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"),

P.J. Keating Company
998 Reservoir Road
Lunenburg, MA 01462

is authorized to discharge from a facility located at

P.J. Keating – Acushnet Facility
72 South Main Street
Acushnet, MA 02743

to receiving water named

unnamed tributary to the Acushnet River

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

This permit shall become effective on March 1, 2021.[1]

This permit expires at midnight on February 28, 2026.

This permit supersedes the permit issued on September 12, 2007.

This permit consists of this **cover page**, **Part I**, **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012), **Attachment B (**Marine Chronic Toxicity Test Procedure and Protocol*,* November 2013), and **Part II** (NPDES Part II Standard Conditions, April 2018).

Signed this 30th day of December 2020.

/S/Signature On File

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

[1] 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 process wastewater and stormwater through Outfall 001. Process wastewater discharge consists of stone processing/washing, vehicle washing, ready-mix concrete treatment basin overflow during extreme weather, and dust control measures. Stormwater discharge consist of quarry dewatering and runoff from site areas associated with industrial activities, including: product transfer/fueling; vehicle washing; asphalt plant; concrete plant; aggregate processing/washing; silt material storage; haul roads; aggregate storage; silt/shingles/recycled asphalt pavement (RAP) stockpiles; and paving/stone/crusher garages. The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	**Effluent Limitation**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Effluent Flow[6]	Report MGD	Report MGD	1/week	Meter or Estimate
Total Suspended Solids (TSS)	15 mg/L	23 mg/L	1/week	Composite
pH[7]	6.5 - 8.5 S.U.		1/week	Grab
Oil and Grease	10 mg/L	15 mg/L	2/month	Grab
Turbidity	----	25 NTU	2/month	Grab
Enterococcus[8]	----	Report cfu per 100 ml	1/month	Grab
Fecal Coliform[8]	---	Report cfu per 100 ml	1/month	Grab
Perchlorate[9]	----	Report mg/L	1/quarter	Composite
Ammonia as Nitrogen	----	Report mg/L	2/month	Composite

Effluent Characteristic	Effluent Limitation		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Total Nitrogen	----	Report mg/L	2/month	Composite
Naphthalene[10]	----	Report µg/L	1/quarter	Grab
Total BTEX[11]	----	Report µg/L	1/quarter	Grab
Surfactants (as methylene blue active substances (MBAS)	----	Report mg/L	2/year	Grab
Whole Effluent Toxicity (WET) Testing[12,13]				
LC_{50}	---	$\geq$ 100 %	1/year	Composite
C-NOEC	---	100 %	1/year	Composite
Total Organic Carbon	---	Report mg/L	1/year	Composite
Ammonia Nitrogen	---	Report mg/L	1/year	Composite
Total Cadmium	---	Report mg/L	1/year	Composite
Total Copper	---	Report mg/L	1/year	Composite
Total Nickel	---	Report mg/L	1/year	Composite
Total Lead	---	Report mg/L	1/year	Composite
Total Zinc	---	Report mg/L	1/year	Composite

Ambient Characteristic[14]	**Reporting Requirement**		**Monitoring Requirements**[1,2,3]	
	Average Monthly	**Maximum Daily**	**Measurement Frequency**[4]	**Sample Type**[5]
Salinity	---	Report ppt	1/year	Grab
Ammonia Nitrogen	---	Report mg/L	1/year	Grab
Total Cadmium	---	Report mg/L	1/year	Grab
Total Copper	---	Report mg/L	1/year	Grab
Total Nickel	---	Report mg/L	1/year	Grab
Total Lead	---	Report mg/L	1/year	Grab
Total Zinc	---	Report mg/L	1/year	Grab
pH[15]	---	Report S.U.	1/year	Grab
Temperature[15]	---	Report °C	1/year	Grab

2. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge dust control wastewater and stormwater through Outfall 002. The discharge shall be limited and monitored as specified below.

Effluent Characteristic	**Effluent Limitation**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Effluent Flow[6]	Report MGD	Report MGD	1/week	Meter or Estimate
Total Suspended Solids (TSS)	15 mg/L	23 mg/L	1/week	Composite
pH[7]	6.5 - 8.5 S.U.		1/week	Grab
Oil and Grease	10 mg/L	15 mg/L	2/month	Grab
Turbidity	----	25 NTU	2/month	Grab
Naphthalene[10]	----	Report µg/L	1/quarter	Grab
Total BTEX[11]	----	Report µg/L	1/quarter	Grab

Footnotes:

1. A routine sampling program shall be developed in which effluent samples are taken that represent all stormwater and process water associated with operations at the site. Outfall 001 shall be sampled from the outlet of the northern side of Basin 1C, prior to entering the southern side of Basin 1C. This sampling shall be conducted prior to mixing with any other stream including any flow of stormwater not associated with industrial activity, originating from the wetland area southeast of the Permittee's property, which flows under the property. Outfall 002 shall be sampled from the outlet of the last inground settling vault prior to entering the southern side of Basin 1C. Changes in sampling location must be approved in writing by the Environmental Protection Agency Region 1 (EPA). The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 CFR § 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. Measurement frequency of 1/week is defined as the sampling of one discharge event in each seven-day calendar week. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month. Measurement frequency of 1/quarter is defined as the sampling of one discharge event per calendar quarter. Calendar quarters are defined as January through March, April through June, July through September, and October through December. Measurement frequencies of 1/year and 2/year are defined as the sampling of one and two discharge events during one calendar year, respectively. If no sample is collected during the measurement

frequencies defined above, the Permittee must report an appropriate No Data Indicator (NODI) Code.

5. Grab samples shall be taken and composite samples shall begin within 30 minutes of the initiation of the discharge from the outfall location where practicable, but in no case later than within the first hour of discharge. Each composite sample must be collected proportional to flow, either by collecting a constant sample volume at varying time intervals proportional to the wastewater flow or collected by varying the volume of each individual aliquot proportional to the flow, while maintaining a constant time interval between the aliquots. Each composite sample will consist of at least eight aliquots taken during one consecutive 24-hour period, unless the discharge event lasts for a lesser period but not less than three hours. A composite sample collected over a period less than three hours is not valid.

6. Effluent flow shall be reported in million gallons per day (MGD).

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.) and the number of exceedances that occurred during monthly period, if any, shall be reported on each DMR.

8. After 12 monthly sampling events showing Fecal Coliform and/or Enterococcus results that meet the state WQS at 314 CMR 4.05(4)(b)(4), the Permittee may request discontinuation of sampling. Discontinuation of Fecal Coliform and/or Enterococcus sampling will not be in effect until the Permittee receives written notice from EPA.

9. Perchlorate shall be sampled in conjunction with total nitrogen sampling.

10. For the purposes of this permit, naphthalene analysis must be completed using an EPA approved 40 CFR Part 136 test method that achieves a minimum level no greater than 5.0 µg/L.

11. BTEX shall be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and (m,o,p) xylenes. For the purposes of this permit, BTEX analysis must be completed using a test method in 40 CFR § 136 that achieves a minimum level of detection no greater than 0.5 µg/L for each individual BTEX compound.

12. The Permittee shall conduct acute and chronic toxicity tests in accordance with test procedures and protocols specified in **Attachments A and B** of this permit. LC_{50} and C-NOEC are defined in Part II.E. of this permit. The Permittee shall test the Mysid Shrimp (*Americamysis bahia*) and the Inland Silverside (*Menidia beryllina*) for the acute test. For the chronic test, the Permittee shall test the Inland Silverside (*Menidia beryllina*) and the Sea Urchin (*Arbacia punctulata*). Toxicity test samples shall be collected, and tests completed during the calendar quarter ending September 30th. The

test results shall be submitted as an attachment to the monthly DMR submittal immediately following the completion of the test.

13. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachments A and B**, 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 **Attachments A and B**, 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 **Attachments A and B**, Part VI. CHEMICAL ANALYSIS.

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

15. 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.

3. The discharge shall not cause a violation of the water quality standards of the receiving water.

4. The discharge shall be free from pollutants in concentrations or combinations that, in the receiving water, settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.

5. The discharge shall be free from pollutants in concentrations or combinations that adversely affect the physical, chemical, or biological nature of the banks or bottom of the water course.

6. The discharge shall not result in pollutants in concentrations or combinations in the receiving water that are toxic to humans, aquatic life or wildlife.

7. The discharge shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to the receiving water.

8. The discharge 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.

9. 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 that was not reported in the permit application.

B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfalls listed in Part I.A.1 and I.A.2 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 D.1.e.(1) of the Standard Conditions of this permit (24-hour reporting).

   a. The Permittee shall repair Basin 1C to prevent the breakthrough and overflow of wastewater directly into the unnamed tributary within six months of the effective date of the permit. **The Permittee shall submit a report describing the repairs within 30 days following completion of such work**.

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.

3. The discharge of wastewater from hot mix asphalt process operations to the receiving water is prohibited.

C. SPECIAL CONDITIONS

1. Best Management Practices

   The Permittee shall design, install, and implement control measures, including best management practices (BMPs), to minimize pollutant discharges from stormwater associated with quarry operations to the receiving water. At a minimum, the Permittee must implement control measures consistent with those described in Part 2.1 and any Sector specific control measures in Part 8 of EPA's Multi-Sector General Permit (MSGP) that became effective on June 4, 2015 (available at https://www.epa.gov/npdes/final-2015-msgp-documents), including the following:

   a. Minimize exposure;
   b. Good housekeeping;
   c. Maintenance;
   d. Spill prevention and response;

e. Erosion and sediment control;
f. Management of runoff;
g. Salt storage piles or piles containing salt;
h. Employee training;
i. Dust generation and vehicle tracking of industrial materials;
j. Sector specific non-numeric technology-based effluent limitations included in Parts 2.1.2, Part 8.E.2 (Glass, Clay, Cement, Concrete, and Gypsum Products), and Part 8.J.5 (Non-Metallic Mineral Mining and Dressing) of the 2015 MSGP;
k. Routine dredging of Basin 1C and other basins as necessary in order to assure that they are effectively settling solids and minimizing the transport of solids and other pollutants to the receiving water;
l. Inspect and remedy any breakthrough or overflow discharges from Basin 1C which discharge directly to the unnamed tributary to the Acushnet River; and
m. Identify and reduce sources of pathogens from the facility.

2. Stormwater Pollution Prevention Plan

The Permittee shall maintain a Stormwater Pollution Prevention Plan (SWPPP) to document the selection, design and installation of BMPs developed under Part I.C.1 of this Permit and consistent with Parts 2.1.2, 8.E.2, and 8.J.5 of the 2015 MSGP, to minimize the discharge of pollutants from the quarry operations to the receiving water. The SWPPP shall be a written document and be 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 ninety (90) days after the effective date of this Permit.

b. The SWPPP shall be consistent with the general provisions for SWPPPs included in Part 5 of EPA's 2015 MSGP. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the stormwater discharges, and document implementation of non-numeric technology based effluent limitations described in Part I.C.1 that will be used to reduce the pollutants and assure compliance with this Permit. Specifically, the SWPPP shall contain the elements listed in Parts 5.2.1 through 5.2.5, and Parts 8.E.3 and 8.J.6 of the 2015 MSGP that are briefly described below:

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

c. The Permittee shall inspect quarterly all areas identified as being exposed to stormwater, potential pollutant sources, discharge points, and control measures. Inspections shall occur beginning the first full calendar quarter after the effective date of the Permit. EPA considers quarters as follows: January through March; April through June; July through September; and October through December. Inspections shall be performed by qualified personnel with participation of at least one member of the stormwater pollution prevention team. At least once each calendar year, the routine inspection must be conducted during a period when stormwater discharge is occurring.

d. The Permittee shall amend and update the SWPPP within fourteen (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 that 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; and 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. 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.

e. The Permittee shall certify at least annually that the previous year's inspections, maintenance, and training activities were conducted, results were recorded, and records were maintained, as described in the SWPPP. If the facility is not in compliance with any BMPs and/or activities described in the SWPPP, the annual certification shall specify such non-compliance and the remedies that are being 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 and MassDEP. All documentation of SWPPP activities shall be kept at the Facility for at least three years and provided to EPA or MassDEP upon request.

3. 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 and the State or provided through a subsequent written notification submitted to EPA and the State is prohibited. Upon the effective date of this permit, chemicals and/or additives that have been disclosed to EPA and the State 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 and the State unless otherwise notified by EPA and/or the State. To request authorization to discharge a new chemical

or additive, the Permittee must submit a written notification to EPA and the State 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), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
(4) The frequency (e.g., daily), magnitude (i.e., maximum application concentration), duration (e.g., hours), and method of application for the chemical/additive;
(5) The maximum discharge concentration; and
(6) The vendor's reported aquatic toxicity, if available (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 which 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 no later than the 15th day of the month electronically using NetDMR. 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. *See* Part I.D.5. for more information on State reporting. 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)

   a. The following requests, reports, and information described in this permit shall be submitted to the NPDES Applications Coordinator in the EPA WD:

      (1) Transfer of Permit notice;
      (2) Request for changes in sampling location;
      (3) SWPPP reports and certifications, if required;
      (4) Report describing remedy of settling basin breakthrough/overflow;
      (5) Request to eliminate Fecal Coliform and/or *Enterococcus* monitoring;
      (6) Request to discharge new chemicals or additives; and
      (7) Report on unacceptable dilution water/request for alternative dilution water for WET testing.

   b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Water Division
NPDES Applications Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912

4. Submittal of Reports in Hard Copy Form

   a. The following notifications and reports shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission:

      (1) Written notifications required under Part II, Standard Conditions. Beginning December 21, 2025, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

   b. This information shall be submitted to EPA ECAD at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

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

6. Verbal Reports and Verbal Notifications

a. Any verbal reports or verbal notifications required in Parts I and 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 Environmental Compliance Assurance Division: **617-918-1510**

and to

MassDEP's Emergency Response: **888-304-1133**

RESPONSE TO COMMENTS

NPDES Permit # MA0029297
P.J. Keating Company
Acushnet, MA

The U.S. Environmental Protection Agency's Region 1 (EPA) is issuing a Final National Pollutant Discharge Elimination System (NPDES) Permit ("Final Permit") for P.J. Keating Company's (the "Permittee") facility located in Acushnet, MA (the "Facility"). This Final Permit is being issued under the Federal Clean Water Act (CWA), 33 U.S.C., §§ 1251 et. seq.

In accordance with the provisions of 40 CFR §124.17, this document presents EPA's responses to comments received on the Draft NPDES Permit #MA0029297 ("Draft Permit"). The Response to Comments explains and supports EPA's determinations that form the basis of the Final Permit. From July 1, 2020 through July 30, 2020, EPA solicited public comments on the Draft Permit.

EPA received comments from P.J. Keating and from Patrick Hannon, Assistant Health Agent for the Town of Acushnet, both by email on July 30, 2020. EPA also received comments from Christian De Sousa of Acushnet, by email on August 10, 2020. This document provides the verbatim text of comments extracted from the original emails.

Although EPA's decision-making process has benefited from the comments submitted, the information and arguments presented did not raise any substantial new questions concerning the permit that warrants EPA exercising the discretion to reopen the public comment period.

A copy of the Final Permit and this response to comments document will be posted on the EPA Region 1 web site: http://www.epa.gov/region1/npdes/permits_listing_ma.html.

A copy of the Final Permit may be also obtained by writing or calling George Papadopoulos, USEPA, 5 Post Office Square, Suite 100 (Mail Code: 06-1), Boston, MA 02109-3912; Telephone: (617) 918-1579; Email papadopoulos.george@epa.gov.

I. Summary of Changes to the Final Permit

Part I.A.2: The description of waste streams authorized to discharge through Outfall 002 has been changed to remove "tire rinsing."

Part I.A, footnote 1: The reference to the southern side of Basin 1C as the "southern branch of an unnamed tributary of the Acushnet River" has been removed.

Part E. of the Final Permit has been removed because the state certification requirement has been deemed waived consistent with 40 CFR § 124.53(c)(3).

Part D.4.a.: As an administrative change - the date by which the Permittee is required to submit written notifications under Part II, Standard Conditions in electronic form has been amended.

II. Responses to Comments

A. Comments from P.J. Keating, on July 30, 2020.

Comment A.1

Due to the significance of the proposed changes from the existing permit, particularly related to the monitoring location for Outfall 001 and the newly identified Outfall 002, we are requesting an additional 30 days to provide comment to EPA. As such, please provide a response indicating whether our request for additional time to submit comment is granted. We understand that PJK will have the opportunity to appeal the Permit if the conditions are not modified as requested. However, we believe that it would be beneficial to both PJK and EPA to resolve these matters before issuance of the final permit.

Response to Comment A.1

EPA considered the Permittee's request to extend the comment period and decided to deny the request for reasons provided in the email dated August 10, 2020 to Jonathan Olson.

Comment A.2

We understand that the EPA has proposed to modify the location for Outfall 001 to be "from the outlet of the northern side of Basin 1C, prior to entering the southern side of Basin 1C". We do not believe that this is an appropriate location for monitoring as there is further treatment that occurs as the discharge travels the length of the southern-most basin due to retention time and by treatment through turbidity curtains. PJ Keating does not know whether the pipe connecting the two basins will be routinely accessible as there will be times when both basins are full due to high volume during storm events and associated quarry stormwater pumping activities. During these instances, the referenced pipe will likely be fully submerged.

Response to Comment A.2

Basin 1C is the final settling basin that wastewater[1] flows through prior to discharging to the unnamed tributary, which then flows to the Acushnet River. The Fact Sheet describes Basin 1C as having northern and southern segments, which are separated by an earthen berm. Wastewater from Basin 1A is pumped into the northern side of Basin 1C, flows the length of the basin and then flows by gravity through two 12-inch pipes into the southern side of Basin 1C. *See* Fact Sheet, Figures 3 and 4.

Although the entirety of Basin 1C may have been designed to treat only P.J. Keating generated wastewater, the Permittee has noted that stormwater, not associated with industrial activity, passes through the southern side of Basin 1C, at times at high volumes, diluting any wastewater flows that have potentially received treatment in the northern side of Basin 1C. During the December 16, 2019, site visit, EPA observed a high volume and velocity of water flowing through the southern side of Basin 1C. The flow was noteworthy given that no precipitation was observed on the day of the site visit and no wastewater discharge was occurring.[2] The Permittee acknowledged that the water flowing through the southern side of Basin 1C originated from an off-site wetland area located southeast of the Facility.[3] During and for some period following precipitation events, water drains from this wetland and is conveyed through a 30-inch underground culvert, emerging into the southern side of Basin 1C prior to leaving the P.J. Keating property and discharging to the Acushnet River by means of an unnamed tributary. As explained in the Fact Sheet, in previous permitting actions, Basin 1C was identified as a settling basin having two distinct sections in series, with water from Basin 1A entering the northern side of the man-made Basin 1C and flowing by gravity to the southern side. The southern side of Basin 1C, however, acts more like a man-made channel, because the southeastern wetland area drains through this channel.

Based on site visit observations, EPA determined that when the conveyed off-site stormwater enters the southern side of Basin 1C, the wastewater flows in that side are likely to become significantly diluted with the conveyed stormwater. EPA regulations require that "samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity." 40 CFR § 122.41(j)(1); *see also* 40 CFR 122.48(b). Because the wastewater flows in the southern side of Basin 1C are significantly diluted by the conveyed off-site stormwater, which is not associated with industrial activity, during and after rainfall, EPA determined that monitoring at the end of the southern side does not yield a representative sample. Fact Sheet at 16; *see also* 40 CFR § 122.41(j)(1); 40 CFR 122.48(b). Accordingly, EPA determined that monitoring the wastewater flow at the point at which it enters the southern side, before any such

[1] Wastewater refers to both stormwater and process water generated at the Facility that commingles prior to discharge.

