Attachment 1

New Permit

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C.§§ 1251 et seq.; the "CWA", and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Holtec Decommissioning International, LLC

is authorized to discharge from a facility located at

Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

to receiving water named

Cape Cod Bay

a Class SA water, 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 following sixty (60) days after signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the permit that was issued on April 29, 1991, modified on August 30, 1994, and expired on April 29, 1996.

This permit consists of this cover page, Part I, Attachment A (Marine Acute Toxicity Test Protocol, July 2012), Attachment B (Impingement Monitoring Plan), Attachment C (Summary of Monitoring Parameters for Electrical Vault Sampling), and Part II (NPDES Part II Standard Conditions, April 2018).

Signed this 30th day of January , 2020.

/S/SIGNATURE ON FILE

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

/S/SIGNATURE ON FILE

Lealdon Langley, Director[1]
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

[1] Massachusetts Department of Environmental Protection (MassDEP), by taking this action, does not acquiesce in or accept past or future decisions and actions of the Nuclear Regulatory Commission, including those of its staff, approving the direct and indirect transfer of the Pilgrim Renewed Facility Operation License DPR-35 and the general license for the Pilgrim Independent Spent Fuel Storage Installation (ISFSI) from Entergy Nuclear Operation Inc. and Entergy Nuclear Generation Company (to be renamed Holtec Pilgrim, LLC) to Holtec International and Holtec Decommissioning International, LLC. MassDEP takes this action in an abundance of caution to ensure protection of Massachusetts' waters.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The Permittee is authorized to discharge circulating water through **Outfall Serial Number 001** to the discharge canal which flows to Cape Cod Bay. This discharge, and commingled wastestreams in the discharge canal, shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency [2]	Sample Type
Flow Rate[3]	MGD	Report	224	Continuous [4]	Recorder
Hours of Operation[3]	Hours	---	Report	1/Month	Count
pH[5]	S.U.	---	Report	1/Month	Grab
Oil and Grease[6]	mg/L	Report	Report	1/Month	Grab
Total Residual Oxidants[7]	mg/L	0.1	0.1	1/Week	Grab
Tolyltriazole[8]	mg/L	Report	1.48	1/Month	Grab
Sodium Nitrite[8]	mg/L	Report	2.0	1/Month	Grab

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency [2]	Sample Type
Temperature, Effluent	°F	Report	Report	Continuous [4]	Recorder
Temperature Rise (delta T)[9]	°F	---	Report	Continuous [4]	Recorder
WHOLE EFFLUENT TOXICITY[10,11,12, 13]					
LC_{50}	%	---	Report	2/Year	24-Hour Composite[10]
Total Residual Chlorine	mg/L	---	Report	2/Year	Grab
Salinity	g/Kg	---	Report	2/Year	24-Hour Composite[10]
pH	S.U.	---	Report	2/Year	Grab
Total Solids	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Suspended Solids	mg/L	---	Report	2/Year	24-Hour Composite[10]
Ammonia	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Organic Carbon	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Recoverable Cadmium	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Recoverable Lead	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Recoverable Copper	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Recoverable Zinc	mg/L	---	Report	2/Year	24-Hour Composite[10]
Total Recoverable Nickel	mg/L	---	Report	2/Year	24-Hour Composite[10]

Footnotes:

1. All samples shall be representative of the effluent that is discharged through Outfall 001, taken at a location in the outfall channel discharge to Cape Cod Bay. This sampling point shall also include flows from Outfalls 004, 005, 010, 011, 012, and 014 when discharging. A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report (DMR) submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 Code of Federal Regulations (CFR) §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

2. For those months when there are no discharges, the Permittee must report a No Data Indicator (NODI) Code (e.g., "C" for "No Discharge") on the DMR. In Attachment E of *NPDES Permit Program Instructions for the DMRs*, a list of NODI codes are included at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary.The results of sampling for any parameter above its required frequency must also be reported.

3. The Permittee may discharge at this flow for up to 48 hours in any calendar month. The Permittee shall report the total number of hours that either circulating water pump operates during the period beginning on the first day of the calendar month and ending on the last day of the calendar month.

4. Continuous monitoring shall be defined as monitoring at a minimum of fifteen (15) minute intervals during discharge. The results shall be recorded with the time and date on a chart and shall be made available upon request by EPA or MassDEP. If continuous monitoring equipment at the outfall is unavailable, a minimum of four (4) manual grab samples taken at least fifteen (15) minutes apart each day is acceptable in lieu of continuous monitoring data. The Permittee shall provide an explanation of why continuous monitoring was not available and when continuous monitoring would be expected to be resumed. The flow rate may be estimated from pump capacity curves and operational hours. The daily maximum values for effluent temperature and delta T shall be the highest values recorded during the month.

5. The minimum and maximum pH sample measurement values for the monitoring period shall be reported in standard units (S.U.).

6. The Permittee shall use EPA Method 1664A for oil and grease analysis, which has a minimum level of 5 mg/L (where the ML is the lowest point on the curve used to calibrate the test equipment for the pollutant of concern. Sampling shall be conducted in the discharge canal at a point which includes flow from Outfalls 010, 011, and 014 when the circulating water pumps are not operating.

7. Chlorination of the intake water from either circulating water pump is prohibited. Sampling shall be conducted in the discharge canal at a point which includes flow from Outfall 010, when this flow is being chlorinated and no circulating water pump is operating. The minimum level (ML) for TRC is defined as 20 ug/l. This value is the minimum level for chlorine using EPA approved methods found in the most currently approved

version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G. One of these methods must be used to determine total residual chlorine, which can be reported as the TRO value on the DMR. No other biocide shall be used without explicit approval from the Regional Administrator (RA) of Region I of the EPA and the Commissioner of the MassDEP or their designees.

8. The Permittee shall monitor the discharge for sodium nitrite and tolyltriazole originating from Outfall 011 and Outfall 014 on a monthly basis. These discharges may be made directly to the discharge canal. Monitoring must be conducted during dry weather prior to the effluent mixing with seawater when discharging from Outfall 011 and/or Outfall 014. If discharging simultaneously from Outfalls 011 and 014 during a reporting period, monitoring at the compliance point must be representative of the combined discharge.

9. The temperature rise, or delta T, is defined as the difference between the discharge temperature and the intake temperature measured within the same 15-minute interval.

10. The Permittee shall conduct acute whole effluent toxicity (WET) tests twice per year for years 1, 3 and 5 of the permit. The Permittee shall test the Mysid Shrimp, *Americamysis bahia*, and the Inland Silverside, *Menidia beryllina*. The test must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit. Samples shall be collected during dry weather prior to the effluent mixing with seawater when discharging from Outfall 011 and when there is no discharge from Outfall 014 or when a circulating water pump is operating. A 24-hour composite shall consist of twenty-four (24) grab samples collected at hourly intervals during a twenty-four hour period (*i.e.*, 0700 Monday to 0700 Tuesday), combined proportional to flow. If the discharge duration is less than 24 hours, the composite sample shall consist of a shorter time interval than hourly to assure that 24 grab samples are taken. Toxicity testing must be reported in the DMR no later than the second month following the month of testing. For example, for toxicity testing conducted in May, sampling results must be reported by the DMR submitted no later than the 15th of July.

