$

Where:

C_d = downstream concentration
C_s = upstream concentration (median value of available ambient data)
C_e = effluent concentration (95th percentile of effluent concentrations)
Q_s = upstream flow (7Q10 flow upstream of the outfall)
Q_e = effluent flow of the Facility (permitted maximum daily flow)
Q_d = downstream flow (Q_s + Q_e)

Solving for the receiving water concentration downstream of the discharge (C_d) yields:

$$C_d = \frac{C_s Q_s + C_e Q_e}{Q_d}$$

When the downstream concentration exceeds the applicable criterion, there is reasonable potential for the discharge to cause, or contribute to an excursion above WQSs. *See* 40 CFR § 122.44(d). When EPA determines that a discharge causes, has the reasonable potential to cause, or contribute to such an excursion, the permit must contain WQBELs for the parameter. The limitation is calculated by rearranging the above mass balance equation to solve for the effluent concentration using the applicable criterion as the downstream concentration. The resulting effluent concentration then becomes the basis for the effluent limit. *See* 40 CFR § 122.44(d)(1)(iii).

[2] USEPA, *Technical Support Document for Water Quality-Based Toxics Control*, Office of Water, Washington, D.C., March 1991.

Determination of Applicable Criteria

State water quality criteria are derived from EPA's *National Recommended Water Quality Criteria: 2002*, which are incorporated into the state WQSs by reference at 314 CMR 4.05(5)(e).

Freshwater aquatic life criteria for aluminum, cadmium, copper, lead, nickel and zinc are established in terms of dissolved metals and are converted to total recoverable using published conversion factors. Additionally, the criteria for cadmium, copper, lead, nickel and zinc are hardness-dependent. EPA calculated hardness-dependent chronic and acute criteria for metals detected in the effluent using the downstream hardness determined using the hardness values measured in the Facility's discharge (Appendix A) and the median hardness value measured in the receiving water immediately upstream of the discharge (Appendix B The applicable criteria are summarized in the table below.

Summary of Applicable Criteria

Parameter	Coefficients				Applicable Criteria[1,2,3,4,5]	
	ma	ba	mc	bc	Acute Criteria (CMC)	Chronic Criteria (CCC)
Units	—	—	—	—	**µg/L**	**µg/L**
Aluminum	—	—	—	—	978	380
Cadmium	0.9789	-3.866	—	—	1.1	0.5
Copper	0.9422	-1.7000	0.8545	-1.702	8.0	5.6
Lead	1.273	-1.460	1.273	-4.705	38.6	1.5
Nickel	0.8460	2.255	0.8460	0.0584	285.2	31.7
Zinc	0.8473	0.884	0.8473	0.884	72.8	72.8
Ammonia (Cold)	—	—	—	—	32.6	4.9
Ammonia (Warm)	—	—	—	—	11.5	1.3
Chromium (VI)	—	—	—	—	16.3	11.4
Iron	—	—	—	—		1.0
Phosphorus	—	—	—	—		0.1

[1]Acute Criteria (Criterion Maximum Concentration (CMC)) = $\exp\{m_a * \ln(\text{hardness}) + b_a\}$ where:

m_a = pollutant-specific coefficient
b_a = pollutant-specific coefficient
ln = natural logarithm
h = hardness of the receiving water

[2]Chronic Criteria (Criterion Continuous Concentration (CCC)) = $\exp\{m_C * \ln(\text{hardness}) + b_C\}$where:

m_c = pollutant-specific coefficient
b_c = pollutant-specific coefficient
ln = natural logarithm

h = hardness of the receiving water

[3]For hardness-dependent criteria, see *National Recommended Water Quality Criteria, Appendix B - Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent*: http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm

[4]For dissolved to total recoverable metal conversion, see *Appendix A - Conversion Factors for Dissolved Metals:* http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#appendxa; Required by 314 CMR 4.05(5)(e).

Calculation of Reasonable Potential

EPA first calculated the upper bound of expected effluent concentrations for each parameter. EPA then used the calculated upper bound of expected effluent concentrations, the median value of the available ambient data, the permitted daily maximum effluent flow and the upstream 7Q10 flow to project the in-stream concentration downstream from the discharge. When this resultant in-stream concentration (Cd) exceeds the applicable criterion there is reasonable potential for the discharge to cause, or contribute to an excursion above water quality standards. The results are summarized in the table below.

