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"),

Quabbin Wire & Cable Company, Inc.

is authorized to discharge from a facility located at

10 Maple Street
Ware, Massachusetts 01082

to receiving water named

Ware River (Segment MA36-06)
Chicopee River Watershed

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

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

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

This Permit supersedes the permit issued on February 7, 2013.

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

Signed this day of

_____
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 contact cooling water through Outfall Serial Number 003 to the Ware River. 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]	0.015 MGD	0.03 MGD	Continuous	Meter
pH[7]	6.5 - 8.3 S.U.		1/month	Grab
Temperature	---	83° F	1/month	Grab
Biochemical Oxygen Demand (BOD_5)	---	2.01 lbs/day	1/quarter	Composite
Total Suspended Solids	---	1.47 lbs/day	1/quarter	Composite
Oil and Grease	---	2.24 lbs/day 15 mg/L	1/quarter	Composite
Total Residual Chlorine (TRC)[8]	---	1.0 mg/L	1/month	Grab
Bis (2-Ethylhexyl) Phthalate (DEHP)[9]	---	Report µg/L	1/year	Composite
Total Antimony[10]	---	Report µg/L	2/year	Composite
Perfluorohexanesulfonic acid (PFHxS)[11,12]	---	Report ng/L	1/Quarter	Composite
Perfluoroheptanoic acid (PFHpA)[11,12]	---	Report ng/L	1/Quarter	Composite
Perfluorononanoic acid (PFNA)[11,12]	---	Report ng/L	1/Quarter	Composite
Perfluorooctanesulfonic acid (PFOS)[11,12]	---	Report ng/L	1/Quarter	Composite
Perfluorooctanoic acid (PFOA)[11,12]	---	Report ng/L	1/Quarter	Composite
Perfluorodecanoic acid (PFDA)[11,12]	---	Report ng/L	1/Quarter	Composite
Whole Effluent Toxicity (WET) Testing[13,14]				
LC_{50}	---	50 %	2/year	Composite

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

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

Footnotes:

1. Effluent samples shall yield data representative of the discharge. A routine sampling program shall be developed in which samples are taken at the discharge point to Outfall 003. 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 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 the parameter is 50 µg/L).

4. Measurement frequency of continuous is defined as the recording of one total measurement for each 24-hour period. Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 1/quarter is defined as the sampling of one discharge event during each calendar quarter. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. Measurement frequency of 1/year is defined as the sampling of one discharge event during each calendar year. Measurement frequency of 2/year is defined as the sampling of one discharge event during June and September. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

5. The composite samples shall consist of at least 8 grab samples collected at equal intervals during a normal eight-hour workday and during a time at which the discharge is entering the receiving water.

6. Effluent flow shall be reported in million gallons per day (MGD), determined by the total volume recorded by a flow meter for each 24-hour period. See Compliance Schedule, below, regarding the flow meter requirement.

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

8. For the purposes of this permit, TRC analysis must be completed using a test method in 40 CFR Part 136 that achieves a minimum level of detection no greater than 30 µg/L.

9. For the purposes of this permit, Bis (2-Ethylhexyl) Phthalate (DEHP) analysis must be completed using the most current revision of EPA test method 625.

10. For the purposes of this permit, total recoverable antimony analysis must be completed using a test method in 40 CFR Part 136 that achieves a minimum level of detection no greater than 640 µg/L.

11. This reporting requirement for the listed PFAS parameters takes effect six months after EPA's multi-lab validated method for wastewater is made available to the public on EPA's CWA methods program website. *See* https://www.epa.gov/cwa-methods/other-clean-water-act-test-methods-chemical and https://www.epa.gov/cwa-methods .

12. After one year of monitoring, if all samples are non-detect for all six PFAS compounds, using EPA's multi-lab validated method for wastewater, the Permittee may request to remove the requirement for PFAS monitoring. *See* Special Condition in Part I.C.2.

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

14. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the receiving water to be toxic or unreliable, the Permittee shall follow procedures outlined in **Attachment A**, Section IV., DILUTION WATER. Even where alternate dilution water has been used, the results of the receiving water control (0% effluent) analyses must be reported. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

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

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

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

3. 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.

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

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

6. 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.

7. 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.

8. 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 one milligram per liter (mg/L) for antimony;
      (3) Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
      (4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

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

      (1) 500 µg/L;
      (2) One mg/L for antimony;
      (3) 10 times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR . § 122.21(g)(7); or

(4) Any other notification level established by EPA in accordance with 40 CFR . § 122.44(f) and State regulations.

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

B. UNAUTHORIZED DISCHARGES

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

C. SPECIAL CONDITIONS

1. Discharges of Chemicals and Additives

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

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

(1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
(2) Purpose or use of the chemical/additive;
(3) Safety Data Sheet (SDS), 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 that exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the

application of permit conditions different from, or in addition to those currently in this permit.

2. After one year of monitoring, if all samples are non-detect for all six PFAS compounds, using EPA's multi-lab validated method for wastewater, the Permittee may request to remove the requirement for PFAS monitoring. Until written notice is received from EPA indicating that the monitoring requirements have been changed, the Permittee is required to continue the monitoring specified in this Permit. *See* Reporting Requirements in Part I.D.3.a.(4).

3. Compliance Schedule

No later than one year following the issuance date of this permit, the Permittee shall install a flow meter that records the total effluent flow which is discharged via Outfall 003 over each 24-hour period. Prior to the installation of this flow meter, the Permittee may continue to report flow measurements based on the daily intake rate of the municipal water supply.

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

   a. The Permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and the State electronically using NetDMR no later than the 15th day of the month following the monitoring period. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

   Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. *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 EPA WD:

(1) Transfer of Permit notice;
(2) Request for changes in sampling location;
(3) Request to discharge new chemicals or additives;
(4) Request for discontinuation of per- and polyfluoroalkyl substances (PFAS) sampling (see Part I.A.1, footnote 12) requirements; and
(5) 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 21 December 2020, written notifications required under Part II. Starting on 21 December 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

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NOT FOR RELEASE

6. Verbal Reports and Verbal Notifications

   a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this Permit, shall be made to both EPA and to the State. This includes verbal reports and notifications which 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 Office of Environmental Stewardship: 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.

USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

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

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

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

II. METHODS

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

http://water.epa.gov/scitech/methods/cwa/wet/disk2_index.cfm

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

III. SAMPLE COLLECTION

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

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

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

IV. DILUTION WATER

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

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

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
5 Post Office Sq., Suite 100 (OEP06-5)
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
5 Post Office Sq., Suite 100 (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/enforcement/water/dmr.html *for further important details on alternate dilution water substitution requests.*

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

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

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

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

Footnotes:

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

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

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

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

Footnotes:

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

VI. CHEMICAL ANALYSIS

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

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

Notes:

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

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

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

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

No Observed Acute Effect Level (NOAEL)

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

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

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

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: MA0030571

PUBLIC NOTICE START AND END DATES: July 20, 2020 – August 18, 2020

NAME AND MAILING ADDRESS OF APPLICANT:

Quabbin Wire & Cable Company, Inc.
10 Maple Street
Ware, MA 01082

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Quabbin Wire & Cable Company, Inc.
10 Maple Street
Ware, MA 01082

RECEIVING WATER AND CLASSIFICATION:

Ware River (MA36-06)
Chicopee River Watershed
Class B

SIC CODE: 3357 (Drawing and Insulating of Nonferrous Wire)

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Appendices

1.0 Proposed Action

The Quabbin Wire and Cable Company, Inc. (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 the facility located at 10 Maple Street in Ware, Massachusetts (the "Facility") into the Ware River.

The permit currently in effect was issued on February 7, 2013 with an effective date of May 1, 2013 and expired on April 30, 2018 (the "2013 Permit"). The Permittee filed an application for permit reissuance with EPA dated October 6, 2017, as required by 40 Code of Federal Regulations (CFR) § 122.6. Since the permit application was deemed timely and complete by EPA on August 28, 2018, the Facility's 2013 Permit has been administratively continued pursuant to 40 CFR § 122.6 and § 122.21(d). EPA and the State conducted a site visit on February 5, 2019. This permit does not address storm water discharges from this Facility authorized under EPA's Multi-Sector General Permit for Stormwater Associated with Industrial Activities (MSGP) with tracking number MAR05CT21.

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 C.F.R. §§ 122.4(d), 122.44(d)(1), and 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 New Source Performance Standards (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 Outstanding National Resource Waters. *See* CWA § 303(c)(2)(A) and 40 CFR § 131.12. The applicable State WQSs can be found in 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 Procedures for the Anti-degradation Provisions of the Massachusetts Surface 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 exiting uses of the receiving water. New or increased discharges are authorized by this permit. Therefore, MassDEP is required to conduct an antidegradation review for this permit reissuance for an existing discharge.

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, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." *Id.* EPA regulations pertaining to permit limitations based upon WQSs and State requirements are contained in 40 CFR §§ 122.4(d) and 122.44(d).

2.3 Effluent Flow Requirements

Generally, EPA uses effluent flow both to determine whether a 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

[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-

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 noncompliance 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 C.F.R. §§ 122.41(d), (e).

2.4 Monitoring and Reporting Requirements

2.4.1 Monitoring Requirements

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

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

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case" conditions. *See In re Washington Aqueduct Water Supply Sys., 11 E.A.D. 565, 584 (EAB 2004).*

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 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]

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

With the use of NetDMR, the Permittee is no longer required to submit hard copies of DMRs and reports to EPA and the State unless otherwise specified in the 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 2013 Permit unless specific conditions exist to justify relaxation in accordance with CWA § 402(o) or § 303(d)(4). Discussion of any less stringent limitations and corresponding exceptions to anti-backsliding provisions is provided in the sections that follow.

3.0 Description of Facility and Discharge

3.1 Location and Type of Facility

The Facility is located in a former textile mill between the Ware River and Maple Street in Ware, Massachusetts. A location map is provided in Figure 1. The manufacturing and distribution buildings form the south bank of the Ware River. A hydroelectric power plant abuts the river on the north bank. The Facility is located downstream of the Lower Canal Dam and upstream of the confluence with Muddy Brook. A site plan is provided in Figure 2.
The Facility manufactures and distributes thermoplastic shielded and unshielded wire and cable for a variety of computer, data transmission, instrumentation, and other electronic applications. The Permittee has been manufacturing and distributing wire and cable at the Facility since 1975. Raw materials brought into the Facility include bare and tin-coated copper wire, polyvinyl chloride (PVC), high density polyethylene (HDPE), low-density polyethylene (LDPE), and fluorinated ethylene propylene (FEP) pellets, polyethylene terephthalate (PET), aluminum and copper braids for woven sheathing shielding, and dyes and inks. The Facility purchases (i.e., does not manufacture) these raw materials. Pellets are generally white, but water insoluble color concentrate can be added to the extrusion hopper for coloring during manufacture. Copper wire is either bare or pre-coated with tin. The coating materials may also include metal stabilizer (e.g., zinc and antimony) and/or flame-retardant additives. Because the Facility manufactures wire and cable for distribution around the world, products are manufactured to meet standards set for

hazardous substances such as lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl and polybrominated diphenyl ether flame retardants. As a result, the Facility has eliminated or significantly reduced the content of these substances in process materials.

