RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 Promenade Street, Providence, Rhode Island 02908

April 1, 2021

CERTIFIED MAIL

Mr. Kevin Cleary, P.E.
Town Engineer
Town of Smithfield
64 Farnum Pike
Smithfield, RI 02917

RE: **Final Permit for the Town of Smithfield WWTF**
RIPDES Permit No. RI0100251

Dear Mr. Cleary:

Enclosed are the Town of Smithfield's (Town's) final Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit for the Smithfield Wastewater Treatment Facility. State regulations, promulgated under Chapter 46-12 of the Rhode Island General Laws of 1956, as amended, require this permit to become effective on the date specified in the permit. Also enclosed is the "Response to Public Comments" received on the draft permit and information relative to hearing requests and stays of RIPDES Permits.

As noted in the Response to Public Comments, the Department of Environmental Management (DEM) has accepted some of the proposed permit clarifications/modifications suggested by the Town. In addition, as indicated in the permit Fact Sheet, the DEM is aware that the Town may not be able to immediately comply with certain limitations/conditions in the new permit. Therefore, the DEM is willing to enter into a Consent Agreement with the Town that will establish a compliance schedule for the Town to come into compliance with these requirements. Specifically, the DEM is willing to enter into a Consent Agreement that will include a compliance schedule for the Town to comply with its April-October Monthly Average Total Phosphorus limit, bis(2-ethylhexyl)phthalate (DEHP) limit, and chloroform limit. In order for the DEM to be able to enter into a Consent Agreement with the Town, the Town must file an appeal of the above-mentioned permit requirements.

In order to appeal the permit, the Town must request an adjudicatory hearing pursuant to §1.50 of the RIPDES Regulations within thirty (30) days (see the attached sheet). Additionally, to obtain a stay of the contested limits for the duration of the appeal, the Town must also request a temporary stay for the duration of the adjudicatory hearing proceedings in accordance with §1.51 (see the attached sheet).

If there are any questions, regarding the enclosed permit or the process of entering into a Consent Agreement, feel free to contact me at 401-222-4700, extension 77715.

Sincerely,

Joseph Haberek, P.E.
Environmental Engineer IV

cc: David Turin, EPA Region 1 (Electronic Copy)
Kevin Regan, Veolia Water (Electronic Copy)
Kevin Schott, P.E., CDM Smith (Electronic Copy)
Stephen Burke, Esq., Law Offices of Stephen H Burke (Electronic Copy)
Randy R. Rossi, MBA, CGFM, Town of Smithfield (Electronic Copy)
Traci Pena, DEM (Electronic Copy)
Crystal Charbonneau, DEM (Electronic Copy)
Christina Hoefsmit, DEM (Electronic Copy)

Response to Public Comments
Town of Smithfield
Smithfield WWTF
RIPDES Permit No. RI0100251

Initially, the Rhode Island Department of Environmental Management (DEM) solicited public comments on the draft Rhode Island Pollutant Discharge Elimination System (RIPDES) permit for the Town of Smithfield's (Town's) Wastewater Treatment Facility (WWTF) from November 13, 2020 to December 18, 2020. Subsequent to the initial public notice, the public comment period was extended to allow additional time for the Town to prepare responses to the draft RIPDES permit. The public comment period was extended to January 18, 2021.

The following is a synopsis of all significant comments received and the DEM's responses to those comments.

The following responses address the comments that were made by the Town in a January 18, 2021 comment letter.

Comment 1. *(Comment A of Comment Letter)*
In the January 18, 2021 comment letter, the Town indicated that, although it agrees with adjusting the 7Q10 flow to account for the difference in drainage areas between the Centerdale gauge and the WWTF's locations, the Town claims that the adjustment to account for the treatment plant flow is oversimplified. The Town indicated that the 7Q10 adjustment should account for the seasonality of the WWTF flow, and that the assumption that the WWTF effluent discharge flow rate is equal to its average annual flow will cause the calculated 7Q10 to be too low. This is because, statistically, the in-stream average daily flow is likeliest to be below the 7Q10 in August and September, when WWTF flows are also well below the its annual average flow. The Town noted that, when alternative procedures are used to calculate the adjusted 7Q10 flow to account for actual WWTF flow, the calculated 7Q10 is 44 percent higher than that found using DEM's procedures. The alternative procedures use daily average effluent flow from 2001 to 2020 and daily average flow at the USGS gage from 1941 to 2020. Three time periods (2001-2020, 1978-2000, and Prior to 1978) were analyzed using different treatment flow measurements depending on data availability. The Town then calculated the 7Q10 flow by fitting a Log-Pearson Type III statistical distribution to the annual series of 7-day average low flows across the period of record on a calendar year basis.

Response 1. After evaluating the procedures the Town used to calculate the 7Q10 low flow at the WWTF, DEM agrees that the Town's procedures better account for site-specific hydrology. Accordingly, DEM has updated the fact sheet to reference the revised 7Q10 value (3.87 cfs).

Comment 2. *(Comment A of Comment Letter cont.)*
The Town requested that, if DEM is requiring a more stringent total phosphorus effluent limit, DEM calculate the total phosphorus limit using the 7Q10 found with the Town's

procedures (3.87 cfs).

Response 2. Based on the revised 7Q10 value (see comment #1), DEM recalculated the total phosphorus limit in the draft permit. Based on historic discharge data from the facility, DEM determined that the effluent still has reasonable potential to cause or contribute to an excursion above the narrative criteria for total phosphorus. At the effluent limit of 0.1 mg/L at the revised 7Q10 and design flow of the WWTF, the in-stream phosphorus concentration is 0.063 mg/L, which is between the Gold Book and Ecoregion criteria. DEM has established an April-October Monthly Average limit of 0.1 mg/L in the final permit. Because the 0.1 mg/L total phosphorus average monthly limit has also been determined to be technically and reasonably feasible in accordance with §1.10(D)(1) of the Rhode Island Water Quality Regulations, no change has been made to the total phosphorus limit from the draft permit.

Comment 3. *(Comment B of Comment Letter)*
The Town disagreed with DEM's use of both the 7Q10 and treatment plant design flow for the reasonable potential analysis for phosphorus. The Town indicated that the hydrologic condition of the 7Q10 flow and WWTF design flow occurring at the same time is impossible because historic data shows that the two flows are positively correlated, and the 7Q10 flow and design flow conditions have never coincided.

Response 3. Part §1.18(B)(1) of the RIPDES Regulations states that "in the case of POTWs, permit effluent limitations, standards or prohibitions shall be calculated based on design flow." Part §1.26(D)(4) of the Rhode Island Water Quality Regulations also states that "the acute and chronic aquatic life criteria for freshwaters shall not be exceeded at or above the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years (7Q10)." Therefore, in accordance with these regulations, DEM uses the design flow of the POTW and the 7Q10 flow for freshwaters when calculating effluent limits for RIPDES permits.

Excess levels of nutrients in freshwater will promote the growth of nuisance algae and rooted aquatic plants, reducing dissolved oxygen levels in the river. Given that this segment of the Woonasquatucket River is not supporting the Fish and Wildlife Habitat use due to DO impairments and non-native aquatic plants per the 2018-2020 Impaired Waters Report, and that Part §1.10(D)(1) of the Rhode Island Water Quality Regulations requires that "phosphates shall be removed from existing discharges to the extent that such removal is or may become technically and reasonably feasible," DEM is establishing a total phosphorus limit in the Smithfield WWTF RIPDES permit. DEM had previously determined that total phosphorus levels of 0.1 mg/L in the effluent are both technically and reasonably achievable using existing treatment technologies. The Town's comments on the public notice draft permit also confirm that the lower limit is technically feasible: "The average monthly total phosphorus concentrations have nearly always been less than the proposed 0.1 mg/L concentration limit." When determining if the discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard, including the narrative criterion for phosphorus, DEM uses the applicable permit conditions described in the RIPDES and Rhode Island Water Quality Regulations. An in-

stream phosphorus concentration between the Gold Book and EPA Ecoregion recommended values, is an appropriate interpretation of the narrative standard for phosphorus and the basis for the Smithfield WWTF total phosphorus limit.

Comment 4. *(Comment B of Comment Letter cont.)*
The Town claims that the assumption of concurrent design flow and 7Q10 flow is not a reasonable basis to evaluate the reasonable potential to exceed the narrative nutrient criteria.

Response 4. See Response # 3. DEM uses the design flow and 7Q10 flow according to applicable regulations to determine if the discharge has a reasonable potential to exceed the narrative nutrient criteria. This approach is consistent with other RIPDES permits for POTWs discharging to freshwaters issued by DEM and results in effluent limits that are protective of the receiving water.

The Town's claim that a reasonable potential analysis should be conducted under a possible combination of plant and river flow conditions as determined by the historic data provided is inconsistent with existing federal and state guidance and is not required by EPA regulations. When discussing how to characterize the effluent flow for the purpose of modeling effluent and receiving water interactions, the NPDES Permit Writer's Manual states:

"Permitting authority policy or procedures might specify which flow measurement to use as the critical effluent flow value(s) in various water quality-based permitting calculations (e.g., the maximum daily flow reported on the permit application, the maximum of the monthly average flows from discharge monitoring reports for the past three years, the facility design flow) Permit writers should follow existing policy or procedures for determining critical effluent flow or, if the permitting authority does not specify how to determine this value, look at past permitting practices and strive for consistency."

Therefore, since the RIPDES Regulations explicitly require the use of design flow for calculating POTW effluent limitations and it is consistent with past permitting practices, the facility design flow is an appropriate basis for determining if a pollutant has a reasonable potential to cause or contribute to an excursion above a State water quality standard. The reasonable potential analysis for total phosphorus and corresponding limit assigned in the permit considered the factors required in 40 CFR §122.44(d)(1)(ii).