[2] The data from a nearby New Bedford, MA weather station recorded a precipitation of 1.44 inches of rain from approximately 8:00 PM on December 13th through 11:00 AM on December 14th (wunderground.com). There was no precipitation recorded for December 15th or 16th, 2019. This information shows that water continued to drain from the southeastern wetland area into Basin 1C for at least two full calendar days after the precipitation event had ended.

[3] EPA notes that this is the first time that Permittee acknowledged this off-site wetland drainage to EPA. EPA was unaware of this fact at the time of the issuance of the previous permit.

dilution occurs, will yield the necessary representative sample. Fact Sheet at 16; *see also* 40 CFR § 122.41(j)(1); 40 CFR 122.48(b).

With regard to the comment that further treatment occurs in the southern portion, EPA disagrees. Clearly when water is flowing at a rate similar to what was observed during the site visit noted above, the wastewater would quickly be discharged to the unnamed tributary of the Acushnet River and there would not be sufficient time to allow for any appreciable settling of solids. Additionally, to the extent a minor amount of settling may occur in the southern Basin 1C during dry periods through use of turbidity curtains,[4] a majority of the settled solids would nevertheless be washed away and discharged to the Acushnet River during the next rain event. These solids and any corresponding pollutants are not being captured and removed from the basin. Furthermore, based on the high turbidity of the wastewater in the northern side of Basin 1C, EPA determined that additional turbidity curtains would provide no appreciable treatment. This point is more apparent given that the Permittee has reported flows above 2 million gallons per day (MGD). Finally, to the extent the Facility is relying on dilution from the incoming conveyed stormwater, dilution is "not to be used as a substitute for treatment." *See* 40 CFR § 122.45(f)(1)(iii). Accordingly, the southern side of Basin 1C is not providing any further, meaningful treatment to the wastewater and monitoring the flow at the end of this portion would not be representative of the monitored activity. *See* 40 CFR § 122.41(j)(1); 40 CFR 122.48(b).

The Permittee states that there could be times when both sides of Basin 1C are full due to a combination of storm events and quarry pumping activities. This could be an indication that Basin 1C is improperly sized to handle the amounts of flow under these conditions and that the water from the off-site wetland area would likely be providing dilution to the wastewater as described above. Under such conditions, it would be unlikely that a sample could be obtained from one of the two pipes that connect the two segments of Basin 1C. Therefore, the Permittee would have to wait until this condition passed and the levels in Basin 1C were such that this sampling could be conducted. With that said, EPA expects that the sampling location will be adequately accessible to collect the required weekly samples based, in part, on the July 28, 2020 conference call between the Permittee, EPA, and Massachusetts Department of Environmental Protection (MassDEP). During the call, EPA asked if the flow from the southeastern drainage area ever reaches or goes above the two 12-inch discharge pipes from the northern side of Basin 1C. The Permittee expressed that this scenario was impossible as these pipes were at least one foot above the top of the 30'' culvert entering the channel. See Memorandum to File Notes from conference call with P.J. Keating (MA0029297), on July 28, 2020 (2-3 PM).

Comment A.3

The description in the permit for Outfall 001 also inaccurately identifies "the southern side of Basin 1C" as "part of the southern branch of the unnamed tributary to the Acushnet River". PJK believes that EPA is aware that the entire basin, inclusive of the southern side of Basin 1C, is a manmade structure that was designed and installed to treat quarry stormwater and other

[4] EPA observed one such curtain swept to the side and downriver, likely due to the high flow velocity seen during the 2019 site visit.

discharges related to PJK's operations. We understand that EPA has observed flow from an off-site wetland into the southern side of Basin 1C. However, this does not by default change the original intended purpose of the southern side of Basin 1C to operate as treatment for PJK's NPDES permitted discharge. PJK acknowledges that there are times when the off-site wetland discharge commingles with their discharge. However, PJK has indicated that their discharge also occurs independent of the wetland discharge and benefits from the treatment intended by the settling basin and turbidity curtains.

In summary, we are requesting that EPA modify the draft permit to identify Outfall 001 as the outlet of the southern side of Basin 1C.

Response to Comment A.3

In labelling of the southern side of Basin 1C, EPA was attempting to convey, as described above, that in order to obtain a "representative sample" of the wastewater flow, the measurement must occur before entering the southern side of Basin 1C. See response to comment A.2 for further discussion on the location for monitoring for Outfall 001. Because EPA has clarified this point as described in response to comment A.2, it has removed this unnecessary label for the southern side of Basin 1C in the Final Permit.

EPA has edited footnote 1 on page 6 of the Final Permit to reflect this change.

Comment A.4

<u>EPA Proposed Outfall 002</u>

Drainage from a paved parking area to the west of PJ Keating's Main Office and additional areas to the south and east collect stormwater and dust suppression water. PJ Keating has identified this area to be approximately 0.0516 square miles (sm). This is one of many sub-drainage areas that comprise Drainage Area 001 that currently discharge at Outfall 001. PJK has recently installed additional control structures (I.e., trench drain and 5,000-gallon settling chamber) to address sediment tracking caused by truck traffic in and out of the facility within this area. Otherwise, there has been no change to the volume or nature of the discharge. Please note that tire rinsing water flows to Basin 1A and does not discharge into the structures identified above.

Outfall 002 has been added into the draft permit as a new monitoring location. However, a drainage area has not been identified or delineated in the draft Permit or associated Fact Sheet. Also, the types of discharges from the referenced structures (i.e., dust suppression water and stormwater) are already included in the description for Outfall 001. In EPA's Fact Sheet, the agency indicates that "the Permittee also has the option to redirect this flow to Basin 1C, obviating the need for Outfall 002 in the Final Permit". Since the flow is already directed to Basin 1C, there is no need for Outfall 002. As such, we are requesting that EPA modify the draft permit to eliminate Outfall 002.

Response to Comment A.4

EPA agrees that the drainage area was not delineated in the Draft Permit or Fact Sheet because it is unnecessary to do so. The Draft Permit and Fact Sheet does, however, identify and describe the wastewater flows that discharge through Outfall 002, namely dust control wastewater and stormwater runoff, from the Facility's entrance closest to the main office building. Based on the Permittee's comment, "tire rinsing" will be removed from the description of Outfall 002 in the Final Permit. Unlike similar process and stormwater that is directed to Basin 1C, the wastewater that flows through Outfall 002 is first collected in a recently installed trench drain, routed to an in-ground settling basin (for solids settling), and then pumped to a catch basin from where it flows by gravity to the southern side of Basin 1C. As mentioned in responses to comments A.2 and A.3 above, the southern side of Basin 1C is not an appropriate monitoring location to collect representative samples. Therefore, the Final Permit retains the Outfall 002 sampling location as the point where the wastewater enters the southern side of Basin 1C.

In the Fact Sheet, EPA stated that the Permittee has the option to redirect the flow at Outfall 002 to Basin 1C, obviating the need for Outfall 002 in the Final Permit. Although the Permittee correctly states that this wastewater source is already discharged to Basin 1C, EPA intended this statement to mean the northern side of Basin 1C. As noted above, monitoring at the outlet of the southern portion of Basin 1C would not provide a "representative sample" and thus would not be an appropriate location.

Comment A.5

<u>Monitoring Frequency</u>

The EPA has modified the frequency in the draft permit from twice per month to weekly for total suspended solids (TSS) and pH. The EPA has indicated that the increased frequency is due to the past 5-year review period. However, for TSS, the discharge from the site has conformed to the permit limits since at least January 2017 excepting on 4/27/17 (32); 9/28/18 (70); and, 1/16/20 (33) thru July 16, 2020. That is out of a total of 99 sampling events or approximately 3% of the total samples analysed. This is as a result of improved operation and maintenance of the facilities BMPs, including enhanced street sweeping and truck watering.

Since June 2017, pH has been within the specified range on a consistent basis. The increased monitoring frequency requirement will result in a significant burden from a staffing and cost perspective, particularly since composite monitoring for TSS requires at least eight grab samples throughout a 24-hr period.

As such, PJK is requesting that the draft NPDES Permit be modified to be consistent with the existing permit with monitoring for TSS and pH to be twice per month.

Response to Comment A.5

As noted in the Fact Sheet, there were 36 exceedances of the TSS limits from July 2014 through July 2019. Although there have been fewer violations since January of 2017, they are still occurring. EPA believes that since the Permittee has been sampling Outfall 001 at the outlet of the southern side of Basin 1C that it has had, at times, the benefit of dilution from off-site stormwater not associated with industrial activity, as explained in the response to comment A.2 above. EPA believes that the new sampling location for the wastewater, as it enters the southern portion of Basin 1C, is more representative and would better indicate whether permit limits are being met. Therefore, EPA is retaining the Draft Permit monitoring frequency. EPA will consider reducing the sampling frequency to twice per month for the following permit reissuance based on monitoring results.

There were 14 violations of the pH range during dry weather prior to June 2017 as well as one violation in February of 2019. Due to these violations, which have occurred on the both the low end and the high end of the limited pH range and the variety of waste streams at the facility, EPA believes it was appropriate to increase the sampling frequency for pH from twice per month to weekly. EPA disagrees that the increased frequency is overly burdensome, as pH and TSS sampling and analysis is neither expensive nor labor intensive.

B. **Comments from Pat Hannon, Assistant Health Agent for the Town of Acushnet, on July 30, 2020.**

I recently (July 1, 2020) was appointed as the assistant health agent for the town of Acushnet. My primary responsibilities as the assistant health agent is for disease prevention and control, and health and environmental protection and promoting a healthy community.

Boards of Health serve as the local arm of both the Mass. Department of Public Health and the Mass. Department of Environmental Protection. To fulfill my duties, I develop, implement and enforce health policies, oversee inspections to maintain minimum standards and assure that the basic health needs of our community are being met. Currently operations at the site have dipped below the minimum standards allowed by law.

Comment B.1

I can honestly say that my observations and research in the past weeks indicates that P.J. Keating is not in compliance with their NPDES, SWPPP and other state and local permits or regulations. This non-compliance is currently impacting the health needs of the community, and damaging resource areas protected by federal and state laws.

Response to Comment B.1

The commenter should provide any evidence of non-compliance with the Permit to EPA's Enforcement and Compliance Assurance Division (ECAD) office. EPA's enforcement staff may

follow up with inspections and other investigations to assure that the Permittee gets back into compliance with its Permit to the extent appropriate.

Comment B.2

The town has been denied access to compliance records, and access to the quarry and stockpile areas to inspect for compliance. The quarry operations are clearly not in sync with plans supplied in the Fact Sheet, wetlands are currently being utilized for stormwater and process water controls in violation of the Wetlands Protection Act. David Turin has been in contact and is aware of the situation but is restricted under Phase 1 covid plans for EPA from making a site visit at this time.

Response to Comment B.2

See response to comment B.1 above.

Comment B.3

The town is taking legal action to gain access and inspect the site, I ask that EPA either suspend or continue the comment period until we know exactly what is happening at the site, and the town can make informed comments.

Response to Comment B.3

EPA considered the commenter's request to extend the comment period and decided to deny the request for reasons explained in the email to Mr. Hannon dated August 10, 2020.

C. **Comments from Christian De Sousa, Town of Acushnet resident, on August 10, 2020.**

Comment C.1

I write to you today as a concerned citizen in the town of Acushnet. I strongly oppose the current process, in which the PJ Keating Co. is allowed to discharge polluted wastewater from their facility into the Acushnet River estuary. As a long time resident in town, I have frequently walked along S Main St. by the discharge being sent to the river. Many times I have observed oil sheen and bluestone silt contamination flowing down the stream toward the river. I don't understand why and how their is not stronger oversight either by local officials or state officials pertaining to the operations occurring at this facility. PJ Keating has no concern for enviromental impacts. This has been going on for many years. It seems futile to spend 400 million dolllars to clean the river, only to allow a company to continue polluting it.

Response to Comment C.1

EPA's reissued permit includes monitoring requirements and effluent limits which are intended to meet Federal and State water quality standards (WQS) in the Acushnet River. If you see

evidence of oil sheens or silts that are originating from the property and entering the Acushnet River, you should contact EPA's ECAD office at (617) 918-1510. The Final Permit's maximum daily limits for TSS and Oil and Grease are 23 mg/L and 15 mg/L, respectively.

Comment C.2

I would like to know how this permitting process works. What are the requirements and or restrictions regarding this permit? Who has authority to police this process on an ongoing basis?

As a resident, I have been hopeful, since the EPA cleanup of the Acushnet River has been ongoing, that at some point in my lifetime I will be able to access the river, whereas it is a tremendous resource for the residents of this town.

Response to Comment C.2

The Fact Sheet that accompanied the Draft Permit spells out the statutory and legal basis for the Permit and how effluent limits and monitoring requirements are established to comply with Federal and State WQS. Once the Final Permit goes into effect, the Permittee is required to sample its outfalls for the listed parameters as well as to comply with the Facility SWPPP and other reporting requirements. EPA tracks the monitoring data that is generated from the Permittee to assure that permit limits are met. The public can access data for this facility at https://echo.epa.gov/. If there are permit violations or other compliance issues that are made known to EPA, our enforcement office noted in the prior response may follow up with inspections and other enforcement actions as appropriate to assure that the Permittee gets back into compliance with its Final Permit.

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"),

P.J. Keating Company
998 Reservoir Road
Lunenburg, MA 01462

is authorized to discharge from a facility located at

P.J. Keating – Acushnet Facility
72 South Main Street
Acushnet, MA 02743

to receiving water named

unnamed tributary to the Acushnet River

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

This permit shall become effective on [DATE] [1]

This permit expires at midnight [DATE]

This permit supersedes the permit issued on September 12, 2007.

This permit consists of this **cover page**, **Part I**, **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012) and **Attachment B, (**Marine Chronic Toxicity Test Procedure and Protocol*,* November 2013), and **Part II** (NPDES Part II Standard Conditions, April 2018).

Signed this day of , 2020.

_____
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 process wastewater and stormwater through Outfall 001. Process wastewater discharge consists of stone processing/washing, vehicle washing, ready-mix concrete treatment basin overflow during extreme weather, and dust control measures. Stormwater discharge consist of quarry dewatering and runoff from site areas associated with industrial activities, including: product transfer/fueling; vehicle washing; asphalt plant; concrete plant; aggregate processing/washing; silt material storage; haul roads; aggregate storage; silt/shingles/recycled asphalt pavement (RAP) stockpiles; and paving/stone/crusher garages. The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	**Effluent Limitation**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Effluent Flow[6]	Report MGD	Report MGD	1/week	Meter or Estimate
Total Suspended Solids (TSS)	15 mg/L	23 mg/L	1/week	Composite
pH[7]	6.5 - 8.5 S.U.		1/week	Grab
Oil and Grease	10 mg/L	15 mg/L	2/month	Grab
Turbidity	----	25 NTU	2/month	Grab
Enterococcus[8]	----	Report cfu per 100 ml	1/month	Grab
Fecal Coliform[8]	---	Report cfu per 100 ml	1/month	Grab
Perchlorate[9]	----	Report mg/L	1/quarter	Composite
Ammonia as Nitrogen	----	Report mg/L	2/month	Composite

Effluent Characteristic	Effluent Limitation		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Total Nitrogen	----	Report mg/L	2/month	Composite
Naphthalene[10]	----	Report µg/L	1/quarter	Grab
Total BTEX[11]	----	Report µg/L	1/quarter	Grab
Surfactants (as methylene blue active substances (MBAS)	----	Report mg/L	2/year	Grab
Whole Effluent Toxicity (WET) Testing[12,13]				
LC_{50}	---	$\geq$ 100 %	1/year	Composite
C-NOEC	---	100 %	1/year	Composite
Total Organic Carbon	---	Report mg/L	1/year	Composite
Ammonia Nitrogen	---	Report mg/L	1/year	Composite
Total Cadmium	---	Report mg/L	1/year	Composite
Total Copper	---	Report mg/L	1/year	Composite
Total Nickel	---	Report mg/L	1/year	Composite
Total Lead	---	Report mg/L	1/year	Composite
Total Zinc	---	Report mg/L	1/year	Composite

Ambient Characteristic[14]	Reporting Requirement		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Salinity	---	Report ppt	1/year	Grab
Ammonia Nitrogen	---	Report mg/L	1/year	Grab
Total Cadmium	---	Report mg/L	1/year	Grab
Total Copper	---	Report mg/L	1/year	Grab
Total Nickel	---	Report mg/L	1/year	Grab
Total Lead	---	Report mg/L	1/year	Grab
Total Zinc	---	Report mg/L	1/year	Grab
pH[15]	---	Report S.U.	1/year	Grab
Temperature[15]	---	Report °C	1/year	Grab

2. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge tire rinsing and dust control wastewater and stormwater through Outfall 002. The discharge shall be limited and monitored as specified below.

Effluent Characteristic	**Effluent Limitation**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Effluent Flow[6]	Report MGD	Report MGD	1/week	Meter or Estimate
Total Suspended Solids (TSS)	15 mg/L	23 mg/L	1/week	Composite
pH[7]	6.5 - 8.5 S.U.		1/week	Grab
Oil and Grease	10 mg/L	15 mg/L	2/month	Grab
Turbidity	----	25 NTU	2/month	Grab
Naphthalene[10]	----	Report µg/L	1/quarter	Grab
Total BTEX[11]	----	Report µg/L	1/quarter	Grab

Footnotes:

1. A routine sampling program shall be developed in which effluent samples are taken that represent all stormwater and process water associated with operations at the site. Outfall 001 shall be sampled from the outlet of the northern side of Basin 1C, prior to entering the southern side of Basin 1C, which is considered part of to the southern branch of the unnamed tributary to the Acushnet River. This sampling shall be conducted prior to mixing with any other stream including any flow of stormwater not associated with industrial activity, originating from the wetland area southeast of the Permittee's property, which flows under the property. Outfall 002 shall be sampled from the outlet of the last inground settling vault prior to entering the unnamed tributary to the Acushnet River (southern side of Basin 1C). Changes in sampling location must be approved in writing by the Environmental Protection Agency Region 1 (EPA). The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 CFR § 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. Measurement frequency of 1/week is defined as the sampling of one discharge event in each seven-day calendar week. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month. Measurement frequency of 1/quarter is defined as the sampling of one discharge event per calendar quarter. Calendar quarters are defined as January through March, April through June, July through September, and October through December. Measurement frequencies of 1/year and 2/year are defined as the sampling of one and two discharge events during one calendar year, respectively. If no sample is collected during the measurement

frequencies defined above, the Permittee must report an appropriate No Data Indicator (NODI) Code.

5. Grab samples shall be taken and composite samples shall begin within 30 minutes of the initiation of the discharge from the outfall location where practicable, but in no case later than within the first hour of discharge. Each composite sample must be collected proportional to flow, either by collecting a constant sample volume at varying time intervals proportional to the wastewater flow or collected by varying the volume of each individual aliquot proportional to the flow, while maintaining a constant time interval between the aliquots. Each composite sample will consist of at least eight aliquots taken during one consecutive 24-hour period, unless the discharge event lasts for a lesser period but not less than three hours. A composite sample collected over a period less than three hours is not valid.

6. Effluent flow shall be reported in million gallons per day (MGD).

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.) and the number of exceedances that occurred during monthly period, if any, shall be reported on each DMR.

8. After 12 monthly sampling events showing Fecal Coliform and/or Enterococcus results that meet the state WQS at 314 CMR 4.05(4)(b)(4), the Permittee may request discontinuation of sampling. Discontinuation of Fecal Coliform and/or Enterococcus sampling will not be in effect until the Permittee receives written notice from EPA.

9. Perchlorate shall be sampled in conjunction with total nitrogen sampling.

10. For the purposes of this permit, naphthalene analysis must be completed using an EPA approved 40 CFR Part 136 test method that achieves a minimum level no greater than 5.0 µg/L.

11. BTEX shall be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and (m,o,p) xylenes. For the purposes of this permit, BTEX analysis must be completed using a test method in 40 CFR § 136 that achieves a minimum level of detection no greater than 0.5 µg/L for each individual BTEX compound.