Shielded cable is manufactured using a mass melt process. Plastic pellets are fed into a hopper above a spiral extruder where, under high pressure and heat, a plastic tube is formed around the wire cable. The Facility generally uses eight extrusion machines. Each extrusion machine is followed by a recirculating cooling water trough that immerses or sprays the coated wire, gradually lowering its temperature. After cooling, the cable is dried, stamped with identifying information and coiled on large spools. Plastic coatings may be applied to a single wire or over a bundle of wires that have been previously coated with color-coded plastic at the Facility. Additional shields such as PET, aluminum and copper braids may also be applied.

3.1.1 Effluent Limitation Guidelines

EPA has promulgated technology-based effluent limitation guidelines (ELGs) for Plastics Molding and Forming Point Source Category. *See* 40 CFR Part 463. The applicable subpart of these regulations for the Facility is Subpart A - Contact Cooling and Heating Water Subcategory. Only contact cooling water is used and discharged in the manufacturing process at the Facility.

For this subcategory, the ELGs promulgated on December 17, 1984, includes BAT ELGs (40 CFR Part 463.13(b)) equal to the BPT ELGs at 40 C.F.R. Part 463.12. The ELGs are presented in Table 1, below.

Table 1: Subpart A – Contact Cooling and Heating Water Subcategory (BAT)

Concentration used to calculate BPT effluent limitations	
Pollutant or pollutant property	**Maximum for any 1 day (mg/L)**
BOD_5	26
Oil and grease	29
TSS	19
pH	([1])

[1]Within the range of 6.0 to 9.0 at all times.

The other subparts of the Plastics Molding and Forming Point Source Category cover washing, cleaning and finishing operations. Cables produced at the Facility undergo diagnostic testing. These test tanks are not used for cooling, cleaning or finishing and therefore, the water discharged from them is not subject to the ELGs. However, EPA reserved the BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate at 40 CFR . Part 463.13(a). In the absence of BAT limitations guidelines for bis(2-ethylhexyl) phthalate, and in accordance with CWA § 402(a)(1)(B) and 40 CFR § 125.3(c)(2), EPA may establish effluent limitations on a case-by-case basis using BPJ. The NPDES regulations in 40 CFR §125.3(c)(2) state that permits developed on a case-by-case basis under Section 402 (a)(1) of the CWA shall apply the appropriate factors listed in 40 CFR § 125.3(d) and must consider 1) the appropriate technology for the category class of point sources of which the applicant is a member, based on available information, and 2) any unique factors relating to the applicant.

3.1.2 Measure of Production

In accordance with 40 CFR . § 122.45(b)(2), EPA based the calculation of biochemical oxygen demand (BOD_5), Oil and Grease, and total suspended solids (TSS) effluent limitations applicable under the ELGs for 40 CFR § 463.13(b) on a reasonable measure of actual production of the Facility. EPA determined that the measure of production appropriate for this Facility is the average monthly flow, which consists of the process water used for contact cooling water during the production of cable.

In 40 CFR § 463.13(b), mass-based ELGs are expressed as an allowable mass of pollutant discharge per day and are directly related to the process flow. The effluent limitations are calculated by multiplying the average process water usage flow rate for the contact cooling water, as reported by the Permittee, by the concentration listed in Table 1 above. The "average process water usage flow rate" is defined in 40 CFR §463.11(a), as the volume of process water used per year divided by the number of days per year the process operates. The volume of process water used per year and the operational days for the last five years provided by the Permittee are presented in the table below.

Table 2: Average Process Water Usage Flow Rate Data

Year	Total Gallons	Operational Days	Average Process Water Usage Flow Rate
2014	1,344,321	248	5,421
2015	1,540,117	252	6,112
2016	1,172,954	255	4,600
2017	2,462,266	251	9,810
2018	2,136,071	251	8,510

In the issuance of the final 2013 permit, EPA determined that the average process water usage flow rate was 9,290 gallons/day (0.00929 MGD). Since this average process water usage is similar to the two most recent production years for the Facility, 2017 and 2018, and given that the Facility has requested an effluent flow limitation increase for the permit reissuance, the average process water usage flow rate used to calculate the permissible maximum daily, mass-based TBELs for BOD_5, Oil and Grease, and TSS at Outfall 003 in the Draft Permit remains 9,290 gallons/day.

3.2 Location and Type of Discharge

Outfall 003 is located at Latitude 42° 15' 31" Longitude 72° 14' 21." The receiving water is the Ware River, which flows from east to west on the northern edge of manufacturing building. The Permittee is authorized to discharge contact cooling water from the cooling water system used to cool plastic coated wire and wire bundles after extrusion. As of August 1, 2007, the Facility uses municipal water for its water supply. Cooling water from the municipal water supply system enters the Facility at a maximum flow rate of approximately 50 gallons per minute. Flow meters connected in line with the system regulate the pumping rate. The water enters the cooling water

system through the three large cooling water tanks located on the ground floor of the manufacturing building. Table 2 presents the maximum capacity of each of the holding tanks.

Table 3: Summary of Cooling Water Tank Capacities

Tank Name	Capacity	Purpose
Q-1 Tank	250 gallons	Discharge tank
DataMax Tank	450 gallons	Holding tank
DataMax Cooling Tank	200 gallons	Cooling water reservoir

Water is pumped from the three large tanks listed above and recirculated among approximately 11 small holding tanks and 21 cooling trays throughout the Facility. Process controls are set to maintain the water temperature under 82ºF. When the temperature of the cooling water in the holding tanks rises to 82ºF, additional municipal water is added, which results in excess water in the Q-1 Tank. Discharge to the Ware River occurs when the Q-1 Tank overflows onto the floor in the small room in which it is located. The water flows to a floor drain approximately 15 feet from the Q-1 Tank and enters the Ware River via the Outfall 003 pipe exiting the face of the building. A schematic of water flow is provided in Figure 3.

Water supplementation is not constant and depends on the size and number of extrusion machines in use at any one time. A filter sock is attached to the return line from the cooling trays. The Facility does not add other chemicals or additives to the water. Occasionally, the Facility drains the tanks one at a time for cleaning. Buildup from the sides and bottom of the holding tanks is disposed of as a solid waste. The entrance to the room in which the Q-1 Tank is located is elevated by approximately seven inches, providing some capacity for flood control and spill protection.

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 June 1, 2015 through June 30, 2020, is provided in Appendix A of this Fact Sheet.

4.0 Description of Receiving Water and Dilution

4.1 Receiving Water

The Facility discharges through Outfall 003 to the Ware River (Segment MA36-06). This segment is 10.1 miles in length from the Ware Dam in Ware, to the Thorndike Dam in Palmer. The Facility is approximately one mile downstream of the Ware Dam and just below the smaller Lower Canal Dam, part of the Ware River Hydroelectric Project. MassDEP classifies this segment of the Ware River as Class B (warm water fishery)[5] and CSO. Class B waters are described in the Commonwealth of Massachusetts Water Quality Standards (314 CMR 4.05(3)(b)) as follows: “designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and

[5] http://www.mass.gov/dep/water/laws/tblfig.pdf

secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment (Treated Water Supply). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value." The Ware River is a tributary to the Chicopee River and ultimately drains to the Connecticut River.

The Ware River segment MA36-06 is listed in the *Massachusetts Year 2016 Integrated List of Waters* ("303(d) List") as a Category 5 "Waters Requiring a TMDL".[6] The pollutant requiring a TMDL is fecal coliform. The status of each designated use is presented in Table 3, below.

Table 3: Summary of Designated Uses and Listing Status

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

According to the Chicopee River Basin 2003 Water Quality Assessment Report,[7] the Aquatic Life use is supported in this segment based on the presence of fish and wildlife protection and propagation. This use is on "Alert Status" because of Whole Effluent Toxicity from the Ware Wastewater Treatment Plant (WWTP) discharge, located approximately one mile downstream of the Facility. The Aesthetics use is supported in this segment based on the overall lack of objectionable conditions. The Aquatic Life use is given an "Alert Status" due to the acute and chronic whole effluent toxicity from the WWTP discharge. The Primary Contact Recreation, Secondary Contact Recreation, and Fish Consumption uses have not been assessed.

4.2 Ambient Data

A summary of the ambient data collected in the receiving water in the vicinity of the Facility that is referenced in this Fact Sheet can be found in Appendix B of this Fact Sheet. These data consist of monitoring conducted by the Permittee in conjunction with Whole Effluent Toxicity Testing.

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.[8] The critical flow is some measure of the low flow of the receiving water and may stipulate the magnitude, duration, and frequency of allowable excursions from the magnitude component of

[6] Massachusetts Year 2014 Integrated List of Waters. MassDEP Division of Watershed Management Watershed Planning Program, Worcester, Massachusetts; .
[7] Chicopee River Watershed 2003 Water Quality Assessment Report. MassDEP Division of Watershed Management, Worcester, Massachusetts; October 2008, Report Number: 36-AC-3.
[8] EPA Permit Writer's Manual, Section 6.2.4

criteria in order to prevent adverse impacts of discharges on existing and designated uses. State WQSs specify the hydrologic condition at which water quality criteria must be applied. For waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the State. The State has determined that the lowest flow in this case is the lowest mean flow for seven consecutive days, recorded once in 10 years, or 7-day 10-year low flow (7Q10). *See* 314 CMR 4.03(3)(b).

The 7Q10 and drainage area for the Ware River were determined using the last 30 years of data from the United States Geological Survey (USGS) gauging station nearest to the Facility along the Ware River (station number 01173500 at Gibbs Crossing[9]), which are 15.94 cubic feet per second (cfs) and 197 square miles (mi^2), respectively. EPA determined the estimated drainage area for the Facility using the USGS StreamStats for Massachusetts.[10] The 7Q10 and harmonic mean flow in the receiving water upstream of the discharge was then calculated as follows:

$$\text{Flow}_{@\text{Facility}} = \text{Flow}_{@\text{Gauge}} / \text{Drainage Area}_{@\text{Gauge}} * \text{Drainage Area}_{@\text{Facility}}$$

Where:

$\text{Drainage Area}_{@\text{Gauge}}$ = 197 square miles (mi^2)
$7Q10\ \text{Flow}_{@\text{Gauge}}$ = 15.94 cubic feet per second (cfs)
$\text{Drainage Area}_{@\text{Facility}}$ = 166 mi^2

Therefore:

7Q10 = 15.94 cfs / 197 mi^2 * 166 mi^2
7Q10 = 13.43 cfs (8.68 MGD)

Using the above-calculated 7Q10 (Q_s), the dilution factor (DF) was calculated using the average process water usage flow rate of 9,290 gallons/day, equivalent to approximately 0.00929 MGD, (Q_d) as follows:

$$DF = (Q_s + Q_d)/Q_d$$

Where:

Q_S = 7Q10 in MGD = 8.68
Q_d = Discharge flow in MGD = 0.00929

Therefore:

DF = (8.68 + 0.00929)/ 0.00929
DF = 935

[9] USGS StreamStats National Data Collection Station Report for Station 01173500: http://streamstatsags.cr.usgs.gov/gagepages/html/01173500.htm
[10] USGS StreamStats for Massachusetts Interactive Map: http://water.usgs.gov/osw/streamstats/massachusetts.html

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

5.0 Proposed Effluent Limitations and Conditions

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

In accordance with 40 CFR § 122.45(b)(2), EPA based the calculation of effluent limitations upon a reasonable measure of actual production of the Facility. EPA determined that the measure appropriate for this Facility is the average process water usage flow rate of 9,290 gallons/day. The average process water usage flow rate reflects the magnitude, frequency and duration of process water usage during routine production. Average process water usage flow rate is also the effluent flow value used to calculate the dilution factor for the discharge. EPA calculated this measure of production as described in Section 3.1.2, above.