Comment 5. *(Comment C of Comment Letter)*
The Town requests that the permit limits for total residual chlorine, ammonia, total cadmium, total cyanide, total lead, total zinc, and C-NOEC concentration limits should be recalculated using the Town's site-specific 7Q10 flow.

Response 5. DEM recalculated the limits for the above parameters given the revised site-specific 7Q10 flow. Based on the updated 7Q10 flow, the effluent no longer has a reasonable potential to cause an excursion above the water quality criterion for cadmium, therefore, limits for cadmium have been removed from the permit. The below table

outlines the changes between the draft permit limits and the final permit limits for these parameters:

		Acute (Daily Max) (µg/L)	Chronic (Monthly Avg) (µg/L)
TRC	Draft	27.8	16.1
	Final	32.6	18.9
Ammonia (Summer)	Draft	35.3	2.9
	Final	40.4	3.0
Cadmium	Draft	0.8	0.14
	Final	Quarterly Monitoring	Quarterly Monitoring
Cyanide	Draft	26.3	6.2
	Final	30.2	7.1
Lead	Draft	23.7	0.86
	Final	27.1	0.96
Zinc	Draft	27.0	52.6
	Final	65.0	54.4
C-NOEC	Draft	-	75%
	Final	-	65%

Comment 6. *(Comment D of Comment Letter)*
The Town, citing the fact that bis(2-ethylhexyl)phthalate is a well-documented laboratory contaminant, requests a permit condition that would discount any exceedances of the DEHP limit that occur concurrent with a positive blank test.

Response 6. DEM previously modified the Town's Draft Permit to allow the monitoring requirement for DEHP to be suspended if twelve (12) consecutive months of monitoring shows effluent concentrations below the applicable minimum detection limit. The determination that the effluent concentration is below the detection limit shall be based only on valid test results. DEM will not count an invalid test against the 12 consecutive months of monitoring for the purposes of this permit condition.

EPA Method 625.1, Section 8.5 states that "A blank must be extracted and analyzed with each extraction batch to demonstrate that the reagents and equipment used for preparation and analysis are free from contamination." Therefore, the Town must analyze the blank concurrent with the DEHP analysis per the approved method. Section 8.5.2 elaborates:

"If an analyte of interest is found in the blank: 1) at a concentration greater than the MDL for the analyte, 2) at a concentration greater than one-third the regulatory compliance limit, or 3) at a concentration greater than one-tenth the concentration in a sample in the extraction batch, whichever is greater, analysis of samples must be halted, and the problem corrected. If the contamination is traceable to the extraction batch, samples affected by the blank must be re-extracted and the extracts re-analyzed. If, however, continued re-testing results in repeated blank contamination, the laboratory must

document and report the failures (e.g., as qualifiers on results), unless the failures are not required to be reported as determined by the regulatory/control authority. **Results associated with blank contamination for an analyte regulated in a discharge cannot be used to demonstrate regulatory compliance. QC failures do not relieve a discharger or permittee of reporting timely results.** [emphasis added]"

Therefore, since results associated with blank contamination cannot be used to demonstrate regulatory compliance, any results that experience blank contamination when being analyzed will not count towards the 12 consecutive months of DEHP non-detections. The Town must report all results in a timely manner on the Discharge Monitoring Report (DMR) per Part I.G of the permit. If the DEHP concentration is a result of laboratory contamination, this should be explained on the corresponding DMR cover letter, the appropriate No Data Indicator (NODI) code should be reported on the DMR webform according to the latest DMR instructions, and supporting documentation from the laboratory should be sent to DEM. Absent this documentation, data should not be excluded. Accordingly, no change has been made to the permit or fact sheet regarding the DEHP limit.

Comment 7. *(Comment E of Comment Letter)*
The Town references the claim in the Draft Permit that dissolved oxygen impairments in the Woonasquatucket River are caused by excessive nutrients, and therefore phosphorus limits are necessary for the WWTF effluent. The Town claims that this reasoning is flawed for three reasons:

(i) DEM does not show that cultural eutrophication occurred after the 2014 WWTF upgrade to reduce effluent phosphorus concentrations. The post-upgrade data are not enough to demonstrate that cultural eutrophication occurs because DEM has not shown that the data has undergone quality review and do not include direct measures of eutrophication.

(ii) DEM relies, in part, on data collected prior to the 2014 WWTF upgrade to support the impairment designation. The continuous dissolved oxygen data collected in 2010 and 2011, referenced in the Response to Comments do not reflect current conditions. The Town references 40 CFR §122.44(d)(1)(ii), which states that permitting authorities shall consider existing controls on point source and nonpoint sources of pollution.

(iii) DEM does not prove causation between low dissolved oxygen and phosphorus. DEM cites Woonasquatucket River Watershed Council's post-upgrade data to identify low dissolved oxygen levels but does not develop a scientific basis for cultural eutrophication, as low dissolved oxygen can be a result of many factors.

Response 7. When establishing water quality-based effluent limits, DEM first determines if the discharge has a reasonable potential to cause or contribute to an excursion above a State water quality standard. If the discharge does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality criterion, DEM must establish effluent limits for that pollutant in the RIPDES permit. According to RIPDES Regulations at §1.16(5)(g)(1), when a water quality criterion has not been established for a chemical pollutant, DEM may establish effluent limits using a calculated numeric water quality criterion for the pollutant which DEM demonstrates will "attain and maintain

applicable narrative water quality criteria and will fully protect the designated use." The State narrative criterion for nutrients, §1.10(D)(1) of the Rhode Island Water Quality Regulations, states that nutrients shall not be discharged "in such concentration that would impair any usages specifically assigned to said Class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication." To interpret this narrative standard according to §1.16(5)(g)(1) of the RIPDES Regulations, DEM uses in-stream nutrient recommendations found in the 1986 Quality Criteria of Water ("the Gold Book") and the EPA document titled *Ambient Water Quality Criteria Recommendations: Information Supporting the Development of State and Tribal Nutrient Criteria, River and Streams in Nutrient Ecoregion XIV* ("Ecoregion"). The total phosphorus in-stream target concentration of 63 µg/L is between the recommendations of the Gold Book and Ecoregion criteria. Because the Smithfield WWTF discharge was found to have a reasonable potential to cause an excursion of the narrative criterion for nutrients (i.e., exceed the Gold Book phosphorus target), DEM must establish effluent limitations for total phosphorus in the RIPDES permit.

The Town claims in Point (i) of this comment that the dissolved oxygen and phosphorus in-stream data was not shown to have undergone a full quality review. The data used meets the requirements of the Consolidated Listing and Assessment Methodology (CALM). See Response # 9. The Town also claims that DEM does not prove that cultural eutrophication has occurred or is occurring after the 2014 WWTF upgrade. The Woonasquatucket River still exhibits violations of the State dissolved oxygen standard and excursions of the Ecoregion total phosphorus criterion, even after the 2014 treatment facility upgrade. The total phosphorus limit established in the permit is based on a combination of the Gold Book and Ecoregion criteria for phosphorus. Given that this criteria was selected to protect the designated uses and protect against cultural eutrophication (the narrative criteria for nutrients per Rhode Island Water Quality Regulations), and that the 7Q10 low flow has decreased since the previous permit issuance, it is appropriate to establish a more stringent total phosphorus limit to protect the receiving water.

The Town claims in Point (ii) of this comment that DEM inappropriately relies on the 2010 and 2011 continuous dissolved oxygen data to support the impairment designation. The Town claims that this is contrary to the provisions of 40 CFR §122.44(d). First, this segment of the Woonasquatucket River is included on Rhode Island's most recent 303(d) List of Impaired Waters for several impairments, one of which is dissolved oxygen. The validity of this assessment is affirmed by EPA's February 2021 approval of DEM's 2018-2020 List of Impaired Waters. Therefore, the fact sheet language is representative of current conditions, with the Woonasquatucket currently being impaired for dissolved oxygen. Second, as noted in the comments, the dissolved oxygen impairment is supported only in part by the 2010 and 2011 continuous monitoring data. Violations of the State Dissolved Oxygen standard were also seen in 2016 and 2017, after the treatment plant upgrade. As such, the impairment designation considers existing controls on phosphorus in the WWTF effluent and the corresponding phosphorus limit addresses this impairment. Third, the provisions in 40 CFR §122.44(d) refer to conditions that must be considered when conducting a reasonable potential analysis for a discharge of pollutants,

not when assessing a waterbody. The reasonable potential analysis considered the required factors as explained in Response # 4.

The Town's claim in Point (iii) of this comment that a "cause and effect" demonstration is necessary under 40 CFR §122.44(d) for nutrients is false; the process for deriving the total phosphorus limit as described above flows directly from EPA and applicable State regulations. Moreover, the decision to establish a permit limit for total phosphorus to address an in-stream dissolved oxygen impairment is based on sound scientific judgement and known impacts phosphorus has in freshwater systems. As explained in the Fact Sheet, excessive levels of phosphorus will cause cultural eutrophication, promoting the growth of nuisance algae and rooted aquatic plants. The nuisance aquatic species contribute to the impairment through the consumption of more oxygen, reducing the dissolved oxygen level in the river. While, as the comments acknowledge, there can be multiple causes of low dissolved oxygen in rivers, it stands to reason that excessive nutrients will further decrease dissolved oxygen levels through the process described above, which is harmful to the designated use of the waterbody. Additionally, the NPDES Permit Writer's Manual states: "Often, criteria for dissolved oxygen are addressed by modeling and limiting discharges of oxygen-demanding pollutants such as biochemical oxygen demand (BOD), chemical oxygen demand (COD), and **nutrients (phosphorus and nitrogen)**. [emphasis added]". Therefore, it is appropriate to assign an effluent limit for total phosphorus, particularly in this segment of the Woonasquatucket River, which has seen violations of the State dissolved oxygen standard and excursions above the Ecoregion criterion for total phosphorus even after the 2014 treatment facility upgrade.