11. The LC_{50} is the concentration of the effluent which causes mortality to 50% of the test organisms.

12. For each WET test, the Permittee shall report the concentrations of the parameters listed that are detected in a 100% effluent sample on the appropriate DMR. All of these chemical parameters shall be determined to at least the minimum levels of quantification (ML) shown on Pages 8 to 10 of **Attachment A**, as amended. The Permittee should note that all chemical parameter results must still be reported in the appropriate WET test report.

13. 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 (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water.

2. The Permittee is authorized to discharge non-thermal backwash water through **Outfall Serial Number 002**, which flows back through the intake structure and out to the intake embayment (Cape Cod Bay). Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency [2]	Sample Type
Flow [3]	MGD	---	28	Total Daily	Estimate
Discharge Frequency[4]	count	---	1	1/Week	Count
Discharge Duration	hours	---	Report	1/Backwash	Duration
pH[5]	S.U.	6.5 - 8.5		1/Backwash	Grab

a. Chlorination of the cooling water system shall not be conducted during any backwash procedure.

Footnotes:

1. All samples shall be representative of the effluent that is discharged through Outfall 002, taken at a representative location at the fish sluiceway, between the point of discharge from the intake screens and the discharge to the intake embayment. A routine sampling program shall be developed in which samples are taken at the same location each month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable DMR submitted to EPA. Samples for pH shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

2. Sampling frequency of 1/week is defined as the sampling of one (1) discharge event during each calendar week, when discharge occurs. For those months when there are no discharges, the Permittee must report a NODI Code on the DMR. A list of NODI codes are found in Attachment E of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, available at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

3. The maximum daily flow of all backwashes shall be recorded and reported on the DMR.

4. The frequency of backwashes shall be limited to one per week except to respond to infrequent, abnormal events where backwashing is necessary to avoid severe property damage. Severe property damage means substantial physical damage to property or to cooling water intake-related equipment that causes it to become inoperable. If the frequency of backwashing exceeds once per week, the Permittee shall report the duration of each event and describe the conditions that resulted in a backwashing frequency exceeding once per week. The report shall be attached to the DMR for the reporting period in which more frequent backwashing occurred.

5. The pH of the effluent shall be in the range of 6.5 to 8.5 standard units (S.U.) and not more than 0.2 S.U. outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample measurement values for the month shall be reported in S.U.

3. The Permittee is authorized to discharge non-contact cooling water from the Salt Service Water (SSW) system, classified as low volume waste, through **Outfall Serial Number 010** to the discharge canal, which flows to Cape Cod Bay. Such discharge shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency[2]	Sample Type
Flow	MGD	15.6	19.4	Continuous [3]	Estimate
Intake Velocity[4]	fps	Report	0.5	1/Month	Calculation
Total Suspended Solids (TSS)	mg/L	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/L	15	20	1/Month	Grab
Temperature, Effluent	°F	80	90	Continuous [3]	Recorder
Temperature Rise (delta T) [5]	°F	---	10	Continuous [3]	Recorder
pH [6]	S.U.	6.5 – 8.5		1/Month	Grab
Total Residual Oxidants (TRO) [7]	mg/L	0.5	1.0	2/Day	Grab

Footnotes:

1. All samples shall be representative of the effluent that is discharged through Outfall 010, taken at a representative location of the discharge exiting from the heat exchangers and prior to mixing with any other flows. A routine sampling program shall be developed in which samples are taken at the same location each month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable DMR submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

2. Sampling frequency of 1/month is defined as the sampling of one (1) discharge event during each calendar month, when discharge occurs. For those months when there are no discharges, the Permittee must report a No Data Indicator (NODI) Code (e.g., "C" for "No Discharge") on the DMR. In Attachment E of *NPDES Permit Program Instructions for the DMRs*, a list of NODI codes are included at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

3. Continuous monitoring shall be defined as monitoring at a minimum of fifteen (15) minute intervals during discharge. The results shall be recorded with the time and date on a chart and shall be made readily available upon request by EPA or MassDEP. If continuous monitoring equipment at the outfall is unavailable, a minimum of four (4) manual grab samples taken at least fifteen (15) minute apart each day is acceptable in lieu of continuous monitoring data. The Permittee shall provide an explanation of why continuous monitoring was not available and when continuous monitoring would be expected to be resumed. The flow rate shall be estimated from pump capacity curves and operational hours.

4. The intake velocity shall be monitored at the traveling screens at a minimum frequency of daily when only operating the salt service water pumps or may be calculated using water flow, depth, and the percent open screen area at the maximum salt service water pump flow rate for the reporting period. The maximum daily intake velocity is the maximum instantaneous velocity that is measured or calculated. Also see Part I.C.1.

5. The temperature rise, or delta T, is defined as the difference between the discharge temperature and the intake temperature.

6. The pH of this discharge shall be in the range of 6.5 to 8.5 standard units (S.U.) and not more than 0.2 S.U. outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample measurement values for the month shall be reported in S.U.

7. These limits are based on the marine water quality criteria for TRC. The minimum level (ML) for TRC is defined as 20 ug/l. This value is the minimum level for chlorine using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G. One of these methods must be used to determine total residual chlorine,

which can be reported as the TRO value on the DMR. Compliance with the TRC limits shall be measured at the ML of detection for the test method used. In order to establish less stringent TRC limits, the Permittee shall demonstrate to EPA and the MassDEP that the discharge of higher levels of TRC are required for macroinvertebrate control and shall include any dilution estimates based on an acceptable dilution model of Cape Cod Bay in the vicinity of the discharge. Only chlorine may be used as a biocide. Sampling shall be conducted only during periods of chlorination at the Facility, when chlorine is expected to be present in the discharge. No other biocide shall be used without explicit approval from the Regional Administrator (RA) of Region I of the EPA and the Commissioner of the MassDEP or their designees. The Permittee shall use a sufficiently sensitive test procedures (method) for TRC consistent with Part I.A.13 below.