5.1 Effluent Limitations and Monitoring Requirements

The State and Federal regulations, data regarding discharge characteristics, and data regarding ambient characteristics described above, were used during the effluent limitations development process. Discharge and ambient data are included in Appendix A and B. EPA's Reasonable Potential Analysis is included in Appendix C and results are discussed in the sections below.

5.1.1 Effluent Flow

From June 1, 2015 through June 30, 2020 (Appendix A) daily maximum effluent flow has ranged from 0.00402 MGD to 0.02522 MGD and monthly average effluent flow has ranged from 0.00134 MGD to 0.01118 MGD. The Facility's 2013 Permit limits the discharge to a maximum daily flow of 0.025 MGD and an average monthly flow of 0.01 MGD. Under normal operating conditions, and as indicated by monitoring data, the maximum daily flow has exceeded the 2013 Permit flow limit on 1 occasion and the average monthly flow limit on 4 occasions. The Permittee has requested the effluent flow limitations be increased to a daily maximum flow of 0.03 MGD and an average monthly flow of 0.015 MGD to reflect the effluent flow at the Facility that the Permittee has estimated is necessary for normal operation.

The Draft Permit includes a daily maximum flow limitation of 0.03 MGD and an average monthly effluent flow limitation of 0.015 MGD to reflect the effluent flow necessary for normal operation. However, to ensure that effluent flow is more precisely quantified, and in turn effluent limitations based on effluent flow are more accurate, the Draft Permit requires effluent flow monitoring be conducted continuously using a totalizer or similar device, when the Facility is discharging. This device must be installed following treatment (i.e., after overflowing the Q-1 Tank) and prior to entering the receiving water (i.e., via Outfall 003 pipe exiting the face of the building). Since this condition requires physical modifications be made to the existing discharge appurtenances, the Draft Permit allows the Permittee up to one year to meet this new requirement.

While EPA is allowing a flow increase for this Facility, the mass-based effluent limitations for BOD_5 and TSS, which were calculated based on flow as the measure of production, will be maintained, to ensure any increase in effluent flow does not cause an increase in the mass loading of these pollutants.

5.1.2 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 June 1, 2015 through June 30, 2020 (Appendix A), pH has ranged from 6.5 to 8.18 S.U. The Plastics Molding and Forming Point Source Category require pH limits of 6.0 to 9.0 S.U. *See* 40 CFR § 463.13(b). However, State WQSs for Inland Water, Class B at 314 CMR 4.05(3)(a)3, require that the pH of the receiving water be in the range of 6.5 to 8.3 S.U. Therefore, Draft Permit requires a pH range of 6.5 to 8.3 S.U. when the Facility is discharging, monitored monthly by grab samples. These limitations are based on CWA § 301(b)(1)(C) and 40 CFR § 122.44(d).

5.1.3 Temperature

Section 502(6) of the Clean Water Act defines heat as a "pollutant." *See* 33 U.S.C. § 1362(6). Water temperature affects the metabolic and reproductive activities of aquatic organisms and can determine which fish and macroinvertebrate species can survive in a given water body. Certain cold-blooded species cannot regulate their body temperature through physiological means, so their body temperatures reflect the temperatures of the water they inhabit. Rapid increases or decreases in ambient water temperature can directly affect aquatic life, particularly fish. Ambient water temperature can indirectly affect aquatic life by influencing water quality parameters such as dissolved oxygen, by which the solubility of oxygen decreases as water temperature increases.

As described in Section 3, above, cooling water re-circulates through the large holding tanks, small holding tanks, and cooling trays at the Facility. Thermocouples inside the holding tanks monitor the temperature of the re-circulating water. If the temperature of the water in the holding tanks rises to 82 ºF, supplemental municipal water is added to cool the water in the holding tanks. The resulting overflow discharges to the Ware River through Outfall 003. The thermocouple attached to the Q-1 Tank measures the actual discharge temperature.

The Massachusetts WQSs for class B waters pertaining to temperature in warm water fisheries states that "…Temperature shall not exceed 83 °F (28.3 °C) in warm water fisheries…The rise in temperature due to a discharge shall not exceed…5 °F (2.8 °C) in rivers and streams designated as warm water fisheries…" *See* 314 CMR 4.05(3)(b)2. From June 1, 2015 through June 30, 2020 (Appendix A), this temperature has ranged from 78 ºF to 81 ºF. In addition, upstream and

downstream monitoring conducted between 2001 and 2006 indicated a 1 °F or less temperature difference between locations upstream and downstream of Outfall 003.

The Draft Permit maintains a daily maximum temperature limit of 83 °F and requires reporting the average monthly temperature to comply with Massachusetts WQSs and to comply with anti-backsliding requirements found in 40 C.F.R. § 122.44(1). Since the expected effluent flow and temperature are similar to those used in the previous determination that a temperature impact on the Ware River does not occur, additional instream temperature monitoring is not required in the Draft Permit. EPA notes that the Fact Sheets issued in support of the Draft Permits for this Facility for 2007 and 2013 indicate a temperature limit of 82 °F, but permits have listed 83 °F in the table of effluent limitations. EPA has corrected this inconsistency in this Fact Sheet such that the limitation for temperature is consistent with State WQSs.

5.1.4 Biochemical Oxygen Demand

Biochemical oxygen demand (BOD_5), measures the amount of oxygen consumed by microorganisms in decomposing organic matter in water. BOD_5 also measures the chemical oxidation of inorganic matter (i.e., the extraction of oxygen from water via chemical reaction). The rate of oxygen consumption in a waterbody is affected by several variables: temperature, pH, the presence of microorganisms, and the type of organic and inorganic material. BOD_5 directly affects the amount of dissolved oxygen in rivers and streams. The greater the BOD_5, the more rapidly oxygen is depleted in the stream. Depletion of the in-stream oxygen levels cause aquatic organisms to become stressed, suffocate, and die.

From June 1, 2015 through June 30, 2020 (Appendix A), daily maximum mass of BOD_5 has ranged from 0.01673 lbs/day to 0.4491 lbs/day. The 2013 Permit limits the mass of BOD_5 at 2.01 lbs/day, a TBEL based on the Plastics Molding and Forming Point Source Category, Subpart A at 40 C.F.R. Part 463, calculated using the average process water usage flow rate as follows:

$$26 \text{ mg/L} \times 9{,}290 \text{ gal/day} \times (1 \text{ lb}/453{,}592 \text{ mg}) \times (3.785 \text{ L/gal}) = 2.01 \text{ lbs/day}$$

The Draft Permit maintains a daily maximum BOD limit of 2.01 lbs/day and requires quarterly monitoring by composite samples to comply with Massachusetts WQSs and to comply with anti-backsliding requirements found in 40 C.F.R. § 122.44(1).

5.1.5 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 June 1, 2015 through June 30, 2020 (Appendix A), daily maximum mass of total suspended solids (TSS) ranged from 0.01677 lbs/day to 0.6001 lbs/day. The 2013 Permit limits the mass of TSS at 1.47 lbs/day, a TBEL based on the Plastics Molding and Forming Point Source Category, Subpart A at 40 CFR Part 463, calculated using the average process water usage flow rate as follows:

19 mg/L x 9,290 gal/day x (1 lb/453,592 mg) x (3.785 L/gal) = 1.47 lbs/day

The Draft Permit maintains a daily maximum TSS limit of 1.47 lbs/day and requires quarterly monitoring by composite samples to comply with Massachusetts WQSs and to comply with anti-backsliding requirements found in 40 CFR . § 122.44(1).

5.1.6 Oil and Grease

Oil and Grease 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.

From June 1, 2015 through June 30, 2020 (Appendix A), concentrations of Oil and Grease ranged from below laboratory minimum levels to 4.9 mg/L. The 2013 Permit limits the concentration of Oil and Grease at 15 mg/L. State WQSs at 314 CMR 4.05(3)(b)(7), state "These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life." A concentration of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish (EPA Water Quality Criteria, 1972). The Draft Permit maintains a maximum daily limit for Oil and Grease of 15 mg/L, monitored quarterly, to comply with Massachusetts WQSs and to comply with anti-backsliding requirements found in 40 C.F.R. § 122.44(1).

In addition, the Draft Permit proposes a mass-based TBEL limitation based on the Plastics Molding and Forming Point Source Category, Subpart A at 40 C.F.R. Part 463, calculated using the average process water usage flow rate as follows:

29 mg/L x 9,290 gal/day x (1 lb/453,592 mg) x (3.785 L/gal) = 2.37 lbs/day

The Draft Permit proposes quarterly monitoring by composite samples. Since EPA is proposing a flow increase for this Facility, this mass-based effluent limitation, which is calculated based on flow as the measure of production as determined in the 2013 Permit, is to prevent an increase in the mass loading of this pollutant above what would have been allowed under the 2013 Permit's measure of production.

5.1.7 Total Residual Chlorine

Chlorine and chlorine compounds are toxic to aquatic life. Free chlorine is directly toxic to aquatic organisms and can react with naturally occurring organic compounds in receiving waters to form toxic compounds such as trihalomethane. Potable water sources are typically chlorinated to minimize or eliminate pathogens. 40 CFR § 141.72 stipulates that a public water system's residual disinfectant concentration in the water entering the distribution system cannot be less than 0.2 mg/L for more than four hours. Discharges from the Facility contain total residual chlorine (TRC) because the Facility uses potable water for its process water supply. As a result, the 2013 Permit included monitoring requirements for TRC once per month at Outfall 003. From June 1, 2015 through June 30, 2020 (Appendix A), daily maximum TRC concentrations have ranged from below the minimum level of detection to 0.3 mg/L.

The *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) specifies that "Waters shall be protected from unnecessary discharges of excess chlorine. In segments with dilution factors greater than 100, the maximum effluent concentration of chlorine shall not exceed 1.0 mg/L TRC." Massachusetts WQSs further require the use of federal WQC where a specific pollutant could reasonably be expected to adversely affect existing or designated uses (314 CMR 4.05(5)(e)). The National Recommended freshwater acute and chronic WQC for TRC are 19 µg/L (0.019 mg/L), and 11 µg/L (0.011 mg/L), respectively. Using the available dilution in the Ware River (935:1), EPA calculated the TRC effluent limitations based on these criteria as follows:

Acute TRC limit = 0.019 mg/L * 935 = 17.765 mg/L
Chronic TRC limit = 0.011 mg/L * 935 = 10.285 mg/L

Since the most stringent limitation determined above is 1.0 mg/L, the Draft Permit proposes a daily maximum TRC effluent limitation of 1.0 mg/L, monitored monthly by grab samples, to comply with State WQSs.