The fact that a dissolved oxygen TMDL has not been completed does not give cause to avoid more stringent limits that will be protective of the receiving water. Moreover, not establishing a water quality-based effluent limit based on time to conduct an evaluation or TMDL is inconsistent with Clean Water Act. See Response # 10.

DEM disagrees with the analysis in the footnote following the "cause and effect" interpretation of §122.44(d) and the interpretation of the §122.44(d) subparagraphs as referenced in the Federal Register. §122.44(d) does not mandate that "in the case of a narrative standard one looks to see if the characteristics that are intended to be prevented are evidenced in the waters." §122.44(d)(i) states that limitations must control all pollutants which may be "discharged at a level which will cause, have the reasonable potential to cause, or contribution to an excursion above any State water quality standard, including State narrative criteria for water quality." Based on the total phosphorus effluent data, the discharge from the Smithfield WWTF has a reasonable potential to cause an excursion above the State narrative criterion for nutrients. Based on this reasonable potential, DEM must establish effluent limits which, based on §122.44(d)(vi), may be calculated using a calculated numeric water quality criterion which will attain and maintain the applicable water quality criterion and protect the designated use. This process does not require that DEM evaluate if violations of the Class B1 designated uses or cultural eutrophication are occurring in the receiving water. Rather, 54 Fed. Reg. 1,303 (Jan. 12, 1989) notes that "to determine whether a discharge has a reasonable potential for causing an excursion above a water quality standard, and thus requires a water quality-based

effluent limit, the permitting authority must use reliable and consistent procedures." The approach used is reliable and consistent with previous RIPDES permitting practices. DEM agrees that, fundamentally, the interpretation of the narrative criterion between the Gold Book and Ecoregion total phosphorus targets serves to calculate the effluent limit for total phosphorus. DEM does not claim, however, that the "waters are in violation of the narrative standard," nor, as explained above, does DEM have to prove such to set an effluent limit in a RIPDES permit.

Comment 8. *(Comment F of Comment Letter)*
The Town, citing the Woonasquatucket River Watershed Council data, states that the total phosphorus downstream of the WWTF always meets the phosphorus target of 67 µg/L and almost always meets the Ecoregion Criteria of 23.75 µg/L. The Town also mentions that the treatment plant phosphorus removal is consistent across varying effluent flow rates, thereby making in-stream phosphorus concentrations suitable for evaluating whether the instream total phosphorus target is met.

Response 8. When determining reasonable potential, DEM uses the facility design flow for POTWs and the 7Q10 flow for discharges to freshwater. See Response # 3. DEM uses the in-stream phosphorus target between the Gold Book and Ecoregion criteria to determine effluent limitations for phosphorus. DEM does not claim that the waterbody is not meeting the in-stream target concentration during typical conditions. DEM determined that when the treatment plant is at design flow under the updated 7Q10 low flow condition, the in-stream phosphorus concentration is at 63 µg/L when the effluent concentration is 0.1 mg/L, which is between the Gold Book and Ecoregion criteria. Moreover, the 0.1 mg/L effluent limit has been shown to be technically and reasonably feasible using available treatment technologies. Therefore, the total phosphorus monthly average limit established in the permit is 0.1 mg/L.

Comment 9. *(Comment G of Comment Letter)*
The Town claims that the dissolved oxygen data for the Woonasquatucket River collected by the URI Watershed Watch Program was not shown to have undergone data quality review consistent with DEM's Consolidated Listing and Assessment Methodology (CALM), and therefore may not be suitable for determining an impairment and establishing permit requirements.

Response 9. The Woonasquatucket River is included on Rhode Island's List of Impaired Waters due to several impairments, one of which is dissolved oxygen. See Response # 7. Each assessment cycle requires a quality review. EPA's February 2021 approval of the DEM 2018-2020 List of Impaired Waters confirms that the data used to support the impairment is consistent with the CALM.

Comment 10. *(Comment H of Comment Letter)*
The Town claims that additional monitoring and a TMDL assessment should be conducted to confirm the impairment for DO in the Woonasquatucket and the existence of cultural eutrophication, citing the availability of water quality data in other Rhode Island rivers. The Town specifically requests that the Woonasquatucket River be

reassessed using only data collected after the WWTF upgrade and that a TMDL be completed to determine the cause of the DO impairment prior to lowering the phosphorus limit.

Response 10. The total phosphorus limit in the Smithfield WWTF permit is based upon the effluent's reasonable potential to contribute to an excursion above the narrative criterion for phosphorus as required by RIPDES and EPA regulations. Therefore, a TMDL and additional monitoring is not required to be completed prior to setting effluent limits. Additionally, existing EPA memoranda has demonstrated that establishing compliance schedules or excluding an effluent limit from a permit solely for conducting water body evaluations or completing a TMDL is inconsistent with the Clean Water Act and implementing NPDES regulations. From EPA's letter to Doyle Childers at the Missouri Department of Natural Resources on February 20, 2007:

"CWA definition does not contemplate that a compliance schedule may be used to justify excluding from a permit a WQBEL based on the currently applicable standards solely to provide time to conduct an evaluation or use attainability analysis (UAA) that may result in changing the standards."

See also EPA's October 23, 2006 letter to Celeste Cantu, Executive Director of the California State Water Resources Control Board. Accordingly, it is not appropriate to delay either establishing limits or establishing more stringent limits based on the time required to evaluate a waterbody or conduct a TMDL.

DEM would also like to note that establishing more stringent limits in a RIPDES permit does not equate to requiring capital expenditure on the part of the permittee. As noted in the comments, significant improvements in water quality and effluent concentration for total phosphorus have been seen in other waterbodies and wastewater treatment plants without additional capital upgrades to the treatment processes. However, as indicated in the Fact Sheet, if the WWTF cannot meet the proposed total phosphorus limit, DEM is willing to enter into a Consent Agreement with the Town to establish interim limits and a compliance schedule to meet its final limits for Total Phosphorus.

Comment 11. *(Comment H of Comment Letter cont.)*
The Town notes that the Providence Water Supply Board's decision to add orthophosphate to treated drinking water for corrosion control in January 2021 may further complicate the actions needed to lower the amount of phosphorus in the wastewater treatment facility's discharge.

Response 11.DEM has received notification of Providence Water's decision to dose orthophosphate to finished water for corrosion control. Plans to study the impact of the orthophosphate dosing on treatment plant processes, effluent phosphorus concentrations, and the ability of the WWTF to meet the final limit for total phosphorus would be incorporated into a Consent Agreement between DEM and the Town.

HEARING REQUESTS

If you wish to contest any of the provisions of this permit, you must request a formal hearing within thirty (30) days of receipt of this letter. The request should be submitted to the Administrative Adjudication Division at the following address:

Mary Dalton, Clerk
Department of Environmental Management
Office of Administrative Adjudication
235 Promenade Street
3rd Floor, Rm 350
Providence, RI 02908

Any request for a formal hearing must conform to the requirements of §1.50 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (RI Code of Regulations; 250-RICR-150-10-1.50).

STAYS OF RIPDES PERMITS

Should the Department receive and grant a request for a formal hearing, the contested conditions of the permit will not automatically be stayed. However, the permittee, in accordance with §1.51 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (RI Code of Regulations; 250-RICR-150-10-1.51), may request a temporary stay for the duration of adjudicatory hearing proceedings. Requests for stays of permit conditions should be submitted to the Office of Water Resources at the following address:

Angelo S. Liberti, P.E.
Administrator of Surface Water Protection
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908

All uncontested conditions of the permit will be effective and enforceable in accordance with the provisions of §1.50 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (RI Code of Regulations; 250-RICR-150-10-1.50).

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended,

The Town of Smithfield
64 Farnum Pike
Smithfield, RI 02917

is authorized to discharge from a facility located at the

Smithfield Wastewater Treatment Plant
20 Esmond Mill Drive
Smithfield, Rhode Island 02917

to receiving waters named

Woonasquatucket River
RI0002007R-10C

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

This permit shall become effective on July 1, 2021.

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

This permit supersedes the permit issued on September 27, 2013.

This permit consists of 21 pages in Part I including effluent limitations, monitoring requirements, etc., 78 pages in the Fact Sheet including attachments, and 10 pages in Part II including General Conditions.

Signed this 31st day of March, 2021.

Angelo Liberti Digitally signed by Angelo Liberti
Date: 2021.03.31 14:01:07 -04'00'

Angelo S. Liberti, P.E., Administrator of Surface Water Protection
Office of Water Resources
Rhode Island Department of Environmental Management
Providence, Rhode Island

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 001A. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	Quantity - lbs/day		Concentration – units specified				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow	3.5 MGD					Continuous	Recorder
$CBOD_5$ (May-Oct)	292	496	10 mg/L	15 mg/L	17 mg/L	3/Week	24-hr comp.
$CBOD_5$ (Nov-Apr)	437	729	15 mg/L	25 mg/L	25 mg/L	3/Week	24-hr comp.
$CBOD_5$ % Removal			85%			1/Month	Calculated
TSS (May-Oct)	437	729	15 mg/L	20 mg/L	25 mg/L	3/Week	24-hr comp.
TSS (Nov-Apr)	437	729	15 mg/L	25 mg/L	25 mg/L	3/Week	24-hr comp.
TSS - % Removal			85%			1/Month	Calculated
Settleable Solids				--- ml/L	--- ml/L	1/Day	Grab
Oil and Grease					--- mg/L	1/Month	3 Grabs[1]

[1] Three (3) grab samples shall be taken, equally spaced over one (1) eight- (8-) hour working shift, with a minimum of three (3) hours between grabs. Each of the three (3) grab samples must be analyzed individually.