4. The Permittee is authorized to discharge intake screenwash water through **Outfall Serial Numbers 012** to Cape Cod Bay via the fish sluiceway which discharges directly to the discharge canal. Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency [2]	Sample Type
Flow Rate [3]	MGD	4.1	4.1	Daily	Estimate
pH [4]	S.U.	6.5 – 8.5		1/Month	Grab
Total Residual Oxidants (TRO)	mg/L	Report	Report	1/Month	Grab

a. All water used for screenwash operations, with the exception of Station Fire water used during emergency conditions, shall be dechlorinated before being sprayed on the traveling screens and shall not have been used for any cooling purposes at the facility.

b. All live fish, shellfish, and other aquatic organisms that collected or are trapped on the screens or the intake bays shall be returned to the receiving water with minimal stress and at a sufficient distance from the intake so as to prevent reimpingement. All other material, except natural debris (e.g. leaves, seaweed, and algae), shall be removed from the intake screens and recycled or disposed of in accordance with all existing Federal, State, and/or Local laws and regulations that apply to waste disposal. Any such material shall not be returned to the receiving water.

Footnotes:

1. All samples shall be representative of the effluent that is discharged through Outfall 012, taken at a representative location at the fish sluiceway, between the point of discharge from the intake screens and the discharge to the discharge canal. A routine sampling program shall be developed in which samples are taken at the same location each month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

2. Sampling frequency of 1/month is defined as the sampling of one (1) discharge event during each calendar month, when discharge occurs. For those months when there are no discharges, the Permittee must report a NODI Code (e.g., "C" for "No Discharge") on the DMR. A list of NODI codes are found in Attachment E of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, available at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

3. The screenwash water shall consist of up to 3.2 MGD of Cape Cod Bay marine water and up to 0.90 MGD of potable freshwater normally used as Station Fire water. This water shall be used only under emergency conditions [as authorized by the U.S. Nuclear Regulatory Commission (NRC)] when traveling screen operation is impeded by the accumulation of algae or other biological material.

4. The pH of this discharge shall be in the range of 6.5 to 8.5 standard units (S.U.) and not more than 0.2 S.U. outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample measurement values for the month shall be reported in S.U.

5. The Permittee is authorized to discharge stormwater through **Outfall Serial Numbers 004 and 005*** to the discharge canal to Cape Cod Bay. **Stormwater pumped out from electrical vaults may also be discharged to these stormwater outfalls**. **(See separate monitoring requirements for electrical vault discharges in Part I.A.7 below**) Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency[2]	Sample Type[3]
Flow Rate	MGD	---	Report	1/Month	Estimate
Total Suspended Solids (TSS)	mg/L	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/L	---	Non-detect[4]	1/Month	Grab
pH[5]	S.U.	6.0 – 8.5		1/Month	Grab

* Outfall 005 also discharges a portion of the flows from Internal Outfall 011 (Part I.C.3 of this permit). Discharges from the heating boiler blowdown via a floor drain to Outfall 005 are prohibited, except in an emergency situation. This discharge has occurred two times from 1998 to 2013. If this discharge occurs, it shall be sampled and be subject to the monitoring conditions and effluent limitations for the stormwater discharges shown above.

Footnotes:

1. All samples shall be representative of the effluent that is discharged through each outfall and taken at a representative location at the point of discharge from the outfall to the discharge to the discharge canal. If an outfall is inaccessible or submerged, the Permittee shall proceed to the first accessible upstream manhole or structure for the observation and sampling and report the location with its analytical results. A routine sampling program shall be developed in which samples are taken at the same location each month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable DMR submitted to EPA. All samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

2. Sampling frequency of 1/month is defined as the sampling of one (1) discharge event during each calendar month, when discharge occurs. For those months when there are no discharges, the Permittee must report a NODI Code on the DMR. A list of NODI codes are found in Attachment E of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, available at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

3. Stormwater samples shall be taken during the first flush of wet weather, defined as during the first hour of a storm event greater than 0.1 inches in magnitude and which occurs at least twenty four (24) hours from the previously measurable (greater than 0.1inch rainfall) storm event. If sampling within the first hour of a storm event is not feasible, the Permittee shall sample as soon as is practicable after the start of a storm which meets this definition and provide a brief explanation on the DMR or cover letter for that month as to why a first flush sample was not taken. For example, the Permittee may cite an unsafe condition (e.g. icing, high wind) as the reason why first flush sampling was not conducted. Flow for these stormwater outfalls shall be estimated for those storm events associated with the monthly sampling events.

4. For Outfalls 004 and 005, there shall be no detectable discharge of oil and grease (O&G). The Permittee shall use EPA Method 1664A for O&G analysis. Compliance with the non-detect limit for Outfalls 004 and 005 shall be measured at the minimum level (ML) of detection for the EPA approved test methods. The ML for O&G is 5 mg/l using EPA Method 1664A, where the ML is the lowest point on the curve used to calibrate the test equipment for the pollutant of concern. If EPA approves a method under 40 CFR Part 136 for O&G that has a ML lower than 5 mg/l, the Permittee shall be required to use the improved method. If EPA approves a method under 40 CFR Part 136 for O&G that has a ML lower than 5 mg/l, the Permittee shall be required to use the improved method.

5. The pH of this discharge shall be in the range of 6.0 to 8.5 standard units (S.U.) and no more than 0.2 S.U. outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample values for the month shall be reported in S.U.

6. The Permittee is authorized to discharge stormwater through **Outfall Serial Numbers 006, 007, and 013** to the intake embayment, which flows to Cape Cod Bay. Discharges to Outfall 006 may include municipal water from the fire water storage tanks. **Stormwater pumped out from electrical vaults may also be discharged to these stormwater outfalls**. **(See separate monitoring requirements for electrical vault discharges in Part I.A.7 below**) Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency[2]	Sample Type[3]
Flow Rate	MGD	---	Report	1/Month	Estimate
Total Suspended Solids (TSS)	mg/L	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/L	---	Non-detect[4]	1/Month	Grab
pH[5]	S.U.	6.0 – 8.5		1/Month	Grab

Footnotes:

1. All samples shall be representative of the effluent that is discharged through each outfall and taken at a representative location at the point of discharge from the outfall to the discharge to the intake embayment. If an outfall is inaccessible or submerged, the Permittee shall proceed to the first accessible upstream manhole or structure for the observation and sampling and report the location with its analytical results. A routine sampling program shall be developed in which samples are taken at the same day, time, and location each month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. Sampling for Outfall 013 is not required.

2. Sampling frequency of 1/month is defined as the sampling of one (1) discharge event during each calendar month, when discharge occurs. For those months when there are no discharges, the Permittee must report a NODI Code on the DMR. A list of NODI codes are found in Attachment E of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, available at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

3. Stormwater samples shall be taken during the first flush of wet weather, defined as during the first hour of a storm event greater than 0.1 inches in magnitude and which occurs at least twenty four (24) hours from the previously measurable (greater than 0.1inch rainfall) storm event. If sampling within the first hour of a storm event is not feasible, the Permittee shall sample as soon as is practicable after the start of a storm which meets this definition and provide a brief explanation on the DMR or cover letter for that month as to why a first flush sample was not taken. For example, the Permittee may cite an unsafe condition (e.g. icing, high wind) as the reason why first flush sampling was not conducted. Flow for these stormwater outfalls shall be estimated for those storm events associated with the monthly sampling events.