5.1.8 Bis (2-ethylhexyl) Phthalate

Phthalates are a group of compounds that contain a phenyl ring with two attached acetate groups, often referred to as plasticizers. Because phthalates are not a part of the polymers that make up plastics, they are released from these materials. Bis (2-ethyl hexyl) phthalate, also known as diethyhexyl phthalate (DEHP) is a plasticizer widely used in the manufacturing of PVC. Bis (2-ethylhexyl) phthalate is listed as a priority pollutant in Appendix A to 40 CFR Part 423. Except for DEHP, BAT effluent limitations guidelines promulgated in 40 CFR § 463.13 are the same as the BPT ELGs in 40 CFR § 463.12. Since the technologies considered during the development of the proposed rule for the Plastics Molding and Forming Point Source Category cannot be used to control DEHP, EPA reserved the BAT ELGs for this pollutant pending further study.[11]

[11] See *Development Document for Effluent Limitations Guidelines and Standards for The Plastics Molding and Forming Point Source Category*. Report EPA 440/1-84/069, December 1984.

Between January 2001 and August 2006, DEHP was not detected above the laboratory minimum levels. As a result, EPA eliminated monitoring requirements for DEHP for the Facility's discharge in the permit issued in 2007. However, the 2013 Permit included a once per year monitoring requirement. From June 1, 2015 through June 30, 2020 DEHP was not detected above laboratory minimum levels. The laboratory minimum levels for common test methods allowed in 40 CFR Part 136 range from approximately 5 µg/L to 10 µg/L. The laboratory minimum levels reported by the Permittee was 5.15 µg/L.

Pursuant to CWA § 402(a)(1), EPA has proposed a TBEL for DEHP using BPJ. Since the Facility does not manufacture DEHP, elevated concentrations of DEHP are not expected, nor have concentrations been detected in the discharge. However, because materials used at the Facility may contain DEHP that may be released from these materials during the processes that occur at the Facility, DEHP could be present in the discharge at very low concentrations. Since laboratory minimum levels for DEHP can vary, EPA's BPJ determination for this pollutant, for this Facility, is reporting requirement for DEHP, required annually by composite sample. The Draft Permit specifies that DEHP must be analyzed using the most current revision of EPA test method 625, which is being required ot meet the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule.*

EPA notes that the 2013 Permit noted a "non-detect" requirement in the effluent limitations table. However, EPA did not define this requirement, specify a compliance level for this requirement, nor was an explanation of basis provided in the Fact Sheet for this requirement. As a result, EPA believes this requirement was included in the 2013 Permit in error. Therefore, an exception to the CWA's anti-backsliding provision applies. *See* CWA § 402(o). This provision specifies that a less stringent effluent limitation may be applicable if the existing limitation is the result of technical mistakes or mistaken interpretations of law. EPA finds that the monitoring requirement included in the Draft Permit constitutes a correction of such a mistake.

5.1.9 Metals

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

The Permittee has obtained quarterly monitoring data for total recoverable copper and zinc, as well as aluminum, cadmium, copper, lead, nickel and zinc in the discharge and the receiving water in conjunction with Whole Effluent Toxicity testing conducted twice per year. For Outfall 003, from June 1, 2015 through June 30, 2020 (Appendix A), total recoverable cadmium, lead,

and nickel were not detected above laboratory minimum levels. However, total recoverable aluminum, copper, and zinc were detected in the discharge. EPA completed an analysis to determine if these discharges cause, or have a reasonable potential to cause, or contribute to an excursion above State WQSs using EPA's 2002 *National Recommended Water Quality Criteria* for metals (Appendix C). State WQSs contain minimum criteria applicable to all surface waters for toxic pollutants, which requires the use of EPA's *National Recommended Water Quality Criteria: 2002, EPA 822-R-02-047, November 2002* where a specific pollutant is not otherwise listed in 314 CMR 4.00. *See* 314 CMR 4.05(5)(e). Because the discharge is relatively continuous, EPA considered the acute and chronic EPA *National Recommended Water Quality Criteria* for aluminum, copper, and zinc as follows:

Aluminum:
Freshwater acute (Class A or B) = 750 µg/L
Freshwater chronic (Class A or B) = 87 µg/L

Copper:
Freshwater acute (Class A or B) = 13 µg/L
Freshwater chronic (Class A or B) = 9 µg/L

Zinc:
Freshwater acute (Class A or B) = 120 µg/L
Freshwater chronic (Class A or B) = 120 µg/L

The results of EPA's analysis indicate discharges of aluminum, copper, and zinc do not cause, or have a reasonable potential to cause, or contribute to an excursion above State WQSs. As a result, the Draft Permit does not include effluent limitations for these metals. Monitoring for total recoverable metals in the discharge and the receiving water continue to be required in conjunction with Whole Effluent Toxicity Testing, discussed further below.

Finally, the Draft Permit includes a twice per year monitoring requirement for total recoverable antimony. Antimony forms complex ions with organic and inorganic acids, adsorbing strongly to particles that contain iron, manganese, or aluminum. Antimony does not break down but can transform or attach to solids. Antimony is a metal additive in one or more materials used at the Facility. Because monitoring data are not available for antimony for discharges from the Facility, EPA has included monitoring requirements to determine if the metal is present in quantities that could cause, or have a reasonable potential to cause, or contribute to an excursion above WQSs. Monitoring for antimony is required concurrently with Whole Effluent Toxicity Testing.

5.1.10 Per- and polyfluoroalkyl substances (PFAS)

As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may

increase risk of adverse health effects.[12] EPA is collecting information to evaluate the potential impacts that discharges of PFAS from wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

On January 27, 2020, Massachusetts DEP established an Office of Research and Standards Guideline (ORSG) level for drinking water that applies to the sum of the following PFAS:[13,14]

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

Based on the ORSG, MassDEP recommends that:

1. Consumers in sensitive subgroups (pregnant women, nursing mothers and infants) not consume water when the level of the six PFAS substances, individually or in combination, is above 20 ppt.
2. Public water suppliers take steps expeditiously to lower levels of the six PFAS individually or in combination, to below 20 ppt for all consumers.

In December 2019, MassDEP proposed revisions to 310 CMR 22.00: Drinking Water Regulation that would set a new PFAS Maximum Contaminant Level (MCL) of 20 ppt (ng/L) for the sum of the concentrations of six PFAS compounds, including all six compounds addressed by the ORSG (listed above).

Although the Massachusetts water quality standards do not include numeric criteria for PFAS, the Massachusetts narrative criterion for toxic substances at 314 CMR 4.05(5)(e) states:

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

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

> Human Health Risk Levels. Where EPA has not set human health risk levels for a toxic pollutant, the human health-based regulation of the toxic pollutant shall be in accordance with guidance issued by the Department of Environmental Protection's Office of Research and Standards. The Department's goal is to prevent all adverse health effects

[12] EPA, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan,* EPA 823R18004, February 2019. Available at: https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf
[13] https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas
[14] https://www.mass.gov/doc/massdep-ors-guideline-for-pfas/download

> which may result from the ingestion, inhalation or dermal absorption of toxins attributable to waters during their reasonable use as designated in 314 CMR 4.00.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, the Draft Permit requires that the facility conduct quarterly effluent sampling for PFAS chemicals, six months after appropriate, multi-lab validated test methods are made available by EPA to the public.

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

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

Since an EPA method for sampling and analyzing PFAS in wastewater and is not currently available, the PFAS sampling requirement in the Draft Permit includes a compliance schedule which delays the effective date of this requirement until six months after EPA's multi-lab validated method for wastewater is made available to the public on EPA's CWA methods program website For wastewater see https://www.epa.gov/cwa-methods/other-clean-water-act-test-methods-chemical and https://www.epa.gov/cwa-methods. EPA expects this method will be available by the end of 2021.This approach is consistent with 40 CFR § 122.44(i)(1)(iv)(B) which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters. After one year of monitoring, if all samples are non-detect for all six PFAS compounds, using EPA's multi-lab validated method for wastewater, the permittee may request to remove the requirement for PFAS monitoring.

5.1.11 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 addition, the Massachusetts WQSs at 314 CMR 4.03(2)(a) require no lethality to organisms passing through a mixing zone.

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}. For a Facility with a dilution factor between 100:1 and 1,000:1, EPA's *Technical Support Document for Water Quality-based Toxics Control* (1991) recommends either acute or chronic toxicity testing and recommends that toxicity testing be required even if the effluent is not determined to cause or contribute to an excursion above water quality criteria. Both EPA's *Technical Support Document for Water Quality-based Toxics Control* (1991) and the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) recommended criterion to prevent acutely toxic effects is 0.3 toxic unit (T.U.) Further, for discharges with dilution factors greater than 100, if there is reasonable potential to exceed water quality criteria, the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) specifies that the end-of-pipe acute (i.e., LC_{50}) limit is 2.0 T.U., equivalent to an LC_{50} of 50%.

The 2013 Permit required WET testing two times per year, using the daphnid (*Ceriodaphnia dubia*) as the test species, with a reporting requirement for LC_{50}. For Outfall 003, from June 1, 2015 through June 30, 2020 (Appendix A), WET test results indicated toxicity in five of the ten valid tests, with an LC_{50} % ranging between 59.5 and >100. EPA completed an analysis to determine if these discharges cause, or have a reasonable potential to cause, or contribute to an

[15] *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.

excursion above State WQSs using the acute criterion of 0.3 T.U. specified in the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) (Appendix D). While the projected downstream toxicity, 0.003 T.U., does not exceed the acute toxicity criterion, 0.3 T.U., given that the projected effluent toxicity, 2.8571 T.U (i.e., the 95th percentile), exceeds both the criterion and the end-of-pipe limitation specified in the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990), 2.0 T.U., EPA has determined that discharges cause, or have a reasonable potential to cause, or contribute to an excursion above State WQSs. EPA notes that relative to toxicity test results evaluated during development of the 2013 Permit, the effluent trend for toxicity is: 1) decreasing in frequency (i.e., five of ten valid test results compared to six of ten previously); but 2) increasing in magnitude (i.e., 50% mortality at 59.5% effluent compared to 65.98% previously).

Therefore, in accordance with 40 CFR § 122.44(d), the Draft Permit includes an acute toxicity limitation of 50% for LC_{50}. Further, because the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) specifies that permits for discharges having a dilution factor greater than 100 require toxicity testing two times per year for two species, the Draft Permit proposes two species for testing. Toxicity testing must be performed in accordance with the EPA Region 1 test procedures and protocols specified in **Attachment A,** *Freshwater Acute Toxicity Test Procedure and Protocol* (February 2011), of the Draft Permit.

5.2 Special Conditions

5.2.1 Discharges of Chemicals and Additives

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

- Pigments/Colorants
- Polymers/Resins with and without metal additives (e.g., aluminum, antimony, zinc)

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

- 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 that exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

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

5.2.2 Compliance Schedule

Massachusetts regulations for schedules of compliance can be found at 314 CMR 3.11(10). Any schedule of compliance requires compliance "as soon as possible, but not later than the applicable statutory deadline under the CWA." Further, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule must include interim requirements and the dates for their achievement. *See* 40 CFR § 122.47(a). The Draft Permit proposes a compliance schedule of one year from the date of permit issuance for the new permit requirement that effluent flow be monitored using a flow meter. EPA determined that this compliance schedule is appropriate because it requires physical modification of the existing infrastructure.