Testing for TSS and $CBOD_5$ shall be performed and reported on influent and effluent with appropriate allowances for hydraulic detention time. Sampling for TSS shall be performed on Tuesday, Thursday, and either Saturday or Sunday. Two (2) of the $CBOD_5$ samples shall be taken at the same time as two (2) of the TSS samples. Sampling for Flow and Settleable Solids shall be performed Sunday-Saturday.

---signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A. (Final discharge after dechlorination).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 001A. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	Quantity - lbs/day		Concentration – units specified				
	Average Monthly	Maximum Daily	Average Monthly * (Minimum)	Average Weekly * (Average)	Maximum Daily * (Maximum)	Measurement Frequency	Sample Type
Enterococci			54 cfu[1] / 100 ml		175 cfu[1] / 100 ml	3/Week	Grab
Fecal Coliform			--- MPN[1] / 100 ml		--- MPN[1] / 100 ml	1/Month	Grab
Total Residual Chlorine (TRC)			18.9 µg/L[3]		32.6 µg/L	Continuous	Recorder[2]
pH			(6.5 SU)		(9.0 SU)	2/Day	Grab

[1] Two (2) of the three (3) Enterococci samples are to be taken on Tuesday and Thursday at the same time as one of the TRC samples. The Fecal Coliform sample shall be taken at the same time as one of the Enterococci samples. The Geometric Mean shall be used to obtain the "monthly average" for Enterococci.

[2] The use of a continuous TRC recorder after chlorination and prior to dechlorination is required to provide a record that proper disinfection was achieved at all times. Compliance with these limitations shall be determined by taking a minimum of three (3) grab samples, Monday-Friday (except Holidays), equally spaced over one (1) eight- (8-) hour working shift with a minimum of three (3) hours between grabs, and on Saturdays, Sundays, and Holidays by taking at least two (2) grab samples each day with a minimum of two (2) hours between grabs. The Maximum Daily and Average Monthly values are to be computed from the averaged grab sample results for each day. The following methods may be used to analyze the grab samples: (1) Low Level Amperometric Titration, Standard Methods (18th Edition) No. 4500-Cl E; and (2) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-Cl G.

[3]The limit at which compliance/noncompliance determinations will be based is the Quantitation Limit, which is defined as 20 ug/l for TRC. This value may be reduced by permit modification as more sensitive methods are approved by EPA and the State.

* Values in parentheses ( ) are to be reported as Minimum /Maximum for the reporting period rather than Average Monthly /Maximum Daily.

Sampling for TRC and pH shall be performed Sunday-Saturday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A. (Final discharge after dechlorination).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 001A. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	Quantity - lbs/day		Concentration – units specified				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Phosphorus,Total (Apr-Oct)			0.1 mg/L		--- mg/L	3/Week	24-hr comp.
Phosphorus,Total (Nov-Mar)			1.0 mg/L		--- mg/L	1/Week	24-hr comp.
Ortho-phosphorus (Nov-Mar)			--- mg/L		--- mg/L	1/Week	24-hr comp.
Nitrate,Total (as N) (May-Oct)			--- mg/L		--- mg/L	3/Week	24-hr comp.
Nitrate,Total (as N) (Nov-Apr)			--- mg/L		--- mg/L	1/Month	24-hr comp.
Nitrite, Total (as N) (May-Oct)			--- mg/L		--- mg/L	3/Week	24-hr comp.
Nitrite,Total (as N) (Nov-Apr)			--- mg/L		--- mg/L	1/Month	24-hr comp.
TKN (as N) (May-Oct)			--- mg/L		--- mg/L	3/Week	24-hr comp.
TKN (as N) (Nov-Apr)			--- mg/L		--- mg/L	1/Month	24-hr comp.
Total Nitrogen (TKN + NO_2 + NO_3) (May-Oct)	--- lb/day		10.0 mg/L[1]		--- mg/L	3/Week	Calculated
Total Nitrogen (TKN + NO_2 + NO_3) (Nov-Apr)	--- lb/day		--- mg/L[1]		--- mg/L[1]	1/Month	Calculated
Ammonia,Total (as N)) (May-Oct)			3.0 mg/L		40.4 mg/L	3/Week	24-hr comp.
Ammonia,Total (as N) (Nov-Apr)			11.2 mg/L		68 mg/L	1/Week	24-hr comp.

[1] The Permittee shall operate the treatment facility to reduce the discharge of total nitrogen during the months of November through April, to the maximum extent possible using all available treatment equipment in place at the facility, except methanol addition.

--- signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A. (Final discharge after dechlorination).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 001A. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	Quantity - lbs/day		Concentration – units specified				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Total Cyanide			7.1 µg/L		30.2 µg/L	1/Week	Composite[2]
Total Lead			0.96 µg/L		27.1 µg/L	1/Week	24-hr comp.
Total Zinc			54.4 µg/L		65.0 µg/L	1/Week	24-hr comp.
Total Cadmium			--- µg/L		--- µg/L	1/Quarter	24-hr comp.
Total Copper			--- µg/L		--- µg/L	1/Quarter	24-hr comp.
Total Nickel			--- µg/L		--- µg/L	1/Quarter	24-hr comp.
Total Aluminum			--- µg/L		--- µg/L	1/Quarter	24-hr comp.
Total Iron			--- µg/L		--- µg/L	1/Week	24-hr comp.

[1]Compliance with these limitations shall be determined by taking three (3) grab samples per day with a minimum of three (3) hours between grabs and preserved immediately upon collection. All three samples shall be composited then analyzed. Samples must be collected during a dry weather period (no rain forty-eight (48) hours prior to or during sampling unless approved by RIDEM).

--- signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A. (Final discharge after dechlorination).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 001A. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	Quantity - lbs/day		Concentration – units specified				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Ceriodaphnia sp LC_{50}[1]					100% or Greater[2]	1/Quarter	24-hr comp.
C-NOEC[3]					65%[4]	1/Quarter	24-hr comp.
IC25[5]					Report[6]	1/Quarter	24-hr comp

[1] LC_{50} is defined as the concentration of wastewater that causes mortality to 50% of the test organisms (Ceriodaphnia sp.).

[2] The 100% or greater limit is defined as a sample which is composed of 100% effluent.

[3] C-NOEC or Chronic – No Observed Effects Concentration is defined as the highest concentration of toxicant or effluent at which no adverse effects are observed.

[4] The 65% or greater limit is defined as a sample which is composed of 65% effluent.

[5] IC_{25} is defined as the concentration of wastewater that causes a 25% reduction in growth or reproduction of test organisms.

[6] A numeric limit is not associated with this parameter, but the IC_{25} must be reported as part of the test results from any chronic WET tests.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A. (Final discharge after dechlorination) and in accordance with I.B. of the permit.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 001A. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirements	
	Quantity - lbs/day		Concentration – units specified				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Bis(2-ethylhexyl) phthalate			16.46 µg/L		761 µg/L	1/Month[1]	24-hr comp
Chloroform			43.9 µg/L		1982 µg/L	1/Month	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A. (Final discharge after dechlorination).

[1]The permittee shall perform monthly testing on samples collected from the discharge at Outfall 001A. If the results of twelve (12) consecutive months of monitoring shows effluent concentrations below the applicable minimum detection limits from Part I.F, then the permittee is no longer required to continue sampling.

7.

a. The pH of the effluent shall not be less than 6.5 nor greater than 9.0 standard units at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.

b. The discharge shall not cause visible discoloration of the receiving waters.

c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

d. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and 5-day carbonaceous biochemical oxygen demand. The percent removal shall be based on monthly average values.

e. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the designed flow, the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

8. The permittee shall analyze its effluent annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. The results of these analyses shall be submitted to the Department of Environmental Management with the 3rd quarter bioassay by October 15th of each year. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.

9. This permit serves as the State's Water Quality Certificate for the discharges described herein.

B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

1. General

Beginning on the effective date of the permit, the permittee shall perform four (4) chronic toxicity tests per year on samples collected from discharge Outfall 001A. The permittee shall conduct the tests during dry weather periods (no rain within forty-eight (48) hours prior to or during sampling unless approved by RIDEM) according to the following test frequency and protocols. Chronic and acute toxicity data shall be reported as outlined in part I.B.8. The chronic daphnid tests shall be used to calculate the acute LC_{50} at the forty-eight (48) hour exposure interval. The State may require additional screening, range finding, definitive acute or chronic bioassays as deemed necessary based on the results of the initial bioassays required herein. Indications of toxicity could result in requiring a Toxicity Reduction Evaluation (TRE) to investigate the causes and to identify corrective actions necessary to eliminate or reduce toxicity to an acceptable level.

2. Test Frequency

For four (4) sampling events (one each calendar quarter), the permittee will conduct seven-day chronic toxicity tests on the species listed below, for a total of four (4) chronic toxicity tests per year. This requirement entails performing one-species testing as follows:

Species	Test Type	Frequency
Daphnid (Ceriodaphnia sp.)	Survival and Reproduction	Quarterly

A sampling event is defined as three 24-hour composites collected over the seven-day test period (see Part I.B.4).

3. Testing Methods

Toxicity testing shall be conducted in accordance with the protocols listed in 40 CFR Part 136.

4. Sample Collection

For each sampling event a twenty-four- (24) hour flow proportioned composite final effluent, sample after dechlorination shall be collected during a dry weather period (no rain forty-eight (48) hours prior to or during sampling unless approved by RIDEM). For each sampling event, the effluent samples shall be collected on days 0, 3 and 5 of the 7-day exposure period. The first sample is used for test initiation, Day 1, and for test solution renewal on Day 2. The second sample would be used for test solution renewal on Days 3 and 4. The third sample would be used for test solution renewal on Days 5, 6 and 7.