4. For Outfalls 006 and 007, there shall be no detectable discharge of oil and grease (O&G). The Permittee shall use EPA Method 1664A for O&G analysis. Compliance with the non-detect limit for Outfalls 006 and 007 shall be measured at the minimum level (ML) of detection for the EPA approved test methods. The ML for O&G is 5 mg/l using EPA Method 1664A, where the ML is the lowest point on the curve used to calibrate the test equipment for the pollutant of concern. If EPA approves a method under 40 CFR Part 136 for O&G that has a ML lower than 5 mg/l, the Permittee shall be required to use the improved method.

5. The pH of this discharge shall be in the range of 6.0 to 8.5 standard units and no more than 0.2 standard units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample values for the month shall be reported in S.U.

7. The Permittee is authorized to discharge stormwater from electrical vaults (manholes) through internal **Outfall Serial Numbers 004A (manhole MH-4[1]), 004B (manhole MH-2[1]), 005A (CP-4[1]), and 005B (MH-27A[1])** to the discharge canal to Cape Cod Bay **and through internal Outfall Serial Numbers 007A (MH-L[1])** to the intake embayment, which flows out to Cape Cod Bay. Such discharges shall consist of stormwater runoff only and shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [2]	
		Average Monthly	Maximum Daily	Measurement Frequency [3]	Sample Type [4]
Total Suspended Solids (TSS)	mg/L	---	Report	1/Quarter	Grab
Total Phenols	ug/l	---	Report	1/Quarter	Grab
Total Polychlorinated Biphenyls (PCBs) [4]	ug/l	---	Report	1/Quarter	Grab
Total Phthalates	ug/l	---	Report	1/Quarter	Grab
Total Antimony	ug/l	---	Report	1/Quarter	Grab
Total Cadmium	ug/l	---	Report	1/Quarter	Grab
Cyanide, Free	ug/l	---	Report	1/Quarter	Grab
Chromium VI	ug/l	---	Report	1/Quarter	Grab
Total Copper [5]	ug/l	---	Report	1/Quarter	Grab
Total Iron	ug/l	---	Report	1/Quarter	Grab
Total Lead [5]	ug/l	---	Report	1/Quarter	Grab
Total Nickel	ug/l	---	Report	1/Quarter	Grab

Total Zinc	ug/l	---	Report	1/Quarter	Grab
pH [6]	S.U.	Report		1/Quarter	Grab

Footnotes:

1. Manhole designations are provided by the Permittee in the June 30, 2015 CWA Section 308(a) information request letter submittal to EPA. **The Permittee is also authorized to discharge stormwater from twenty (20) other electrical vaults through one of the existing stormwater outfalls, designated as Outfalls 004 through 007. The routine monitoring requirements apply to the five named electrical vaults listed above. Discharges from all 25 electrical vaults are subject to Parts I.A.10 through Part I.A.18 and Part I.D of this Permit. The designations of the additional 20 electrical vaults are as follows: MH-5, MH-2A, MH-3, MH-1, MH-J, MH-Q, MH-K, CP-1, MH-27B, MH-20, MH-19, MH-26A, MH-26B, MH-28A, CP-6, MH-6A, CP-5, CP-2B, CP-2, and CP-3.**

2. Sampling shall be representative of the water that has collected in each electrical vault and prior to being pumped out and discharged to a permitted outfall. Sampling may be conducted in wet or dry weather and does not need to be at a time when the vault contents are being discharged to a stormwater outfall. Sampling locations in these five (5) vaults are considered internal outfalls to eventual discharge points, which are Outfalls 004, 005, and 007. The Permittee shall note the total precipitation and snowmelt over the forty-eight (48) hours prior to sampling. If there is any visible sheen present, the Permittee shall pump out the vault water and dispose of it off-site. A routine sampling program shall be developed in which samples are taken at the same day, time, and location each quarter. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable DMR submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

3. Sampling frequency of 1/quarter is defined as the sampling of one (1) discharge event during each calendar quarter, when discharge occurs. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. The Permittee shall conduct sampling of electrical vault water during the first month of the calendar quarter. If the vault is dry, the sampling shall be attempted during the following two (2) months of the quarter until a sample is obtained. For those months when there are no discharges, the Permittee must report a NODI Code on the DMR. A list of NODI codes are found in Attachment E of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, available at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

4. The minimum level (ML) for analysis for total PCBs shall be no greater than 0.022 µg/L. The ML is not the minimum level of detection, but rather the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for an analyte, representative of the lowest concentration at which an analyte can be measured with a known level of confidence. Provide the results of PCB

analyses as the sum of all Aroclors. Sampling results less than the detection limit shall be reported as "≤ [detection limit]" on the DMR.

5. The minimum levels (ML) for copper and lead are defined as 3 ug/l and 0.5 ug/l, respectively. These values are the MLs for copper and lead using the Furnace Atomic Absorption analytical method (EPA Method 220.2). This method or another EPA-approved method with an equivalent or lower ML shall be used. Sampling results less than the detection limit shall be reported as "≤ [detection limit]" on the DMR.

6. The pH of this discharge shall be no more than 0.2 standard units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample values for the month shall be reported in S.U.

8. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge station heating system water, cooling water from heat exchangers of the Turbine Building Closed Cooling Water (TBCCW) system and Reactor Building Closed Cooling Water (RBCCW) system, drainage from the floor drains in the boiler room (station heating water), SSW system chlorinated salt water from various sumps in the Turbine and Reactor buildings, and reject water from the demineralizer system * through **Internal Outfall Serial Number 011** which is directed through the drain line associated with Outfall 005 and discharged to the discharge canal and ultimately to Cape Cod Bay. Such discharges shall be limited and monitored by the Permittee as specified below: (* purified city water which does not meet the requirements of condenser makeup water)

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency [2]	Sample Type
Flow	MGD	0.015	0.06	Continuous, when in use [3]	Estimate
Total Suspended Solids (TSS)	mg/L	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/L	15	20	1/Month	Grab
pH[4]	S.U.	6.1 – 8.4		1/Month	Grab
Effluent Boron[5]	mg/L	Report	5.6	1/Month	Calculated
Boron[5], Ambient	mg/L	Report	Report	1/Month	Grab

See pages 22 and 23 for explanation of footnotes.

9. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge cooling water from heat exchangers of the Turbine Building Closed Cooling Water (TBCCW) system and Reactor Building Closed Cooling Water (RBCCW) system, SSW system chlorinated salt water from various sumps in the Turbine and Reactor buildings, and reject water from the emergency standby liquid control system* through **Outfall Serial Number 014** to the discharge canal and ultimately to Cape Cod Bay. Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements [1]	
		Average Monthly	Maximum Daily	Measurement Frequency [2]	Sample Type
Flow	MGD	0.015	0.06	Continuous, when in use [3]	Estimate
Total Suspended Solids (TSS)	mg/L	30	100	1/Quarter, when discharging	Grab
Oil and Grease (O&G)	mg/L	15	20	1/Quarter, when discharging	Grab
pH[4]	S.U.	6.1 – 8.4		1/Quarter, when discharging	Grab
Effluent Boron[5]	mg/L	Report	5.6	1/Quarter, when discharging	Calculated
Boron[5], Ambient	mg/L	Report	Report	1/Quarter, when discharging	Grab

* boronated water from the demineralizer which does not meet technical specifications

Footnotes:

1. All samples shall be representative of the effluent that is discharged through internal Outfalls 011, taken at a representative location of the discharge, prior to mixing with any other flows including flow through Outfall 005. A routine sampling program shall be developed in which samples are taken at the same location each month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable DMR submitted to EPA. All samples shall be analyzed using the analytical methods found in 40 CFR § 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR § 136. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

2. Sampling frequency of 1/month is defined as the sampling of one (1) discharge event during each calendar month, when discharge occurs. If no discharge occurs during the monitoring period, the Permittee shall indicate this on the Discharge Monitoring Report (DMR). For Outfall 014, quarterly sampling shall be conducted when discharge occurs. Such sampling shall be conducted during periods when the majority of the listed flows to this outfall are being discharged. For those months when there are no discharges, the Permittee must report a NODI Code (e.g., "C" for "No Discharge") on the DMR. A list of NODI codes are found in Attachment E of *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, available at https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary. The results of sampling for any parameter above its required frequency must also be reported.

3. Continuous monitoring shall be defined as monitoring at a minimum of fifteen (15) minute intervals during discharge. The results shall be recorded with the time and date on a chart and shall be made readily available upon request by USEPA or MassDEP. If continuous monitoring at the outfall is unavailable, a minimum of four (4) manual grab samples taken at a minimum fifteen (15) minute intervals each day is acceptable in lieu of continuous monitoring data.

4. The pH of this discharge shall be in the range of 6.1 to 8.4 standard units and not more than 0.2 standard units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class. The minimum and maximum pH sample values for the month shall be reported in S.U.

5. Each release of boron will be reported in that month's DMR and the Permittee shall provide the concentration of boron in the tank before release, and the calculated boron concentration in the discharge canal before mixing with Cape Cod Bay water. Sodium pentaborate may be discharged in 20,000-gallon batches at a maximum concentration of 16,500 mg/l calculated as boron. The boron concentration shall not exceed 1.0 mg/l above background, by calculation, in the discharge from the discharge canal. Each sodium pentaborate release shall be conducted at a rate and with adequate dilution to assure that this concentration is not exceeded in the discharge canal at any time. To calculate the estimated concentration of boron in the discharge canal, the Permittee shall divide the concentration of boron in this internal batch discharge by the dilution factor derived by dividing the flow rate of the cooling water flow being used from the combination of CW and SW pumps that are operating at the time of the batch discharge by the flow rate of this batch discharge. This estimate shall meet the limit of 1.0 mg/l above background of boron. These discharges may be made directly to the discharge canal. In order to confirm that the background concentration of boron is approximately 4.6 mg/l, the Permittee shall sample the ambient water at the intake for boron once per month for Outfall 011 and once per quarter for Outfall 014 during the same day that the batch discharge of boron occurs.

Part I.A. (continued)

10. The effluents shall not cause objectionable discoloration of the receiving waters.

11. The effluents shall not cause a violation of the water quality standards of the receiving waters.

12. The effluents shall be free from visible oil sheens or floating, suspended, and settleable solids in concentrations or combinations that would impair any use assigned to the receiving water, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

13. In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the Permittee shall use sufficiently sensitive test procedures (*i.e.*, methods) approved under 40 C.F.R. § 136 or required under 40 C.F.R. Chapter I, Subchapter N or O, for the analysis of pollutants or pollutant parameters limited in this permit (except WET limits). A method is considered "sufficiently sensitive" when either (*1*) The method minimum level (ML) is at or below the level of the effluent limit established in this permit for the measured pollutant or pollutant parameter; or (*2*) The method has the lowest ML of the analytical methods approved under 40 C.F.R. § 136 or required under 40 C.F.R. Chapter I, Subchapter N or O for the measured pollutant or the pollutant parameter. The ML is not the minimum level of detection, but rather the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for an analyte, representative of the lowest concentration at which an analyte can be measured with a known level of confidence.

14. Toxics Control

    a. The Permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

    b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

15. Numerical Effluent Limitations for Toxicants

    EPA or MassDEP may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), 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 C.F.R. Part 122.

16. EPA may modify this permit in accordance with EPA regulations in 40 C.F.R. §§ 122.62 and 122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.

17. All existing manufacturing, commercial, mining and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

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

        i. One hundred micrograms per liter (100 µg/l);

        ii. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

        iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. § 122.21(g)(7); or

        iv. Any other notification level established by the Director in accordance with 40 C.F.R. § 122.44(f).

    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":

        i. Five hundred micrograms per liter (500 µg/l);

        ii. One milligram per liter (1 mg/l) for antimony;

        iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. § 122.21(g)(7);

        iv. Any other notification level established by the Director in accordance with 40 C.F.R. § 122.44(f).

    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.

18. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

19. Any thermal plume in the receiving water resulting from the discharges from the Facility shall not block or severely restrict fish passage, nor interfere with the spawning of indigenous populations of fish in the receiving water, nor change the balanced indigenous population of the receiving water, and shall have minimal contact with the surrounding shoreline.

20. Unusual Impingement Event (UIE)

During the period beginning on the effective date of the permit, the Permittee shall visually inspect the traveling screens once every 24 hours. The Permittee shall report all "unusual impingement events" at the Facility. An "unusual impingement event" (UIE) at PNPS is defined as the impingement of 250 or more total fish of all species impinged in a single 12-hour period or impingement of more than 1,000 fish during a single event. Upon the occurrence of a UIE, the Permittee shall continuously rotate the traveling screens until the impingement rate decreases to less than 5 fish per hour.

UIEs must be reported to EPA and MassDEP by telephone no later than twelve (12) hours after the Permittee is aware of or has reason to believe an UIE has occurred (See Part I.G.6). A written confirmation report is to be provided within five (5) business days. The MassDEP and EPA addresses to be used are found in Parts I.G.4 and 5 of this permit. The written reports shall include the following information:

a. All fish shall be enumerated and recorded by species. Report the species, size ranges (maximum and minimum length), and approximate number of organisms involved in the UIE. In addition, a representative sample of 25% of fish specimens from each species, up to a maximum of 50 total fish specimens, shall be measured to the nearest centimeter total length.

b. The date and time of occurrence.

c. The determination or opinion of the Permittee as to the reason the incident occurred.