6.0 Federal Permitting Requirements

6.1 Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority and imposes requirements on Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (listed species) and habitat of such species that has been designated as critical (a "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 Service (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 Quabbin Wire and Cable Company, Inc. The Draft Permit is intended to replace the 2013 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, when required under Section 7(a)(2) of the ESA.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants in the expected action area of the outfall to determine if EPA's proposed NPDES permit could potentially impact any such listed species in this segment of the Ware River. There are no known federally listed threatened or endangered species or their critical habitat under the jurisdiction of NOAA Fisheries within the vicinity of the Facility's discharge(s).[16] Two endangered anadromous fish species that occur in Massachusetts, the shortnose sturgeon (*Acipenser brevirostrom*) and Atlantic sturgeon (*Acipenser oxyrinchus*). According to a NMFS letter dated December 19, 2011[17] for the Chicopee Water Pollution Control Facility discharge to the Connecticut River, "extensive sampling and the lack of any strong evidence of Atlantic sturgeon spawning indicates that the presence of this species in the vicinity of the discharge is unlikely." In addition, the Holyoke Dam separates shortnose sturgeon in the Connecticut River into an upriver group (above the Dam) and a lower river group that occurs below the Dam to Long Island Sound. NMFS determined that adult and juvenile shortnose sturgeon are likely to occur in the vicinity of the Chicopee facility outfall year-round, but further determined that Early Life Stages are less likely to be observed in this area of the Connecticut River, since spawning occurs further upstream in the Montague area near the confluence of the Deerfield and Connecticut Rivers.

The Quabbin Wire and Cable Company, Inc. facility is located approximately 30 river miles upstream of the nearest confluence with the Connecticut River and the Chicopee facility discussed in the paragraph above. Multiple impoundments are located along the Chicopee River between the confluence with the Ware River and the confluence with the Connecticut River. There are no current provisions for fish passage for at least three of these dams (Chicopee Falls Dam, Indian Orchard Station, and Putts Bridge Dam).[18] Based on this assessment and the expected normal distribution of these species, these sturgeon species are not present in the vicinity of this discharge in the Ware River or the associated action area. Therefore, ESA consultation with NOAA Fisheries is not required for this federal action.

For protected species under the jurisdiction of the USFWS, one listed threatened species, the northern long-eared bat (*Myotis septentrionalis*), was identified as potentially occurring in the action area of the Facility's discharge.[19] According to the USFWS, the threatened northern long-eared bat is found in "winter – mines and caves, summer – wide variety of forested habitats. This species is not aquatic, so the Facility's discharge will have no direct effect on this mammal.

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

[17] December 19, 2011, Letter from Patricia A. Kurkul, Regional Administrator, NOAA, National Marine Fisheries Service, Northeast Region, to John H. Nagle, EPA Region 1 ("NOAA's December 19, 2011, Chicopee WPCF Consultation Letter") (addressing ESA issues concerning EPA's proposed NPDES permit for the Chicopee, MA, WPCF).

[18] See Segments MA36-07, MA36-22, MA36-23, MA36-24, and MA36-25 in *Chicopee River Watershed 2003 Water Quality Assessment Report*. MassDEP Division of Watershed Management, Worcester, Massachusetts; October 2008, Report Number: 36-AC-3.

[19] See Section 7 resources for USFWS at https://ecos.fws.gov/ipac/.

Further, the permit action is also expected to have no indirect effect on the species because it is not expected to impact insects, the primary prey of the northern long-eared bat. The federally endangered dwarf wedgemussel (*Alasmidonta heterodon*), which is under the jurisdiction of the USFWS, is found in "rivers and streams" in Hatfield, Amherst and Northampton. These areas are between 6 and 13 miles northwest of the Facility, at their closest. The hills in Pelham and Belchertown separate these areas from Ware. Tributaries in the location nearest the Facility generally drain westward to the Connecticut River and discharge upstream of the confluence with the Chicopee River. Tributaries near the Facility generally drain south toward the Ware River. Therefore, these species are not present in the Facility's action area.[20] Therefore, the proposed permit action is deemed to have no impact on this listed species and ESA consultation with USFWS is not required for this discharge.

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

Initiation of consultation is required and shall be requested by EPA or by USFWS/NOAA Fisheries where discretionary Federal involvement or control over the action has been retained or is authorized by law and if: 1) New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the analysis; 2) The identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this analysis; 3) A new species is listed or critical habitat designated that may be affected by the identified action; or 4) There is any incidental taking of a listed species.

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 NOAA Fisheries if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat". *See* 16 U.S.C. § 1855(b).

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." *See* 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH. 50 CFR . § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), 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* 16 U.S.C. § 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

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[20] See *The Dwarf Wedgemussel Waters of Massachusetts* at http://www.fws.gov/newengland/pdfs/MA_DWM.pdf

The Federal action being considered in this case is EPA's proposed NPDES permit for the Quabbin Wire and Cable Company, Inc. facility, which discharges though Outfall 003, to the Ware River Segment MA36-06 in Ware, Massachusetts. The Ware River is not covered by EFH designation for riverine systems at Latitude 42° 15' 31" Longitude 72° 14' 21" as determined by the NOAA EFH Mapper.[21] However, the Ware River is a tributary of the Chicopee River, which ultimately flows into the Connecticut River. The Connecticut River and its tributaries, including the Chicopee River, are designated EFH for Atlantic salmon (Salmo salar). Although the presence of this species may be in question since the termination of the stocking program, EPA has taken the conservative approach and decided that one or more lifestages of Atlantic salmon may be present within the area which encompasses the discharge site. EPA has concluded that the limits and conditions contained in the Draft Permit minimize adverse effects to Atlantic Salmon EFH for the reasons described below.

6.2.1 EPA's Finding of all Potential Impacts to EFH Species

- This Draft Permit action does not constitute a new source of pollutants. It is the
- reissuance of an existing NPDES permit;
- The quantity of the discharge from the Facility is low (0.03 MGD);
- The available dilution in the Ware River for the Facility discharge is high (935);
- The Facility withdraws no water from the Ware River; therefore, no life stages of Atlantic salmon are vulnerable to impingement or entrainment from this facility;
- EPA has completed analysis to determine that no reasonable potential exists for concentrations of metals including aluminum, copper, and zinc in discharges from the Facility to exceed water quality criteria specifically protective of aquatic organisms;
- Acute toxicity testing on *Ceriodaphnia dubia* is required two (2) times per year;
- The Draft Permit includes effluent limitations that were developed to be protective of all aquatic life;
- The Draft Permit prohibits the discharge of pollutants or combination of pollutants in toxic amounts;
- The Draft Permit prohibits any violation of Massachusetts WQSs.

EPA believes that the conditions and limitations contained in the Draft Permit adequately protects all aquatic life, including EFH designated for Atlantic salmon in the receiving water. 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 Habitat Division will be contacted and an EFH consultation will be re-initiated.

At the beginning of the public comment period, EPA notified NOAA Fisheries Habitat and Ecosystem Services Division that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents. In addition to this Fact Sheet and the Draft Permit, information to support EPA's finding was included in a letter under separate cover that will be sent to the NOAA Fisheries Habitat and Ecosystem Services Division during the public comment period.

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

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:

Shauna Little
EPA Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1989
Email: little.shauna@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.

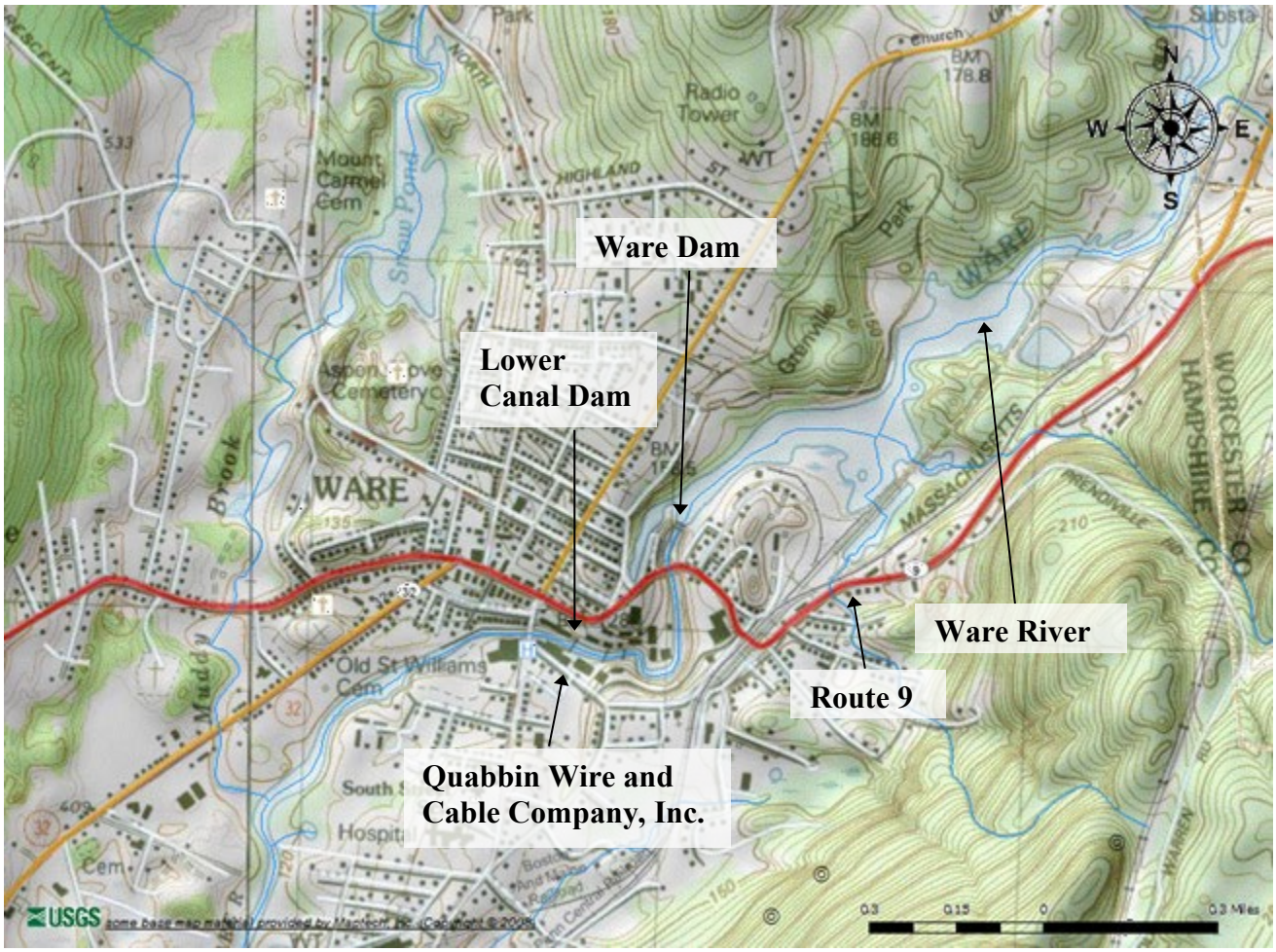
8.0 Administrative Record

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 Shauna Little, EPA Region 1, Water Division**,** Industrial Permits Section, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912 or via email to little.shauna@epa.gov.