To eliminate the problem of potential rainfall interference during the five-day sampling period for the chronic tests, the permittee shall collect enough sample on Day 0 to properly store and use one-third on both Days 3 and 5 if rain has occurred since Day 0. In addition, if no rainfall has occurred since Day 3, enough sample shall also be collected on Day 3 to use for Day 5 if necessary.

In the laboratory, the initial sample (Day 0) will be split into two (2) subsamples, after thorough mixing, for the following:

A: Chemical Analysis
B: Chronic Toxicity Testing

Day 3 and 5 samples will be held until test completion. If either the Day 3 or 5 renewal sample is of sufficient potency to cause lethality to 50% or more test organisms in any of the dilutions for either species, then a chemical analysis shall be performed on the appropriate sample(s) as well.

All samples held overnight shall be refrigerated at 4°C.

5. Dilution Water

Dilution water used for freshwater chronic toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (see Part I.B.6). For each species, natural freshwater shall be used as the dilution water. This water shall be collected from the Woonasquatucket River (RI0002007R-10A) at DEM's Water Quality Monitoring Station number WON01. This is the station at the Woonasquatucket River at Old Forge Rd. Details regarding this station can be found in Attachment L of the Permit Fact Sheet. If this natural freshwater diluent is found to be, or suspected to be toxic or unreliable, an alternate or laboratory source of water of known quality with a hardness and pH similar to that of the receiving water may be substituted AFTER RECEIVING APPROVAL FROM RIDEM.

6. Effluent Toxicity Test Conditions for the Daphnid (Ceriodaphnia sp.) Survival and Reproduction Test[1]

Test conditions are required to be compliant with 40 CFR 136 using the following effluent concentrations:

Six (6) dilutions plus a control: 100%, 85%, 75%, 50%, 25%, 12.5%, and 0% effluent.

7. Chemical Analysis

The following chemical analysis shall be performed for every one-species sampling event.

Parameter	Effluent	Diluent	Minimum Detection Limit (mg/L)
Hardness	X	X	0.5
Alkalinity	X	X	2.0
pH	X	X	---
Specific Conductance	X	X	---
Total Solids and Suspended Solids	X	X	---
Ammonia	X	X	0.1
Total Residual Chlorine (TRC)	X	X	0.02
Total Organic Carbon	X		0.5
Cyanide	X		0.005

During the first, second, and fourth calendar quarter bioassay sampling events the following chemical analyses shall be performed:

Total Metals	Effluent	Diluent	Minimum Detection Limit (µg/L)
Cu	X	X	1.0
Pb	X	X	1.0
Zn	X	X	5.0
Cd	X	X	0.1
Ni	X	X	1.0
Al	X	X	20.0

The above metal analyses may be used to fulfill, in part or in whole, monthly monitoring requirements in the permit for these specific metals.

During the third calendar quarter bioassay sampling event, the final effluent sample collected during the same twenty-four (24) hour period as the bioassay sample, shall be analyzed for priority pollutants (as listed in Tables II and III of Appendix D of 40 CFR 122). The bioassay priority pollutant scan shall be a full scan.

In addition, the following chemical analyses shall be performed as part of each daily renewal procedures on each dilution and the controls.

Parameter	Beginning of 24-Hour Exposure Period	End of 24-Hour Exposure Period
Dissolved Oxygen	X	X
Temperature	X	
pH	X	

Specific Conductance	X
Alkalinity	X[1]
Hardness	X[1]

[1]These are performed on the 100% effluent and control samples only.

8. Toxicity Test Report Elements

A report of results will include the following:

- Description of sample collection procedures and site description.
- Names of individuals collecting and transporting samples, times, and dates of sample collection and analysis.
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests (quality assurance); light and temperature regime; dilution water description; other information on test conditions if different than procedures recommended.
- Raw data and laboratory sheets.
- Any other observations or test conditions affecting test outcome.
- Results of required chemical and physical analyses.

Toxicity test data shall include the following:

Chronic

- Daily survival of test organisms in the controls and all replicates in each dilution. Survival data should be analyzed by Fisher's Exact Test prior to analysis of reproduction data.
- Young per female for all replicates in each dilution for Ceriodaphnia and weight for minnow larvae.
- Dissolved oxygen, pH, specific conductance and temperature for each dilution.
- Results of Dunnett's Procedure and/or other EPA recommended or approved methods for analyzing the data.
- C-NOEC = Chronic No Observed Effect Concentration
- LOEC = Lowest Observed Effect Concentration
- MATC = Maximum Allowable Toxicant Concentration
- IC_{25} = Inhibition Concentration (the statistical calculation of the effluent concentration which causes a 25% reduction in growth or reproduction of test organisms)

Acute - (These data points are to be obtained 48 hours into the chronic test).

- Survival for each concentration and replication at time 24 and 48 hours.
- Dissolved oxygen, pH and specific conductance for each concentration.

- LC_{50} and 95% confidence limits using one of the following methods in order of preference: Probit, Trimmed Spearman Karber, Moving Average Angle, or the graphical method; printout or copy of these calculations. The Probit, Trimmed Spearman Karber and Moving Average Angle methods of analyses can only be used when mortality of some of the test organisms are observed in at least two (2) of the (% effluent) concentrations tested (i.e., partial mortality). If a test results in a 100% survival and 100% mortality in adjacent treatments ("all or nothing" effect), a LC_{50} may be estimated using the graphical method.

9. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

Quarter Testing to be Performed	Report Due No Later Than	Results Submitted on DMR for
January 1 - March 31	April 15	March
April 1 - June 30	July 15	June
July 1 - September 30	October 15	September
October 1 - December 31	January 15	December

Bioassay testing following the protocol described herein shall commence during the 1st quarter following the effective date of this permit.

A signed copy of these, and all other reports required herein, shall be submitted electronically in accordance with Part I.G.3.

C. INDUSTRIAL PRETREATMENT PROGRAM

1. Definitions

For the purpose of this permit, the following definitions apply.

a. 40 CFR 403 and sections thereof refer to the General Pretreatment regulations, 40 CFR Part 403 as revised.

b. Categorical Pretreatment Standards mean any regulation containing pollutant discharge limits promulgated by the USEPA in accordance with section 307(b) and (c) of the Clean Water Act(33 USC 1251), as amended, which apply to a specific category of industrial users and which appears in 40 CFR Chapter 1, subchapter N.

c. Pretreatment Standards include all specific prohibitions and prohibitive discharge limits established pursuant to 40 CFR 403.5, including but not limited to, local limits, and the Categorical Pretreatment Standards.

d. Regulated Pollutants shall include those pollutants contained in applicable categorical standards and any other pollutants listed in the Pretreatment Standards which have reasonable potential to be present in an industrial user's effluent.

2. Implementation

The authority and procedures of the Industrial Pretreatment Program shall at all times be fully and effectively exercised and implemented, in compliance with the requirements of this permit and in accordance with the legal authorities, policies, procedures and financial provisions described in the permittee's approved Pretreatment Program and Sewer Use Ordinance, the Rhode Island Pretreatment Regulations and the General Pretreatment Regulations 40 CFR 403. The permittee shall maintain adequate resource levels to accomplish the objectives of the Pretreatment Program.

3. Local Limits

Pollutants introduced into POTWs by a non-domestic source (user) shall not: pass through the POTW, interfere with the operation or performance of the works, contaminate sludge as to adversely affect disposal options, or adversely affect worker safety and health.

a. The permittee has an approved Local Limits Monitoring Plan that shall continue to be implemented at all times. The permittee's most recent technical evaluation of the need to revise local limits was approved in 2018.

b. At the time of renewal of this permit and in accordance with 40 CFR 122.44(j)(2), the permittee shall submit to the DEM with its permit renewal application a written technical evaluation of the need to revise local limits. The evaluation shall be based, at a minimum, on information obtained during the implementation of the permittee's local limits monitoring plan and procedures required by Part I.C.3.a of this permit and current RIPDES permit discharge limits, sludge disposal criteria, secondary treatment inhibition, and worker health and safety criteria.

4. Enforcement Response Plan (ERP)

The permittee has an approved ERP that meets the requirements of 40 CFR 403.8(f)(5). The permittee shall continue to implement its approved ERP at all times.

5. General

a. The permittee shall carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with Pretreatment Standards. At a minimum, all significant industrial users shall be inspected and monitored for all regulated pollutants at the frequency established in the approved Industrial Pretreatment Program but in no case less than once per year (one (1) year being determined as the reporting year established in Part I.C.7 of this permit). In addition, these inspections, monitoring and surveillance activities must be conducted in accordance with EPA's Industrial User Inspection and Sampling Manual for POTW's, April 1994. All inspections, monitoring, and surveillance activities shall be performed, and have records maintained, with sufficient care to produce evidence admissible in enforcement proceedings or judicial actions. The permittee shall evaluate, at least every two years unless specific superseding 40 CFR 403 streamlining provisions have been adopted, whether each SIU requires a Slug Control Plan. If a Slug Control Plan is required, it shall include the contents specified by 40 CFR 403.8(f)(2)(vi).

b. The permittee shall reissue all necessary Industrial User (IU) control mechanisms within thirty (30) days of their expiration date. The permittee shall issue, within sixty (60) days after the determination that an IU is a Significant Industrial User (SIU), all SIU control mechanisms. All SIU control mechanisms must contain, at a minimum, those conditions stated in 40 CFR 403.8(f)(1)(iii)(B). All control mechanisms must be mailed via Certified Mail, Return Receipt Requested. A complete bound copy of the control mechanism with the appropriate receipt must be kept as part of the Industrial User's permanent file. In addition, the permittee must develop a fact sheet describing the basis for the SIU's permit and retain this fact sheet as part of the SIU's permanent file.

c. The permittee must identify each instance of noncompliance with any pretreatment standard and/or requirement and take a formal documented action for each instance of noncompliance. Copies of all such documentation must be maintained in the Industrial User's permanent file.

d. The permittee shall prohibit Industrial Users from the dilution of a discharge as a substitute for adequate treatment in accordance with 40 CFR 403.6(d).

e. The permittee shall comply with the procedures of 40 CFR 403.18 for instituting any modifications of the permittee's approved Pretreatment Program. Significant changes in the operation of a POTW's approved Pretreatment Program must be submitted and approved following the procedures outlined in 40 CFR 403.18(b) and 403.9(b). However, the endorsement of local officials responsible for supervising and/or funding the pretreatment program required by 403.9(b)(2) will not be required until DEM completes a preliminary review of the submission. The DEM will evaluate and review the permittee's initial proposal for a modification and provide written notification either granting preliminary approval of the proposed modifications or stating the deficiencies contained therein. DEM's written notification will also include a determination whether the submission constitutes a substantial or non-substantial program modification as defined by 40 CFR 403.18. Should DEM determine that a deficiency exists in the proposed modification, the permittee shall submit to DEM, within thirty (30) days of the receipt of said notice, a revised submission consistent with DEM's notice of deficiency.