21. All live fish, shellfish, and other aquatic organisms collected or trapped on the screens or in the intake bays shall be returned to the receiving water with minimal stress and at a sufficient distance from the intake so as to minimize re-impingement. All other material, except natural debris (e.g. leaves, seaweed and twigs), shall be removed from the intake screens and recycled or disposed of in accordance with all existing Federal, State, and/or Local laws and regulations that apply to waste disposal. Such material shall not be returned to the receiving water.

22. Sand Removal from CWIS

The Permittee may remove accumulated sand from the concrete surfaces of the CWIS as necessary to assure that the operation of the traveling screens is not compromised. Such sand shall be disposed of in accordance with local and state regulations or ordinances. Each sand removal occurrence shall be reported as an attachment to that month’s DMR.

23. Radioactive materials

    The discharge of radioactive materials shall be in accordance with and regulated by the Nuclear Regulatory Commission (NRC) requirements (10 C.F.R. Part 20 and NRC Technical Specifications set forth in facility operating license, DPR-35).

24. Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

B. UNAUTHORIZED DISCHARGES

1. The Permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Parts I.A. through I.C. of this permit. Discharges of wastewater from any other point sources not authorized by this permit shall be reported in accordance with the twenty-four-hour reporting provision found in Section D.1.e.(1) of Part II (Standard Conditions) of this permit. The Permittee must report any planned physical alterations or additions to the permitted facility in accordance with the reporting provision found in Section D.1.a of Part II (Standard Conditions) and give advance written notice (including notice to MassDEP) of any planned changes which may result in noncompliance with permit requirements in accordance with the reporting provision found in Section D.1.b of Part II (Standard Conditions).

2. The discharge of pollutants in spent fuel pool water (including, but not limited to, boron) is not authorized by this permit.

3. The discharge of pollutants in stormwater associated with construction activity, including activities, physical alterations, or additions associated with the dismantlement and demolition of plant systems, structures, and buildings is not authorized by this permit.

4. Discharges of pollutants associated with contaminated site dewatering, pipeline and tank dewatering, collection structure dewatering, or dredge-related dewatering, and including but not limited to physical alterations or additions resulting in the discharge of pollutants associated with the dismantlement and decontamination of plant systems and structures and/or the demolition of buildings are not authorized by this permit.

C. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS TO MINIMIZE ADVERSE IMPACTS FROM IMPINGEMENT AND ENTRAINMENT

Section 316(b) of the CWA, 33 U.S.C. § 1326(b), dictates that this permit must require that the cooling water intake structure's (CWIS) design, location, construction, and capacity reflect the best technology available for minimizing adverse environmental impact (BTA), including the CWIS's entrainment and impingement of various life stages of aquatic organisms (e.g., eggs, larvae, juveniles, and adults).

PNPS has ceased electricity generating operations and entered its shutdown phase as of June 1, 2019. The BTA requirements in this permit reflect operation of the CWIS as of June 1, 2019. The Permittee may continue to operate the CWIS subject to the following conditions:

1. Operate the traveling screens with a maximum through-screen intake velocity no greater than 0.5 feet per second. Exceedances of the maximum through-screen velocity when a circulating water pump is operating shall not exceed 48 hours in a single calendar month.

2. Monitor the through-screen velocity at the screen at a minimum frequency of daily. Alternatively, the Permittee shall calculate the daily maximum through-screen velocity using water flow, depth, and screen open area. For this purpose, the maximum intake velocity shall be calculated during minimum ambient source water surface elevations and periods of maximum head loss across the screens. The average monthly and maximum daily through-screen intake velocity shall be reported each month on the DMR. See Part I.A.3. of this permit.

3. Cooling water withdrawals at the salt service water pumps shall be limited to a maximum daily flow of 19.4 MGD.

4. Operation of a single circulating water pump at a maximum daily flow of 224 MGD shall not exceed 48 hours over a single calendar month. Operation of either circulating water pump may exceed 48 hours in a single calendar month only to support the withdrawal of fire suppression water.

5. Continuously rotate the traveling screens when operating a circulating water pump.

6. The Permittee shall conduct impingement monitoring once per month when operating a circulating water pump. The Permittee shall conduct monitoring as described in Attachment B and submit an annual biological monitoring report no later than May 15th of the following year as an attachment to the April Discharge Monitoring Report. The Permittee may request a reduction in frequency or elimination of impingement monitoring after a minimum of two years of monthly monitoring. The Permittee is required to monitor at the frequency specified in the permit until written notice is received by certified mail from EPA that the frequency has changed.

7. Any change in the location, design, or capacity of any CWIS, except as expressed in the above requirements, must be approved in advance and in writing by the EPA and MassDEP.

D. SPECIAL CONDITIONS

1. Best Management Practices

The Permittee shall design, install, and implement control measures, including best management practices (BMPs), to minimize pollutant discharges from stormwater associated with industrial activity at the Facility to the receiving water. At a minimum, the Permittee must implement control measures, both structural and non-structural, consistent with those described in Part 2.1 and any Sector specific

control measures in Part 8 of EPA's MSGP. (The current MSGP was effective June 4, 2015 – see https://www.epa.gov/npdes/final-2015-msgp-documents). Specifically, control measures, including BMPs must be selected and implemented in compliance with the non-numeric technology-based effluent limitations found in Parts 2.1.2 and 8.O.4 of the 2015 MSGP:

a. Minimize exposure of processing and material storage areas to stormwater discharges;
b. Good housekeeping measures designed to maintain areas that are potential sources of pollutants;
c. Preventative maintenance programs to avoid leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters;
d. Spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur;
e. Erosion and sediment controls designed to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants;
f. Runoff management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff;
g. Proper handling procedures for salt or materials containing chlorides that are used for snow and ice control;
h. Employee training to ensure personnel understand the requirements of this permit
i. Minimize dust generation and vehicle tracking of industrial materials; and
j. Sector specific non-numeric technology-based effluent limitations included in Sector O (Steam Electric Generating Facilities) of the 2015 MSGP.

2. Stormwater Pollution Prevention Plan (SWPPP)

The Permittee shall develop a Stormwater Pollution Prevention Plan (SWPPP) to document the selection, design and installation of control measures, including BMPs designed to meet the non-numeric technology-based effluent limitations required in Part I.C.1 and consistent with Parts 2.1.2, and 8.O.4 of the 2015 MSGP, to minimize the discharge of pollutants from the Permittee's operations to the receiving water. The SWPPP shall be a written document and consistent with the terms of this Permit.

a. The SWPPP shall be developed and certified by the Permittee within one hundred and eighty days (180) days after the effective date of this permit. The Permittee shall certify that its SWPPP has been completed and signed in accordance with the requirements identified in 40 C.F.R. §122.22. A copy of this certification shall be sent to EPA and MassDEP within thirty (30) days after the certification date.

b. The SWPPP shall be consistent with the general provisions for SWPPPs included in Part 5 of EPA's 2015 MSGP. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the stormwater discharges, and document the implementation of non-numeric technology based effluent limitations described in Part I.D.1 that will be used to reduce the

pollutants and assure compliance with this Permit. The Permittee shall incorporate into the SWPPP all the elements listed in Parts 5.2.1 through 5.2.5 and the sector-specific elements listed at Part 8.O.5 of the 2015 MSGP. Specifically, the SWPPP shall document the selection, design, and installation of control measures and contain the elements listed below:

i. A pollution prevention team with collective and individual responsibilities for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.

ii. A site description which includes the activities at the facility; a general location map showing the facility, receiving waters, and outfall locations; and a site map showing the extent of significant structures and impervious surfaces, directions of stormwater flows, and locations of all existing structural control measures, stormwater conveyances, pollutant sources, stormwater monitoring points, stormwater inlets and outlets, **electrical vaults which collect stormwater**, and industrial activities exposed to precipitation such as those associated with materials storage, disposal, and material handling.

iii. A summary of all pollutant sources, including a list of activities exposed to stormwater, the pollutants associated with these activities, a description of where spills have occurred or could occur, a description of non-stormwater discharges, and a summary of any existing stormwater discharge sampling data.

iv. A description of structural and non-structural stormwater controls.

v. A schedule and procedure for implementation and maintenance of the control measures described above and for the quarterly inspections and best management practices (BMPs) described below.

vi. Sector specific SWPPP provisions included in Sector O (Steam Electric Generating Facilities) of the MSGP.

c. All areas with industrial materials or activities exposed to stormwater, all structural controls used to comply with effluent limits in this permit, and all discharge points shall be inspected, at least once per quarter, **including all electrical vaults that accumulate stormwater that is then discharged via one of the four authorized stormwater outfalls**, by qualified personnel with one or more members of the stormwater pollution prevention team. If discharge locations are inaccessible, nearby downstream locations must be inspected. Inspections shall be consistent with the conditions in Part 3.1 of the 2015 MSGP. Inspections shall begin during the 1st full calendar month after the effective date of this permit. The Permittee must examine the following during an inspection:

i. Industrial materials, residue, or trash that may have or could come into contact with stormwater;

ii. Leaks or spills from industrial equipment, drums, tanks, or other containers;

iii. Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;

iv. Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;

v. Control measures needing replacement, maintenance, or repair.

d. Once per quarter, a sample of stormwater discharged from Outfalls 004, 005, 006 and 007 shall be collected and visually assessed. Samples shall be collected within the first sixty (60) minutes of discharge from a storm event, stored in a clean, clear glass or plastic container, and examined in a well-lit area for the following water quality characteristics: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of pollution. The Permittee shall document the following information for each inspection and maintain the records along with the SWPPP:

i. The date and time of the inspection and at which any samples were collected;

ii. The name(s) and signature(s) of the inspector(s)/sample collector(s);

iii. If applicable, why it was not possible to take samples within the first 60 minutes;

iv. Weather information and a description of any discharges occurring at the time of the inspection;

v. Results of observations of stormwater discharges, including any observed discharges of pollutants and the probable sources of those pollutants;

vi. Any control measures needing maintenance, repairs or replacement; and,

vii. Any additional control measures needed to comply with the permit requirements.

e. The Permittee shall amend and update the SWPPP within thirty (30) days of any changes at the facility that result in a significant effect on the potential for the discharge of pollutants to the waters of the United States. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 C.F.R. § 302; or a determination by the Permittee or EPA that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with industrial activity. **The Permittee shall specifically address changes to the site associated with planned decommissioning activities and design and implement additional BMPs as**

necessary to account for changes in stormwater drainage patterns, new or additional potential pollutants, and demolition and construction activities which are not subject to the EPA's Construction General Permit. Any amended, modified, or new version of the SWPPP shall be re-certified and signed by the Permittee in accordance with the requirements identified in 40 C.F.R. §122.22.

f. The Permittee shall also certify, at least annually, that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with this permit. If the facility is not in compliance with any BMPs and/or activities described in the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 C.F.R. §122.22 and Part II.D.2 of this Permit. The Permittee shall maintain at the facility a copy of its current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit and shall make these available for inspection by EPA and MassDEP. All documentation of SWPPP activities shall be kept at the Facility for at least five years and provided to EPA or MassDEP upon request. In addition, the Permittee shall document in the SWPPP any violation of numeric or non-numeric stormwater effluent limits with a date and description of any corrective actions taken.

E. REOPENER CLAUSE

1. This permit shall be modified, or alternately, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

    a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

    b. Controls any pollutants not limited in the permit.

F. ELECTRICAL VAULT SAMPLING

The Permittee shall conduct a one-time sampling for all of the electrical vaults which were not sampled pursuant to EPA's March 24, 2015 CWA Section 308(a) letter. The Permittee shall reference Exhibit B of its "Response to USEPA's March 24, 2015 Request for Information" submittal, which listed the twenty-five (25) electrical vaults on the property as identified by the Permittee. Since stormwater was sampled for seven (7) of these electrical vaults, this requirement shall apply for the remaining eighteen (18) electrical vaults. These samples shall be analyzed for the same parameters which were required by the 2015 308(a) letter which are listed in Permit Attachment C. The sampling results shall be submitted within 180 days of the effective date of the permit.

G. MONITORING AND REPORTING

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The Permittee is obligated to monitor and report sampling results to EPA and the MassDEP within the time specified within the permit. 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 and the Use of NetDMR:

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

2. Submittal of Reports as NetDMR Attachments

   Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. *See* Part I.D.5. for more information on State reporting. Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), 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) and MassDEP

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

   (1) Transfer of Permit notice;
   (2) Request for changes in sampling location;
   (3) Annual Biological Monitoring Reports
   (4) BMP reports and certifications, if required;
   (5) Request for Reduction in WET Testing Requirement;
   (6) Report on unacceptable dilution water/request for alternative dilution water for WET testing;
   (7) Change in location, design or capacity of cooling water intake structure; and
   (8) Request to discharge new chemicals or additives.

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

Submit hard copies of reports listed above to MassDEP at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
1 Winter St.
Boston, Massachusetts 02108

4. Submittal of Reports in Hard Copy Form

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

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

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

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

5. State Reporting

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

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

6. Verbal Reports and Verbal Notifications

   a. Any verbal reports or verbal notifications, 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 Enforcement and Compliance Assurance Division at:

617-918-1510

H. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 CMR 3.00. The state authorization includes all of Part I, Attachment A, Attachment B, and Attachment C. In addition, the standard conditions contained in 314 CMR 3.19 are hereby incorporated by reference into this state surface water discharge permit. These standard conditions include, but are not limited to, 314 CMR 3.19(20)(e):

> The permittee shall report any non-compliance which may endanger public health or the environment. Any information shall be provided orally to the appropriate DEP office within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the non-compliance, including exact dates and times, and if the non-compliance 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 non-compliance. The following shall be included as information which must be reported within 24 hours:
>
> 1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
> 2. Violation of the maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

2. This authorization also incorporates the state water quality certification issued by MassDEP under §401(a) of the Federal Clean Water Act, 40 C.F.R. §124.53, M.G.L. c. 21, §27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

3. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

4. For each year of the permit term, the permittee shall notify MassDEP when the Annual Radioactive Effluent Release Report and the Annual Radiological Environmental Operating Report submitted to the Nuclear Regulatory Commission are available, and the website at which the reports are available. If the one or both of the reports are not made available on a website, then the permittee shall also transmit to MassDEP electronic copies of the Reports with the notification. Notification shall be sent to: David Johnston, MassDEP Southeast Regional Office, david.johnston@mass.gov and Cathy Vakalopoulos, MassDEP Surface Water Discharge Permitting Program, catherine.vakalopoulos@mass.gov, or other contact as identified.

5. The permittee shall provide a copy to MassDEP of the reports it must provide to the Nuclear Regulatory Commission regarding events described in sections 3.2.2 (p.3/4-13), 3.2.3 (p.3/4-14), and 3.5.1 (p.3/4-24) of PNPS' Offsite Dose Calculation Manual, Revision 9 (2003) (NRC Adams Accession No. ML041400430). Reports shall be sent to David Johnston, MassDEP Southeast Regional Office, david.johnston@mass.gov and Cathy Vakalopoulos, MassDEP Surface Water Discharge Permitting Program, catherine.vakalopoulos@mass.gov, or other contact as identified, at the same time that they are submitted to the NRC.

6. Prior to making any physical alterations or additions to the facility that may result in discharges not specifically covered by this permit, including any discharges associated with activities encompassed by Part I.B (conditions 1 through 4), the Permittee shall provide written notice to MassDEP that includes, but is not limited to, a description of those activities and any potential associated discharges, potential volume of those discharges, and the pollutant profile of those discharges. MassDEP reserves the right to request additional information. Unless and until the permit is modified, any new or increased discharge in excess of permit limits or not specifically authorized by the state permit is prohibited.

ATTACHMENT A

MARINE ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

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

- **2007.0 - Mysid Shrimp (Americamysis bahia) definitive 48 hour test.**
- **2006.0 - Inland Silverside (Menidia beryllina) definitive 48 hour test.**

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

II. METHODS

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

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

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

III. SAMPLE COLLECTION

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

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

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

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1 mg/L chlorine. If dechlorination is necessary, a thiosulfate control consisting of the maximum concentration of thiosulfate used to dechlorinate the sample in the toxicity test control water must also be run in the WET test.

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

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

IV. DILUTION WATER

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

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

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

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

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

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

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

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

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

and

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

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

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

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

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

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

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

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

Footnotes:

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

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

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

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

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

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

Footnotes:

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

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

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

V.1. Test Acceptability Criteria

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

V.2. Use of Reference Toxicity Testing

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

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

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

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

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

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

VI. CHEMICAL ANALYSIS

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

Parameter	Effluent	Diluent	Minimum Level for effluent[*1] (mg/L)
pH	x	x	---
Salinity	x	x	ppt(o/oo)
Total Residual Chlorine [*2]	x	x	0.02
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005

Superscript:

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

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

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

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

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

Methods of Estimation:

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

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

No Observed Acute Effect Level (NOAEL)

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

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

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

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

In addition to the summary sheets the report must include:

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

PERMIT ATTACHMENT B
IMPINGEMENT MONITORING PROGRAM

The impingement monitoring program described in this attachment shall begin on the first day of the calendar month following the effective date of the permit.

Impingement monitoring shall be conducted once per month during a period in which a circulating water pump is operating. To the extent practicable, impingement monitoring shall consist of one eight-hour collection per month. In consecutive months, to the extent practicable, impingement monitoring shall represent morning, afternoon, and night (*e.g.*, morning in January, afternoon in February, and night in March). In the event that the sampling period is less than eight hours or three time periods are not monitored in each of three consecutive months, the Permittee shall provide an explanation in the Annual Biological Monitoring Report.

Impingement sampling shall be conducted using 1/4-inch or smaller stainless steel baskets placed in the screenwash return sluiceway. All fish will be immediately examined for initial condition (live, dead, or injured). All fish shall be identified to the lowest distinguishable taxonomic category, counted, and measured (to the nearest mm total length). In the event of a large impingement event of a school of equivalently sized forage fish, a subsample of 50 fish can be taken for length measurements.

For fish determined to be alive or injured at the time of collection, a representative sample of 25% of the total collection for each species (up to a maximum of 50 specimens per species) shall be placed in a holding tank supplied with continuously running ambient seawater. Latent survival shall be determined after 48 hours after which any live fish shall be safely returned to the subtidal waters of Cape Cod Bay.

Attachment C

Summary of Monitoring Parameters for Electrical Vault Sampling

	Parameter	**Minimum Level (ML) of detection** [1]
	1. Total Suspended Solids (TSS)	5 mg/L
	2. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L
	3. Cyanide (CN)	10 ug/L
	4. Benzene (B)	2 ug/L
	5. Toluene (T)	2 ug/L
	6. Ethylbenzene (E)	2 ug/L
	7. (m,p,o) Xylenes (X)	2 ug/L
	8. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [2]	2 ug/L
	9. Naphthalene	2 ug/L
	10. Total Phenols	50 ug/L
	11. Total Phthalates (Phthalate esters)	5 ug/L
	12. Bis (2-Ethylhexyl) Phthalate	5 ug/L
	13. Total Polychlorinated Biphenyls (PCBs)	0.5 ug/L

	Metal parameter	**Total Recoverable Metal [3] - ML**
	14. Antimony	10 ug/l
	15. Arsenic	20 ug/l
	16. Cadmium	10 ug/l
	17. Chromium III (trivalent)	15 ug/l
	18. Chromium VI (hexavalent)	10 ug/l
	19. Copper	3 ug/l
	20. Lead	0.5 ug/l
	21. Mercury	0.2 ug/l
	22. Nickel	20 ug/l

	Metal parameter	Total Recoverable Metal [3] - ML
	23. Selenium	20 ug/l
	24. Silver	10 ug/l
	25. Zinc	15 ug/l
	26. Iron	20 ug/l

Footnotes:

[1] Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

[2] BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

[3] With the exception of Chromium III and Chromium VI

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