July 9, 2020

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

Figure 1: Location Map



Source: http://water.usgs.gov/osw/streamstats/massachusetts.html

Figure 2: Site Plan

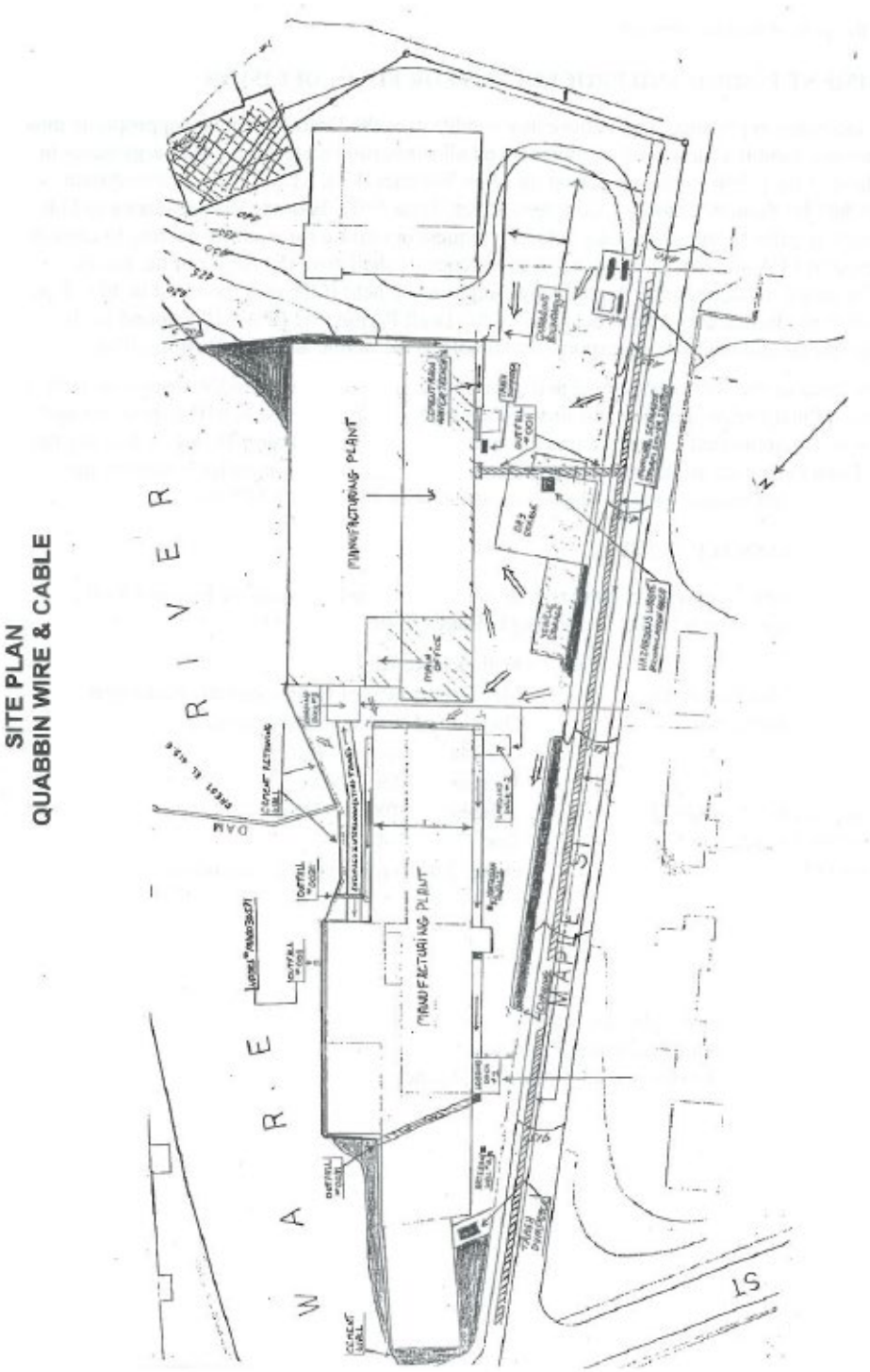
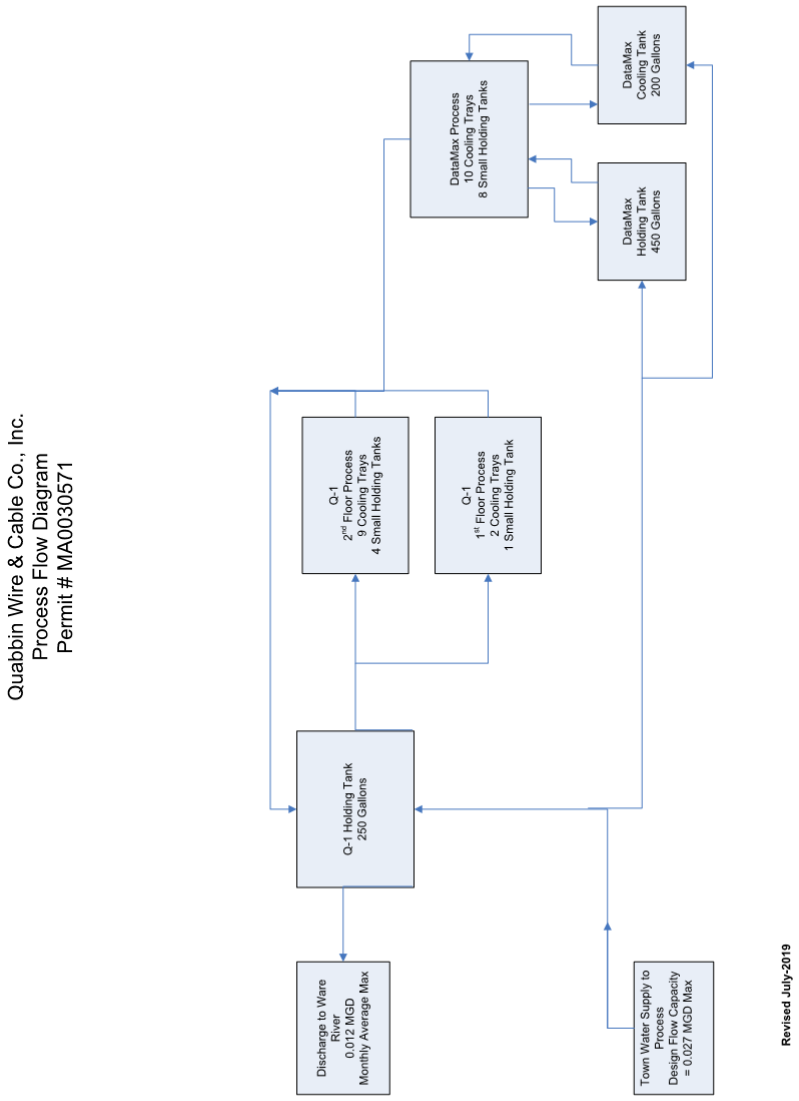


Figure 3: Schematic of Water Flow



Appendix A: Discharge Monitoring Data

QUABBIN WIRE AND CABLE **Outfall Serial Number 003** **Monthly Effluent Monitoring**						
Parameter	**Flow**	**Flow**	**pH**	**pH**	**TRC**	**Temperature, water deg. fahrenheit**
	Monthly Avg	**Daily Max**	**Minimum**	**Maximum**	**Daily Max**	**Daily Max**
Units	**MGD**	**MGD**	**SU**	**SU**	**mg/L**	**deg F**
Effluent Limit	**0.01**	**0.025**	**6.5**	**8.3**	**Report**	**83**
Minimum	**0.00134**	**0.00402**	**7.4**	**7.59**	**0**	**78**
Maximum	**0.01118**	**0.02522**	**8.12**	**8.18**	**0.3**	**81**
Median	**0.00395**	**0.00994**	**7.81**	**7.92**	**Non-Detect**	**80**
No. of Violations	**4**	**1**	**0**	**0**	**N/A**	**0**
Monitoring Period End Date						
6/30/2015	0.00403	0.01409	7.87	7.98	< .02	81
7/31/2015	0.00674	0.0159	7.85	8	< .02	80
8/31/2015	0.00808	0.01689	7.78	7.89	< .1	80
9/30/2015	0.00761	0.01662	8.05	8.09	< .1	80
10/31/2015	0.00505	0.01188	7.91	8.06	< .02	80
11/30/2015	0.00471	0.01282	7.84	7.93	< .02	80
12/31/2015	0.00355	0.01129	7.86	7.93	0.024	80
1/31/2016	0.00376	0.00872	7.85	7.96	< .02	80
2/29/2016	0.00302	0.00961	7.82	7.98	< .02	80
3/31/2016	0.00388	0.00851	7.77	7.92	< .02	80
4/30/2016	0.00381	0.0084	7.84	7.95	< .02	80

5/31/2016	0.00673	0.016	7.74	7.86	0.026	80
6/30/2016	0.00679	0.01643	7.93	8.03	< .02	80
7/31/2016	0.00856	0.01707	7.68	7.79	< .02	80
8/31/2016	**0.01118**	0.02451	7.62	7.74	< .02	80
9/30/2016	0.00717	0.02004	7.74	7.79	< .02	80
10/31/2016	0.00353	0.00958	7.75	7.86	< .2	80
11/30/2016	0.0025	0.0066	7.8	7.88	< .02	80
12/31/2016	0.00134	0.00489	7.77	7.84	< .02	80
1/31/2017	0.0018	0.00438	7.8	7.85	0.021	81
2/28/2017	0.00148	0.00498	7.79	7.82	< .02	80
3/31/2017	0.00183	0.00454	7.75	7.88	< .02	80
4/30/2017	0.00198	0.00483	7.9	7.93	< .02	80
5/31/2017	0.00311	0.00829	7.8	7.96	0.023	80
6/30/2017	0.00639	0.01581	7.92	8.01	< .02	81
7/31/2017	0.00712	0.019	7.8	7.93	< .02	80
8/31/2017	**0.01086**	0.02357	7.9	7.99	< .02	80
9/30/2017	0.00723	0.02111	8.04	8.1	< .02	80
10/31/2017	0.00569	0.01174	8.03	8.1	< .02	80
11/30/2017	0.00425	0.00942	8.12	8.16	< .02	80
12/31/2017	0.00387	0.00791	7.76	7.83	< .02	80
1/31/2018	0.0037	0.00733	7.85	7.94	< .02	80
2/28/2018	0.00304	0.0068	7.81	7.89	< .02	80
3/31/2018	0.00358	0.00828	7.88	7.96	< .02	80
4/30/2018	0.00366	0.00849	7.66	7.72	< .02	80
5/31/2018	0.00587	0.01252	7.65	7.8	< .02	80
6/30/2018	0.00767	0.01856	7.84	7.92	< .02	80
7/31/2018	**0.01114**	**0.02522**	7.91	7.99	< .02	80