   Pretreatment program modifications which the permittee considers Non-substantial, shall be deemed to be approved within forty-five (45) days after submission of the request for modification, unless DEM determines that the modification is in fact a substantial modification or notifies the permittee of deficiencies. Upon receipt of notification that DEM has determined the modification is substantial, the permittee shall initiate the procedures and comply with the deadlines for substantial modifications, which are outlined below.

   For substantial modifications, the permittee shall, within sixty (60) days (unless a longer time frame is granted) of the receipt of DEM's preliminary approval of the proposed modification, submit documentation (as required by 403.9(b)(2)) that any local public notification/participation procedures required by law have been completed, including any responses to public comments, and a statement that the local officials will endorse and/or approve the modification upon approval by DEM.

   Within thirty (30) days of DEM's final approval of the proposed modification(s), the permittee shall implement the modification and submit proof that the local officials have endorse and/or approved the modification(s) to the DEM. Upon final approval by the DEM and adoption by the permittee, this modification(s) shall become part of the approved pretreatment program and shall be incorporated into this permit in accordance with 40CFR 122.63(g).

f. All sampling and analysis required of the permittee, or by the permittee of any Industrial User, must be performed in accordance with the techniques described in 40 CFR 136.

g. For those Industrial Users with discharges that are not subject to Categorical Pretreatment Standards, the permittee shall require appropriate reporting in accordance with 40 CFR 403.12(h).

h. The permittee shall, in accordance with 40 CFR 403.12(f), require all Industrial Users to immediately notify the permittee of all discharges by the Industrial User that could cause problems to the POTW, including slug loadings, as summarized in 40 CFR 403.5.

i. The permittee shall require all Industrial Users to notify the permittee of substantial changes in discharge as specified in 40 CFR 403.12(j) and the permittee shall also notify DEM of each such substantial change in discharge prior to acceptance.

j. The permittee shall require New Sources to install and have in operation all pollution control equipment required to meet applicable Pretreatment Standards before beginning to discharge. In addition, the permittee shall require New Sources to meet all applicable Pretreatment Standards within the shortest feasible time which shall not exceed ninety (90) days in accordance with 40 CFR 403.6(b).

k. The permittee shall require all Industrial Users who are required to sample their effluent and report the results of analysis to the POTW to comply with signatory requirements contained in 40 CFR 403.12(l) when submitting such reports.

l. The permittee shall determine, based on the criteria set forth in 40 CFR 403.8(f)(2)(viii), using the EPA method of "rolling quarters", the compliance status of each Industrial User. Any Industrial User determined to meet Significant Non-Compliance (SNC) criteria shall be included in an annual public notification as specified in 40 CFR 403.8(f)(2)(viii).

m. The permittee shall require Industrial Users to comply with the notification and certification requirements of 40 CFR 403.12(p)(1), (3) and (4) pertaining to the discharge of substances to the POTW, which if disposed of otherwise, would be a hazardous waste under 40 CFR Part 261.

n. The permittee shall continue to designate, as SIUs, those Industrial Users (IUs) which meet the definition contained in 40 CFR 403.3 and the permittee's sewer use ordinance.

The permittee shall notify each newly designated SIU of its classification as a SIU within thirty (30) days of identification and shall inform the SIU of the requirements of a SIU contained in 40 CFR 403.12.

6. Categorical Industrial Users (CIUs)

a. The permittee shall require Industrial Users to comply with applicable Categorical Pretreatment Standards in addition to all applicable Pretreatment Standards and Requirements. The permittee shall require of all Categorical Industrial Users (CIUs), all reports on compliance with applicable Categorical Pretreatment Standards and Categorical Pretreatment Standard deadlines as specified in and in accordance with Sections (b), (d), (e) and (g) of 40 CFR 403.12. In addition, the permittee shall require Categorical Industrial Users to comply with the report signatory requirements contained in 40 CFR 403.12(1) when submitting such reports.

b. If the permittee applies the Combined Wastestream Formula (CWF) to develop fixed alternative discharge limits of Categorical Pretreatment Standards, the application of the CWF and the enforcement of the resulting limits must comply with 40 CFR 403.6(e). The permittee must document all calculations within the control mechanism fact sheet and the resulting limits within the CIU's control mechanism. The permittee must ensure that the most stringent limit is applied to the CIU's effluent at end-of-pipe based upon a comparison of the resulting CWF limits and the permittee's local limits.

c. If the permittee has or obtains the authority to apply and enforce equivalent mass-per-day and/or concentration limitations of production-based Categorical Pretreatment Standards, then the permittee shall calculate and enforce the limits in accordance with 40 CFR 403.6(c). The permittee must document all calculations within the control mechanism fact sheet and the resulting limits within the CIU's control mechanism.

7. Annual Report

The annual report for the permittee's Industrial Pretreatment Program shall contain information pertaining to the reporting year which shall extend from October 1 through September 30 and shall be submitted to the DEM by December 15 each year. Each item below must be addressed separately and any items which are not applicable must be so indicated. If any item is deemed not applicable a brief explanation must be provided. The annual report shall include the following information pertaining to the reporting year:

a. A listing of Industrial Users which complies with requirements stated in 40 CFR

403.12(i)(1). The list shall identify all Categorical Industrial Users, Significant Industrial Users and any other categories of users established by the permittee;

b. A summary, including dates of any notifications received by the permittee of any substantial change in the volume or character of pollutants being introduced into the POTW by new or existing IUs. If applicable, an evaluation of the quality and quantity of influent introduced into the POTW and any anticipated impact due to the changed discharge on the quantity or quality of effluent to be discharged from the POTW shall be included;

c. A summary of the Compliance status of each Industrial User (IU), as of the end of last quarter covered by the annual report. The list shall identify all IUs in non-compliance, the pretreatment program requirement which the IU failed to meet, and the type, and date of the enforcement action initiated by the permittee in response to the violation. If applicable, the list shall also contain the date which IUs in non-compliance returned to compliance, a description of corrective actions ordered, and the penalties levied.

d. A list of industries which were determined, in accordance with Part I.C.5.(l) of this permit, to be in significant non-compliance required to be published in a local newspaper and a copy of proof of publication from the newspaper that the names of these violators has been published.

e. A summary of inspection and monitoring activity performed by the permittee, including;

- significant industrial users inspected by the POTW (include inspection dates for each industrial user);
- significant industrial user sampled by the POTW (include sampling dates and dates of analysis, for each industrial user);

f. A summary of permit issuance/reissuance activities including the name of the industrial user, expiration date of previous permit, issuance date of new permit, and a brief description of any changes to the permit;

g. A list including the report/notification type, due date, and receipt date for each report/notification required by 40 CFR 403.12.

h. A summary of public participation efforts including meetings and workshops held with the public and/or industry and notices/newsletters/bulletins published and/or distributed;

i. A program evaluation in terms of program effectiveness, local limits application and resources which addresses but is not limited to:
- A description of actions being taken to reduce the incidence of SNC by Industrial Users;
- effectiveness of enforcement response program;
- sufficiency of funding and staffing;
- sufficiency of the SUO, Rules and Regulations and/or statutory authority;

j. An evaluation of recent/proposed program modifications, both substantial and non-substantial, in terms of the modification type, implementation and actual/ expected effect (note proposed modifications must be submitted under separate cover along with the information required by 40 CFR 403.18);

k. A detailed description of all interference and pass-through that occurred during the past year and, if applicable;

- A thorough description of all investigations into interference and pass-through during the past year;

- A description of the monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying pollutants analyzed and frequencies;

l. A summary of the average, maximum concentration, minimum concentration, and number of data points used for pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus the maximum allowable headworks loadings contained in the approved local limits evaluation and effluent sampling results versus water quality standards. Such a comparison shall be based on the analytical results required in Parts I.A and I.C. of this permit and any additional sampling data available to the permittee; and

m. A completed Annual Pretreatment Report Summary Sheet.

8. Interjurisdictional Agreement

The DEM has no interjurisdictional agreements on file regarding the contribution of industrial wastewater to the Smithfield WWTF. Any such interjurisdictional agreements which may become necessary must be submitted to the DEM in draft form for approval prior to signature and execution.

9. Sewer Use Ordinance

The permittee has an approved Sewer Use Ordinance which shall continue to be implemented at all times.

D. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II of this permit and the following terms and conditions:

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Infiltration/Inflow

The permittee shall minimize infiltration/inflow to the sewer system. A summary report of all actions taken to minimize infiltration/inflow during the previous two years shall be submitted to RIDEM, Office of Water Resources, by the 15th day of January following the two-year period. The first report is due January 15, 2022.