12. The Permittee shall conduct acute and chronic toxicity tests in accordance with test procedures and protocols specified in **Attachments A and B** of this permit. LC_{50} and C-NOEC are defined in Part II.E. of this permit. The Permittee shall test the Mysid Shrimp (*Americamysis bahia*) and the Inland Silverside (*Menidia beryllina*) for the acute test. For the chronic test, the Permittee shall test the Inland Silverside (*Menidia beryllina*) and the Sea Urchin (*Arbacia punctulata*). Toxicity test samples shall be collected, and tests completed during the calendar quarter ending September 30th. The

test results shall be submitted as an attachment to the monthly DMR submittal immediately following the completion of the test.

13. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachments A and B**, 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 **Attachments A and B**, 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 **Attachments A and B**, Part VI. CHEMICAL ANALYSIS.

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

15. 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.

3. The discharge shall not cause a violation of the water quality standards of the receiving water.

4. The discharge shall be free from pollutants in concentrations or combinations that, in the receiving water, settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.

5. The discharge shall be free from pollutants in concentrations or combinations that adversely affect the physical, chemical, or biological nature of the banks or bottom of the water course.

6. The discharge shall not result in pollutants in concentrations or combinations in the receiving water that are toxic to humans, aquatic life or wildlife.

7. The discharge shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to the receiving water.

8. The discharge 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.

9. 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 that was not reported in the permit application.

B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfalls listed in Part I.A.1 and I.A.2 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 D.1.e.(1) of the Standard Conditions of this permit (24-hour reporting).

a. The Permittee shall repair Basin 1C to prevent the breakthrough and overflow of wastewater directly into the unnamed tributary within six months of the effective date of the permit. The Permittee shall submit a report describing the repairs within one 30 days following completion of such work.

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.

3. The discharge of wastewater from hot mix asphalt process operations to the receiving water is prohibited.

C. SPECIAL CONDITIONS

1. Best Management Practices

The Permittee shall design, install, and implement control measures, including best management practices (BMPs), to minimize pollutant discharges from stormwater associated with quarry operations to the receiving water. At a minimum, the Permittee must implement control measures consistent with those described in Part 2.1 and any Sector specific control measures in Part 8 of EPA's Multi-Sector General Permit (MSGP) that became effective on June 4, 2015 (available at https://www.epa.gov/npdes/final-2015-msgp-documents), including the following:

a. Minimize exposure;
b. Good housekeeping;
c. Maintenance;
d. Spill prevention and response;
e. Erosion and sediment control;

f. Management of runoff;
g. Salt storage piles or piles containing salt;
h. Employee training;
i. Dust generation and vehicle tracking of industrial materials;
j. Sector specific non-numeric technology-based effluent limitations included in Parts 2.1.2, Part 8.E.2 (Glass, Clay, Cement, Concrete, and Gypsum Products), and Part 8.J.5 (Non-Metallic Mineral Mining and Dressing) of the 2015 MSGP;
k. Routine dredging of Basin 1C and other basins as necessary in order to assure that they are effectively settling solids and minimizing the transport of solids and other pollutants to the receiving water;
l. Inspect and remedy any breakthrough or overflow discharges from Basin 1C which discharge directly to the unnamed tributary to the Acushnet River; and
m. Identify and reduce sources of pathogens from the facility.

2. Stormwater Pollution Prevention Plan

The Permittee shall maintain a Stormwater Pollution Prevention Plan (SWPPP) to document the selection, design and installation of BMPs developed under Part I.C.1 of this Permit and consistent with Parts 2.1.2, 8.E.2, and 8.J.5 of the 2015 MSGP, to minimize the discharge of pollutants from the quarry operations to the receiving water. The SWPPP shall be a written document and be 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 ninety (90) days after the effective date of this Permit.

b. The SWPPP shall be consistent with the general provisions for SWPPPs included in Part 5 of EPA's 2015 MSGP. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the stormwater discharges, and document implementation of non-numeric technology based effluent limitations described in Part I.C.1 that will be used to reduce the pollutants and assure compliance with this Permit. Specifically, the SWPPP shall contain the elements listed in Parts 5.2.1 through 5.2.5, and Parts 8.E.3 and 8.J.6 of the 2015 MSGP that are briefly described below:

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

c. The Permittee shall inspect quarterly all areas identified as being exposed to stormwater, potential pollutant sources, discharge points, and control measures.

Inspections shall occur beginning the first full calendar quarter after the effective date of the Permit. EPA considers quarters as follows: January through March; April through June; July through September; and October through December. Inspections shall be performed by qualified personnel with participation of at least one member of the stormwater pollution prevention team. At least once each calendar year, the routine inspection must be conducted during a period when stormwater discharge is occurring.

d. The Permittee shall amend and update the SWPPP within fourteen (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 that 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; and 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. 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.

e. The Permittee shall certify at least annually that the previous year's inspections, maintenance, and training activities were conducted, results were recorded, and records were maintained, as described in the SWPPP. If the facility is not in compliance with any BMPs and/or activities described in the SWPPP, the annual certification shall specify such non-compliance and the remedies that are being 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 and MassDEP. All documentation of SWPPP activities shall be kept at the Facility for at least three years and provided to EPA or MassDEP upon request.

3. 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 and the State or provided through a subsequent written notification submitted to EPA and the State is prohibited. Upon the effective date of this permit, chemicals and/or additives that have been disclosed to EPA and the State 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 and the State unless otherwise notified by EPA and/or the State. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA and the State 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), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
(4) The frequency (e.g., daily), magnitude (i.e., maximum application concentration), duration (e.g., hours), and method of application for the chemical/additive;
(5) The maximum discharge concentration; and
(6) The vendor's reported aquatic toxicity, if available (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 which 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 no later than the 15th day of the month electronically using NetDMR. 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. *See* Part I.D.5. for more information on State reporting. 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)

   a. The following requests, reports, and information described in this permit shall be submitted to the NPDES Applications Coordinator in the EPA WD:

      (1) Transfer of Permit notice;
      (2) Request for changes in sampling location;
      (3) SWPPP reports and certifications, if required;
      (4) Report describing remedy of settling basin breakthrough/overflow;
      (5) Request to eliminate Fecal Coliform and/or *Enterococcus* monitoring;
      (6) Request to discharge new chemicals or additives; and
      (7) Report on unacceptable dilution water/request for alternative dilution water for WET testing.

   b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Water Division
NPDES Applications Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912

4. Submittal of Reports in Hard Copy Form

   a. The following notifications and reports shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission:

      (1) Prior to December 21, 2020, written notifications required under Part II. Starting on December 21, 2020, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

   b. This information shall be submitted to EPA ECAD at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

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

6. Verbal Reports and Verbal Notifications

   a. Any verbal reports or verbal notifications required in Parts I and 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 Environmental Compliance Assurance Division: **617-918-1510**

and to

MassDEP's Emergency Response: **888-304-1133**

E. STATE PERMIT CONDITIONS

1. 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 by reference all state water quality certification requirements (if any) into the final permit.

ATTACHMENT A

MARINE 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:

- **2007.0 - Mysid Shrimp (Americamysis bahia) definitive 48 hour test.**

- **2006.0 - Inland Silverside (Menidia beryllina) definitive 48 hour test.**

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

II. METHODS

The permittee shall use the most recent 40 CFR Part 136 methods. Whole Effluent Toxicity (WET) Test Methods and guidance may be found at:

http://water.epa.gov/scitech/methods/cwa/wet/index.cfm#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 and receiving water sample shall be collected. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any holding time extension. Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine[1] (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate

[1] For this protocol, total residual chlorine is synonymous with total residual oxidants.

prior to sample use for toxicity testing. If performed on site the results should be included on the chain of custody (COC) presented to WET laboratory.

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 mg/L chlorine. If dechlorination is necessary, a thiosulfate control consisting of the maximum concentration of thiosulfate used to dechlorinate the sample in the toxicity test control water must also be run in the WET test.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol. Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6^{o} C.

IV. DILUTION WATER

Samples of receiving water must be collected from a reasonably accessible location in the receiving water body immediately upstream of the permitted discharge's zone of influence. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2,Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water is found to be, or suspected to be toxic or unreliable, ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is

species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first case is when repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use by the permittee and toxicity testing laboratory. The second is when two of the most recent documented incidents of unacceptable site dilution water toxicity require ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
Five Post Office Square, Suite 100
Mail Code OES04-4
Boston, MA 02109-3912

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 most current annual DMR instructions which can be found on the EPA Region 1 website at http://www.epa.gov/region1/enforcementandassistance/dmr.html for further important details on alternate dilution water substitution requests.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA Region 1 requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Americamysis and Menidia toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE MYSID, AMERICAMYSIS BAHIA 48 HOUR TEST[1]

1. Test type	48hr Static, non-renewal
2. Salinity	25ppt ± 10 percent for all dilutions by adding dry ocean salts
3. Temperature (^{o}C)	20^{o}C ± 1^{o}C or 25^{o}C ± 1^{o}C, temperature must not deviate by more than 3^{o}C during test
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml (minimum)
7. Test solution volume	200 ml/replicate (minimum)
8. Age of test organisms	1-5 days, < 24 hours age range
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated Artemia naupli while holding prior to initiating the test
13. Aeration [2]	None
14. Dilution water	5-30 ppt, +/- 10%; Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	≥ 0.5
16. Number of dilutions [3]	5 plus a control. An additional dilution at the permitted effluent concentration (%

	effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding
18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

Footnotes:

[1] Adapted from EPA 821-R-02-012.

[2] If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.

[3] When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST[1]

1. Test Type	48 hr Static, non-renewal
2. Salinity	25 ppt ± 10 % by adding dry ocean salts
3. Temperature	20°C ± 1°C or 25°C ± 1°C, temperature must not deviate by more than 3°C during test
4. Light Quality	Ambient laboratory illumination
5. Photoperiod	16 hr light, 8 hr dark
6. Size of test vessel	250 mL (minimum)
7. Volume of test solution	200 mL/replicate (minimum)
8. Age of fish	9-14 days; 24 hr age range
9. No. fish per chamber	10 (not to exceed loading limits)
10. No. of replicate test vessels per treatment	4
11. Total no. organisms per concentration	40
12. Feeding regime	Light feeding using concentrated Artemia nauplii while holding prior to initiating the test
13. Aeration[2]	None
14. Dilution water	5-32 ppt, +/- 10% ; Natural seawater, or deionized water mixed with artificial sea salts.
15. Dilution factor	≥ 0.5
16. Number of dilutions[3]	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.

18. Test acceptability	90% or greater survival of test organisms in control solution.
19. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters.

Footnotes:

[1] Adapted from EPA 821-R-02-012.

[2] If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.

[3] When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

V.1. Test Acceptability Criteria

If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.2. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

In general, if reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary as prescribed below.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.2.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥3 standard deviations for IC25s and LC50 values and ≥ two concentration intervals for NOECs or NOAECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

Parameter	Effluent	Diluent	Minimum Level for effluent[*1] (mg/L)
pH	x	x	---
Salinity	x	x	ppt(o/oo)
Total Residual Chlorine [*2]	x	x	0.02
Total Solids and Suspended Solids	x	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

Superscript:

[*1] These are the minimum levels for effluent (fresh water) samples. Tests on diluents (marine waters) shall be conducted using the Part 136 methods that yield the lowest MLs.

[*2] Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

-Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
-Method 4500-CL G DPD Photometric Method.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

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

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

No Observed Acute Effect Level (NOAEL)

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

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Toxicity Test summary sheet(s) (Attachment F to the DMR Instructions) which includes:
    - Facility name
    - NPDES permit number
    - Outfall number
    - Sample type
    - Sampling method
    - Effluent TRC concentration
    - Dilution water used
    - Receiving water name and sampling location
    - Test type and species
    - Test start date
    - Effluent concentrations tested (%) and permit limit concentration
    - Applicable reference toxicity test date and whether acceptable or not
    - Age, age range and source of test organisms used for testing
    - Results of TAC review for all applicable controls
    - Permit limit and toxicity test results
    - Summary of any test sensitivity and concentration response evaluation that was conducted

Please note: The NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) are available on EPA's website at http://www.epa.gov/NE/enforcementandassistance/dmr.html

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures;
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s);
- Reference toxicity test control charts;
- All sample chemical/physical data generated, including minimum levels (MLs) and analytical methods used;
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis;
- A discussion of any deviations from test conditions; and
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint.

MARINE CHRONIC

TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall be responsible for the conduct of acceptable silverside chronic and sea urchin chronic toxicity tests in accordance with the appropriate test protocols described below:

- Inland Silverside (Menidia beryllina) Larval Growth and Survival Test
- Sea Urchin (Arbacia punctulata) 1 Hour Fertilization Test

Chronic toxicity 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. Where 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 AND USE

A total of three fresh samples of effluent and receiving water are required for initiation and subsequent renewals of a marine, chronic, toxicity test. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. Fresh samples are recommended for use on test days 1, 3, and 5. However, provided a total of three samples are used for testing over the test period, an alternate sampling schedule is acceptable. The acceptable holding times until initial use of a fresh sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any hold time extension. All fresh test samples collected may be used for 24, 48 and 72 hour renewals after initial use. All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6^{o} C.

If any of the renewal samples are of sufficient potency to cause lethality to 50 percent or more of the test organisms in any of the test treatments for either species or, if the test fails to meet its permit limits, then chemical analysis for total metals (originally required for the initial sample only in Section VI) will be required on the renewal sample(s) as well.

Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. For TRC analysis performed on site the results must be included on the chain of custody (COC) presented to WET laboratory. For the purpose of sample preparation, i.e. eliminating chlorine prior to toxicity testing, if called for by the permit, TRC analysis may also be performed by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate prior to sample use for toxicity testing. According to 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 mg/L chlorine.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol. Grab samples must be used for pH, temperature, and total residual oxidants (as per 40 CFR Part 122.21).

IV. DILUTION WATER

Samples of receiving water must be collected from a location in the receiving water body 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. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2,Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable test acceptability criteria (TAC). When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.
If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternatedilution water (ADW) of known quality with hardness similar to that of the receiving water may be substituted. Substitution is species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species.

Substitution to an ADW is authorized in two cases. The first is the case where repeating a test due to toxicity in the site dilution water requires an immediate decision for ADW use be made by the permittee and toxicity testing laboratory. The second is in the case where two of the most recent documented incidents of unacceptable site dilution water toxicity requires ADW use in future WET testing. For the second case, written notification from the permittee requesting ADW use and written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
Five Post Office Square, Suite 100
Mail Code OES04-4
Boston, MA 02109-3912

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 most current annual DMR instructions, which can be found on the EPA Region 1 website at http://www.epa.gov/region1/enforcementandassistance/dmr.html for further important details on alternate dilution water substitution requests.

If the use of an alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA New England requires that if a reference toxicant test was being performed concurrently with an effluent or receiving water test and fails, both tests must be repeated.

The following tables summarize the accepted Menidia and Arbacia toxicity test conditions and

test acceptability criteria:

EPA NEW ENGLAND RECOMMENDED TEST CONDITIONS FOR THE SEA URCHIN, ARBACIA PUNCTULATA, FERTILIZATION TEST[1]

1. Test type	Static, non-renewal
2. Salinity	30 o/oo ± 2 o/oo by adding dry ocean salts
3. Temperature	20 ± 1°C temperature must not deviate by more than 3°C during test
4. Light quality	Ambient laboratory illumination
5. Light intensity	10-20 uE/m^2/s, or 50-100 ft-c (Ambient Laboratory Levels)
6. Test vessel size	Disposal (glass) liquid scintillation vials (20 ml capacity), presoaked in control water
7. Test solution volume	5 ml
8. Number of sea urchins	Pooled sperm from four males and pooled eggs from four females are used per test
9. Number of egg and sperm cells	About 2000 eggs per chamber and 5,000,000 sperm cells per vial
10. Number of replicate chambers	4 per treatment
11. Dilution water	Uncontaminated source of natural seawater or deionized water mixed with artificial sea salts
12. Dilution factor	Approximately 0.5, must bracket the permitted RWC
13. Test duration	1 hour and 20 minutes
14. Effects measured	Fertilization of sea urchin eggs
15. Number of treatments per test[2]	5 and a control. (receiving water and laboratory water control) An additional dilution at the permitted effluent concentration (% effluent) is required.

16. Acceptability of test	70% - 90% egg fertilization in all controls. Minimum of 70% fertilization in dilution water control. Effluent concentrations exhibiting greater than 70% fertilization, flagged as statistically significantly different from the controls, will not be considered statistically different from the controls for NOEC reporting.
17. Sampling requirements	For on-site tests, samples are to be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
18. Sample volume required	Minimum 1 liter

Footnotes:

[1] Adapted from EPA 821-R-02-014

EPA NEW ENGLAND RECOMMENDED TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA, GROWTH AND SURVIVAL TEST[1]

1. Test type	Static, renewal
2. Salinity	5 o/oo to 32 o/oo +/- 2 o/oo of the selected salinity by adding artificial sea salts
3. Temperature	25 ± 1°C, temperature must not deviate by more than 3°C during test
4. Light quality	Ambient laboratory light
5. Light intensity	10-20 uE/m^2/s, or 50-100 ft-C (Ambient Laboratory Levels)
6. Photoperiod	16 hr light, 8 hr darkness
7. Test vessel size	600 - 1000 mL beakers or equivalent (glass test chambers should be used)
8. Test solution volume	500-750 mL/replicate loading and DO restrictions must be met)
9. Renewal of test solutions	Daily using most recently collected sample
10. Age of test organisms	Seven to eleven days post hatch; 24 hr range in age
11. Larvae/test chamber	15 (minimum of 10)
12. Number of replicate chambers	4 per treatment
13. Source of food	Newly hatched and rinsed Artemia nauplii less than 24 hr old
14. Feeding regime	Feed once a day 0.10 g wet wt Artemia nauplii per replicate on days 0 – 2 feed 0.15 g wet wt Artemia nauplii per replicate on days 3-6
15. Cleaning	Siphon daily, immediately before test solution renewal and feeding
16. Aeration[2]	None
17. Dilution water	Uncontaminated source of natural seawater; or deionized water mixed with artificial sea salts

18. Effluent concentrations	5 and a control (receiving water and laboratory water control) An additional dilution at the permitted effluent concentration (% effluent) is required
19. Dilution factor	$\geq$ 0.5, must bracket the permitted RWC
20. Test duration	7 days
21. Effects measured	Survival and growth (weight)
22. Acceptability of test	The average survival of dilution water control larvae is a minimum of 80%, and the average dry wt of unpreserved control larvae is a minimum of 0.5 mg, or the average dry wt of preserved control larvae is a minimum of 0.43 mg if preserved not more than 7 days in 4% formalin or 70% ethanol
23. Sampling requirements	For on-site tests, samples are collected daily and used within 24 hours of the time they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
24. Sample Volume Required	Minimum of 6 liters/day.

Footnotes:

[1] Adapted from EPA 821-R-02-014

[2] If dissolved oxygen (D.O.) falls below 4.0 mg/L, aerate all chambers at a rate of less than 100 bubbles/min. Routine D.O. checks are recommended.

V.1. Test Acceptability Criteria

If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.2. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

In general, if reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary as prescribed below.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.2.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established upper control limits i.e. $\geq$3 standard deviations for IC25s values and $\geq$ two concentration intervals for NOECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

VI. CHEMICAL ANALYSIS

The toxicity test requires measurement of pH, salinity, and temperature at the beginning and end of each 24 hour period in each dilution and controls for both daily test renewal and waste. The following chemical analyses shall be performed for each initial sample as well as any renewal samples, if necessary pursuant to the requirement of Part III above.

Parameter	Effluent	Diluent	Minimum Level for effluent[*1] (mg/L)
pH	x	x	---
Salinity	x	x	ppt(o/oo)
Total Residual Chlorine [*2]	x	x	0.02
Total Solids and Suspended Solids	x	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

Superscript:

[*1] These are the minimum levels for effluent (fresh water) samples. Tests on diluents (marine waters) shall be conducted using the Part 136 methods that yield the lowest MLs.

[*2] Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

-Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
-Method 4500-CL G DPD Photometric Method.

VII. TOXICITY TEST DATA ANALYSIS AND REVIEW

A. Test Review

1. Concentration / Response Relationship

A concentration/response relationship evaluation is required for test endpoint determinations from both Hypothesis Testing and Point Estimate techniques. The test report is to include documentation of this evaluation in support of the endpoint values reported.

The dose-response review must be performed as required in Section 10.2.6 of EPA-821-R-02-014. Guidance for this review can be found at http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_07_10_methods_wet_disk1_ctm.pdf.

In most cases, the review will result in one of the following three conclusions: (1) Results are reliable and reportable; (2) Results are anomalous and require explanation; or (3) Results are inconclusive and a retest with fresh samples is required.

2. Test Variability (Test Sensitivity)

This review step is separate from the determination of whether a test meets or does not meet TAC. Within test variability is to be examined for the purpose of evaluating test sensitivity. This evaluation is to be performed for the sub-lethal hypothesis testing endpoint growth for *Menidia beryllina* as required by the permit. The test report is to include documentation of this evaluation to support that the endpoint values reported resulted from a toxicity test of adequate sensitivity. This evaluation must be performed as required in Section 10.2.8 of EPA-821-R-02-014.

To determine the adequacy of test sensitivity, USEPA requires the calculation of test percent minimum significant difference (PMSD) values. In cases where NOEC determinations are made based on a non-parametric technique, calculation of a test PMSD value, for the sole purpose of assessing test sensitivity, shall be calculated using a comparable parametric statistical analysis technique. The calculated test PMSD is then compared to the upper and lower PMSD bounds shown for marine tests in Section 10.2.8.3, p. 54, Table 6 of EPA-821-R-02-014. The comparison will yield one of the following determinations.

- The test PMSD exceeds the PMSD upper bound test variability criterion in Table 6, the test results are considered highly variable and the test may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC). If the test results indicate that the discharge is not toxic at the PLC, then the test is considered insufficiently sensitive and must be repeated within 30 days of the initial test completion using fresh samples. If the test results indicate that the discharge is toxic at the PLC, the test is considered acceptable and does not have to be repeated.

- The test PMSD falls below the PMSD lower bound test variability criterion in Table 6, the test is determined to be very sensitive. In order to determine which treatment(s) are statistically significant and which are not, for the purpose of reporting a NOEC, the relative percent difference (RPD) between the control and each treatment must be calculated and compared to the lower PMSD boundary. See *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program*, EPA 833-R-00-003, June 2002, Section 6.4.2. The document can be located under Guidance Documents

at the following website location http://water.epa.gov/scitech/methods/cwa/wet/index.cfm#guidance. If the RPD for a treatment falls below the PMSD lower bound, the difference is considered statistically insignificant. If the RPD for a treatment is greater that the PMSD lower bound, then the treatment is considered statistically significant.

- The test PMSD falls within the PMSD upper and lower bounds in Table 6, the sub-lethal test endpoint values shall be reported as is.

B. Statistical Analysis

1. General - Recommended Statistical Analysis Method

Refer to general data analysis flowchart, EPA 821-R-02-014, page 45

For discussion on Hypothesis Testing, refer to EPA 821-R-02-014, Section 9.6

For discussion on Point Estimation Techniques, refer to EPA 821-R-02-014, Section 9.7

2. *Menidia beryllina*

Refer to survival hypothesis testing analysis flowchart, EPA 821-R-02-014, page 181

Refer to survival point estimate techniques flowchart, EPA 821-R-02-013, page 182

Refer to growth data statistical analysis flowchart, EPA 821-R-02-014, page 193

3. *Arbacia punctulata*

Refer to fertilization data testing flowchart, EPA 821-R-02-014, page 312

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Toxicity Test summary sheet(s) (Attachment F to the DMR Instructions) which includes:
  - Facility name
  - NPDES permit number
  - Outfall number
  - Sample type
  - Sampling method
  - Effluent TRC concentration
  - Dilution water used
  - Receiving water name and sampling location
  - Test type and species
  - Test start date
  - Effluent concentrations tested (%) and permit limit concentration
  - Applicable reference toxicity test date and whether acceptable or not
  - Age, age range and source of test organisms used for testing
  - Results of TAC review for all applicable controls
  - Test sensitivity evaluation results (test PMSD for growth)
  - Permit limit and toxicity test results
  - Summary of test sensitivity and concentration response evaluation

Please note: The NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) are available on EPA's website at http://www.epa.gov/NE/enforcementandassistance/dmr.html

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures;
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s);
- Reference toxicity test control charts;
- All sample chemical/physical data generated, including minimum limits (MLs) and analytical methods used;
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis;
- A discussion of any deviations from test conditions; and
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review.

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: MA0029297

PUBLIC NOTICE START AND END DATES: July 1, 2020 – July 30, 2020

NAME AND MAILING ADDRESS OF APPLICANT:

P. J. Keating Company
998 Reservoir Road
Lunenberg, MA 01462

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

P.J. Keating – Acushnet Facility
72 South Main Street
Acushnet, MA 02743

RECEIVING WATER AND CLASSIFICATION:

Unnamed Tributary to the Acushnet River (MA95-33)
Buzzards Bay Watershed
Class SB

SIC CODES: 1429 (Crushed and Broken Stone), 2951 (Asphalt Paving Mixtures and Blocks), and 3273 (Ready Mix Concrete)

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1.0 Proposed Action

The P.J. Keating Company (the "Permittee") has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge from P.J. Keating - Acushnet (the "Facility") into the unnamed tributary to the Acushnet River.

The permit currently in effect was issued on September 12, 2007 with an effective date of December 1, 2007 and expired on November 30, 2012 (the "2007 Permit"). The Permittee filed an application for permit reissuance with EPA dated June 2012, as required by 40 Code of Federal Regulations (CFR) § 122.6. Since the permit application was deemed timely and complete by EPA on August 30, 2012 the Facility's 2007 Permit has been administratively continued pursuant to 40 CFR § 122.6 and § 122.21(d). EPA and the State conducted site visits on October 22, 2019 and December 16, 2019.

In 2017, EPA determined that P.J. Keating Company failed to comply with the terms and conditions of the facility's NPDES permit, and with Spill Prevention Control and Countermeasure (SPCC) regulations. P.J. Keating Company paid a civil penalty of $140,000. The facility was found to violate its effluent limits for total suspended solids and pH as well as several violations of spill prevention regulations, including the failure to have adequate secondary containment for some of its oil storage containers, in order to prevent a discharge of oil.

2.0 Statutory and Regulatory Authority

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 as authorized by specific permitting sections 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" in accordance with certain conditions. CWA § 402(a). 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 §§ 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 Section 301 and 402. *Arkansas v. Oklahoma,* 503 U.S. 91, 105 (1992). *See also* 40 CFR §§ 122.4(d), 122.44(d)(1), 122.44(d)(5). CWA §§ 301 and 306 provide for two types of effluent limitations to be included in NPDES permits: "technology-based" effluent limitations (TBELs) and "water quality-based" effluent limitations (WQBELs). *See* CWA §§ 301, 304(b); 40 CFR §§ 122, 125, and 131.

2.1 Technology-Based Requirements

Technology-based treatment requirements represent the minimum level of control that must be imposed under CWA §§ 301(b) and 402 to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. *See* 40 CFR § 125 Subpart A.

Subpart A of 40 CFR Part 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under § 301(b) of the CWA, including the application of EPA promulgated Effluent Limitation Guidelines (ELGs) and case-by-case determinations of effluent limitations under CWA § 402(a)(1). EPA promulgates NSPS under CWA § 306 and 40 CFR § 401.12. *See also* 40 CFR §§ 122.2 (definition of "new source") and 122.29.

In general, ELGs for non-POTW facilities must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989. *See* 40 CFR § 125.3(a)(2). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit. In the absence of published technology-based effluent guidelines, the permit writer is authorized under CWA § 402(a)(1)(B) to establish effluent limitations on a case-by-case basis using best professional judgment (BPJ).

2.2 Water Quality-Based Requirements

The CWA and federal regulations require that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is necessary when less stringent TBELs would interfere with the attainment or maintenance of water quality criteria 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).

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 §§ 131.10-12. Generally, WQSs consist of three parts: 1) beneficial designated use or uses for a water body or a segment of a water body; 2) numeric 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. The applicable State WQSs can be 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 numeric and narrative water quality criteria. 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 limitation(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 basis" 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).

2.2.2 Antidegradation

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 Procedure for the Anti-Degradation Provisions of the State Water Quality Standards," 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 the 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) and 40 CFR § 122.44(d)(1), NPDES permits must contain any requirements in addition to TBELs that are necessary to achieve water quality standards established under § 303 of the CWA. *See also* 33 U.S.C. § 1311(b)(1)(C). In addition, limitations "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 WQSs, 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 and, in each case, cite the CWA or State law provisions upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. EPA includes properly supported State certification conditions in the NPDES permit. 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 should 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. Since the State's certification is provided prior to final permit issuance, any failure by the State to provide this statement waives the State's right to certify or object to any less stringent condition.

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, "[t]he 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).

2.3 Effluent Flow Requirements

Generally, EPA uses effluent flow 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 EPA's reasonable potential and WQBEL calculations to ensure compliance with WQSs under CWA § 301(b)(1)(C). Should the 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 reasonable potential at a higher flow due to the decreased dilution. 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.[1] In this regard, the effluent flow limitation is a component of WQBELs because the WQBELs are premised on a maximum level flow. The effluent flow limit is also necessary to ensure that other pollutants remain at levels that do not have a reasonable potential to exceed WQSs.

The limitation on effluent flow 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). A condition on the discharge designed to ensure the validity of EPA's WQBELs and reasonable potential calculations that account for "worst case" conditions is encompassed by the references to "condition" and "limitations" in CWA §§402 and 301 and the implementing regulations, as WQBELs are designed to assure compliance with applicable water quality regulations, including antidegradation requirements. Regulating the quantity of pollutants in the discharge through a restriction on the quantity of effluent is also consistent with the CWA.

In addition, as provided in Part II.B.1 of this 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, the 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 establish1ed 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(j), 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 wastewater 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

[1] 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)*.

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 numerical 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. 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*.[2] 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[3] (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

[2] Fed. Reg. 49,001 (Aug. 19, 2014).
[3] 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).

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.[4]

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 Draft Permit. In most cases, reports required under the permit shall be submitted to EPA as an electronic attachment through NetDMR. Certain exceptions are provided in the permit such as for providing written notifications required under the 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 the Code of Federal Regulations. *See generally* 40 CFR Part 122.

2.6 Anti-backsliding

The CWA's anti-backsliding requirements prohibit a permit from being renewed, reissued or modified to include less stringent limitations or conditions than those contained in a previous permit except in compliance with one of the specified exceptions to those 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 2007 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 P.J. Keating Company owns and operates an earth products processing facility in the town of Acushnet, Massachusetts. A location map is provided in Figure 1. The Permittee manufactures crushed stone, hot-mix asphalt (bituminous concrete), and construction sand and gravel from on-site granite rock. Quarry activities at the site began in the 1920's. The Facility was originally owned by Tilcon Capaldi and was purchased in January of 2001 by P.J. Keating Company. There is also a ready-mix concrete batch processing plant at the site, which is owned and operated by L&S Concrete, who leases the space from the Permittee. The asphalt, concrete and aggregate materials are sold and shipped to independent contractors or used by P.J. Keating for off-site projects. The Facility typically operates seven days per week, 24 hours per day, except during the cold season (i.e., generally December through February), when rock quarrying, stone processing, and asphalt batch processing may cease.

[4] https://netdmr.zendesk.com/hc/en-us

The main features of the Facility are: the quarry, rock crushers, conveyors, sand screw, wash plant, clarifier station, asphalt plant, concrete plant, stone/crusher and paving garages, and the water supply and settling basins. A site plan identifying these features is provided in Figure 2. Routine quarry operations include: blasting, stone transport, aggregate processing (crushing and washing), aggregate material stockpiling, vegetative cover maintenance and removal, dust control, and stormwater management.

Quarry Operations

Vegetative cover at the site is maintained if possible within inactive portions of the site for stabilization purposes. To prepare for quarry operations, surface areas are cleared and grubbed, which includes the removal of trees, roots, stumps, debris, brush, etc. Overburden material is then removed to expose the rock for quarrying. Materials removed in preparation of quarry operations are stockpiled either in or around the vicinity of the quarry or sold to customers. These materials are configured in such a way as to minimize the mobilization of fines, solids, or organics in stormwater runoff by the establishment of silt fencing or other methods (e.g., direction of runoff to the storm water management system).

To prepare the quarry for blasting which is best conducted during dry weather, accumulated stormwater in the quarry is pumped to Basin 1A. Stone is separated from the quarry walls by drilling and blasting in the active portions of the quarry. Blasting operations occur on an intermittent basis using outside contractors. Therefore, blasting materials are transported to the site by the contractor and are not stored on-site.

Drilling of blast holes is performed in regularly spaced intervals, as designed by the blasting engineer, along the vertical face of the quarry wall. Bulk explosive materials (typically a mixture of ammonium nitrate and fuel oil (ANFO)) are then pneumatically pumped into the blast holes. The blast is detonated in a pattern using an electronic sequential timer to initiate numerous, small controlled explosions that break apart the rock. On the rare occasions that a partial detonation occurs due to a failure in the detonation equipment or circuits, security guards are posted at the site until residual undetonated explosive materials are removed by industry-approved methods. The explosion creates a pile of broken rock at the base of the quarry face (vertical wall). The process of blasting (explosive detonation), by its very nature; consumes the explosives used in creating tremendous instantaneous high temperatures and expanding gas energy. As such, there is little residual materials expected to be left in the blasted rock.

Stone removed from the quarry is transported by truck to the aggregate processing area (crushing and screening). Quarry rock is processed at primary and secondary crushers located west of the quarry. Crushed stone is transported to the wash plant via conveyors and then screened and washed with water supplied by Basin 1A. Clean stone aggregate is then transported and stockpiled by an output conveyor. A portion of the stone is crushed into sand-sized material with a sand screw and washed. Rock and sand wash water are pumped to a clarifier station for treatment. Flocculants are added to the wash water to promote settling. See Section 5.2.3 of this Fact Sheet for the list of flocculant chemicals used.

Stone dust and solids generated from quarry and process operations are likely constituents of stormwater flow at the site. Dust suppression operations are also performed, except during precipitation events. The Permittee has implemented a stormwater management system which uses a series of detention basins to allow for the removal of particulates and solids.

Concrete Operations

L&S Concrete leases the northwest portion of the site from P.J. Keating for its ready-mix concrete operations. Ready-mix concrete is produced using water, dry Portland cement, sand and stone aggregate. L&S Concrete does not manufacture Portland cement. The Portland cement additive used in the concrete ready-mix plant is delivered by truck. Excess material is formed into concrete blocks and stored on site. Concrete trucks are rinsed with water from a closed-loop concrete wash water settling system consisting of a series of settling chambers. Wash water from these settling chambers is used in the process of concrete production. There is no discharge from these settling chambers except during extreme precipitation events, when stormwater and process water overflow into Basin 1A.

Asphalt Operations

The on-site hot mix asphalt (HMA) plant produces up to 500 tons of bituminous concrete per hour. Liquid asphalt cement (containing crude oil) is delivered via tank truck and stored on-site in heated tanks. Bituminous concrete is produced by mixing aggregate (crushed stone and sand) with liquid asphalt cement. This operation is in the process of being moved from the southeast portion of the site to a location closer to Basin 1A, to expand quarry operations. Although HMA is not exposed to stormwater during production because the production area is roofed, pollutants (liquid asphalt, aggregate, fuel oil, and asphalt release agent overspray) may be exposed to stormwater during the transport of raw materials and loading of the final product onto trucks. Asphalt release agents are sprayed into truck beds to prevent asphalt from attaching to the truck during transport. Loading and unloading operations at the plant are performed under the supervision of facility personnel. Tanks, lines, and valves are visually inspected for leaks or spills daily. In addition, asphalt is cleaned off machinery with biodegradable emulsifiers that discharge into the stormwater system. This discharge is prohibited pursuant to 40 CFR § 443.22 and 443.23 and reflected in Part 1.B.3 of the Draft Permit. *See* Section 3.1.1 Effluent Limitation Guidelines of this Fact Sheet.

Vehicle Washing, Fueling, Dust Suppression

Vehicle washing takes place at the wash pad adjacent to the paving garage. In addition, tire rinsing operations, without the use of soaps or detergents, take place at the scales to the south of the paving garage prior to loaded trucks exiting the site. Washwater from these operations is collected in a newly installed trench drain system that discharges to the unnamed tributary via two in-line settling basins.

Various types of oil and other materials are stored on-site to facilitate the quarrying, asphalt and concrete production processes. Fueling of vehicles is often performed at 4,000-gallon gasoline

and 8,000-gallon diesel above-ground storage tanks (ASTs) located to the east of the paving garage outside of the quarry. Larger equipment may be fueled by a mobile truck operated by a contractor. Engine oil and transmission oil are stored in 500-gallon double-walled ASTs. Gear oil is stored in a 275-gallon AST. Waste oil from stone crushing operations is temporarily stored in a double-walled AST inside the stone/crush garage and subsequently transported off-site by a licensed waste hauler. Two cooling oil reservoirs serving the primary crusher contain 250 and 220 gallons of cooling oil, respectively. Two other cooling oil reservoirs, each containing 165 gallons of cooling oil, serve the two secondary crushers. Liquid asphalt is stored in two vertical double-walled 20,000-gallon ASTs located in a concrete secondary containment area on the south side of the asphalt plant. There are eight (non-PCB) transformers at the site; all located on elevated concrete pads. Dumpsters for refuse, metal, and other waste are located throughout the site and are required to be covered, preventing exposure to stormwater.

Basin 1A supplies dust suppression water via a series of roadside sprinklers along interior roadways, which spray trucks as they pass by. Dust suppression water that does not infiltrate into the ground drains back to the quarry or Basin 1A.

3.1.1 Effluent Limitation Guidelines

EPA has promulgated the following technology-based effluent limitation guidelines (ELGs) that apply to P.J. Keating Company: Mineral Mining and Processing Point Source Category, 40 CFR Part 436, and Paving and Roofing Materials Point Source Category, 40 CFR Part 443.

The applicable subpart of the Mineral Mining and Processing Point Source Category for P.J. Keating Company is Subpart B —Crushed Stone Subcategory (SIC code 1429). For this subcategory, the revised ELGs promulgated on July 12, 1977 included limitations on the discharge of pH (6-9 standard units) and TSS (a 30-day average of 25 mg/l and a maximum daily average of 45 mg/l). However, on June 18, 1979 the TSS limitations were remanded to EPA for reconsideration and have not been re-proposed. Therefore, Subpart B contains discharge limitations for pH only, as mentioned above.

The applicable subpart of the Paving and Roofing Materials Point Source Category for P.J. Keating Company is Subpart B —Asphalt Concrete Subcategory (SIC code 2951). Both BPT and BAT limitations for this subpart indicate that "[t]here shall be no discharge of process wastewater pollutants to navigable waters." Therefore, P.J. Keating Company is not authorized to discharge any process water from its hot mix asphalt process operations. *See* 40 CFR § 443.22 and 443.23.

In addition, EPA has the authority to establish effluent limitations on a case-by-case basis using best professional judgment (BPJ). *See* Section 402(a)(1)(B) and 40 CFR § 125.3(c)(2). Although P.J. Keating does not manufacture Portland cement at its facility and therefore not subject to the Cement Manufacturing Point Source Category ELG, 40 CFR Part 411, EPA can consider the limitations and conditions in this ELG for developing BPJ-based TBELS. In this case, BPJ-based TBELS may be informed by Subpart C of the Cement Manufacturing Point Source Category, which has TSS and pH limits for the stormwater runoff from materials storage piles. *See* https://www.epa.gov/eg/cement-manufacturing-effluent-guidelines

Where BPJ is applied, all the relevant technology standard factors are considered by EPA. *See* CWA 304 and 40 CFR § 125.3. To the extent applicable to P.J. Keating Company, EPA has incorporated technology-based limitations and conditions based on 1) performance data from the Facility; 2) individual permits issued to similar facilities in Region 1 that discharge comparable wastewater; 3) EPA's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), specifically for facilities engaged in asphalt paving and mineral mining (Sector D and Sector J, respectively of EPA's MSGP), as well as Sector E of the MSGP (Glass Clay, Cement, Concrete, and Gypsum Products).

3.2 Location and Type of Discharge

Outfall 001 and Outfall 002 are generally located at Latitude 41° 40' 27.11" Longitude -70° 54' 27.71" and discharge to an unnamed tributary of the Acushnet River.

The Permittee has requested authorization to discharge wastewater from the Facility through Outfall 001 and newly created Outfall 002. The discharges consist of process wastewater and stormwater associated with industrial activities. Process water is generated from aggregate processing, ready-mix concrete (treatment basin overflows only during extreme weather), vehicle washing, and dust suppression throughout the site. Stormwater consists of quarry dewatering and runoff from all process and material storage areas on the site.

Stormwater and groundwater seepage from the quarry wall accumulate in the lowest part of the quarry, known as the quarry detention basin. Water from the quarry detention basin is periodically pumped to Basin 1A.

Aggregate wash water, after treatment in the clarifier station, is pumped to Basin 2A[5] located in the southeast corner of the site. As previously stated, treatment within the clarifier station consists of flocculant addition and settling. Stormwater runoff from process and storage areas located in the southeast portion of the site, including the asphalt plant and silt material storage area, either infiltrates or also drains to a Basin 2A. As previously described, stormwater runoff from areas near the asphalt plant contains asphalt release agent overspray. Basin 2A water, which includes commingled wastewater and stormwater, is pumped to settling Basin 1A.

Water in Basin 1A is periodically pumped to the final settling basin, Basin 1C, which overflows and therefore discharges by gravity via Outfall 001 to the unnamed tributary of the Acushnet River. A schematic of water flow is provided in Figure 3.
There is off-site stormwater that enters the PJ Keating property from the north and travels along the property line adjacent to South Main Street. This stormwater does not pass through Basin 1C, does not come in contact with industrial activities, and flows directly into the unnamed tributary. For purposes of this discussion, EPA considers the flow originating off-site to the north as the "northern branch" of the unnamed tributary. Stormwater and possibly groundwater also flow on-site from an extensive wetland located on the southwestern edge of the property. Flows from this

[5] There had previously been a series of detention basins on this portion of the site, designated as Basins 2A, 2B and 2C. These have been consolidated into one larger basin, now designated Basin 2A.

wetland area are also not impacted by industrial activities and travel through an underground culvert below the Facility's property, emerging into the "southern section of Basin 1C." EPA considers the flow originating off-site to the south as the "southern branch" of the unnamed tributary.

In previous permitting actions, Basin 1C was identified as a settling basin having two distinct sections in series, with water from Basin 1A entering the northern side of the man-made Basin 1C and flowing by gravity to the southern side. The southern side of Basin 1C, however, acts more like a man-made channel, because the southwestern wetland area drains through this channel. Flow through this channel was significant when observed during the site visit on December 16, 2019. Outfall 001 samples have been collected at a location downstream of the south side channel, just prior to the flow combining with northern branch of the unnamed tributary. However, the more appropriate location to collect wastewater samples not impacted by dilution from the off-site wetland drainage is the overflow from the northern side of Basin 1C. Henceforth, Basin 1C is identified as the settling basin to the north of the channelized flow from the southern branch of the unnamed tributary. See Figures 4 and 5 for maps showing the drainage configuration, basins and channel. Therefore, Outfall 001 in the proposed Draft Permit is either one of the two outlet pipes from Basin 1C, prior to entering the southern branch of the unnamed tributary to the Acushnet River.

The Permittee recently installed a trench drain system near the main entrance to the property. The drain system collects stormwater runoff in that area and wash water from tire/truck rinsing operations nearby. The trench drains flow to a 5000-gallon underground tank that allows solids to settle. Wastewater then flows by gravity to another underground vault prior to discharging to the southern branch of the unnamed tributary to the Acushnet River (formally the south side of Basin 1C). Therefore, this discharge is a separate and discrete outfall and has been designated Outfall 002 in the Draft Permit, for which effluent limits and monitoring requirements have been established.

Potable water for the QA/QC lab and front office building is obtained from the municipal water source. All sanitary wastewater is discharged to subsurface holding systems serving individual processing areas of the site. Three "closed tight tanks" are located onsite. The tanks collect sanitary wastewater discharge, which is subsequently taken offsite for treatment and disposal. These tanks are located near the concrete plant, east of the paving garage, and at the asphalt plant. Additionally, a subsurface septic system is located on the west side of the front office building.

A quantitative description of the discharge in terms of effluent parameters, based on monitoring data submitted by the Permittee, including Discharge Monitoring Reports (DMRs), from August 2014 through July 2019, is provided in Appendix A of this Fact Sheet, showing both dry weather and wet weather conditions. This Draft Permit no longer requires dry and wet weather sampling because the effluent consists of a combination of both stormwater and process water.

Additional monitoring data submitted by the Permittee (i.e., DMRs) since July 2019 was reviewed by EPA for consistency with the data for the monitoring period from August 2014 through July 2019, which is the date range used to determine the effluent limitations and

conditions proposed in the Draft Permit. EPA finds that the additional monitoring data are consistent and as a result, no changes to the proposed effluent limitations and conditions are warranted. Therefore, these data are not included in Appendix A of this Fact Sheet.

4.0 Description of Receiving Water and Dilution

4.1 Receiving Water

The Facility discharges through Outfall 001 to the unnamed tributary to the Acushnet River in Acushnet, Massachusetts. Acushnet River is part of the Buzzards Bay Watershed.

The Acushnet River, in the vicinity of the Facility (Town of Acushnet Main street culvert to the Coggeshall Street Bridge), identified by segment ID MA95-33, is classified as a Class SB, shellfishing (restricted), CSO river segment in the State WQS, 314 CMR 4.06. Class SB waters are described in the State WQS, 314 CMR 4.05(4)(b) as follows:

> *These waters are 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. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.*

Acushnet River segment MA95-33 is listed in the *Massachusetts Year 2016 Integrated List of Waters* ("303(d) List") as a Category 5 "Waters Requiring a TMDL".[6] This river segment is not attaining water quality standards due to debris and trash, color, fecal coliform, total nitrogen, oil and grease, "other" pollutants (impairment causes in this category may include unspecified metals), dissolved oxygen, polychlorinated biphenyls, and taste and odor.

A TMDL for fecal coliform has been completed; the Final Pathogen TMDL for the Buzzards Bay Watershed was completed in March 2009 (CN 251.1).[7] Acushnet River segment MA95-33 is designated a high priority TMDL segment with the shellfishing use impacted by pathogens. NPDES stormwater and wastewater point sources, such as P.J. Keating, are identified as the cause of or contributor to the pathogen impairment. To date, no TMDL has been developed for this river segment for any of the other listed impairments. (A TMDL is not required for the debris and trash impairment.)

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[6] *Massachusetts Year 2016 Integrated List of Waters*. MassDEP Division of Watershed Management Watershed Planning Program, Worcester, Massachusetts, December 2019.
[7] Final Pathogen TMDL for the Buzzards Bay Watershed. MassDEP Division of Watershed Management (DWM), Boston, Massachusetts; March 2009.

The status of each designated use is presented in Table 1.

Table 1: Summary of Designated Uses and Listing Status[8]

Designated Use	**Status**
Aquatic Life	Impaired
Aesthetics	Impaired
Primary Contact Recreation	Impaired
Secondary Contact Recreation	Impaired
Fish Consumption	Not Assessed
Shellfish Harvesting	Impaired

The Aesthetics Use category is assessed as impaired due to oil and grease, taste and odor, color, trash and debris. The Aquatic Life Use category is assessed as impaired due to dissolved oxygen, polychlorinated biphenyls and total nitrogen. The Primary and Secondary Contact Recreation Use categories are assessed as impaired due to trash and debris, oil and grease, color, taste and odor. The Shellfish Harvesting Use category is assessed as impaired due to polychlorinated biphenyls and fecal coliform. Overall, sources of impairment include Superfund sites, contaminated sediments, industrial point source discharges, combined sewer overflows, unspecified urban stormwater, and urbanized high-density areas.

4.2 Ambient Data

There is no ambient monitoring data provided by the Permittee for this segment of the receiving water. Although there was one WET test conducted in 2012 for the permit application, the diluent water used for that test was synthetic (laboratory) water.

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.[9] The critical flow in rivers and streams is some measure of the low flow of that river or stream. For rivers and streams where flows are not regulated by dams, State WQSs require that effluent dilution be calculated based on the receiving water lowest observed mean river flow for seven consecutive days, recorded over a 10-year recurrence interval, or 7-day 10-year low flow (7Q10). *See* 314 CMR 4.03(3)(a). In this case, the Facility discharges into a tidal river. The dilution factor for sites that discharge to saltwater in Massachusetts is assumed to be 1:1, unless otherwise decided on a case-by-case basis by the State.

[8] Buzzards Bay Watershed -Water Quality Assessment Report, MassDEP DWM; 95-AC-2; November 2003 https://www.mass.gov/doc/buzzards-bay-2000-water-quality-assessment-report-s-i/download
[9] EPA Permit Writer's Manual, Section 6.2.4

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 C.F.R § 122.45(b)(2), EPA bases the calculation of effluent limitations on either the reasonable measure of actual production for a facility or the flow from a facility. EPA determined that the measure appropriate for P.J. Keating is the effluent flow. In this case, a dilution factor of one is used in the quantitative derivation of WQBELs for pollutants in the Draft Permit.

5.1 Effluent Limitations and Monitoring Requirements – Outfall 001

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, respectively. EPA's reasonable potential analysis is included in Appendix C and results are discussed in the sections below.

5.1.1 Effluent Flow

From July 2014 through July 2019 (Appendix A) effluent flow has ranged from 0 MGD to 2.55 MGD. The Facility's 2007 Permit does not include a limit for flow (i.e., report only). The Draft Permit maintains a weekly monitoring frequency requirement, measured using estimation, and reporting requirement for average monthly and maximum daily flow values.

5.1.2 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.

From July 2014 through July 2019 (Appendix A), daily maximum total suspended solids (TSS) concentrations have ranged from non-detect to 142 mg/L. There were 36 exceedances during this time frame. In 2017, EPA concluded an enforcement action in part for TSS violations. The current 2007 Permit limits for TSS of 23.0 mg/L maximum daily and a 15.0 mg/L average monthly were established using BPJ, based on EPA's 2000 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2000 MSGP), for SIC code 2951.

The 2007 Permit limits are continued in the Draft Permit in accordance with anti-backsliding requirements found in 40 CFR § 122.44(1). However, because there were multiple exceedances during the permit term and the possibility that samples collected may have been diluted by the flow from the off-site wetland area, the monitoring frequency has been changed from twice per month to weekly, by composite samples.

5.1.3 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. Sudden pH changes can kill aquatic life. pH can also have an indirect effect on the toxicity of other pollutants in the water.

From July 1, 2014 through July 31, 2019 (Appendix A), pH ranged from 4.93 to 8.6 S.U. There were 19 exceedances of the pH range during this time period.

The 2007 Permit includes a pH limitations range of 6.5 to 8.3 S.U. when the Facility is discharging. After consultation with the MassDEP, EPA has determined that the receiving stream classification is Class SB, different from the Class B designation in the 2007 Permit. Consequently, the upper end of the pH range has been changed from 8.3 to 8.5 standard units (S.U.) In addition, given the number of reported violations during the previous five years, the Draft Permit is increasing the monitoring frequency from twice per month to once per week by grab samples when discharging. These limitations are based on CWA § 301(b)(1)(C) and 40 CFR § 122.44(d).

5.1.4 Turbidity

Turbidity is a measure of relative water clarity, with relatively higher turbidity corresponding to relatively lower water clarity. Materials such as inorganic matter (e.g., silt, sand, and clay), organisms (e.g., algae, plankton, and microbes) and detritus can contribute turbidity. Highly turbid water can influence the amount of dissolved oxygen in the water by decreasing light penetration in the water, in turn reducing photosynthesis, by increasing water temperature as suspended particles absorb heat, or by oxygen depletion as bacteria consume dead plant matter. These materials can also have physical effects on aquatic life and waterbodies, clogging fish gills, reducing growth and disease resistance, and smothering fish eggs and benthic macroinvertebrates, and causing sedimentation that may alter the nature of bottom sediments.

From July 1, 2014 through July 31, 2019 (Appendix A), daily maximum turbidity concentrations have ranged from 0.8 to 26 nephelometric turbidity units (NTUs) with one exceedance of the 25 NTU limit. The Draft Permit retains this daily maximum turbidity limitation of 25 NTU, monitored twice per month by grab samples, when discharging. This limitation is required by 40 CFR § 122.44(d)(1)(iii) and is based on certification requirements under § 401(a)(1) of the CWA, as described in 40 CFR §§ 124.53 and 124.55 and complies with anti-backsliding requirements found in 40 CFR § 122.44(1).

This water quality-based limitation for turbidity is based on State WQSs for Class SB waters at 314 CMR 4.05(4)(b), which states, *"[t]hese waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class."* In addition, State WQSs applicable to all waters at 314 CMR 4.05(5)(a) states, *"[a]ll surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life."* A turbidity value of 25 NTU is consistent with several states that have established numeric water quality criteria for turbidity, including the New England states of Vermont[10] and New Hampshire[11] as well as the turbidity limitations imposed on similar facilities in Massachusetts and New Hampshire.

5.1.5 Oil & Grease

Oil and Grease (O&G) is not a single chemical constituent, but includes a large range of organic compounds, which 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.

The 2007 Permit's maximum daily limit of 15 mg/L for O&G is based on the narrative State WQS at 314 CMR 4.05(3)(b)(7), which states that

> *[t]hese waters shall be free from oil, grease and petrochemicals that produce a visible film in the surface of the water, to 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 became toxic to aquatic life.*

However, because the receiving water has been changed to a classification of SB, the narrative from the State WQS at condition 314 CMR 4.05(4)(b)(7) applies to this discharge, which is identical to the one noted above for the prior Class B classification.

An O&G concentration of 15 mg/L is recognized as the concentration at which many oils produce a visible sheen and/or cause an undesirable taste in edible fish.[12]

From July 1, 2014 through July 31, 2019 (Appendix A), O&G has ranged from below detection limits to 19 mg/L, with one reported exceedance during this time period. A maximum daily oil

[10] See Vermont Water Quality Standards, Subchapter 3, § 29A-302(4), effective January 15, 2017.
[11] See "Review of New Hampshire's Water Quality Criteria for Turbidity (Env-Wq 1703.11)," State of New Hampshire Inter-Department Communication, October 6, 2011.
[12] USEPA. 1976. The Red Book – Quality Criteria for Water. July 1976.

and grease limit of 15 mg/L has been retained in the Draft Permit to ensure compliance with State WQS. The 2007 Permit established an average monthly limit of 10 mg/L for O&G using BPJ pursuant to § 402(a)(1) of the CWA (based on the 2000 MSGP for SIC code 2951). This limit is also retained in the Draft Permit in accordance with anti-backsliding requirements found in 40 CFR §122.44(l). The monitoring frequency will also remain unchanged at twice per month.

5.1.6 Nitrogen

Nitrogen is an essential nutrient for plant growth. However, elevated concentrations of nitrogen can result in eutrophication, where nutrient concentrations lead to excessive plant and algal growth. Respiration and decomposition of plants and algae under eutrophic conditions reduce dissolved oxygen in the water and can create poor habitat for aquatic organisms. Total nitrogen is the sum of total kjeldahl nitrogen (TKN) (ammonium, organic and reduced nitrogen) and nitrate and nitrite nitrogen. It is derived by individually monitoring for organic nitrogen compounds, ammonia, nitrate, and nitrite and adding the components together.

The 2007 Permit included monitoring for each of the nitrogen compounds. From July 2014 through July 2019, the highest report TKN result was 2.17 mg/L. The highest total nitrate nitrogen result was 9.35 mg/L, the highest total nitrite nitrogen result was 3.19 mg/L and the highest total nitrogen result was 9.6 mg/L.

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 red blood cells, and can result in excessive plant and algal growth, which 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.

The applicable ammonia water quality criteria are pH dependent and, for the chronic criterion, temperature dependent and can be derived using EPA-recommended ammonia criteria from the document *Ambient Water Quality Criteria for Ammonia (Saltwater)* 1989 (EPA 440/5-88-004; April 1989). These are the saltwater ammonia criteria in EPA's National Recommended Water Quality Criteria, 2002 (EPA 822-R-02-047) document, which are included by reference in the Massachusetts WQS. *See* 314 CMR 4.05(5)(e).

For ammonia, a pH of 7.0, roughly the median value during the monitoring period, an average summer temperature of 20°C, and assuming a salinity level of 10 parts per thousand (ppt), the acute criterion is 62 mg/L and the chronic criterion is 9.4 mg/L. The salinity level in the Acushnet River was found to range between 12 and 32 ppt, with lower salinity found in the upper estuary, to which the unnamed tributary discharges.[13]

[13] The Buzzards Bay Watershed 2000 Water Quality Assessment Report, 95-AC-2, November 2003.

The highest maximum daily ammonia concentration of 1.4 mg/L reported during dry weather by the Facility in December 2016 is lower than both the chronic and acute ammonia criteria. Using the highest recorded pH value of 8.6 S.U. would result in chronic and acute criteria of 0.27 and 1.8 mg/l, respectively. This acute level is still higher than the highest value of 1.4 mg/l during the monitoring period and the average DMR value is far below the chronic level, this demonstrates that the effluent will not cause or contribute to a violation of the ammonia criteria.

Nitrogen containing compounds are used to blast the rock at the site, the Acushnet River is not attaining water quality standards due to nutrients, and the discharge contains low levels of ammonia. Therefore, the Draft Permit maintains the ammonia monitoring requirements of the current permit, at a twice per month monitoring frequency. In addition, the Draft Permit also maintains monitoring for total nitrogen at a twice per month monitoring frequency and eliminates the requirement to report the constituents of total nitrogen (TKN, nitrite and nitrate nitrogen) separately.

5.1.7 Naphthalene

Naphthalene is considered an important limiting pollutant parameter based upon the prevalence of this compound in petroleum products including gasoline (Potter, 1998) and its toxicity (i.e., naphthalene has been identified as a possible human carcinogen). Given the potential health concerns associated with Polycyclic Aromatic Hydrocarbons (PAHs), the type of petroleum products stored at the facility, and the fact that priority organics were one of the pollutants identified by MassDEP contributing to the impairment of the Acushnet River, EPA will continue to require the facility to monitor for naphthalene as an indicator compound for certain PAHs.

PAHs are a group of organic compounds that form through the incomplete combustion of hydrocarbons and are present in petroleum derivatives and residuals. Discharge of these products can introduce PAHs into surface water where they may volatilize, photolyze, oxidize, biodegrade, bind to suspended particles or sediments, or accumulate in aquatic organisms (with bioconcentration factors often in the 10-10,000 range). In soils, PAHs may also undergo degradation, accumulation in plants, or transport via groundwater. 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 §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.

EPA has decided to continue to use the Group II PAH, naphthalene, as the indicator parameter for PAHs at Outfall 001. For Group II PAHs, naphthalene poses high calculable risk relative to other PAHs and has been detected in past effluent sampling. 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 and No. 2 fuel oil at up to approximately 0.8 and 0.4 percent by weight, respectively.[14] Naphthalene is only slightly soluble in water, but is highly soluble in benzene and other solvents.

The 2007 Permit established twice per month monitoring at Outfall 001 for naphthalene. During the monitoring period, naphthalene was not detected. Because gasoline and diesel products are still stored and used onsite and considering that samples collected during the permit term may have been diluted by the flow from the off-site wetland, monitoring continues to be required in the Draft Permit but at a reduced frequency of once per quarter. The Draft Permit requires that the quantitative methodology used for PAH analysis must achieve the ML of ≤ 5 µg/L for naphthalene. The Permittee must use an EPA approved 40 CFR Part 136 method for the analysis for naphthalene, such as test Method 610. RCRA test methods such as Method 8270 or the extractable petroleum hydrocarbon (EPH) method cannot be used for analyses of this parameter.

5.1.8 BTEX

The 2007 Permit included twice per month monitoring for the benzene, toluene, ethyl benzene, and the three xylene compounds (i.e., total xylenes), also referred to as BTEX compounds, due to the use and storage of diesel fuel and gasoline on the site. This monitoring was intended to ensure that stormwater discharges from the site do not contain detectable components of gasoline or diesel fuel. During the monitoring period, all results were non-detect, with the exception of the October 2014 sample which detected toluene at 3.9 µg/L and 7.8 µg/L, respectively, for monthly average and daily maximum.

Only one sampling event that resulted in a detectable quantity of a BTEX compound (toluene) and the event occurred five years ago is evidence that there is no reasonable potential to exceed any criterion associated with any BTEX constituents. However, because gasoline and diesel products are still stored and used onsite and considering that samples collected during the permit term may have been diluted by the flow from the off-site wetland area, monitoring continues to be required in the Draft Permit but at a reduced frequency of once per quarter in the Draft Permit. In addition, the Permittee is required to sample BTEX compounds for each permit renewal application. In addition, the Facility's BMP and SWPPP should continue to control fuel leaks and/or spills.

5.1.9 Perchlorate

Perchlorate is both a naturally-occurring and man-made chemical that is commonly used as an oxidizer in propellants, munitions, fireworks, flares and explosives. Manufactured forms of perchlorate include salts such as ammonium perchlorate. Perchlorate is highly soluble in water and relatively stable and mobile in surface water and groundwater systems. Perchlorate may be found as a co-contaminant in water with nitrate because ammonium nitrate is a main component in explosives. Perchlorate may also be present in nitrogen-based explosives as an impurity or

[14] 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

contained in detonators up to 4 to 60 milligrams of potassium perchlorate. EPA's Interim Drinking Water Health Advisory for perchlorate is 15 µg/L.

The Facility uses nitrogen-based explosive agents at the Facility. If perchlorate is not used as a blasting agent, perchlorate may still be present as an impurity in nitrogen-based blasting compounds, along with other potential impurities. Therefore, the Draft Permit has established a quarterly, monitor-only requirement for perchlorate in conjunction with the monitoring for total nitrogen.

5.1.10 Surfactants

P.J. Keating uses three different asphalt release agents. See Section 5.2.3 of this Fact Sheet for the list of chemicals used. These chemicals are sprayed on the beds of empty trucks, just prior to filling them with HMA product, to reduce the surface tension and prevent asphalt from adhering to the metal vehicle beds. Two of the products used at the Facility contain surfactants, which have been known to cause destruction of useful bacteria in aquatic environments. Because the asphalt release agents are exposed to stormwater there is reason to believe the surfactants could be entering the receiving water. To ascertain whether surfactants are being discharged from the Facility, the Draft Permit includes semiannual sampling for methylene blue active substances (MBAS). Results of MBAS monitoring can also be used to measure the effectiveness of BMPs developed to limit the use and/or discharge of surfactants. MBAS is a colorimetric test method that uses methylene blue to detect the presence of anionic surfactants.

5.1.11 Bacteria

The Acushnet River is impaired for pathogens. As discussed in Section 4.1, the Final Pathogen TMDL for the Buzzards Bay Watershed, issued in March 2009 (Control Number: CN 251.1), was designed to control pathogens in the watershed. Even though PJ Keating is not expected to contribute to the existing impairments due to pathogens, based on the nature of the stormwater discharges from the site, the Draft Permit includes monitoring to evaluate any unexpected pathogen sources to ensure the improvement of water quality in the Acushnet River.

The State WQS for Class SB waters have different indicator bacteria for recreational uses and for shellfishing use. *See* 314 CMR 4.05(4)(b)(4). For Class SB waters designated for shellfishing and recreational uses, such as Acushnet River, fecal coliform and *Enterococcus* are the applicable indicators, respectively. MassDEP recommends and EPA concurs that for marine waters, if shellfishing is a designated use (even if the Massachusetts Division of Marine Fisheries lists shellfishing as prohibited), NPDES permits include monitoring for both fecal coliform and Enterococcus given there is inadequate correlation between the two and Enterococcus is also needed for 303(d) assessments. Furthermore, because there is limited historical data to assess the potential pathogen contributions of PJ Keating stormwater and industrial runoff into the Acushnet River, MassDEP determined that monitoring once per month for at least one year will result in a reasonable dataset with seasonal variation to provide an adequate assessment. Therefore, the Draft Permit includes these monitoring requirements. After one year of sampling events showing Fecal Coliform and/or Enterococcus results that meet the state WQS at 314 CMR 4.05(4)(b)(4), the Permittee may request discontinuation of sampling.

In addition, the Permittee shall continue to implement its SWPPP and associated BMPs to identify and reduce sources of pathogens from the facility. *See* Section 5.2.1 of this Fact Sheet. This is consistent with the Pathogen TMDL, which expects that the WLAs for storm water runoff discharges will be achieved through the implementation of BMPs and other controls.

5.1.12 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 Draft Permit will assure that the Facility does not discharge 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."

In accordance with current EPA guidance and State policy,[15] 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}.

The chronic and acute WET limits in the 2007 Permit are C-NOEC greater than or equal to 100% and LC_{50} greater than or equal to 100%, respectively, using the daphnid (*Ceriodaphnia dubia*) and the fathead minnow (*Pimephales promelas*) as the test species. The Facility did not supply WET reports required in 2009 and 2011 with the DMR but WET results included with the 2012 permit application met these limits.

Based on the potential for toxicity in an effluent which may contain a variety of pollutants from several waste streams including flocculants, blasting chemicals, fuel and other residuals from industrial activities at the site; the state narrative water quality criterion; and in accordance with EPA national and regional policy and 40 CFR § 122.44(d);[16] the Draft Permit continues the

[15] *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*. February 23, 1990.
[16] See *Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants*, 49 FR 9016, March 9, 1984, EPA-833-K-10-001, September 2010, EPA/505/2-90-001, March 1991, and *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*. February 23, 1990.

effluent limits from the 2007 Permit and increases the WET monitoring requirement to an annual frequency to better characterize the toxicity of the discharge. Toxicity testing must be performed in accordance with the EPA Region 1 test procedures and protocols specified in **Attachment A** *Marine Acute Toxicity Test Procedure and Protocol* (July 2012) and **Attachment B,** *Marine Chronic Toxicity Test Procedure and Protocol* (November 2013) of the Draft Permit.

5.2 Effluent Limitations and Monitoring Requirements – Outfall 002

As previously indicated, P.J. Keating installed a trench drain system near the main entrance to the property. The drain system collects stormwater runoff in that area and wash water from tire/truck rinsing operations nearby and discharges to the southern branch of the unnamed tributary via two in-line settling basins. Because this is a separate and discrete outfall, Outfall 002 has been added to the Draft Permit.

The flow through this outfall does not consist of process and stormwater from quarry, hot mix asphalt, aggregate processing and concrete production operations. Therefore, EPA determined that the following limited set of parameters is appropriate for inclusion in the Draft Permit for this outfall: flow, pH, TSS, turbidity, oil & grease, naphthalene and BTEX. Given no data exists for this new wastestream, EPA is proposing the same monitoring frequency and limitations as those proposed for Outfall 001. However, the Permittee also has the option to redirect this flow to Basin 1C, obviating the need for Outfall 002 in the Final Permit.

5.3 Special Conditions

5.3.1 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 section 402(p) of the CWA 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 quarrying, hot mix asphalt and ready-mix concrete operations to comply with the non-numeric technology-based effluent limits in the Draft Permit. These non-numeric limitations are consistent with the limitations specified in Part 2.1.2 and Part 8, Sectors E (Glass, Clay, Cement, Concrete, and Gypsum Products) and J (Non-

Metallic Mineral Mining and Dressing) of EPA's Multi-Sector General Permit (MSGP) effective June 4, 2015.[17] Requirements 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 this permit;
- Minimize dust generation and vehicle tracking of industrial materials;
- Comply with sector specific non-numeric technology-based effluent limitations included in Sectors E and J of the MSGP, as described above;
- Routine dredging of Basin 1C and other basins as necessary in order to assure that they
- are effectively settling solids and minimizing the transport of solids and other pollutants to the receiving water;
- Inspect and remedy any breakthrough or overflow discharges from Basin 1C which discharge directly to the unnamed tributary to the Acushnet River; and
- Identify and reduce sources of pathogens from the facility.

These non-numeric effluent limitations support, and are as 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 §§ 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.

[17] The MSGP is currently available at: https://www.epa.gov/npdes/final-2015-msgp-documents.

5.3.2 Stormwater Pollution Prevention Plan

On September 9, 1992, EPA issued its general permit for stormwater discharges associated with industrial activity, which, among other things, required all facilities to prepare a Stormwater Pollution Prevention Plan (SWPPP) to implement technology-based pollution prevention measures in lieu of numeric limitations.[18] The general permit established 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.[19] This Draft Permit contains BMPs for stormwater associated with the operations at this site, as described earlier. In addition to BMPs, the Draft Permit also contains requirements for the Permittee to develop, implement, and maintain a SWPPP for stormwater discharges associated with the operations at this site. These requirements are consistent with EPA's MSGP effective June 4, 2015. The Draft Permit specifies that the SWPPP must include the following, at a minimum:

- Stormwater pollution prevention team;
- Site description;
- Summary of potential pollutant sources;
- Description of all stormwater control measures; and
- Schedules and procedures pertaining to implementation of stormwater control measures, inspections and assessments, and monitoring.

The development 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 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 has been prepared, 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 operations at this site, as described earlier. 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. 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.

[18] Fed. Reg. 41264 (September 9, 1992).
[19] Fed. Reg. 41242 (September 9, 1992).

5.3.3 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 and the State. The following chemicals and additives were disclosed to EPA:

- Asphalt Release Agents
  - 8277, 55631, 22169 - ChemStation New England
- Asphalt and Tack Oil Remover
  - RHOMA-Sol - Rhomar Industries, Inc.
- Explosives/Blasting Agents
  - Ammonium Nitrate - Austin Powder Co.
  - Bulk Centra Products - Orica Australia Pty, Ltd.
  - Fortel Tempus - Orica Australia Pty, Ltd.
  - Pentex Boosters - Orica Australia Pty, Ltd.
- Flocculants/Process chemicals
  - MasterFloc 2453 - Process Masters Corporation
  - MasterCat 4204 - Process Masters Corporation
- Herbicide
  - Round-Up

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 and the State in writing of the discharge a new chemical or additive; allows for EPA and State review of the change; and provides the factors for consideration of such changes. The Draft Permit specifies that for each chemical or additive, the Permittee must submit the following information, at a minimum, in writing to EPA and the State:

- Product name, chemical formula, 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 and average), 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)).

The Permittee must also provide an explanation which demonstrates that the discharge of such chemical or additive: 1) will not add any pollutants in concentrations which 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 and the State unless otherwise notified by EPA or the State.

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 to and imposes requirements on Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (listed species) and any habitat of such species that has been designated as critical under the ESA (i.e., "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, 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 freshwater species. The National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) administers Section 7 consultations for marine and anadromous species.

The Federal action being considered in this case is EPA's proposed NPDES permit for the Facility's discharges of pollutants. The Draft Permit is intended to replace the 2007 Permit in governing the Facility. As the federal agency charged with authorizing the discharge from this Facility, EPA determines potential impacts to federally listed species, and initiates consultation with the Services, when required under § 7(a)(2) of the ESA.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants in the action area to determine if EPA's proposed NPDES permit could potentially impact any such listed species. No federally listed threatened or endangered species have been identified for the action area.[20] However, one listed endangered species, the northern long-eared bat (*Myotis septentrionalis*), was identified as "statewide". According to the USFWS, the northern long-eared bat is found in "winter – mines and caves, summer – wide variety of forested habitats." This species is not aquatic. Therefore, the proposed permit action will have no direct or indirect effect on this listed species. The second species under the jurisdiction of USFWS is the small whorled pogonia (*Isotria medeoloides*). This plant is found in forested habitat and is not associated with aquatic habitat. Therefore, the proposed permit action will have no direct or indirect effect on this listed plant species.

For protected species under the jurisdiction of NOAA Fisheries, subadult and adult life stages of Atlantic sturgeon (*Acipenser oxyrinchus*), as well as adult shortnose sturgeon (*Acipenser brevirostrom*), are likely present in the action area of the Facility's outfall. Shortnose sturgeon are only expected to be present in the vicinity of the outfall from April to November.

[20] See https://www.greateratlantic.fisheries.noaa.gov/protected/section7/index.html

EPA has made the preliminary determination that the proposed action may affect, but is not likely to adversely affect, the Atlantic sturgeon and shortnose sturgeon life stages found in the action area. In addition, EPA has judged that all effects to the applicable aspects of the four physical or biological features for reproduction and recruitment requiring special management considerations or protection for Atlantic sturgeon critical habitat will be insignificant and the reissuance of this permit is not likely to adversely affect the critical habitat.

Therefore, EPA has judged that a formal consultation pursuant to Section 7 of the ESA is not required. EPA is seeking concurrence from NOAA Fisheries regarding this informal consultation determination through the information in this Fact Sheet and the Draft Permit, as well as supporting information and a request for concurrence contained in a consultation letter to be sent under separate cover to NOAA Fisheries Protected Resources during the public comment period. Re-initiation of consultation will take place: (a) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) if 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 consultation; or (c) if a new species is listed or critical habitat is designated that may be affected by the identified action.

6.2 Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (*see* 16 U.S.C. § 1801 *et seq*., 1998), EPA is required to consult with the NOAA Fisheries if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat". 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". 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), or site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

EFH is only designated for fish species for which federal Fisheries Management Plans exist.[16] *See* 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 review of the relevant essential fish habitat information provided by NOAA Fisheries indicates that essential fish habitat has been designated for 18 managed species within the NOAA Fisheries boundaries encompassing the outfall location. As shown in Table 2, the area supports 12 of the 18 listed species during three or more of the life stage categories (i.e. eggs, larvae, juveniles, adults, and spawning adults).

Table 2: Acushnet River EFH Species and Life Stages

Species/Management Unit	Lifestage(s) Found at Location
Atlantic Wolfish	All
Winter Flounder	Eggs, Larvae, Juvenile, Adult
Little Skate	Juvenile, Adult
Atlantic Herring	Juvenile, Adult
Atlantic Cod	Eggs, Larvae, Juvenile, Adult
Red Hake	Eggs, Larvae, Juvenile, Adult
Windowpane Flounder	Eggs, Larvae, Juvenile, Adult
Winter Skate	Juvenile, Adult
Smoothhound Shark Complex (Atlantic Stock)	All
Black Sea Bass	Eggs, Larvae, Juvenile, Adult
Scup	Eggs, Larvae, Juvenile, Adult
Northern Shortfin Squid	Adult
Longfin Inshore Squid	Eggs, Juvenile, Adult
Atlantic Mackerel	Eggs, Juvenile, Adult
Bluefish	Adult, Juvenile
Atlantic Butterfish	Eggs, Larvae, Juvenile, Adult
Spiny Dogfish	Adult female
Summer Flounder	Larvae, Juvenile, Adult

EPA's Finding of all Potential Impacts to EFH Species

EPA determined the following:

- This Draft Permit action does not constitute a new source of pollutants. It is the reissuance of an existing NPDES permit;
- No water is withdrawn from the Acushnet River, so no life stages of EFH species are vulnerable to impingement or entrainment from this Facility;
- Acute and chronic Whole Effluent Toxicity is limited so that the discharge does not present toxicity problems;
- Toxic pollutants known to be present in the discharge are limited by the Draft Permit to meet water quality standards;
- The Draft Permit prohibits the discharge of pollutants or combination of pollutants in toxic amounts;
- The effluent limitations and conditions in the Draft Permit were developed to be protective of all aquatic life; and
- The Draft Permit prohibits violations of the State water quality standards.

EPA believes that the conditions and limitations contained within the P.J. Keating Draft Permit adequately protect all aquatic life, including those with designated EFH in the receiving water, and that further mitigation is not warranted. Should adverse impacts to EFH be detected as a

result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NOAA Fisheries will be contacted and an EFH consultation will be re-initiated.

As part of the renewal of the NPDES permit for this facility, in addition to the Draft Permit and the information contained in this Fact Sheet, a letter under separate cover will be sent to NOAA Fisheries Habitat Conservation Division.

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 either:

George Papadopoulos
EPA Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1579
Email: papadopoulos.george@epa.gov

or

Sharon DeMeo
EPA Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1995
Email: demeo.sharon@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 at EPA's Boston office and 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.

8.0 Administrative Record

The administrative record on which this Draft Permit is based may be accessed at EPA's Boston office by appointment, Monday through Friday, excluding holidays, from George Papadopoulos, EPA Region 1, Water Division**,** Industrial Permits Section, 5 Post Office Square, Suite 100 (06-1), Boston, Massachusetts 02109-3912 or via email to papadopoulos.george@epa.gov.

Date
July 1, 2020

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

Figure 1: Location Map

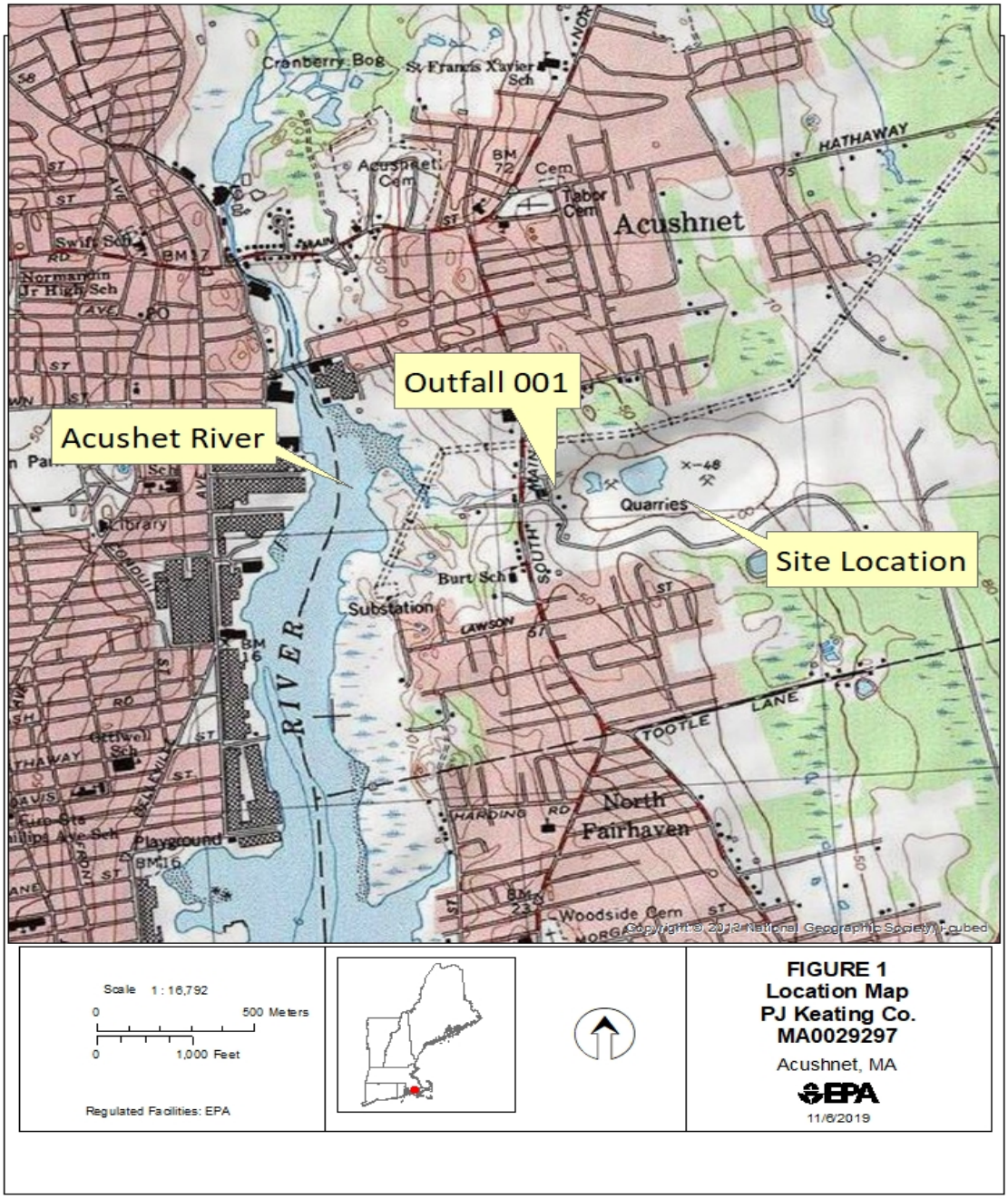


Figure 2: Site Plan

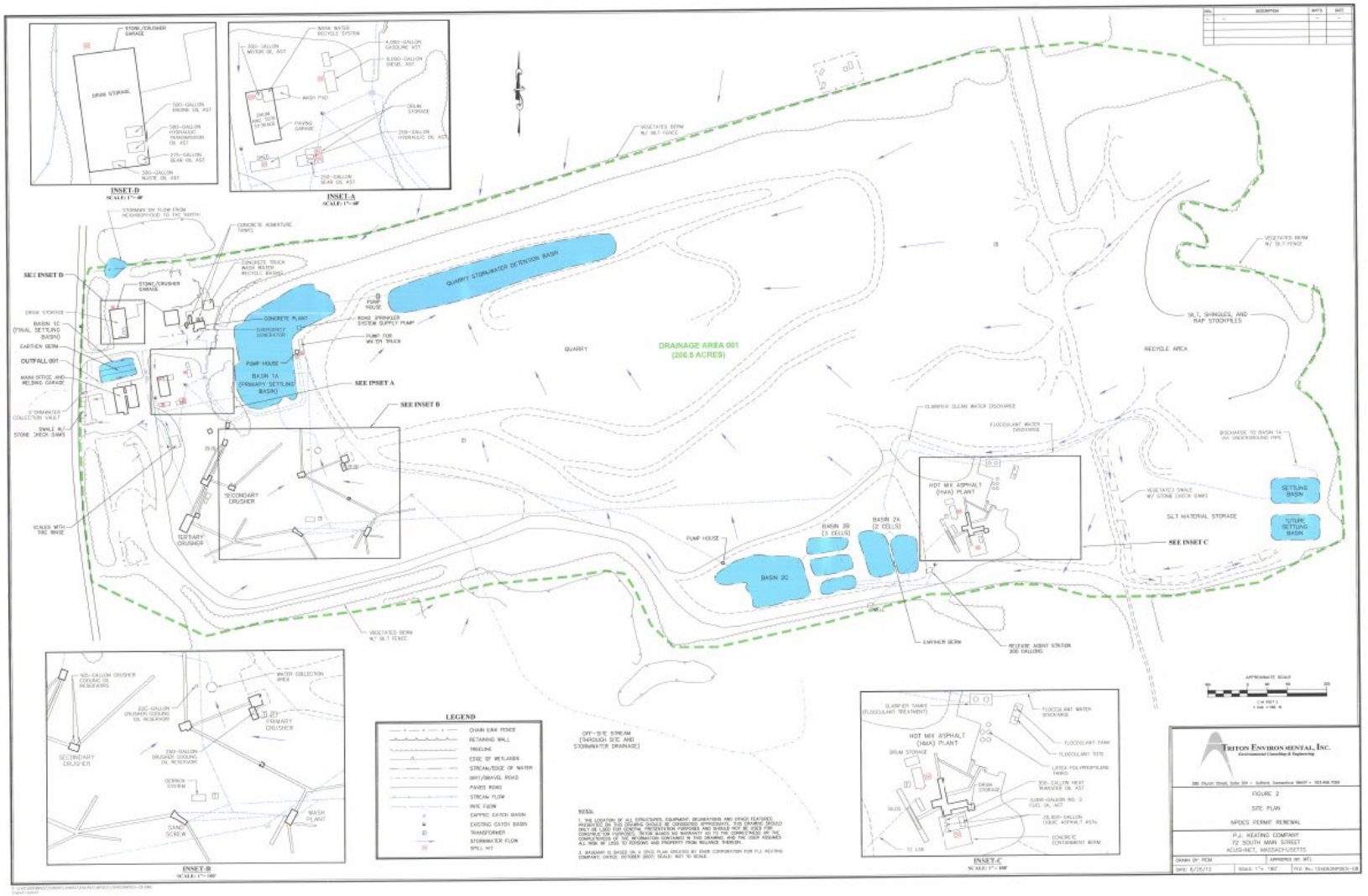
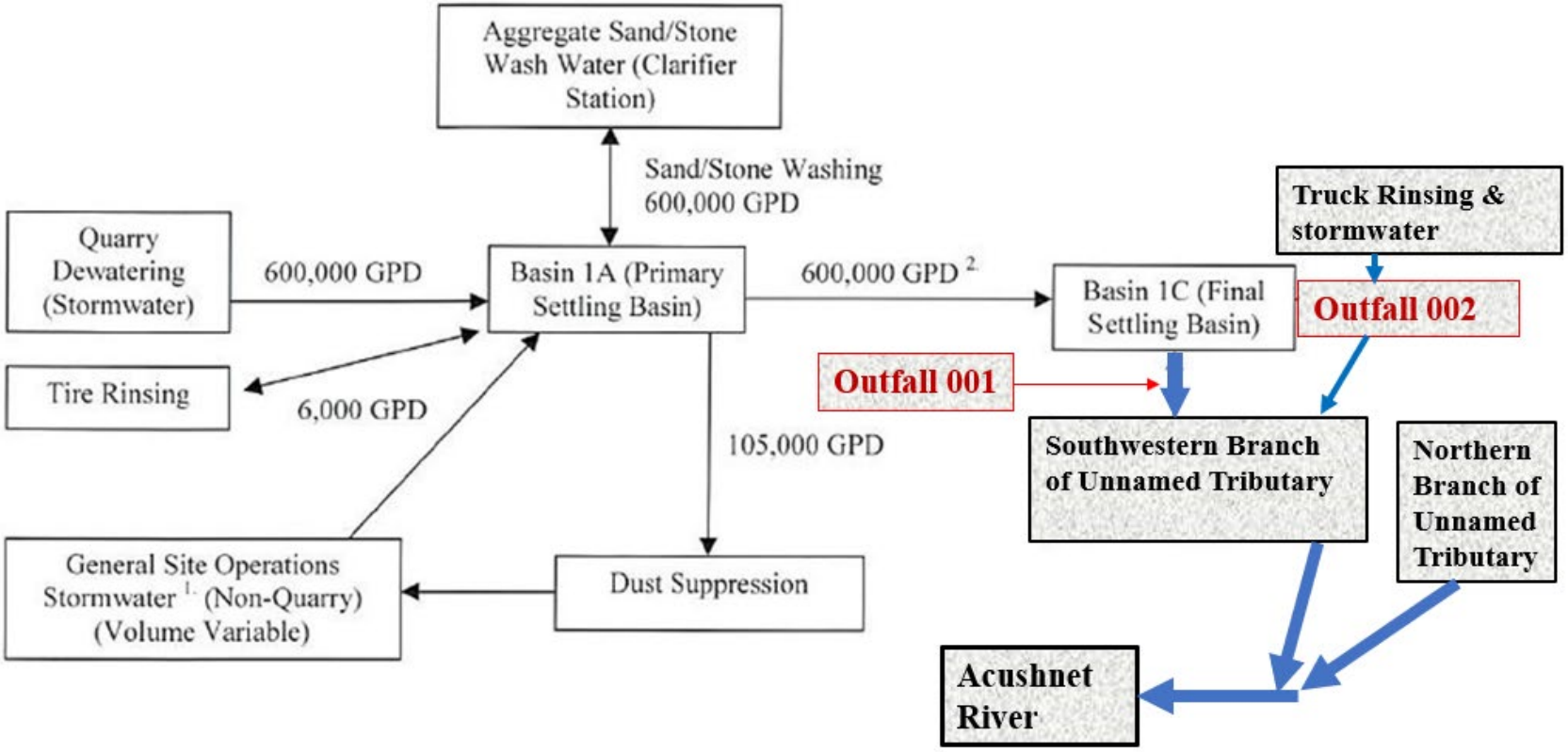


Figure 3: Schematic of Water Flow

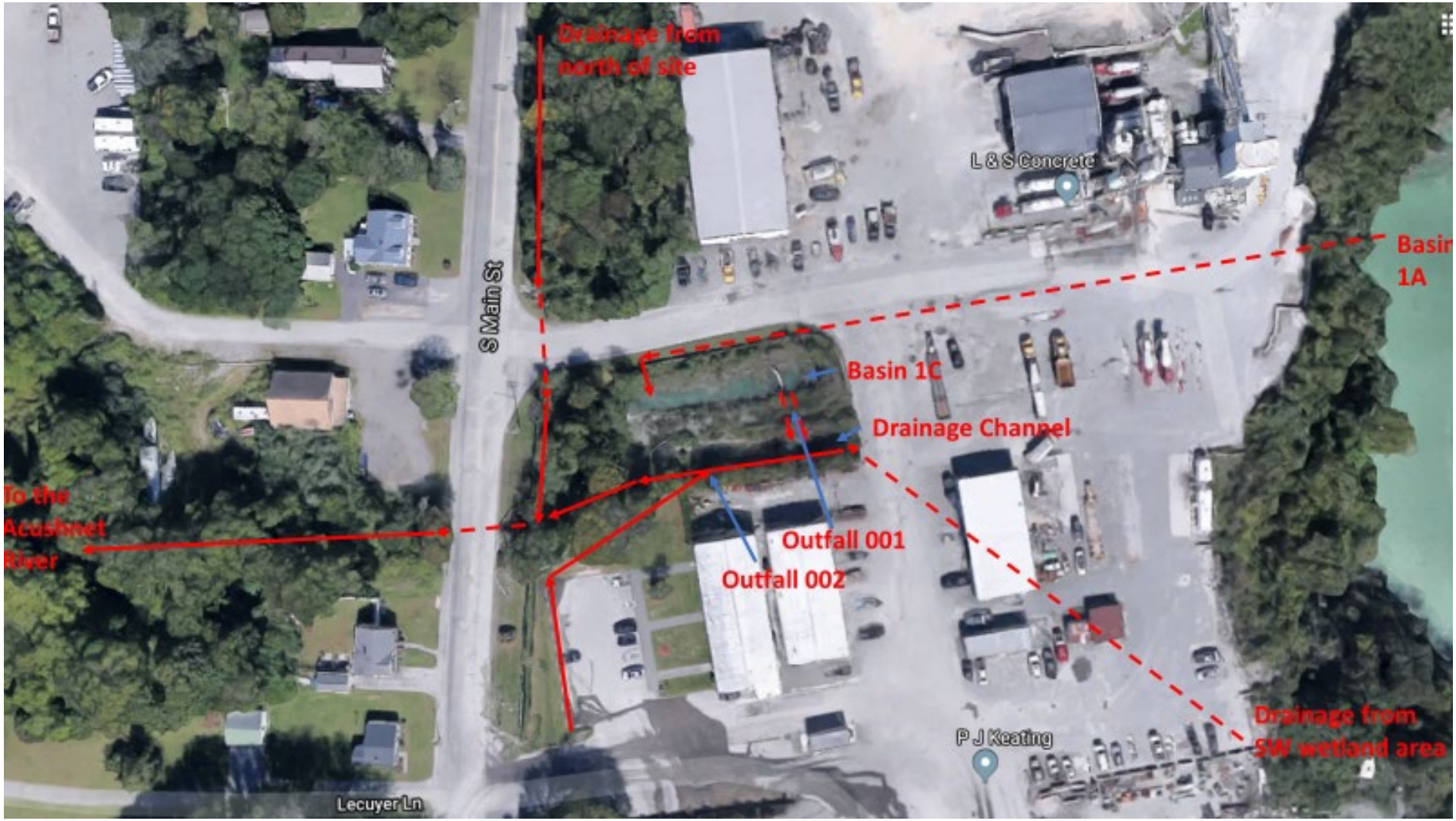


1. General Site Operations Stormwater includes the following: Product Transfer/Fueling Area; Vehicle Washing Area; Asphalt Plant Area; Concrete Plant Area; Aggregate Processing Areas; Silt Material Storage Area; Haul Roads; Aggregate Washing Area; Aggregate Storage Areas; Silt/Shingles/RAP Stockpiles Area; and Paving/Stone/Crusher Garage.
2. The flow diagram indicates an estimated discharge volume of 600,000 GPD. However, there may be the need to operate pumps for a greater length of time or greater pumping rate to directly remove water from the quarry and Basin 1A as the quarry expands (horizontally and vertically). In addition, it should be noted that there may be circumstances when storm events may occur subsequent to each other (e.g. back to back), thus requiring the need to increase the discharge volume from the quarry.
3. Incidental water volume loss also occurs due to evaporation, infiltration, etc.

Ref. No. 104052 Fig. 3 - updated by EPA

Figure 4: Drainage Configuration

Figure 5: Drainage Configuration Showing Basins and Channel



Appendix A: Discharge Monitoring Data

PJ Keating Outfall Serial Number 001 – Dry Weather Monthly Effluent Monitoring								
Parameter	**Flow**	**Flow**	**TSS**	**TSS**	**pH**	**pH**	**Oil & grease**	**Oil & grease**
	Monthly Ave	**Daily Max**	**Monthly Ave**	**Daily Max**	**Minimum**	**Maximum**	**Monthly Ave**	**Daily Max**
Units	**gal/d**	**gal/d**	**mg/L**	**mg/L**	**SU**	**SU**	**mg/L**	**mg/L**
Effluent Limit	**Report**	**Report**	**15**	**23**	**6.5**	**8.3**	**10**	**15**
Minimum	**0**	**0**	**0**	**0**	**4.93**	**5.67**	**0**	**0**
Maximum	**2175000**	**2550000**	**74.5**	**142**	**8.3**	**8.6**	**10**	**19**
Median	**493548**	**2550000**	**9.3**	**12**	**6.9**	**7.45**	**Non-Detect**	**Non-Detect**
No. of Violations	**N/A**	**N/A**	**14**	**12**	**13**	**2**	**0**	**1**
7/31/2014	580645	1200000	**46**	**66**	6.69	7.4	2	4
8/31/2014	77419	1200000	**56.5**	**106**	7.48	7.48	< 2	< 2
9/30/2014	210000	2100000	9.5	10	7.68	7.7	< 2	2
10/31/2014	246774	2550000	**34.5**	**38**	7.28	7.45	2.5	3
11/30/2014	525000	2250000	12	12	**6.25**	6.25	2	2
12/31/2014	735484	2280000	3	3	**5.67**	5.67	< 2	< 2
1/31/2015	0	0	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2015	0	0	2.5	5	**5.88**	6.01	2.5	3
3/31/2015	0	0	3	4	**5.82**	6.21	< 2	< 2
4/30/2015	1955000	2550000	8	14	**6.28**	6.47	< 2	< 2

5/31/2015	1268359	2550000	11.5	14	7.31	7.53	NODI: C	NODI: C
6/30/2015	2175000	2175000	7	10	6.29	7.65	NODI: C	NODI: C
7/31/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2015	2175000	2175000	25.5	38	7.28	7.36	0	0
9/30/2015	2175000	2175000	74.5	142	6.9	7.57	2.5	3
10/31/2015	2175000	2175000	25	42	6.36	7.51	0	0
11/30/2015	304583	2550000	7.5	9	6.63	6.81	10	19
12/31/2015	304583	2550000	20	29	6.5	7.5	1	2
1/31/2016	1028225	2550000	9	11	7.22	7.46	1.5	3
2/29/2016	703448	2550000	13.5	19	6	7.3	< 2	< 2
3/31/2016	287903	2550000	4	8	6.9	6.99	< 2	< 2
4/30/2016	255000	2550000	8.5	10	7.48	7.59	< 2	< 2
5/31/2016	205645	1275000	13	14	4.93	6.75	< 2	< 2
6/30/2016	127500	1275000	28	36	7.02	7.49	< 2	< 2
7/31/2016	41129	1275000	19	24	8.27	8.4	3	4
8/31/2016	41129	1275000	11	13	8.3	8.6	2.5	5
9/30/2016	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2016	171371	2550000	17.5	21	8.1	8.17	2.5	5
11/30/2016	177083	850000	11	18	7.13	7.45	< 2	< 2
12/31/2016	507258	2550000	6	6	7.88	7.88	2	2
1/31/2017	740323	2550000	2	4	6.04	6.09	2	2
2/28/2017	1024554	2550000	9.5	12	6.5	7.6	3.5	4
3/31/2017	877419	2550000	9	18	6.4	7.4	0	0
4/30/2017	998750	2550000	17.6	32	6.7	6.85	1.95	3.9
5/31/2017	808871	2550000	9.3	10	6.74	6.99	1.9	3.8
6/30/2017	46047	2550000	14.2	24	6.15	6.7	< 2	< 2
7/31/2017	219355	850000	17	20	7.4	7.7	< 2	< 2

8/31/2017	287903	2550000	2	3	7.47	7.62	< 2	< 2
9/30/2017	276250	2550000	7.5	9	7.42	7.6	< 2	< 2
10/31/2017	301613	2550000	6.5	9	7.2	7.44	< 2	< 2
11/30/2017	442708	1700000	10	14	6.88	7.42	< 2	< 2
12/31/2017	493548	2550000	8	8	6.7	6.7	< 2	< 2
1/31/2018	891129	2550000	11	13	7.41	7.65	2	4
2/28/2018	1320536	2550000	1.5	3	6.57	6.82	< 2	< 2
3/31/2018	1562903	2550000	10.5	18	6.78	6.82	2	4
4/30/2018	609167	2550000	10.5	18	6.73	7.93	< 2	< 2
5/31/2018	438710	2550000	10.5	11	7.11	7.12	< 2	< 2
6/30/2018	141667	850000	**22**	22	7.39	7.41	1.5	3
7/31/2018	141667	850000	1	2	7.81	7.87	2	4
8/31/2018	0	0	3	3	7.72	7.74	1.5	3
9/30/2018	85000	850000	**35**	**70**	7.2	7.82	3.7	7.4
10/31/2018	534792	2550000	2	4	7.73	7.75	1	2
11/30/2018	1228958	2550000	2	4	7.27	7.42	1.5	3
12/31/2018	998750	2550000	< 2	17	7.35	7.56	< 2	< 2
1/31/2019	1324583	2550000	7	8	7.3	7.7	< 2	< 2
2/28/2019	1048333	2550000	< 2	18	**6.1**	8.1	< 2	< 2
3/31/2019	885417	2550000	3	3	6.78	7.46	< 2	< 2
4/30/2019	920833	2550000	< 2	< 2	6.86	6.86	< 2	< 2
5/31/2019	396667	850000	5	6	6.76	6.97	< 2	< 2
6/30/2019	708333	2550000	11	16	6.97	7.19	< 2	< 2
7/31/2019	694167	2550000	10	20	7.45	7.7	7	7

PJ Keating
Outfall Serial Number 001 – Dry Weather
Monthly Effluent Monitoring

Parameter	Ammonia	TKN	TN	Nitrate	Nitrite	Benzene	BTEX	Ethylbenzene	Naphthalene	Toluene	Xylene
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Monthly Ave	Monthly Ave	Monthly Ave	Monthly Ave	Monthly Ave	Monthly Ave
Units	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	0	0	0.41	0	0	0	0	0	0	0	0
Maximum	1.4	2.17	9.6	9.35	3.19	0	3.9	0	0	3.9	0
Median	0	0.4	3.39	2.76	0.02	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7/31/2014	0.1	0.4	5.6	4.92	0.295	< 1	< 1	< 1	0	< 1	< 3
8/31/2014	< .1	< .1	5.04	5.04	< .007	< 1	< 1	< 1	< 1	< 1	< 3
9/30/2014	< .1	0.2	6.1	6	< .007	< 1	< 1	< 1	0	< 1	< 3
10/31/2014	0.1	2	3.2	3	0.009	< 1	3.9	< 1	0	3.9	< 3
11/30/2014	< .1	0.4	0.75	0.35	< .007	< 1	< 1	< 1	0	< 1	< 3
12/31/2014	0.1	0.3	0.41	0.11	< .007	< 1	< 1	< 1	0	< 1	< 3
1/31/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2015	< .1	0.3	0.58	0.28	< .007	< 1	NODI: C	< 1	< .2	< 1	< 3
3/31/2015	< .1	0.3	0.61	0.41	0.026	< 1	NODI: C	< 1	< .2	< 1	< 3
4/30/2015	< .1	0.4	0.75	0.35	< .007	< 1	NODI: C	< 1	< .2	< 1	< 3
5/31/2015	NODI: C	0.6	5.83	5.6	0.03	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C

6/30/2015	0.15	0.7	5.28	4.88	0.105	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2015	0	0.4	2.03	1.72	0.013	0	0	0	0	0	0
9/30/2015	0	0.7	2.79	2.38	0.04	0	0	0	0	0	0
10/31/2015	0	1.1	2.67	2.35	0.02	0	0	0	0	0	0
11/30/2015	0	0.8	7.04	6.3	0.04	0	0	0	0	0	0
12/31/2015	0	1.1	6.9	6.6	0.1	0	0	0	0	0	0
1/31/2016	0	0.4	3.18	2.76	0.02	0	0	0	0	0	0
2/29/2016	< .1	0.7	2	1.3	< .007	< 1	< 1	< 1	< .2	< 1	< 3
3/31/2016	< .1	0.4	1.02	0.62	< .007	< 1	< 1	< 1	< .2	< 1	< 3
4/30/2016	0.1	0.7	3.39	2.68	0.02	< 1	< 1	< 1	< .2	< 1	< 3
5/31/2016	< .1	0.8	2.48	1.66	0.018	< 1	< 1	< 1	< .2	1	< 3
6/30/2016	0.2	1	5.83	5.13	0.05	< 1	< 1	< 1	< .2	< 1	< 3
7/31/2016	0.15	< .1	7.66	7.54	0.149	< 1	< 1	< 1	< .2	< 1	< 3
8/31/2016	< .1	0.3	7.8	7.7	0.115	< 1	< 1	< 1	< .2	< 1	< 3
9/30/2016	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2016	0.75	< .1	9.3	8.97	0.35	< 1	< 1	< 1	< .2	< 1	< 3
11/30/2016	0.35	0.7	9.6	9.35	0.27	< 1	< 1	< 1	< .2	< 1	< 3
12/31/2016	1.4	< .5	3.26	3.03	0.23	< 1	< 1	< 1	< .2	< 1	< 3
1/31/2017	< .1	0.6	1.28	0.68	< .007	< 1	< 1	< 1	< .2	< 1	< 3
2/28/2017	< .1	0.7	5.14	4.53	0.01	< 1	< 1	< 1	< .2	< 1	< 3
3/31/2017	0	0.7	1.52	1.14	0.008	0	0	0	0	0	0
4/30/2017	0.088	2.17	3.82	1.79	0.046	< 1	< 1	< 1	< .2	< 1	< 1
5/31/2017	0.078	1.05	5.21	4.77	0.047	< 1	< 1	< 1	< .2	< 1	< 3
6/30/2017	0.16	1.19	3.71	2.52	< .007	< 1	< 1	< 1	< .2	< 1	< 3
7/31/2017	< .1	0.3	6.26	5.81	0.152	< 1	< 1	< 1	< .2	< 1	< 3
8/31/2017	< .1	0.1	9.18	9.12	0.059	< 1	< 1	< 1	< .2	< 1	< 3

9/30/2017	0.15	0.4	8.98	8.94	0.058	< 1	< 1	< 1	< .2	< 1	< 3
10/31/2017	0.3	1.1	9.47	8.22	0.146	< 1	< 1	< 1	< .2	< 1	< 3
11/30/2017	0.1	1.1	5.62	4.49	0.035	< 1	< 1	< 1	< .2	< 1	< 3
12/31/2017	< .1	0.4	1.71	1.31	< .007	< 1	< 1	< 1	< .2	< 1	< 3
1/31/2018	< .1	0.4	3.54	3.13	0.014	< 1	< 1	< 1	< .2	< 1	< 3
2/28/2018	< .1	0.5	0.97	< .472	< .007	< 1	< 1	< 1	< .2	< 1	< 3
3/31/2018	< .1	0.5	1.6	1.09	0.008	< 1	< 1	< 1	< .2	< 1	< 3
4/30/2018	0.2	0.7	3.54	3.22	0.03	< 1	< 1	< 1	< .2	< 1	< 3
5/31/2018	0.2	1.3	3.52	2.38	0.032	< 1	< 1	< 1	< .2	< 1	< 3
6/30/2018	0.15	1.1	4.17	3.67	0.021	< 1	< 1	< 1	< .2	< 1	< 3
7/31/2018	< .1	< .1	5.72	5.71	0.015	< 1	< 1	< 1	< .2	< 1	< 3
8/31/2018	0.15	0.2	6.26	6.26	0.008	< 1	< 1	< 1	< .2	< 1	< 3
9/30/2018	< .1	0.1	9.03	9	0.029	< 1	< 1	< 1	< .2	< 1	< 3
10/31/2018	< .1	0.3	7.26	7.25	0.029	< 1	< 1	< 1	< .2	< .1	< 3
11/30/2018	0.05	1	2.55	1.55	< .007	< 1	< 1	< 1	< .2	< 1	< 3
12/31/2018	< .1	1	2.37	1.37	0.02	< 1	< 1	< 1	< .2	< 1	< 3
1/31/2019	0.1	0.3	2.76	2.46	< .007	< 1	< 1	< 1	< .2	< 1	< 3
2/28/2019	< .1	0.3	1.92	1.72	< .007	< 1	< 1	< 1	< .2	< 1	< 3
3/31/2019	< .1	0.4	1.24	0.829	0.008	< 1	< 1	< 1	< .2	< 1	< 3
4/30/2019	< .1	0.4	1.02	0.607	0.011	< 1	< 1	< 1	< .2	< 1	< 3
5/31/2019	0.1	0.5	1.82	1.41	0.013	< 1	< 1	< 1	< .2	< 1	< 3
6/30/2019	0.2	0.4	3.39	3.18	3.19	< 1	< 1	< 1	< .2	< 1	< 3
7/31/2019	<.1	< .1	7.61	6.17	< .007	< 1	< 1	< 1	< .2	< 1	< 3

PJ Keating Outfall Serial Number 001 – Dry Weather Monthly Effluent Monitoring							
Parameter	**Benzene**	**BTEX**	**Ethylbenzene**	**Naphthalene**	**Toluene**	**Turbidity**	**Xylene**
	Daily Max	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**
Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**NTU**	**ug/L**
Effluent Limit	**Report**	**Report**	**Report**	**Report**	**Report**	**25**	**Report**
Minimum	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Maximum	**0**	**7.8**	**0**	**0.2**	**7.8**	**26**	**0**
Median	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**7.8**	**Non-Detect**
No. of Violations	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**2**	**N/A**
7/31/2014	< 1	< 1	< 1	0	< 1	20.4	< 3

8/31/2014	< 1	< 1	< 1	< 1	< 1	7.1	< 3
9/30/2014	< 1	< 1	< 1	0	< 1	7.6	< 3
10/31/2014	< 1	7.8	< 1	0	7.8	**26**	< 3
11/30/2014	< 1	< 1	< 1	0	< 1	2.1	< 3
12/31/2014	< 1	< 1	< 1	0	< 1	1.9	< 3
1/31/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2015	< 1	NODI: C	< 1	< .2	< 1	0.8	< 3
3/31/2015	< 1	NODI: C	< 1	< .2	< 1	3.8	< 3
4/30/2015	< 1	NODI: C	< 1	< .2	< 1	6.3	< 3
5/31/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	10	NODI: C
6/30/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	6.1	NODI: C
7/31/2015	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2015	0	0	0	0	0	4.1	0
9/30/2015	0	0	0	0	0	15	0
10/31/2015	0	0	0	0	0	19.8	0
11/30/2015	0	0	0	0	0	11.5	0
12/31/2015	0	0	0	0	0	22.3	0
1/31/2016	0	0	0	0	0	13.3	0
2/29/2016	< 1	< 1	< 1	< .2	< 1	17	< 3
3/31/2016	< 1	< 1	< 1	< .2	< 1	2.9	< 3
4/30/2016	< 1	< 1	< 1	< .2	< 1	9.6	< 3
5/31/2016	< 1	< 1	< 1	< .2	< 1	7.6	< 3
6/30/2016	< 1	< 1	< 1	< .2	< 1	13.8	< 3
7/31/2016	< 1	< 1	< 1	< .2	< 1	12.3	< 3
8/31/2016	< 1	< 1	< 1	< .2	< 1	13.8	< 3
9/30/2016	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2016	< 1	< 1	< 1	0.2	< 1	9	< 3

11/30/2016	< 1	< 1	< 1	< .2	< 1	11.1	< 3
12/31/2016	< 1	< 1	< 1	< .2	< 1	17.5	< 3
1/31/2017	< 1	< 1	< 1	< .2	< 1	1.9	< 3
2/28/2017	< 1	< 1	< 1	< .2	< 1	8.8	< 3
3/31/2017	0	0	0	0	0	11	0
4/30/2017	< 1	< 1	< 1	< .2	< 1	16	< 1
5/31/2017	< 1	< 1	< 1	< .2	< 1	14	< 3
6/30/2017	< 1	< 1	< 1	< .2	< 1	14	< 3
7/31/2017	< 1	< 1	< 1	< .2	< 1	19	< 3
8/31/2017	< 1	< 1	< 1	< .2	< 1	4.9	< 3
9/30/2017	< 1	< 1	< 1	< .2	< 1	5.9	< 3
10/31/2017	< 1	< 1	< 1	< .2	< 1	7.5	< 3
11/30/2017	< 1	< 1	< 1	< .2	< 1	7.8	< 3
12/31/2017	< 1	< 1	< 1	< .2	< 1	5.7	< 3
1/31/2018	< 1	< 1	< 1	< .2	< 1	18	< 3
2/28/2018	< 1	< 1	< 1	< .2	< 1	3.8	< 3
3/31/2018	< 1	< 1	< 1	< .2	< 1	12	< 3
4/30/2018	< 1	< 1	< 1	< .2	< 1	13	< 3
5/31/2018	< 1	< 1	< 1	< .2	< 1	7	< 3
6/30/2018	< 1	< 1	< 1	< .2	< 1	17	< 3
7/31/2018	< 1	< 1	< 1	< .2	< 1	2.3	< 3
8/31/2018	< 1	< 1	< 1	< .2	< 1	0.9	< 3
9/30/2018	< 1	< 1	< 1	< .2	< 1	**25.8**	< 3
10/31/2018	< 1	< 1	< 1	< .2	< .1	6.1	< 3
11/30/2018	< 1	< 1	< 1	< .2	< 1	4.3	< 3
12/31/2018	< 1	< 1	< 1	< .2	< 1	16.5	< 3
1/31/2019	< 1	< 1	< 1	< .2	< 1	12	< 3

2/28/2019	< 1	< 1	< 1	< .2	< 1	<= 19	< 3
3/31/2019	< 1	< 1	< 1	< .2	< 1	2.7	< 3
4/30/2019	< 1	< 1	< 1	< .2	< 1	2.8	< 3
5/31/2019	< 1	< 1	< 1	< .2	< 1	6.8	< 3
6/30/2019	< 1	< 1	< 1	< .2	< 1	5	< 3
7/31/2019	< 1	< 1	< 1	< .2	< 1	12.8	< 3

PJ Keating
Outfall Serial Number 001 – Wet Weather
Quarterly Effluent Monitoring

Parameter	Flow	Flow	TSS	TSS	pH	pH	Oil & grease	Oil & grease
	Monthly Ave	Daily Max	Monthly Ave	Daily Max	Minimum	Maximum	Monthly Ave	Daily Max
Units	gal/d	gal/d	mg/L	mg/L	SU	SU	mg/L	mg/L
Effluent Limit	Report	Report	15	23	6.5	8.3	10	15
Minimum	1022	207879	3	3	6.29	6.29	0	0
Maximum	4655207	2550000	101	101	8.26	8.26	4	4
Median	31044.5	456160.5	12	12	7.04	7.04	Non-Detect	Non-Detect
No. of Violations	N/A	N/A	6	4	4	0	0	0
9/30/2014	207879	207879	14	14	7.34	7.34	< 2	< 2
12/31/2014	4655207	1596881	8	8	6.78	6.78	NODI: C	NODI: C
3/31/2015	43444	635366	11	11	6.87	6.87	< 2	< 2
6/30/2015	2175000	2175000	27	27	7.94	7.94	3	3
9/30/2015	19182	312253	12	12	6.35	6.35	NODI: C	NODI: C

12/31/2015	26802	304107	101	101	6.81	6.81	0	0
3/31/2016	30411	420862	27	27	6.3	6.3	< 2	< 2
6/30/2016	29053	426293	6	6	7.37	7.37	4	4
9/30/2016	19007	217219	13	13	7.3	7.3	2	2
12/31/2016	31678	496889	82	82	8.26	8.26	< 2	< 2
3/31/2017	22627	477882	4	4	6.29	6.29	0	0
6/30/2017	41634	499604	19	19	6.3	6.3	< 2	< 2
9/30/2017	25342	464306	10	10	7.24	7.24	2	2
12/31/2017	1022	426292	3	3	6.6	6.6	< 2	< 2
3/31/2018	53309	722254	12	12	7.57	7.57	< 2	< 2
6/30/2018	28057	377418	10	10	7.32	7.32	< 2	< 2
9/30/2018	34393	448015	4	4	8.07	8.07	< 2	< 2
12/31/2018	998750	2550000	18	18	6.6	6.6	4	4
3/31/2019	885417	2550000	4	4	6.86	6.86	< 2	< 2
6/30/2019	21772	211789	14	14	7.21	7.21	< 2	< 2

PJ Keating
Outfall Serial Number 001 – Wet Weather
Quarterly Effluent Monitoring

Parameter	Ammonia	TKN	TN	Nitrate	Nitrite	BTEX	Naphthalene	BTEX	Naphthalene
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Monthly Ave	Monthly Ave	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	ug/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report	Report

Minimum	**0**	**0**	**0.6**	**0.25**	**0**	**0**	**0**	**0**	**0**
Maximum	**1.1**	**1.51**	**8.99**	**8.79**	**3.88**	**0**	**0**	**0**	**0**
Median	**0**	**0.4**	**2.37**	**2.055**	**0.014**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**
No. of Violations	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
9/30/2014	< .1	< .1	7.51	7.51	< .007	< 1	0	< 1	0
12/31/2014	NODI: C	0.1	2.68	2.54	0.04	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2015	< .1	0.4	0.86	0.44	0.024	NODI: C	< .2	NODI: C	< .2
6/30/2015	0.1	0.2	5.72	5.36	0.16	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2015	NODI: C	1	1.54	0.54	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2015	0	1.51	0.6	2.11	0	0	0	0	0
3/31/2016	< .1	0.5	0.75	0.25	< .007	< 1	< .2	< 1	< .2
6/30/2016	< .1	0.4	2.4	2	0.03	< 1	< .2	< 1	< .2
9/30/2016	< .1	0.4	1.8	1.38	0.02	< 1	< .2	< 1	< .2
12/31/2016	1.1	< .1	8.17	6.92	1.25	< 1	< .2	< 1	< .2
3/31/2017	0.1	0.5	1.28	0.77	0.007	0	0	0	0
6/30/2017	0.1	1.1	1.52	0.41	0.009	< 1	< .2	< 1	< .2
9/30/2017	< .1	0.6	4.48	3.88	3.88	< 1	< .2	< 1	< .2
12/31/2017	0.2	0.4	1.45	1.05	< .007	< 1	< .2	< 1	< .2
3/31/2018	0.1	0.4	2.34	1.94	< .007	< 1	< .2	< 1	< .2
6/30/2018	< .1	1.2	4.62	3.42	0.01	< 1	< .2	< 1	< .2
9/30/2018	< .1	0.1	8.99	8.79	0.101	< 1	< .2	< 1	< .2
12/31/2018	0.3	1.3	4.51	3.19	0.018	< 1	< .0002	< 1	< .0002
3/31/2019	0.2	0.3	0.76	0.46	< .007	< 1	< .2	< 1	< .2
6/30/2019	< .1	0.5	3.8	3.29	0.019	< 1	< .2	< 1	< .2

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

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" OR THE "ACT"), AS AMENDED, AND STATE CERTIFICATION UNDER SECTION 401 OF THE ACT.

PUBLIC NOTICE PERIOD: **July 1, 2020 – July 30, 2020**

PERMIT NUMBER: **MA0029297**

PUBLIC NOTICE NUMBER: **MA-013-20**

NAME AND MAILING ADDRESS OF APPLICANT:

P.J. Keating Company
998 Reservoir Road
Lunenburg, MA 01462

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

P.J. Keating – Acushnet Facility
72 South Main Street
Acushnet, MA 02743

RECEIVING WATER: **Unnamed Tributary to the Acushnet River (MA95-33)**
Buzzards Bay Watershed - Class SB

The U.S. Environmental Protection Agency (EPA) has developed a draft permit for P.J. Keating, which discharges process wastewater and stormwater. The effluent limits and permit conditions imposed have been drafted to assure compliance with the CWA and State Surface Water Quality Standards at 314 CMR 4.00. EPA has requested that the State certify this draft permit pursuant to Section 401 of the CWA and MassDEP has prepared a determination that the draft permit, with any additional state conditions included in the state certification, assures compliance with Sections 208(e), 301, 302, 303, 306, and 307 of the CWA and with State water quality requirements.

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 either:

George Papadopoulos
Phone: (617) 918-1579
papadopoulos.george@epa.gov

or

Sharon DeMeo
(617) 918-1995
demeo.sharon@epa.gov

U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912

The administrative record containing all documents relating to this draft permit including all data submitted by the applicant may be inspected at the EPA Boston office mentioned above by appointment, Monday through Friday, except holidays and during facility closures due to COVID-19. All data submitted by the applicant are available as part of the administrative record. Electronically available documents may be requested from the above contact.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **July 30, 2020**, to the address or email address listed above. Any person, prior to such date, may submit a request in writing to EPA for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever 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 at EPA's Boston office.

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 forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

KEN MORAFF, DIRECTOR
WATER DIVISION
EPA – REGION 1