8/31/2018	**0.01097**	0.02465	8.1	8.18	< .02	80
9/30/2018	0.00752	0.01866	7.81	7.9	0.026	80
10/31/2018	0.00584	0.01366	7.81	7.88	0.056	80
11/30/2018	0.00395	0.01155	7.94	7.98	0.045	80
12/31/2018	0.00268	0.00746	7.71	7.81	0.07	80
1/31/2019	0.00331	0.00789	7.85	7.96	0.02	80
2/28/2019	0.00294	0.00839	7.87	7.94	0.04	80
3/31/2019	0.00157	0.00447	8.01	8.07	0.054	80
4/30/2019	0.00252	0.01343	7.81	7.92	0.17	80
5/31/2019	0.0023	0.00538	7.81	7.92	0.094	80
6/30/2019	0.00395	0.00971	8.03	8.1	< .02	80
7/31/2019	0.00525	0.01101	7.67	7.81	0.11	80
8/31/2019	0.00523	0.01088	7.72	7.88	0.163	80
9/30/2019	0.00439	0.00994	7.74	7.87	0.07	80
10/31/2019	0.00361	0.00894	7.87	7.94	< .02	80
11/30/2019	0.00232	0.00614	7.65	7.72	0.03	80
12/31/2019	0.00188	0.00402	7.73	7.88	0.03	80
1/31/2020	0.00208	0.00445	7.53	7.64	< .02	80
2/29/2020	0.00216	0.00519	7.69	7.83	0.04	80
3/31/2020	0.00311	0.01053	7.99	8.06	0.03	80
4/30/2020	0.00472	0.00881	7.66	7.75	0.3	79
5/31/2020	0.0047	0.01359	7.44	7.59	0.22	78
6/30/2020	0.00675	0.01939	7.4	7.59	< .02	80

QUABBIN WIRE AND CABLE **Outfall Serial Number 003** **Quarterly Effluent Monitoring**					
Parameter	**BOD5**	**TSS**	**Copper**	**Zinc**	**Oil & grease**
	Daily Max	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**
Units	**lb/d**	**lb/d**	**mg/L**	**mg/L**	**mg/L**
Effluent Limit	**2.01**	**1.47**	**Report**	**Report**	**15**
Minimum	**0.01673**	**0.01677**	**0.0135**	**0**	**0**
Maximum	**0.4491**	**0.6001**	**0.0522**	**0.0529**	**4.9**
Median	**0.13377**	**0.08046**	**0.0317**	**0.0105**	**Non-Detect**
No. of Violations	**0**	**0**	**N/A**	**N/A**	**0**
Monitoring Period End Date					
6/30/2015	0.1396	0.233	0.0236	0.013	< 1
9/30/2015	0.3595	0.6001	0.0522	0.0222	< 1.01
12/31/2015	0.21071	0.35166	0.0317	< .019	< 1
3/31/2016	0.15136	0.25261	0.0505	0.0202	< .99
6/30/2016	0.2984	0.4981	0.0345	0.0119	< 1
9/30/2016	0.34462	0.07149	0.0422	< .03	< 1
12/31/2016	0.1219	0.0403	0.0295	0.0121	< 1.4
3/31/2017	0.10049	0.01677	0.0348	0.014	1.62
6/30/2017	0.02007	0.04699	0.0306	0.0135	< 1
9/30/2017	0.02775	0.04631	0.019	0.005	< 1
12/31/2017	0.01807	0.030172	0.0242	< .01	< 1.5
3/31/2018	0.01673	0.02792	0.017	0.007	1.3
6/30/2018	0.03169	0.05894	0.0239	0.0105	1.3
9/30/2018	0.4491	0.33334	0.016	< .025	4.9
12/31/2018	0.18602	0.0311	0.025	0.012	< 1.6

3/31/2019	0.09675	0.16147	0.036	0.011	< 1.6
6/30/2019	0.12119	0.20225	0.032	0.008	< 1.6
9/30/2019	0.16497	0.24786	0.0368	< .02	< 5
12/31/2019	0.13377	0.08046	0.0385	< .02	< 5
3/31/2020	0.10914	0.06811	0.0491	< .02	< 5
6/30/2020	0.33609	0.20974	0.0135	0.0529	< 2

QUABBIN WIRE AND CABLE
Outfall Serial Number 003
2/Year Whole Effluent Toxicity Testing

Parameter	LC50 Acute Ceriodaphnia	Total Solids	TDS	pH	TRC	Hardness	Alkalinity	TOC	Specific Conductance
	Minimum	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	%	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	umho/cm
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	59.5	125	0.7	7.12	0	39.3	48.4	0	283
Maximum	100	237	242	8.1	0.07	56.5	72	1.45	371
Median	77.1	156	150	7.92	Non-Detect	44.1	56.7	Non-Detect	321
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date									
6/30/2015	100	156	151	7.12	< .02	41.5	57.7	1.04	Reported in uS/cm

9/30/2015	59.5	142	133	8.09	< .1	39.6	55.2	1.45	Reported in uS/cm
6/30/2016	NODI: H	128	125	8.03	< .02	42.6	49.9	< 1	Reported in uS/cm
9/30/2016	77.1	125	150	7.79	< .02	40.1	48.4	< 1	Reported in uS/cm
6/30/2017	100	159	0.7	8.01	< .02	46.4	53.7	< 1	Reported in uS/cm
9/30/2017	100	140	149	8.1	< .02	39.3	56.6	1.17	Reported in uS/cm
6/30/2018	100	196	181	7.92	< .02	48.7	57.2	< 1	Reported in uS/cm
9/30/2018	100	237	242	7.9	0.02	56.5	60.8	< 1	Reported in uS/cm
6/30/2019	70.7	150	160	8.03	NODI: B	44.1	67	NODI: B	283
9/30/2019	70.7	209	196	7.87	0.07	52.1	56.7	< 1	371
6/30/2020	73.6	178	114	7.59	< .02	50	72	< 1	321

QUABBIN WIRE AND CABLE
Outfall Serial Number 003
2/Year Whole Effluent Toxicity Testing

Parameter	**Cadmium**	**Copper**	**Lead**	**Nickel**	**Zinc**	**Aluminum, total (as Al)**	**Ammonia & ammonium- total**
	Daily Max	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Effluent Limit	**Report**	**Report**	**Report**	**Report**	**Report**	**Report**	**Report**
Minimum	**No Data**	**0.0135**	**No Data**	**No Data**	**0**	**0**	**0**
Maximum	**No Data**	**0.0522**	**No Data**	**No Data**	**0.0529**	**0.03**	**0.14**

Median	**No Data**	**0.0306**	**No Data**	**No Data**	**0.0105**	**Non-Detect**	**Non-Detect**
No. of Violations	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Monitoring Period End Date							
6/30/2015	< .0025	0.0236	< .0075	< .005	0.013	0.0286	< .02
9/30/2015	< .005	0.0522	< .015	< .01	0.0222	< .05	< .2
6/30/2016	< .005	0.0345	< .015	< .01	0.0119	< .05	< .05
9/30/2016	< .005	0.0422	< .015	< .01	< .03	< .05	< .2
6/30/2017	< .005	0.0306	< .015	< .01	0.0135	< .05	0.09
9/30/2017	< .001	0.019	< .002	< .001	0.005	< .01	0.09
6/30/2018	< .005	0.0239	< .015	< .01	0.0105	< .05	< .05
9/30/2018	< .0025	0.016	< .0075	< .005	< .025	< .025	< .05
6/30/2019	NODI: B	0.032	NODI: B	NODI: B	0.008	0.03	NODI: B
9/30/2019	< .005	0.0368	< .015	< .01	< .02	< .3	< .1
6/30/2020	< .005	0.0135	< .015	< .01	0.0529	< .05	0.14

Notes:

NODI: B = non-detect
NODI: H = invalid test

QUABBIN WIRE AND CABLE Outfall Serial Number 003 Annual Effluent Monitoring	
Parameter	**Bis(2-ethylhexyl) phthalate**
	Daily Max
Units	**mg/L**
Effluent Limit	**0**
Minimum	**No Data**
Maximum	**No Data**
Median	**No Data**
No. of Violations	**No Data**
Monitoring Period End Date	
4/30/2016	NODI: B
4/30/2017	NODI: B
4/30/2018	NODI: B
4/30/2019	NODI: B
4/30/2020	<0

Notes:

NODI: B = non-detect

Appendix B: Ambient Data

QUABBIN WIRE AND CABLE Ware River - 2/Year Monitoring						
Parameter	**pH**	**Hardness**	**Alkalinity**	**TOC**	**Specific Conductance**	**Ammonia & ammonium- total**
	Daily Max	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**
Units	**SU**	**mg/L**	**mg/L**	**mg/L**	**umho/cm**	**mg/L**
Effluent Limit	**Report**	**Report**	**Report**	**Report**	**Report**	**Report**
Minimum	**6.58**	**15.1**	**0**	**1.04**	**118**	**0**
Maximum	**7.62**	**41.5**	**57.7**	**7.03**	**151**	**0.28**
Median	**7.3**	**21.5**	**12**	**5.34**	**145**	**0.06**
No. of Violations	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Monitoring Period End Date						
6/30/2015	7.12	41.5	57.7	1.04	Reported in uS/cm	< .2
9/30/2015	7.49	24.2	17.6	5.34	Reported in uS/cm	< .2
6/30/2016	7.48	22	13	5.8	Reported in uS/cm	< .2
9/30/2016	7.23	22.5	15.3	5.34	Reported in uS/cm	0.28
6/30/2017	7.3	15.1	6.06	7.03	Reported in uS/cm	0.19
9/30/2017	7.62	19.3	11.6	6.38	Reported in uS/cm	0.14
6/30/2018	7.27	20.2	12	7.01	Reported in uS/cm	< .05
9/30/2018	7.3	19	12	6.71	Reported in uS/cm	0.07
6/30/2019	7.38	16.4	NODI: B	5.3	118	0.06
9/30/2019	7.44	22.4	13.4	4	151	< .1
6/30/2020	6.58	21.5	< 20	5.1	145	0.15

QUABBIN WIRE AND CABLE Ware River - 2/Year Monitoring						
Parameter	**Cadmium**	**Copper**	**Lead**	**Nickel**	**Zinc**	**Aluminum, total (as Al)**
	Daily Max	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**	**Daily Max**
Units	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Effluent Limit	**Report**	**Report**	**Report**	**Report**	**Report**	**Report**
Minimum	**No Data**	**0**	**No Data**	**0**	**0**	**0**
Maximum	**No Data**	**0.0236**	**No Data**	**0.012**	**0.0366**	**0.183**
Median	**No Data**	**Non-Detect**	**No Data**	**Non-Detect**	**Non-Detect**	**0.0781**
No. of Violations	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Monitoring Period End Date						
6/30/2015	< .0025	0.0236	< .0075	< .005	0.013	0.0286
9/30/2015	< .005	< .01	< .015	< .01	< .013	< .05
6/30/2016	< .005	< .01	< .015	< .01	< .01	0.114
9/30/2016	< .005	< .01	< .015	< .01	< .03	0.0751
6/30/2017	< .005	< .01	< .015	< .01	< .01	0.183
9/30/2017	< .001	< .005	< .002	0.012	0.005	0.128
6/30/2018	< .005	< .01	< .015	< .01	< .01	0.0781
9/30/2018	< .0025	< .005	< .0075	< .005	< .025	0.094
6/30/2019	NODI: B	NODI: B	NODI: B	NODI: B	0.004	0.086
9/30/2019	< .005	< .02	< .015	< .01	< .02	< .3
6/30/2020	< .005	< .005	< .015	< .01	0.0366	< .05

Notes:

NODI: B = non-detect

Appendix C: Reasonable Potential Analysis

Methodology

A reasonable potential analysis is completed using a single set of critical conditions for flow and pollutant concentration that will ensure the protection of water quality standards. To determine the critical condition of the effluent, EPA projects an upper bound of the effluent concentration based on the observed monitoring data and a selected probability basis. EPA generally applies the quantitative approach found in Appendix E of the *Technical Support Document for Water Quality-based Toxics Control* (TSD)[1] to determine the upper bound of the effluent data. This methodology accounts for effluent variability based on the size of the dataset and the occurrence of non-detects (i.e., samples results in which a parameter is not detected above laboratory minimum levels). EPA used this methodology to calculate the 95th percentile.