3. Sewer System Overflows (SSOs)

The permittee shall report all SSOs, including SSOs that result in basement backups, to the DEM in accordance with the twenty-four-hour reporting requirements from Part II.(I)(5) of the permit.

4. Resiliency Planning

Within one year of the effective date of this permit, the permittee shall submit a Resiliency Plan and schedule of short and long-term actions that will be taken to maintain operation and protect key collection and treatment system assets. The plan shall be consistent with the DEM's Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure and include consideration of the findings of the 2017 DEM report Implications of Climate Change for

Rhode Island Wastewater Collection and Treatment Infrastructure. The Resiliency Plan shall include, but not be limited to: (i) an assessment of current and projected impacts from natural hazards on critical components within the collection and treatment systems, as well as on the systems themselves; (ii) a plan to adapt and protect vulnerable components and systems; (iii) an analysis that provides justification for selected adaptation methods. The analysis must consider component and system design life and sea-level rise projections. For the purposes of this Resiliency Plan, critical components are considered those necessary to ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit. The Resiliency Plan shall also consider impacts on the WWTF from neighboring facilities during high hazard events. This Plan shall be subject to DEM review and approval. If DEM determines that modifications need to be made to the Plan, DEM shall notify the permittee in writing which elements of the Plan need to be modified and the reason for the needed modification. This notification shall include a schedule for making the changes, after such notification from the DEM, the permittee shall make changes to the Plan and submit the revisions to the DEM for approval.

E. SLUDGE

The permittee shall conform and adhere to all conditions, practices and regulations as contained in the State of Rhode Island Rules and Regulations for Sewage Sludge Management (250-RICR-150-10-3). The permittee shall comply with its Order of Approval for the disposal of sludge.

F. DETECTION LIMITS

The permittee shall assure that all wastewater testing required by this permit, is performed in conformance with the method detection limits listed below, and the following terms and conditions:

1. All analyses of parameters under this permit must comply with the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting* rule. Only sufficiently sensitive test methods may be used for analyses of parameters under this permit. The permittee shall assure that all testing required by this permit is performed in accordance with 40 CFR Part 136, EPA approved analysis techniques, quality assurance procedures and quality control procedures shall be followed for all reports required to be submitted under the Rhode Island Pollutant Discharge Elimination System (RIPDES) program. These procedures are described in "Methods for the Determination of Metals in Environmental Samples" (EPA/600/4-91/010) and "Methods for Chemical Analysis of Water and Wastes" (EPA/600/4-79/020).

   If after conducting the complete Method of Standard Additions analysis, the laboratory is unable to determine a valid result, the laboratory shall report "could not be analyzed". Documentation supporting this claim shall be maintained onsite. If valid analytical results are repeatedly unobtainable, DEM may require that the permittee determine a method detection limit (MDL) for their effluent or sludge as outlined in 40 CFR Part 136, Appendix B.

2. When calculating sample averages for reporting on discharge monitoring reports (DMRs):

   a. "could not be analyzed" data shall be excluded and shall not be considered as a failure to comply with the permit sampling requirements.

   b. Results reported as less than the MDL shall be reported as zeros in accordance with the DEM's DMR Instructions.

   Therefore, all sample results shall be reported as: an actual value, "could not be analyzed", or zero. The effluent or sludge specific MDL must be calculated using the methods outlined in 40 CFR Part 136, Appendix B. Samples which have been diluted to ensure that the sample concentration will be within the linear dynamic range shall not be diluted to the extent that the analyte is not detected. If this should occur the analysis shall be repeated using a lower degree of dilution.

LIST OF TOXIC POLLUTANTS

The following list of toxic pollutants has been designated pursuant to Section 307(a)(1) of the Clean Water Act. The Method Detection Limits (MDLs) represent the required Rhode Island MDLs.

Volatiles - EPA Method 624.1		MDL µg/L (ppb)
1V	acrolein	10.0
2V	acrylonitrile	5.0
3V	benzene	1.0
5V	bromoform	1.0
6V	carbon tetrachloride	1.0
7V	chlorobenzene	1.0
8V	chlorodibromomethane	1.0
9V	chloroethane	1.0
10V	2-chloroethylvinyl ether	5.0
11V	chloroform	1.0
12V	dichlorobromomethane	1.0
14V	1,1-dichloroethane	1.0
15V	1,2-dichloroethane	1.0
16V	1,1-dichloroethylene	1.0
17V	1,2-dichloropropane	1.0
18V	1,3-dichloropropylene	1.0
19V	ethylbenzene	1.0
20V	methyl bromide	1.0
21V	methyl chloride	1.0
22V	methylene chloride	1.0
23V	1,1,2,2-tetrachloroethane	1.0
24V	tetrachloroethylene	1.0
25V	toluene	1.0
26V	1,2-trans-dichloroethylene	1.0
27V	1,1,1-trichloroethane	1.0
28V	1,1,2-trichloroethane	1.0
29V	trichloroethylene	1.0
31V	vinyl chloride	1.0

Acid Compounds - EPA Method 625.1		MDL µg/L (ppb)
1A	2-chlorophenol	1.0
2A	2,4-dichlorophenol	1.0
3A	2,4-dimethylphenol	1.0
4A	4,6-dinitro-o-cresol	1.0
5A	2,4-dinitrophenol	2.0
6A	2-nitrophenol	1.0
7A	4-nitrophenol	1.0
8A	p-chloro-m-cresol	2.0
9A	pentachlorophenol	1.0
10A	phenol	1.0
11A	2,4,6-trichlorophenol	1.0

Pesticides - EPA Method 608.3		MDL µg/L (ppb)
1P	aldrin	0.059
2P	alpha-BHC	0.058
3P	beta-BHC	0.043
4P	gamma-BHC	0.048
5P	delta-BHC	0.034
6P	chlordane	0.211
7P	4,4'-DDT	0.251
8P	4,4'-DDE	0.049
9P	4,4'-DDD	0.139
10P	dieldrin	0.082
11P	alpha-endosulfan	0.031
12P	beta-endosulfan	0.036
13P	endosulfan sulfate	0.109
14P	endrin	0.050
15P	endrin aldehyde	0.062
16P	heptachlor	0.029
17P	heptachlor epoxide	0.040

Pesticides - EPA Method 608.3		MDL µg/L (ppb)
18P	PCB-1242	0.289
19P	PCB-1254	0.298
20P	PCB-1221	0.723
21P	PCB-1232	0.387
22P	PCB-1248	0.283
23P	PCB-1260	0.222
24P	PCB-1016	0.494
25P	toxaphene	1.670

Base/Neutral - EPA Method 625.1		MDL µg/L (ppb)
1B	acenaphthene *	1.0
2B	acenaphthylene *	1.0
3B	anthracene *	1.0
4B	benzidine	4.0
5B	benzo(a)anthracene *	2.0
6B	benzo(a)pyrene *	2.0
7B	3,4-benzofluoranthene *	1.0
8B	benzo(ghi)perylene *	2.0
9B	benzo(k)fluoranthene *	2.0
10B	bis(2-chloroethoxy)methane	2.0
11B	bis(2-chloroethyl)ether	1.0
12B	bis(2-chloroisopropyl)ether	1.0
13B	bis(2-ethylhexyl)phthalate	1.0
14B	4-bromophenyl phenyl ether	1.0
15B	butylbenzyl phthalate	1.0
16B	2-chloronaphthalene	1.0
17B	4-chlorophenyl phenyl ether	1.0
18B	chrysene *	1.0
19B	dibenzo (a,h)anthracene *	2.0
20B	1,2-dichlorobenzene	1.0
21B	1,3-dichlorobenzene	1.0
22B	1,4-dichlorobenzene	1.0
23B	3,3'-dichlorobenzidine	2.0
24B	diethyl phthalate	1.0
25B	dimethyl phthalate	1.0
26B	di-n-butyl phthalate	1.0
27B	2,4-dinitrotoluene	2.0
28B	2,6-dinitrotoluene	2.0
29B	di-n-octyl phthalate	1.0
30B	1,2-diphenylhydrazine (as azobenzene)	1.0
31B	fluoranthene *	1.0
32B	fluorene *	1.0
33B	hexachlorobenzene	1.0
34B	hexachlorobutadiene	1.0
35B	hexachlorocyclopentadiene	2.0
36B	hexachloroethane	1.0
37B	indeno(1,2,3-cd)pyrene *	2.0
38B	isophorone	1.0
39B	naphthalene *	1.0
40B	nitrobenzene	1.0
41B	N-nitrosodimethylamine	1.0
42B	N-nitrosodi-n-propylamine	1.0
43B	N-nitrosodiphenylamine	1.0
44B	phenanthrene *	1.0
45B	pyrene *	1.0
46B	1,2,4-trichlorobenzene	1.0

OTHER TOXIC POLLUTANTS

	MDL µg/L (ppb)
Antimony, Total	3.0
Arsenic, Total	1.0
Beryllium, Total	0.2
Cadmium, Total	0.1
Chromium, Total	1.0
Chromium, Hexavalent	10.0
Copper, Total	1.0
Lead, Total	0.2
Mercury, Total	0.2
Nickel, Total	1.0
Selenium, Total	2.0
Silver, Total	0.5
Thallium, Total	1.0
Zinc, Total	5.0
Asbestos	**
Cyanide, Total	5.0
Phenols, Total	50.0
Aluminum, Total	20.0
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0

** No Rhode Island Department of Environmental Management (RIDEM) MDL

NOTE:

The MDL for a given analyte may vary with the type of sample. MDLs which are determined in reagent water may be lower than those determined in wastewater due to fewer matrix interferences. Wastewater is variable in composition and may therefore contain substances (interferents) that could affect MDLs for some analytes of interest. Variability in instrument performance can also lead to inconsistencies in determinations of MDLs.

To help verify the absence of matrix or chemical interference the analyst is required to complete specific quality control procedures. For the metals analyses listed above the analyst must withdraw from the sample two equal aliquots; to one aliquot add a known amount of analyte, and then dilute both to the same volume and analyze. The unspiked aliquot multiplied by the dilution factor should be compared to the original. Agreement of the results within 10% indicates the absence of interference. Comparison of the actual signal from the spiked aliquot to the expected response from the analyte in an aqueous standard should help confirm the finding from the dilution analysis. (Methods for Chemical Analysis of Water and Wastes EPA-600/4-79/020).

For Methods 624.1 and 625.1 the laboratory must on an ongoing basis, spike at least 5% of the samples from each sample site being monitored. For laboratories analyzing 1 to 20 samples per month, at least one spiked sample per month is required. The spike should be at the discharge permit limit or 1 to 5 times higher than the background concentration determined in Section 8.3.2, whichever concentration would be larger. (40 CFR Part 136 Appendix B Method 624.1 and 625.1 subparts 8.3.1 and 8.3.11).

G. MONITORING AND REPORTING

1. Monitoring

   All monitoring required by this permit shall be done in accordance with sampling and analytical testing procedures specified in Federal Regulations (40 CFR Part 136).

2. Submittal of DMRs Using NetDMR

   The permittee shall continue to submit its monthly monitoring data in Discharge Monitoring Reports (DMRs) to DEM 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 DEM.

3. Submittal of Reports as NetDMR Attachments - Unless otherwise specified in this permit, the permittee must submit electronic copies of documents in NetDMR that are directly related to the DMR. These include the following:

   - DMR Cover Letters
   - Below Detection Limit summary tables
   - Monthly Operating Reports
   - Priority Pollutant Scan results for Outfall 001
   - Bioassay testing (Part I.B.9)

4. Submittal of Reports in Hard Copy Form

   The following notifications and reports shall be submitted as hard copy with a cover letter describing the submission. These reports shall be signed and dated originals when submitted to DEM.

   - Written notifications required under Part II
   - Notice of unauthorized discharges, including Sanitary Sewer Overflow (SSO) reporting
   - Infiltration/Inflow Reports
   - Pretreatment Reports

   This information shall be submitted to DEM at the following address:

   Rhode Island Department of Environmental Management
   RIPDES Program
   235 Promenade Street
   Providence, Rhode Island 02908

5. Verbal Reports and Verbal Notifications

   Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to DEM. This includes verbal reports and notifications which require reporting within 24 hours. (See Part II(I)(5) General Requirements for 24-hour reporting). Verbal reports and verbal notifications shall be made to DEM at (401) 222-4700 or (401) 222-3070 at night.

PART II
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GENERAL REQUIREMENTS

DEFINITIONS

GENERAL REQUIREMENTS

(a) Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Chapter 46-12 of the Rhode Island General Laws and the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(1) The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307 or 308 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment of not more than 1 year, or both.

(3) Chapter 46-12 of the Rhode Island General Laws provides that any person who violates a permit condition is subject to a civil penalty of not more than $5,000 per day of such violation. Any person who willfully or negligently violates a permit condition is subject to a criminal penalty of not more than $10,000 per day of such violation and imprisonment for not more than 30 days, or both. Any person who knowingly makes any false statement in connection with the permit is subject to a criminal penalty of not more than $5,000 for each instance of violation or by imprisonment for not more than 30 days, or both.

(b) 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.)

(c) 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.

(d) Duty to Mitigate

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

(e) 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, and, where applicable, compliance with DEM "Rules and Regulations Pertaining to the Operation and Maintenance of Wastewater Treatment Facilities" and "Rules and Regulations Pertaining to the Disposal and Utilization of Wastewater Treatment Facility Sludge." This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

(f) Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause, including but not limited to: (1) Violation of any terms or conditions of this permit; (2) Obtaining this permit by misrepresentation or failure to disclose all relevant facts; or (3) A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge. 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.

(g) Property Rights

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

(h) 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.

(i) Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

(1) 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;

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

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

(4) Sample or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA or Rhode Island law.

(j) Monitoring and Records

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the discharge over the sampling and reporting period.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings from 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 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 and applicable Rhode Island regulations, unless other test procedures have been specified in this permit.

(5) 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 per violation or by imprisonment for not more than 6 months per violation or by both. Chapter 46-12 of the Rhode Island General Laws also provides that such acts are subject to a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(6) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(7) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, applicable State regulations, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(k) Signatory Requirement

All applications, reports, or information submitted to the Director shall be signed and certified in accordance with 250-RICR-150-10-1.12 of the Rhode Island Pollutant Discharge Elimination System (RIPDES) Regulations. Rhode Island General Laws, Chapter 46-12 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 noncompliance shall, upon conviction, be punished by a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(l) Reporting Requirements

(1) 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.

(2) 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 the permit requirements.

(3) Transfers. This permit is not transferable to any person except after written 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 State and Federal law.

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) Twenty-four hour reporting. The permittee shall immediately report any noncompliance which may endanger health or the environment by calling DEM at (401) 222-4700 or (401) 222-3070 at night.

A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission 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.

The following information must be reported immediately:

(i) Any unanticipated bypass which causes a violation of any effluent limitation in the permit; or

(ii) Any upset which causes a violation of any effluent limitation in the permit; or

(iii) Any violation of a maximum daily discharge limitation for any of the pollutants specifically listed by the Director in the permit.

The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(6) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1), (2), and (5), of this section, at the time monitoring reports are submitted. The reports shall contain the information required in paragraph (l)(5) of the section.

(7) 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, they shall promptly submit such facts or information.

(m) Bypass

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

(1) 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 (2) and (3) of this section.

(2) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in 250-RICR-150-10-1.14(R) of the RIPDES Regulations.

(3) Prohibition of bypass.

(i) 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, where "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) 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 backup 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 preventive maintenance; and

(C) The permittee submitted notices as required under paragraph (2) of this section.

(ii) 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 (3)(i) of this section.

(n) Upset

"Upset" means an exceptional incident in which there is 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.

(1) 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 (2) 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.

(2) 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:

(a) An upset occurred and that the permittee can identify the cause(s) of the upset;

(b) The permitted facility was at the time being properly operated;

(c) The permittee submitted notice of the upset as required in 250-RICR-150-10-1.14(R) of the RIPDES Regulations; and

(d) The permittee complied with any remedial measures required under 250-RICR-150-10-1.14(E) of the RIPDES Regulations.

(3) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(o) Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. Discharges which cause a violation of water quality standards are prohibited. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different or increased discharges of pollutants must be reported by submission of a new NPDES application at least 180 days prior to commencement of such discharges, or if such changes will not violate the effluent limitations specified in this permit, by notice, in writing, to the Director of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.

(p) Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner consistent with applicable Federal and State laws and regulations including, but not limited to the CWA and the Federal Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq., Rhode Island General Laws, Chapters 46-12, 23-19.1 and regulations promulgated thereunder.

(q) Power Failures

In order to maintain compliance with the effluent limitation and prohibitions of this permit, the permittee shall either:

> In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or if such alternative power source is not in existence, and no date for its implementation appears in Part I,

> Halt reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(r) Availability of Reports

Except for data determined to be confidential under paragraph (w) below, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the DEM, 235 Promenade Street, Providence, Rhode Island 02908. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA and under Section 46-12-14 of the Rhode Island General Laws.

(s) State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

(t) Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.

(u) Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

(v) Reopener Clause

The Director reserves the right to make appropriate revisions to this permit in order to incorporate any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA or State law. In accordance with 250-RICR-150-10-1.16 and 250-RICR-150-10-1.24 of the RIPDES Regulations, if any effluent standard or prohibition, or water quality standard is promulgated under the CWA or under State law which is more stringent than any limitation on the pollutant in the permit, or controls a pollutant not limited in the permit, then the Director may promptly reopen the permit and modify or revoke and reissue the permit to conform to the applicable standard.

(w) Confidentiality of Information

(1) Any information submitted to DEM 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, DEM may make the information available to the pubic without further notice.

(2) Claims of confidentiality for the following information will be denied:

(i) The name and address of any permit applicant or permittee;

(ii) Permit applications, permits and any attachments thereto; and

(iii) NPDES effluent data.

(x) Best Management Practices

The permittee shall adopt Best Management Practices (BMP) to control or abate the discharge of toxic pollutants and hazardous substances associated with or ancillary to the industrial manufacturing or treatment process and the Director may request the submission of a BMP plan where the Director determines that a permittee's practices may contribute significant amounts of such pollutants to waters of the State.

(y) Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, the permittee or any interested person may submit a request to the Director for an adjudicatory hearing to reconsider or contest that decision. The request for a hearing must conform to the requirements of 250-RICR-150-10-1.50 of the RIPDES Regulations.

DEFINITIONS

1. For purposes of this permit, those definitions contained in the RIPDES Regulations and the Rhode Island Pretreatment Regulations shall apply.

2. The following abbreviations, when used, are defined below.

cu. M/day or M^3/day	cubic meters per day
mg/l	milligrams per liter
ug/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. ^oC	temperature in degrees Centigrade
Temp. ^oF	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)
TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH_3-N	ammonia nitrogen as nitrogen
Total P	total phosphorus
COD	chemical oxygen demand
TOC	total organic carbon
Surfactant	surface-active agent
pH	a measure of the hydrogen ion concentration
PCB	polychlorinated biphenyl
CFS	cubic feet per second
MGD	million gallons per day
Oil & Grease	Freon extractable material
Total Coliform	total coliform bacteria
Fecal Coliform	total fecal coliform bacteria
ml/l	milliliter(s) per liter
NO_3-N	nitrate nitrogen as nitrogen
NO_2-N	nitrite nitrogen as nitrogen
NO_3-NO_2	combined nitrate and nitrite nitrogen as nitrogen
$C1_2$	total residual chlorine