Summary of Reasonable Potential Results

Pollutant	Conc. Units	Q_s (MGD)	C_s [1]	Q_e (MGD)	C_e [2]		Q_d (MGD)	C_d		Criteria		Reasonable Potential [3]		Limits	
					Acute	Chronic		Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute	Chronic
Aluminum	µg/L	0.7946	33.5	0.04	8208.2	2600.0	0.83458	425.3	156.5	978.0	380.0	N	**Y**	N/A	**2600.0**
Cadmium	µg/L	0.7946	0	0.04	0.0	0.0	0.83458	0.0	0.0	1.1	0.5	N	N	N/A	N/A
Copper	µg/L	0.7946	0	0.04	52.7	52.7	0.83458	2.5	2.5	8.0	5.6	N	N	N/A	N/A
Lead	µg/L	0.7946	1.05	0.04	3.2	3.2	0.83458	1.2	1.2	38.6	1.5	N	N	N/A	N/A
Nickel	µg/L	0.7946	0	0.04	0.0	0.0	0.83458	0.0	0.0	285.2	31.7	N	N	N/A	N/A
Zinc	µg/L	0.7946	0	0.04	0.0	0.0	0.83458	0.0	0.0	72.8	72.8	N	N	N/A	N/A
Ammonia (Cold)	mg/L	0.7946	0.02	0.04	0.0	0.0	0.83458	0.0	0.0	18.6	3.9	N	N	N/A	N/A
Ammonia (Warm)	mg/L	0.7946	0.036	0.04	0.2	0.2	0.83458	0.0	0.0	6.6	1.0	N	N	N/A	N/A
Chromium (VI)	mg/L	0.7946	0	0.04	0.0	0.0	0.83458	0.0	0.0	0.0	0.0	N	N	N/A	N/A
Iron	mg/L	0.7946	0.89	0.04	2.0	2.0	0.83458	0.9	0.9		1.0	N	N	N/A	N/A
Phosphorus	mg/L	0.7946	0.015	0.04	0.0	0.0	0.83458	0.0	0.0		0.1	N	N	N/A	N/A

Aluminum is the only pollutant that has a “reasonable potential” because there is an existing WQBEL in the current permit.

Calculation of Effluent Limitations

EPA calculated the effluent limitations for the parameters that have a reasonable potential to cause or contribute to an excursion above water quality standards by setting the maximum allowable downstream concentration equal to the applicable criterion and solving for the effluent concentration. The results are summarized in the table below.

Summary of Effluent Limitations

Parameter	Acute Criterion	Chronic Criterion	Available Dilution	Daily Max Effluent Limitation	Monthly Avg Effluent Limitation
Units	**µg/L**	**µg/L**	**---**	**mg/L**	**mg/L**
Aluminum	978.0	380.0	21.5:1	N/A	2.6

Note that when the effluent limitation is calculated to be lower than the applicable criterion, then the effluent limitation is set equal to the criterion. Because regulations at 40 CFR § 122.45(c) require, with limited exceptions, that effluent limits for metals in NPDES permits be expressed as total recoverable metals, effluent limitations are expressed as total recoverable metals. *See* EPA-823-B96-007, *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion:*1996.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION 1 (EPA)
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

EPA PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTION 402 OF THE CLEAN WATER ACT (CWA), AS AMENDED.

PUBLIC NOTICE PERIOD: January 22, 2026 – February 23, 2026

PERMIT NUMBER: MA0003531

NAME AND MAILING ADDRESS OF APPLICANT:

Bird, Incorporated, d/b/a CertainTeed
1077 Pleasant Street
Norwood, MA 02062

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Bird, Incorporated, d/b/a CertainTeed
1077 Pleasant Street
Norwood, MA 02062

RECEIVING WATER AND CLASSIFICATION:

Neponset River (Class B)
Boston Harbor Watershed

PREPARATION OF THE DRAFT PERMIT:

EPA is issuing for public notice and comment the Draft NPDES Permit for Bird, Incorporated, d/b/a CertainTeed, which discharges treated contact cooling water and treated process water, non-contact cooling water, boiler condensate, boiler blowdown and stormwater. The effluent limits and permit conditions have been drafted pursuant to, and assure compliance with, the CWA, including EPA-approved State Surface Water Quality Standards at 314 CMR 4.00. MassDEP cooperated with EPA in the development of the Draft NPDES Permit. MassDEP retains independent authority under State law to publish for public notice their CWA § 401 certification and a separate state Surface Water Discharge Permit for the discharge, not the subject of this notice, under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53.

INFORMATION ABOUT THE DRAFT PERMIT:

The Draft Permit and explanatory Fact Sheet may be obtained at no cost at https://www.epa.gov/npdes-permits/massachusetts-draft-individual-npdes-permits or by contacting:

Michele Barden
Telephone: (617) 918-1539

Email: Barden.Michele@epa.gov

Any electronically available documents that are part of the administrative record can be requested from the EPA contact above.

PUBLIC COMMENT AND REQUESTS FOR PUBLIC HEARINGS:

All persons, including applicants, who believe any condition of this Draft Permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by February 23, 2026**,** which is the close of the public comment period. Comments should be submitted to the EPA contact at the email listed above. If you prefer to submit comments by mail, please call or email the EPA contact above to make arrangements for that. Upon the close of the public comment period, EPA will make all comments available to MassDEP. All commenters who want MassDEP to consider their comments in the state decision-making processes (*i.e.*, the separate state permit and the CWA § 401 certification) must submit such comments to MassDEP during the state comment period for the state Draft Permit and CWA § 401 certification. For information on submitting such comments to MassDEP, please follow the instructions found in the state public notice at: https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities.

Any person, prior to the close of the EPA public comment period, may submit a request in writing to EPA for a public hearing on the Draft Permit under 40 CFR § 124.10. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held if the Regional Administrator finds that response to this notice indicates significant public interest.

In reaching a final decision on this Draft Permit, the Regional Administrator will respond to all significant comments and make the responses available to the public.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and notify the applicant and each person who has submitted written comments or requested notice.

KEN MORAFF, DIRECTOR
WATER DIVISION
U.S. EPA – REGION 1