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

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

Where:

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

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

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

When the downstream concentration (C) exceeds the applicable criterion, there is reasonable potential for the discharge to cause, or contribute to an excursion above WQSs. *See* 40 C.F.R. § 122.44(d). When EPA determines that a discharge causes, has the reasonable potential to cause, or contribute to such an excursion, the permit must contain a limitation for the parameter. The numeric WQBELs in this permit have been calculated by rearranging the above mass balance equation to solve for the effluent concentration (C_e) using the applicable criterion as the downstream concentration (C_d). *See* 40 C.F.R. § 122.44(d)(1)(iii).

Determination of Applicable Criteria

State water quality criteria are derived from EPA's *National Recommended Water Quality Criteria: 2002*, which are incorporated into the state WQSs by reference at 315 CMR 4.05(5).

Freshwater aquatic life criteria for aluminum, cadmium, copper, lead, nickel and zinc are established in terms of dissolved metals and are converted to total recoverable using published conversion factors. Additionally, the criteria for cadmium, copper, lead, nickel and zinc are hardness-dependent. EPA calculated hardness-dependent chronic and acute criteria for metals detected in the effluent using the downstream hardness, 21.0, determined using the hardness values measured in the Facility's discharge (Appendix A) and the median hardness value measured in the receiving water immediately upstream of the discharge (Appendix B). To calculate the ammonia criteria, EPA applied the following assumptions: 1) the minimum pH limitation, 6.5 S.U.; 2) the maximum daily temperature limitation, 83 ºF; 3) salmonids are present in the vicinity of the discharge; and 4) early life stages are present in the vicinity of the discharge. The applicable criteria are summarized in the table below.

Summary of Applicable Criteria

Parameter	Applicable Criteria	
	Acute Criteria (CMC)	Chronic Criteria (CCC)
Units	**µg/L**	**µg/L**
Aluminum[1]	750	87
Copper[1,2]	3.2	2.5
Zinc[1,2]	32	32
Ammonia[3]	32.6	2.8

[1] For dissolved to total recoverable metal conversion, see *Appendix A - Conversion Factors for Dissolved Metals:* http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#appendxa; Required by 314 CMR 4.05(5)(e).
[2] For hardness-dependent criteria, see *National Recommended Water Quality Criteria, Appendix B - Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent*: http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm
[3] Ammonia criteria are shown in ml/L. *See* pages 86 through 88 in *1999 Update of Ambient Water Quality Criteria for Ammonia*. U.S. Environmental Protection Agency, Office of Water, EPA-822-R-99-014: December 1999.

Calculation of Reasonable Potential

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

Summary of Reasonable Potential Results

Parameter	Effluent Flow[1]	Effluent Conc[2]	Upstream Flow	Upstream Conc[3]	Downstream Flow[4]	Downstream Concentration	Acute Criterion	Chronic Criterion	Acute Reasonable Potential[5]	Chronic Reasonable Potential[6]
Units	**cfs**	**µg/L**	**cfs**	**µg/L**	**cfs**	**µg/L**	**µg/L**	**µg/L**	**—**	**—**
Aluminum	0.01	29.9	13.44	78.1	13.45	78.05	750	87	N	N
Copper		55		0		0.057	3.2	2.5	N	N
Zinc		43.3		0		0.024	32	32	N	N
Ammonia		0.13		0.06		0.06	48.8	6.7	N	N

[1] Value represents the measure of production for the Facility.
[2] Values represent the 95th percentile concentration calculated using the monitoring data reported by the Facility (*See* Appendix A).
[3] Median upstream values based on monitoring data for the receiving water reported by the Facility (Appendix B).
[4] Value calculated as the sum of effluent flow and 7Q10.
[5] "Y" is indicated if downstream concentration exceeds the acute criterion. Otherwise, "N" indicated.
[6] "Y" is indicated if downstream concentration exceeds the chronic criterion. Otherwise, "N" indicated.

No parameters have a reasonable potential to cause or contribute to an excursion above water quality standards.

Appendix D: Whole Effluent Toxicity Reasonable Potential Analysis

The dilution factor determined for the Facility is 935, equivalent to approximately 0.1% effluent at the edge of the mixing zone. For discharges with dilution greater than 100 the criterion recommended in the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) for acute effects is 0.3 toxic units (T.U.). To determine whether discharges from the Facility have reasonable potential to cause or contribute to an excursion above this level of toxicity, EPA converted the LC_{50} results for the Facility to toxic units, defined as 100 divided by the LC_{50}, as shown below.

Monitoring Period End Date	LC50 Static 48Hr Acute Ceriodaphnia	Toxic Units Equivalent
	%	T.U.
6/30/2015	100	1
9/30/2015	59.5	1.680672269
6/30/2016	---	---
9/30/2016	77.1	1.297016861
6/30/2017	100	1
9/30/2017	100	1
6/30/2018	100	1
9/30/2018	100	1
6/30/2019	70.7	1.414427157
9/30/2019	70.7	1.414427157
6/30/2020	73.6	1.358695652

Using the toxic unit equivalents calculated above, EPA then determined the 95th percentile projected effluent concentration following the methodology described in Appendix C, above. Based on a dataset where n≤10, the 95th percentile was calculated as 2.8571 toxic units (an LC_{50} of 35%), as shown below. The projected downstream toxicity was calculated as 0.003 toxic units, determined by multiplying the 95th percentile by the percent effluent at the edge of the mixing zone (or dividing the 95th percentile by the dilution factor).

Toxicity in T.U. - lognormal distribution assumed

Estimated Daily Maximum Effluent Concentration		
k = number of daily samples =	10	
Max Concentration	1.68	
cv(x)= Coefficient of Variation* =	0.6	
95th percentile multiplication factor**	1.7	
Daily Max 95th Percentile = Max Concentration*95th percentile multiplication factor		
Daily Max 95th Percentile =	**2.8571**	**TU**
Projected Downstream Concentration = Daily Max 95th Percentile/dilution factor		
Projected Downstream Concentration =	**0.003**	**TU**

The estimated downstream toxicity does not exceed the in-stream criterion of 0.3 T.U. However, the projected effluent toxicity exceeds the end-of-pipe limitation of 2.0 T.U. Therefore, discharges from the Facility have a reasonable potential to cause, or contribute to an excursion above State WQSs and a limitation for toxicity is required.

Effluent Limitations

For discharges with dilution factors greater than 100, if there is reasonable potential to exceed water quality criteria, the *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) specifies that the end-of-pipe acute (i.e., LC_{50}) limit is 2.0 toxic units (T.U.), equivalent to an LC_{50} of 50%.

Summary of Effluent Limitations

Parameter	Criterion	Limitation in Toxic Units	Limitation in %
Units	**T.U.**	**T.U.**	**%**
LC_{50}	0.3	2.0	50
NOEC	1.0	N/A	N/A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION 1 (EPA)
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MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MASSDEP)
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

EPA PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTION 402 OF THE CLEAN WATER ACT (CWA), AS AMENDED, AND MASSDEP PUBLIC NOTICE OF EPA REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CWA.

PUBLIC NOTICE PERIOD: **July 20, 2020 – August 18, 2020**

PERMIT NUMBER: **MA0030571**

PUBLIC NOTICE NUMBER: **MA-021-20**

NAME AND MAILING ADDRESS OF APPLICANT:

Quabbin Wire & Cable Company, Inc.
10 Maple Street
Ware, MA 01082

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Quabbin Wire & Cable Company, Inc.
10 Maple Street
Ware, MA 01082

RECEIVING WATER AND CLASSIFICATION:

Ware River (Class B)

PREPARATION OF THE DRAFT PERMIT AND EPA REQUEST FOR CWA § 401 CERTIFICATION:

EPA is issuing for public notice and comment the Draft NPDES Permit for the Quabbin Wire & Cable Company, which discharges contact cooling water from the cooling water system. The effluent limits and permit conditions imposed have been drafted pursuant to, and assure compliance with, the CWA, including EPA-approved State Surface Water Quality Standards at 314 CMR 4.00. MassDEP cooperated with EPA in the development of the Draft NPDES Permit. MassDEP retains independent authority under State law to issue a separate Surface Water Discharge Permit for the discharge, not the subject of this notice, under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53.

In addition, EPA has requested that MassDEP grant or deny certification of this Draft Permit pursuant to Section 401 of the CWA and implementing regulations. Under federal regulations governing the NPDES program at 40 Code of Federal Regulations (CFR) § 124.53(e), state certification shall contain conditions that are necessary to assure compliance with the applicable provisions of CWA sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law, including any conditions more stringent than those in the Draft Permit that MassDEP finds necessary to meet these requirements. In addition, MassDEP may provide a statement of the extent to which each condition of the Draft Permit can be made less stringent without violating the requirements of State law.

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:

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U.S. Environmental Protection Agency – Region 1
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Boston, MA 02109-3912
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Following U.S. Centers for Disease Control and Prevention (CDC) and U.S. Office of Personnel Management (OPM) guidance and specific state guidelines impacting our regional offices, EPA's workforce has been directed to telework to help prevent transmission of the coronavirus. While in this workforce telework status, there are practical limitations on the ability of Agency personnel to allow the public to review the administrative record in person at the EPA Boston office. However, any documents relating to this Draft Permit can be requested from the individual listed above.

PUBLIC COMMENT AND REQUESTS FOR PUBLIC HEARINGS:

All persons, including applicants, who believe any condition of this Draft Permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by August 18, 2020**,** which is the close of the public comment period. Comments, including those pertaining to EPA's request for CWA § 401 certification, should be submitted to the EPA contact at the address or email listed above. Upon the close of the public comment period, EPA will make all comments available to MassDEP.

Any person, prior to the close of the public comment period, may submit a request in writing to EPA for a public hearing on the Draft Permit under 40 CFR § 124.10. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice if the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this Draft Permit, the Regional Administrator will respond to all significant comments and make the responses available to the public.

Due to the COVID-19 National Emergency, if comments are submitted in hard copy form, please also email a copy to the EPA contact above.

FINAL PERMIT DECISION:

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

KEN MORAFF, DIRECTOR
WATER DIVISION
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY – REGION 1

LEALDON LANGLEY, DIRECTOR
DIVISION OF WATERSHED MGMT
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION