

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 Narragansett
Narragansett Town Hall
25 Fifth Avenue
Narragansett, RI

is authorized to discharge from a facility located at the

Scarborough Wastewater Treatment Facility
990 Ocean Road
Narragansett, Rhode Island

to receiving waters named

Rhode Island Sound

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

This permit shall become effective on _____, 201_.

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 30, 2011.

This permit consists of 16 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this _____ day of _____, 201_.

DRAFT

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A. (final discharge after dechlorination)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units			Measurement Frequency	Sample Type
Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)			
Flow	1.4 MGD	---MGD				Continuous	Recorder
BOD ₅	350 lbs/day	584 lbs/day	30 mg/l	45 mg/l	50 mg/l	3/Week	24-Hr. Comp.
BOD ₅ - % Removal			85%			1/Month	Calculated
TSS	350 lbs/day	584 lbs/day	30 mg/l	45 mg/l	50 mg/l	3/Week	24-Hr. Comp.
TSS - % Removal			85%			1/Month	Calculated
Settleable Solids				--- ml/l	--- ml/l	1/Day	Grab

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

Sampling for TSS and BOD₅ shall be performed Sunday, Tuesday, and Thursday. All BOD₅ and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

Sampling for Flow and Settleable Solids 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)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A. (final discharge after dechlorination)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>					<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>		<u>Concentration - specify units</u>			<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *(<u>Minimum</u>)	<u>Average Weekly</u> *(<u>Average</u>)	<u>Maximum Daily</u> *(<u>Maximum</u>)		
Enterococci			35 cfu ¹ 100 ml		276 cfu ¹ 100 ml	3/Week	Grab
Fecal Coliform			--- MPN ¹ 100 ml		--- MPN ¹ 100 ml	3/Week	Grab
Total Residual Chlorine (TRC)			325 ug/l ²		325 ug/l ²	Daily	Grab ²
pH			(6.0 SU)		(9.0 SU)	2/Day	Grab

¹Two (2) of the three (3) Enterococci samples are to be taken on Tuesday and Thursday. The Fecal Coliform samples shall be taken at the same time as the Enterococci samples. The Geometric Mean shall be used to obtain the "weekly average" and the "monthly average." The facility shall report any fecal coliform sample result that exceeds 400 mpn/100 ml to the RIDEM in accordance with the 24-hour reporting requirements under Part II(I)(5) of the permit.

²The 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 three grab samples of the final effluent (after dechlorination) over an eight hour shift, Monday - Friday (except holidays), equally spaced with a minimum of three 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) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-CI G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18th Edition) No. 4500-CI F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18th Edition) No. 4500-CI D or ASTM No. D1253-86(92).

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

Sampling for pH and Chlorine Residual 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)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A. (final discharge after dechlorination)

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units			Measurement Frequency	Sample Type
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)		
Copper, Total ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.
Cyanide ¹			--- ug/l		--- ug/l	1/Quarter	Composite ²
Cadmium, Total ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.
Chromium, Hexavalent ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.
Lead, Total ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.
Zinc, Total ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.
Nickel, Total ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.
Aluminum, Total ¹			--- ug/l		--- ug/l	1/Quarter	24-Hr. Comp.

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

¹Monitoring data may be obtained in conjunction with bioassay testing.

²Three (3) grab samples shall be equally spaced over one (1) eight (8) hour shift, with a minimum of three (3) hours between grabs. All three (3) samples shall be composited then analyzed for available Cyanide.

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A. (final discharge after dechlorination)

Such discharges shall be monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirement</u>			
	Quantity - lbs. per day		Concentration - specify units			<u>Measurement Frequency</u>	<u>Sample Type</u>
<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>			
Oil and Grease					--- mg/l	1/Month	3 Grabs ¹
TKN (May 1-October 31)					--- mg/l	1/Month	24-Hr. Comp.
Nitrate, Total (as N) (May 1-October 31)					--- mg/l	1/Month	24-Hr. Comp.
Nitrite, Total (as N) (May 1-October 31)					--- mg/l	1/Month	24-Hr. Comp.
Nitrogen, Total (TKN+Nitrate+Nitrite, as N) (May 1-October 31)					--- mg/l	1/Month	Calculated

¹Three (3) grab samples shall be equally spaced over the course of an eight (8) hour shift with a minimum of three (3) hours between samples. Each grab sample must be analyzed individually and the maximum values reported.

--- 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 Monday through Friday at the following location: Outfall 001A. (final discharge after dechlorination)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A. (final discharge after dechlorination)

Such discharges shall be monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirement</u>			
	Quantity - lbs. per day		Concentration - specify units			<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>		
LC ₅₀ ¹ (Mysids)					100% or Greater ²	1/Quarter	24-Hr. Comp.

¹LC₅₀ is defined as the concentration of wastewater that causes mortality to 50% of the test organisms.

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

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

6. a. The pH of the effluent shall not be less than 6.0 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 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.
- f. The permittee shall analyze its effluent annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. These priority pollutant scans shall be coordinated with the 3rd quarter bioassay sample and the results of these analyses shall be submitted to the Department of Environmental Management 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.
- g. 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) acute toxicity tests per year on samples collected from discharge outfall 001A the final discharge after dechlorination. 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. Acute data shall be reported as outlined in Part I.B.9. 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

On four (4) sampling events, (one (1) each calendar quarter) the permittee will conduct forty-eight (48) hour acute definitive toxicity tests on the species listed below, for a total of four (4)

acute toxicity tests per year. This requirement entails performing one (1) species testing as follows:

<u>Species</u>	<u>Test Type</u>	<u>Frequency</u>
	One (1) Specie Test (Four (4) Times Annually)	
Mysids (<u>Mysidopsis bahia</u>)	Definitive 48-Hour Acute Static (LC ₅₀)	Quarterly

3. Testing Methods

Acute definitive toxicity tests shall be conducted in accordance with protocols listed in 40 CFR Part 136.

4. Sample Collection

For each sampling event a twenty-four (24) hour flow proportioned composite final effluent (i.e., after dechlorination) sample shall be collected during a dry weather (no rain forty-eight (48) hours prior to or during sampling unless approved by RIDEM). This sample shall be kept cool (at 4°C) and testing shall begin within twenty-four (24) hours after the last sample of the composite is collected. In the laboratory, the sample will be split into two (2) subsamples, after thorough mixing, for the following:

- A: Chemical Analysis
- B: Acute Toxicity Testing

All samples held overnight shall be refrigerated at 4°C. Grab samples must be used for pH and temperature.

5. Salinity Adjustment

Prior to the initiation of testing, the effluent must be adjusted to make the salinity of the effluent equal to that of the marine dilution water. The test solution must be prepared by adding non-toxic dried ocean salts to a sufficient quantity of 100% effluent to raise the salinity to the desired level. After the addition of the dried salts, stir gently for thirty (30) to sixty (60) minutes, preferably with a magnetic stirrer, to ensure that the salts are in solution. It is important to check the final salinity with a refractometer or salinometer. Salinity adjustments following this procedure and in accordance with EPA protocol will ensure that the concentrations (% effluent) of each dilution are real and allow for an accurate evaluation with the acute permit limit and acute monitoring requirements.

6. Dilution Water

Dilution water used for marine acute toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (See Part I.B.7). Natural seawater shall be used as the dilution water. This water shall be collected from Narragansett Bay off the dock at the URI's Graduate School of Oceanography on South Ferry Road, Narragansett. It is noted that the University claims no responsibility for the personal safety on this dock. The permittee shall observe the rules posted at the dock. If this natural seawater diluent is found to be, or suspected to be toxic or unreliable, an alternate source of natural seawater or, deionized water mixed with hypersaline brine or artificial sea salts of known quality with a salinity and pH similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM RIDEM.

7. Effluent Toxicity Test Conditions for Mysids (Mysidopsis bahia)
- a. Test Type 48-Hour Static Acute Definitive
 - b. Salinity 25 ppt \pm 10% for all dilutions
 - c. Temperature (C) 25° \pm 1°C
 - d. Light Quality Ambient laboratory illumination
 - e. Photoperiod 8 - 16 Hour Light/24-Hour
 - f. Test Chamber Size 250 ml
 - g. Test Solution Volume 200 ml
 - h. Age of Test Organisms 1 - 5 Days
 - i. No. Mysids Per Test Chamber 10
 - j. No. of Replicate Test Chamber Per Concentration 2
 - k. Total No. Mysids Per Test Concentration 20
 - l. Feeding Regime Light feeding (two (2) drops concentrated brine shrimp nauplii, approx. 100 nauplii per mysid twice daily).
 - m. Aeration None, unless dissolved oxygen concentration falls below 40% of saturation at which time gentle single-bubble aeration should be started.
 - n. Dilution Water Narragansett Bay water as discussed above.
 - o. Dilutions Five (5) dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25% and 0% effluent.
 - p. Effect Measured and Test Mortality - no movement of body test duration or appendages on gentle prodding, 48-hour LC₅₀ and NOAEL.
 - q. Test Acceptability 90% or greater survival of test organisms in control solution.
 - r. Sampling Requirements Samples are collected and used within 24 hours after the last sample of the composite is collected.
 - s. Sample Volume Required Minimum four (4) liters
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8. Chemical Analysis

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

<u>Parameter</u>	<u>Effluent</u>	<u>Saline Diluent</u>	<u>Detection Limit (mg/l)</u>
pH	X	X	---
Specific Conductance	X	X	---
Total Solids and Suspended Solids	X	X	---
Total Ammonia	X		0.1
Total Organic Carbon	X		0.5
Available Cyanide	X	0.01	
Total Phenols	X		0.05
Salinity	X	X	PPT (0/00)

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

<u>Total Metals</u>	<u>Effluent</u>	<u>Saline Diluent</u>	<u>Detection Limit (ug/l)</u>
Total Cadmium	X	X	0.1 ug/L
Hexavalent Chromium	X	X	20.0 ug/L
Total Copper	X	X	1.0 ug/L
Total Lead	X	X	1.0 ug/L
Total Zinc	X	X	5.0 ug/L
Total Nickel	X	X	1.0 ug/L
Total Aluminum	X	X	5.0 ug/L

The above analyses may be used to fulfill, in part or in whole, 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 and may be coordinated with other permit conditions to fulfill any priority pollutant scan requirements.

9. 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.

- The method used to adjust the salinity of the effluent must be reported.
- All chemical and physical data generated (include detection limits).
- Raw data and bench sheets.
- Any other observations or test conditions affecting test outcome.

Toxicity test data shall include the following:

- Survival for each concentration and replication at time twenty-four (24) and forty-eight (48) hours.
- LC₅₀ and 95% confidence limits shall be calculated using one of the following methods in order of preference: Probit, Trimmed Spearman Karber, Moving Average Angle, or the graphical method. All printouts (along with the name of the program, the date, and the author(s)) and graphical displays must be submitted. When data is analyzed by hand, worksheets should be submitted. The report shall also include the No Observed Acute Effect Level (NOAEL), which is defined as the highest concentration of the effluent (in % effluent) in which 90% or more of the test animals survive.
- 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 (percent 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), an LC₅₀ may be estimated using the graphical method.

10. Special Condition

Due to the fact that the suggested dilution water for this facility to use in conducting the bioassays is from the end of the dock at the URI's Narragansett Bay Campus, a Letter of Agreement must be signed and submitted to the Graduate School of Oceanography. Requests to use another source of dilution water will have to be approved by the Department of Environmental Management, Office of Water Resources.

11. Reporting of Bioassay Testing

Bioassay Testing shall be conducted as follows:

<u>Quarter Testing To be Performed</u>	<u>Report Due No Later Than</u>	<u>Results Submitted on DMR for</u>
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

Reports shall be maintained by the permittee and shall be made available upon request by RIDEM.

C. 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 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 (2) years shall be submitted to RIDEM, Office of Water Resources, by the 15th day of January every other year. The first report is due January 15, 2018.

D. 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 the Treatment, Disposal, Utilization and Transportation of Sewage Sludge. The permittee shall comply with its RIDEM Order of Approval for the disposal of sludge.

E. 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. All sludge testing required by this permit shall be in conformance with the method detection limits found in 40 CFR 503.8. 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 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).

The report entitled "Methods for the Determination of Metals in Environmental Samples" includes a test which must be performed in order to determine if matrix interferences are present, and a series of tests to enable reporting of sample results when interferences are identified. Each step of the series of tests becomes increasingly complex, concluding with the complete Method of Standard Additions analysis. The analysis need not continue once a result which meets the applicable quality control requirements has been obtained. Documentation of all steps conducted to identify and account for matrix interferences shall be submitted along with the monitoring reports.

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 submitted along with the monitoring report. 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.

Therefore, all sample results shall be reported as: an actual value, "could not be analyzed", less than the reagent water MDL, or less than an effluent or sludge specific MDL. 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.

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

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;
2. results reported as less than the MDL shall be included as zeros.

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		MDLug/l (ppb)	Base/Neutral - EPA Method 625		MDL ug/l (ppb)
1V	acrolein	10.0	1B	acenaphthene *	1.0
2V	acrylonitrile	5.0	2B	acenaphthylene *	1.0
3V	benzene	1.0	3B	anthracene *	1.0
5V	bromoform	1.0	4B	benzidine	4.0
6V	carbon tetrachloride	1.0	5B	benzo(a)anthracene *	2.0
7V	chlorobenzene	1.0	6B	benzo(a)pyrene *	2.0
8V	chlorodibromomethane	1.0	7B	3,4-benzofluoranthene *	1.0
9V	chloroethane	1.0	8B	benzo(ghi)perylene *	2.0
10V	2-chloroethylvinyl ether	5.0	9B	benzo(k)fluoranthene *	2.0
11V	chloroform	1.0	10B	bis(2-chloroethoxy)methane	2.0
12V	dichlorobromomethane	1.0	11B	bis(2-chloroethyl)ether	1.0
14V	1,1-dichloroethane	1.0	12B	bis(2-chloroisopropyl)ether	1.0
15V	1,2-dichloroethane	1.0	13B	bis(2-ethylhexyl)phthalate	1.0
16V	1,1-dichloroethylene	1.0	14B	4-bromophenyl phenyl ether	1.0
17V	1,2-dichloropropane	1.0	15B	butylbenzyl phthalate	1.0
18V	1,3-dichloropropylene	1.0	16B	2-chloronaphthalene	1.0
19V	ethylbenzene	1.0	17B	4-chlorophenyl phenyl ether	1.0
20V	methyl bromide	1.0	18B	chrysene *	1.0
21V	methyl chloride	1.0	19B	dibenzo (a,h)anthracene *	2.0
22V	methylene chloride	1.0	20B	1,2-dichlorobenzene	1.0
23V	1,1,2,2-tetrachloroethane	1.0	21B	1,3-dichlorobenzene	1.0
24V	tetrachloroethylene	1.0	22B	1,4-dichlorobenzene	1.0
25V	toluene	1.0	23B	3,3'-dichlorobenzidine	2.0
26V	1,2-trans-dichloroethylene	1.0	24B	diethyl phthalate	1.0
27V	1,1,1-trichloroethane	1.0	25B	dimethyl phthalate	1.0
28V	1,1,2-trichloroethane	1.0	26B	di-n-butyl phthalate	1.0
29V	trichloroethylene	1.0	27B	2,4-dinitrotoluene	2.0
31V	vinyl chloride	1.0	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
Acid Compounds - EPA Method 625		MDL ug/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		MDL ug/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	chlordan	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			
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			

OTHER TOXIC POLLUTANTS

	MDL ug/l (ppb)
Antimony, Total	3.0
Arsenic, Total	1.0
Beryllium, Total	0.2
Cadmium, Total	0.1
Chromium, Total	1.0
Chromium, Hexavalent***	20.0
Copper, Total	1.0
Lead, Total	1.0
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	10.0
Phenols, Total***	50.0
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0
Aluminum, Total	5.0

* Polynuclear Aromatic Hydrocarbons

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

*** Not a priority pollutant

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 and 625 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 and 625 subparts 8.3.1 and 8.3.11).

F. MONITORING AND REPORTING

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

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

1. Submittal of DMRs 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.

2. 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

All other reports (i.e. I/I reports, Priority Pollutant Scans, etc.) should be submitted to DEM hard copy via regular US mail (see Part I.F.3 below).

3. 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 submitted to DEM.

- A. Written notifications required under Part II
- B. Notice of unauthorized discharges, including Sanitary Sewer Overflow (SSO) reporting
- C. Priority Pollutant Scan results
- D. Infiltration/Inflow 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

4. 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 the 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.

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 PROMENADE STREET
PROVIDENCE, RHODE ISLAND 02908-5767

FACT SHEET

RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO DISCHARGE TO WATERS OF THE STATE

RIPDES PERMIT NO. **R10100188**

NAME AND ADDRESS OF APPLICANT:

Town of Narragansett
Narragansett Town Hall
25 Fifth Avenue
Narragansett, Rhode Island 02882

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Scarborough Wastewater Treatment Facility
990 Ocean Road
Narragansett, Rhode Island 02882

RECEIVING WATER: **Rhode Island Sound** (water body ID #: RI0010042E-02A)

CLASSIFICATION: **SB1**

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has applied to the Rhode Island Department of Environmental Management for renewal of a RIPDES Permit to discharge into the designated receiving water. The facility is engaged in the treatment of domestic, commercial, and industrial sewage. The discharge is from the Scarborough Wastewater Treatment Facility at outfall 001A.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from July 2011 through June 2016 is shown on Attachment A-1.

III. Permit Limitations and Conditions

The final effluent limitations and monitoring requirements may be found in the draft permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

The Town of Narragansett owns and operates the Scarborough Wastewater Treatment Facility (WWTF) located on Ocean Road in Narragansett, Rhode Island. The discharge to Rhode Island Sound consists of treated sanitary sewage. A facility process diagram is included as Attachment A-2, headworks diagrams are included in Attachment A-3, and a diffuser schematic is included in Attachment A-4.

Scarborough's most recent RIPDES permit, authorizing discharges from the above-mentioned facility, was issued on September 30, 2011. The permit became effective on November 1, 2011 and expired on November 1, 2016. Scarborough submitted an application for permit reissuance to the DEM on March 14, 2016, and updated that submittal on May 2, 2016. On June 2, 2016 the DEM issued an application complete letter to Scarborough. In accordance with Rule 13(a) of the Regulations for the Rhode Island Pollutant Discharge Elimination System, Scarborough's September 30, 2011 permit remains in effect

since the DEM has determined that a timely and complete permit application was submitted. Once this permit is reissued, it will supersede the September 30, 2011 permit.

Treatment consists of Coarse Screening, Fine Screening, Aerated Grit Removal, Grit Removal via Screw Conveyer, Extended Aeration, Secondary Settling, Chlorination, and Dechlorination.

Receiving Water Description

The water body segment in the Rhode Island Sound that receives the discharge from the Scarborough WWTF is described as coastal waters in the vicinity of Scarborough within 500 feet of the Narragansett-Scarborough WWTF outfall located approximately 2000 feet from a point of land at the northern boundary of Fort Nathaniel Greene. The waterbody identification for this water body is RI0010042E-02A. This segment is located in Narragansett and is classified as a class SB1 water body according to the Rhode Island Water Quality Regulations. SB1 waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class SB criteria must be met.

Permit Development

The requirements set forth in this permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System (RIPDES), both filed pursuant to Chapter 46-12, as amended. RIDEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

WWTF Conventional Pollutant Permit Limitations

Flow Limits

The basis for the facility's flow limit of 1.4 MGD is the facility's Facilities Plan dated October 11, 2007.

BOD₅, TSS, Settleable Solids, and pH

The "Average Monthly" and "Average Weekly" biochemical oxygen demand (BOD₅) and total suspended solids (TSS) limits, and the pH limitations are based upon the secondary treatment requirements in Section 301(b)(1)(B) of the Clean Water Act (CWA), as defined in 40 CFR 133.102 (a)-(c). "Maximum Daily" BOD₅ and TSS limits are based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Rule 17.04(b) of the RIPDES Regulations and as provided in 40 CFR 123.25. The "Percent Removal" requirements for BOD₅ and TSS are consistent with the requirement from 40 CFR 133.103. Settleable Solids monitoring has been included as a process control parameter that can aid in the assessment of the operation of the plant but need not have an effluent limit.

Oil and Grease

Oil & Grease monitoring has been included to ensure that the collection system will not experience blockages due to excessive levels of grease and to ensure that the WWTF will not experience inhibition.

Bacteria

Table 2.8.D(3) of the Rhode Island Water Quality Regulations include Enterococci criteria for primary contact/swimming of a geometric mean of 35 colonies/100 ml and a single sample maximum of 104 colonies/100 ml. However, the "single sample maximum" value is only used by the Rhode Island Department of Health to evaluate beach swimming advisories. EPA's November 12, 2008 memorandum regarding "Initial Zones of Dilution for Bacteria in Rivers and Streams Designated for Primary Contact Recreation" clarifies that it is not appropriate to use dilution for bacteria criteria in receiving waters that are designated for primary contact recreation. Therefore, because the receiving water is designated for primary contact recreation, the DEM has assigned a monthly average Enterococci limit of 35 colonies/100 ml. This limit is consistent with the water quality criteria from Table 2.8.D(3) of the Rhode Island Water Quality Regulations. The daily maximum enterococci limit has been set at the 90% upper confidence level value for "lightly used full body contact recreation" of 276

colonies/100 ml. The DEM has also assigned Fecal Coliform monitoring to ensure that the discharge from the WWTF will not have an impact on any areas designated for shellfish harvesting outside of the immediate vicinity of the outfall.

WWTF Toxic Pollutant Limits

The allowable effluent limitations were established on the basis of acute and chronic aquatic life criteria and human health criteria using the following: available instream dilution; an allocation factor; and background concentrations when available and/or appropriate. The aquatic life and human health criteria are specified in the Rhode Island Water Quality Regulations. Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The more stringent of the two criteria was then used in establishing allowable effluent limitations. Details concerning the calculation of potential permit limitations, selection of factors, which influence their calculation, and the selection of final permit limitations are included below or in the attached documents. The Town's previous permit contained water quality-based limits.

Mixing Zones and Dilution Factors

In order to evaluate the need for water quality based limits, it is necessary to determine the mixing which occurs in the immediate vicinity of the wastewater discharge (initial dilution). The Scarborough WWTF's effluent is discharged through a twenty-two (22) inch pipe which is approximately 2,000 feet offshore and is fitted with a diffuser. The diffuser pipe diameter ranges from twenty (20) inches to sixteen (16) inches and consists of three (3) twelve (12) inch diameter ports, each of which is 4.5 feet above the ocean bottom. A diagram of the pipe diffuser is included in Attachment A-4 of the permit. As outlined in the fact sheet of Scarborough WWTF's September 30, 1994 permit, the DEM defined acute and chronic mixing zones in accordance with RI Water Quality Regulations and guidance provided by the U.S. EPA publication entitled "Technical Support Document for Water Quality-Based Toxics Control (1991)." The procedure used was to limit the acute mixing zone to a small area where rapid mixing occurs, and the chronic mixing zone to a larger area where ocean currents and diffusion provide additional mixing. Using the results of the EPA mixing zone guidance, the acute zone is defined as a circular region centered at the outfall with a radius of approximately 13.5 meters or 44 feet. The chronic zone is also circular, centered at diffuser midpoint, and has a radius of approximately 135 meters or 443 feet. In order to determine dilution factors for both mixing zones, the EPA computer model, CORMIX2, was applied.

As also discussed in the fact sheet of the December 27, 2005 permit, Rule 17 of the RIPDES Regulations requires the use of the design flow when establishing limits for POTWs. Based upon the design flow of 1.4 MGD (as noted in Order of Approval No. 436), the mean low water depth at the discharge pipe of twenty (20) feet, and a conservative estimate of ambient current velocity (0.16 feet per second), an acute dilution of 25:1 and a chronic dilution of 45:1 were determined using CORMIX2. The Scarborough WWTF mixing zone is presented in Attachment A-5, and an aerial photograph of the mixing zone is presented in Attachment A-6.

Using the above-mentioned dilution factors the allowable discharge limits were calculated as follows:

- a) Background concentration unknown or available data is impacted by sources that have not yet achieved water quality based limits.

$$Limit_1 = (DF) * (Criteria) * (80\%)$$

Where: DF = acute or chronic dilution factor, as appropriate

- b) Using available background concentration data.

$$Limit_1 = (DF) * (Criteria) * 90\% - (Background) * (DF - 1)$$

Where: DF = acute or chronic dilution factor, as appropriate

Since specific background data was not available for this discharge, the DEM used the equation in part (a) above to calculate water quality-based limits. Reference Attachment A-7 for calculations of allowable limits based on Aquatic Life and Human Health Criteria.

The formulas and data noted above were applied with the following exceptions

- A) Pollutants that based on the acute and chronic dilution factors, have a higher allowable chronic limit than allowable acute limit. For this situation, both the "Monthly Average" and "Daily Maximum" limits were set at the allowable acute limit.
- B) Total residual chlorine. The limits for total residual chlorine (TRC) were established in accordance with the RIDEM Effluent Disinfection Policy. The "Monthly Average" and "Daily Maximum" were based on a 100% allocation, a zero background concentration, and the appropriate dilution factor(s). The 100% allocation factor for TRC was used due to the non-conservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration.
- C) Pollutants with water quality based monthly average limits in the previous RIPDES permit. The relaxation of monthly average limits from the previous permit was restricted in accordance with the antibacksliding provisions of the Clean Water Act and the Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations. None of the permit limits calculated in Attachment A-7 were less stringent than limits from the previous permit, therefore the limits in Attachment A-7 comply with the antidegradation provisions of the Rhode Island Water Quality Regulations.

Based on the above dilution factors and the saltwater aquatic life and non-class A human health criteria from the Rhode Island Water Quality Regulations allowable discharge concentrations were established using 80% allocation since no background data was available.

Attachment A-8 contains a summary of Discharge Monitoring Report data for the past five (5) years, and Attachment A-9 contains a summary of pollutants detected by the User Fee Program and Priority Pollutant Scan data for the past five (5) years. Attachment A-10 is a summary comparison of the allowable limits vs. the DMR and State User Fee Program and Priority Pollutant Scan data.

Reasonable Potential

In accordance with 40 CFR 122.4(d)(1)(iii), it is only necessary to establish limitations for those pollutants in the discharge which have "reasonable potential" to cause or contribute to the exceedance of instream criteria. In order to evaluate the need for permit limits, the most stringent calculated acute and chronic permit limits were compared to the mean of the daily maximum and monthly average Discharge Monitoring Report (DMR) data and the maximum and mean of the concentrations reported in the WWTF's annual Priority Pollutant Scans and State User Fee Program data. Based on this analysis, it was determined that no pollutants have "reasonable potential" except for Chlorine, 4,4 DDE, and 4,4 DDT. User Fee Program testing in 2011 indicated trace detections of 4,4DDE and 4,4DDT. However, after further review, DEM determined that there is no reasonable potential for the exceedance of 4,4DDE and 4,4DDT due to these detections being at the Method Detection Limits (MDLs) for those parameters, and due to 4,4DDE and 4,4DDT not being detected in Priority Pollutant Scan testing since the User Fee Program detections of these parameters took place in 2011. Therefore, no permit limits have been implemented for 4,4DDE and 4,4DDT. Although these pollutants do not have "reasonable potential", monitoring for Total Copper, Cyanide, Total Cadmium, Hexavalent Chromium, Total Lead, Total Zinc, Total Nickel, and Total Aluminum has been maintained in the permit as part of the quarterly toxicity testing requirements.

Nutrients

Nutrient criteria have not been established for the receiving water. Seasonal (May through October) testing requirements for TKN, Nitrate, and Nitrite have been maintained to determine nutrient loadings to the receiving water, and are consistent with the Department's policy requiring all facilities to perform baseline nutrient monitoring. This information will aid the Department in the determination of the necessity for future nutrient removal from the treatment plant effluent.

Bioassay Testing

RIDEM's toxicity permitting policy is based on past toxicity data and the level of available dilution. Evaluation of the data collected for biotoxicity during the period of the Second (3rd) Quarter 2011 through the second (2nd) Quarter 2016 revealed that the final effluent samples have demonstrated acceptable toxicity values for the *Mysid* (shrimp) tests. RIDEM's toxicity permitting policy requires that acute toxicity be evaluated for effluents with dilutions between 20:1 – 100:1. The permit requires that acute toxicity tests be conducted once per quarter on Mysids. The permit contains an acute LC₅₀ ≥ 100% effluent limit which shall assure control of the toxicity in the effluent. If recurrent toxicity is demonstrated, then toxicity identification and reduction will be required.

Other Limits and Conditions

The permit contains requirements for the permittee to comply with the State's Sludge Regulations and RIDEM's Order of Approval for sludge disposal in accordance with the requirements of Section 405(d) of the Clean Water Act (CWA). Permits must contain sludge conditions requiring compliance with limits, state laws, and applicable regulations as per Section 405(d) of the CWA and 40 CFR 503. The RIDEM Sludge Order of Approval sets forth the conditions to ensure this compliance.

The Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy.

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits.

Final Permit Limits

Table 1

Presented in the following Table is a summary of the permit limitations for outfall 001A set forth in the Final Permit.

Parameter	Monthly (Minimum)	Average	Weekly Average	Daily (Maximum)	Maximum
Flow	1.4 MGD			--- MGD	
BOD ₅	350 lbs/day			584 lbs/day	
BOD ₅	30 mg/l		45 mg/l	50 mg/l	
BOD - % removal	85%				
TSS	350 lbs/day			584 lbs/day	
TSS	30 mg/l		45 mg/l	50 mg/l	
TSS - % removal	85%				
Settleable Solids			--- ml/l	--- ml/l	
Enterococci	35 cfu/100 ml			276 cfu/100 ml	
Fecal Coliform	--- MPN/100 ml			--- MPN/100 ml	
Total Residual Chlorine (TRC)	325 ug/l			325 ug/l	
pH	(6.0 SU)			(9.0 SU)	

Total Copper	---	ug/l	---	ug/l
Cyanide	---	ug/l	---	ug/l
Total Cadmium	---	ug/l	---	ug/l
Hexavalent Chromium	---	ug/l	---	ug/l
Total Lead	---	ug/l	---	ug/l
Total Zinc	---	ug/l	---	ug/l
Total Nickel	---	ug/l	---	ug/l
Total Aluminum	---	ug/l	---	ug/l
Oil and Grease			---	mg/l
TKN [May 1-October 31]			---	mg/l
Nitrate, Total (as N) [May 1-October 31]			---	mg/l
Nitrite, Total (as N) [May 1-October 31]			---	mg/l
Nitrogen, Total (TKN+Nitrate+Nitrite, as N) [May 1-October 31]			---	mg/l
LC ₅₀ (Mysids)			≥	100%

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

V. **Comment Period, Hearing Requests, and Procedures for Final Decisions**

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. A public hearing will be held after a thirty (30) day public notice. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

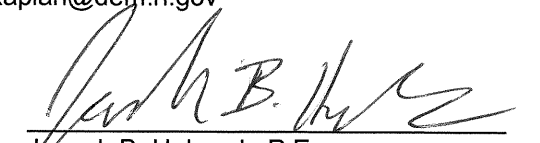
Following the close of the comment period, and after the public hearing, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments, provided oral testimony, or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (16 July 1984).

VI. **DEM Contact**

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding holidays from:

Samuel Kaplan, P.E.
RIPDES Program
Office of Water Resources
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700, ext. 7046
email: samuel.kaplan@dem.ri.gov

5/19/17
Date


Joseph B. Haberek, P.E.
Principal Sanitary Engineer
Office of Water Resources
Department of Environmental Management

ATTACHMENT A-1 – EFFLUENT DATA

DESCRIPTION OF DISCHARGE: Secondary treated domestic and industrial wastewater.
 DISCHARGE: 001A - Secondary Treatment Discharge

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	AVERAGE ¹	WEEKLY ²	MAXIMUM ³
FLOW (MGD) MGD	0.59 MGD		1.13 MGD
BOD ₅ (PPM)	6.04 mg/l	7.76 mg/l	10.41 mg/l
BOD ₅ (LBS)	28.74 lb/d		56.71 lb/d
TSS (PPM)	8.04 mg/l	9.95 mg/l	13.76 mg/l
TSS (LBS)	38.49 lb/d		75.57 lb/d
Fecal Coliform ml	3.13 MPN/100 ml		20.74 MPN/100
Enterococci ml	2.99 CFU/100 ml		50.36 CFU/100
pH S.U.(maximum)	6.53 S.U.(minimum)		7.59
Chlorine Residual	7.78 ug/l		26.6 ug/l
Oil & Grease			3.32 mg/l
Nitrite, Total (as N)			1.61 mg/l
Nitrate, Total (as N)			10.09 mg/l
TKN			9.38 mg/l
Nitrogen, Total (TKN+Nitrate+Nitrite, as N)			18.50 mg/l
Settleable Solids		0.3827 mL/L	0.466 ml/l
Aluminum, Total	17.36 ug/l		17.36 ug/l
Cadmium, Total	1.09 ug/l		1.09 ug/l
Chromium, Total	1.99 ug/l		1.99 ug/l
Copper, Total	11.13 ug/l		11.13 ug/l
Cyanide, Total	4.36 ug/l		4.36 ug/l
Lead, Total	4.64 ug/l		4.64 ug/l
Nickel, Total	1.94 ug/l		1.94 ug/l
Zinc, Total	32.01 ug/l		32.01 ug/l

¹Data represents the mean of the monthly average data from July 2011 – June 2016.

²Data represents the mean of the weekly average date from July 2016-June 2016.

³Data represents the mean of the daily maximum data from July 2011 – June 2016.

Final Effluent
 Mysid
 Biototoxicity Data LC₅₀ Values (in percent effluent)

2014 3rd qtr. 100	4th qtr. 100	2015 1st qtr. 100	2nd qtr. 100	3rd qtr. 100	4th qtr. 100	2016 1st qtr. 100	2nd qtr. 100
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ATTACHMENT A-2 – SCARBOROUGH WWTF FACILITY PROCESS DIAGRAM

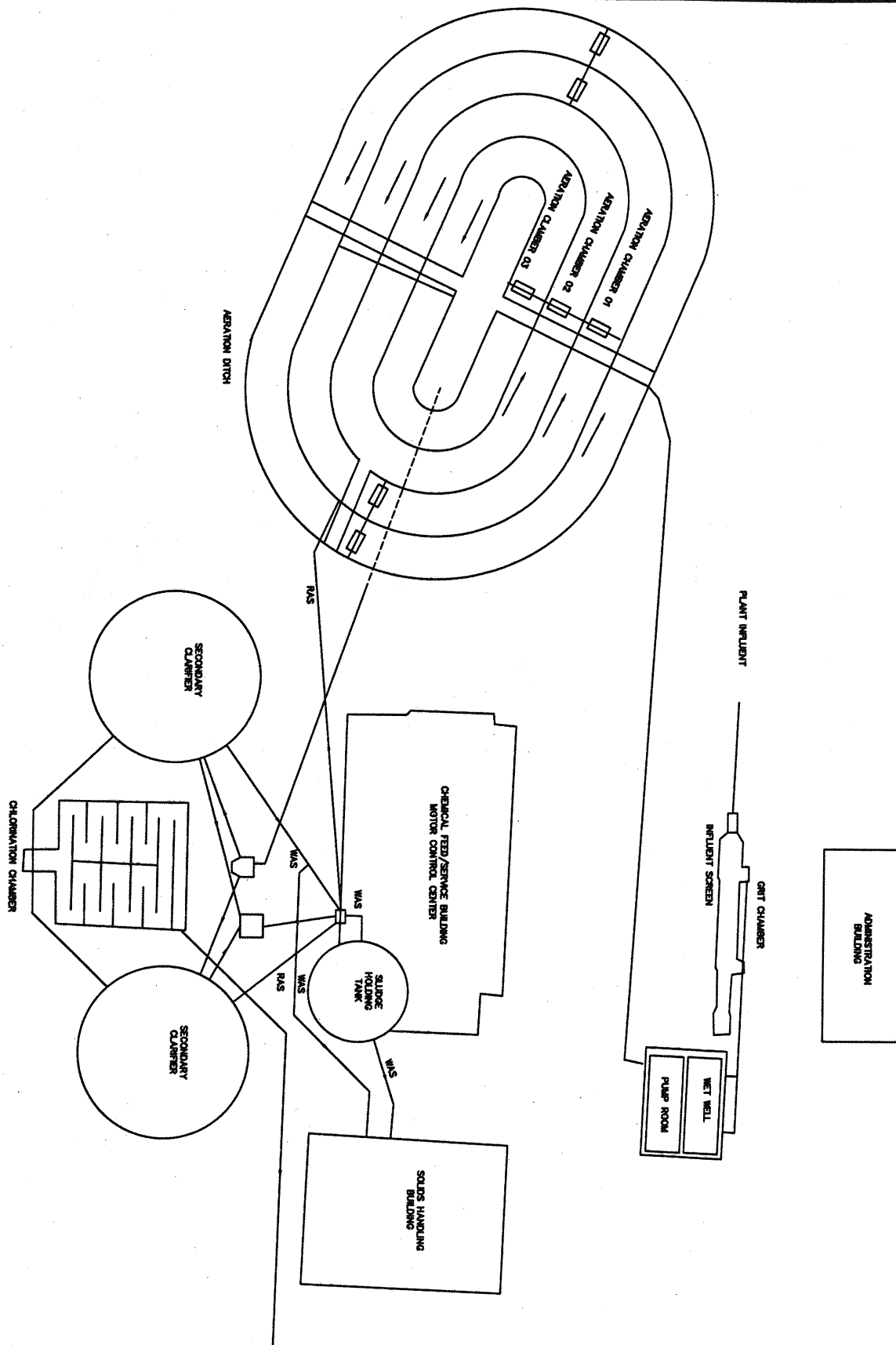


Figure 4-11
 SCARBOROUGH TREATMENT FACILITY



Town of Narragansett
 Rhode Island



JAMES J. GEREMIA & ASSOCIATES, INC.
 CONSULTING ENVIRONMENTAL ENGINEERS & SCIENTISTS
 272 W. Exchange Street Suite 201 Providence, RI 02903-1025
 Phone: 401-454-7000 Fax: 401-454-7418

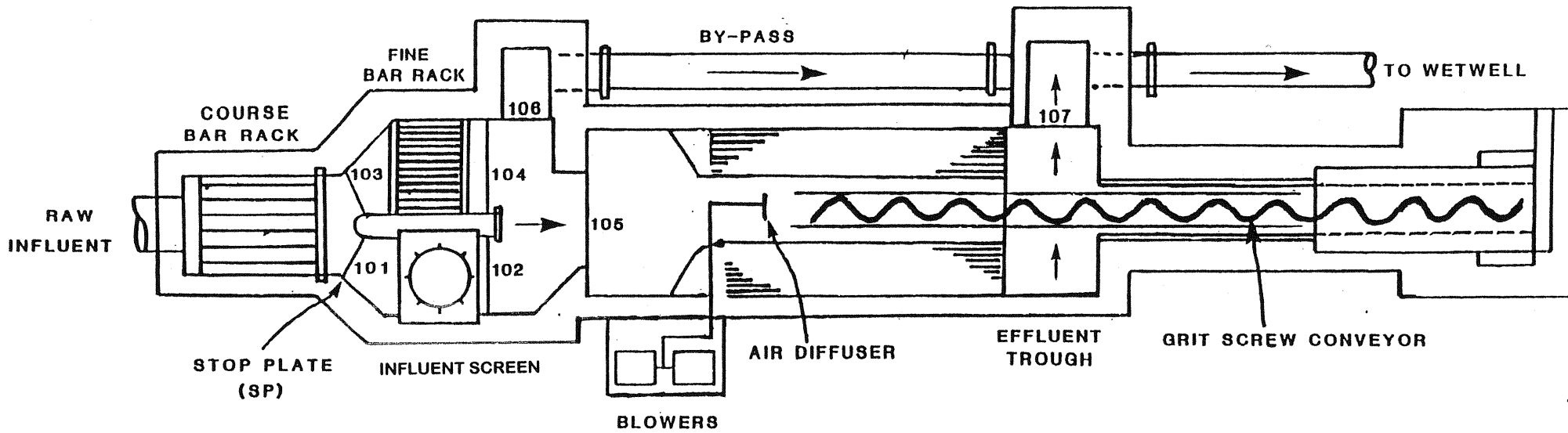


Source: Town of Narragansett

Date: 2005

Scale: N=350'±

ATTACHMENT A-3 – SCARBOROUGH HEADWORKS DIAGRAMS



HEADWORKS TREATMENT SYSTEM
Figure 3-2

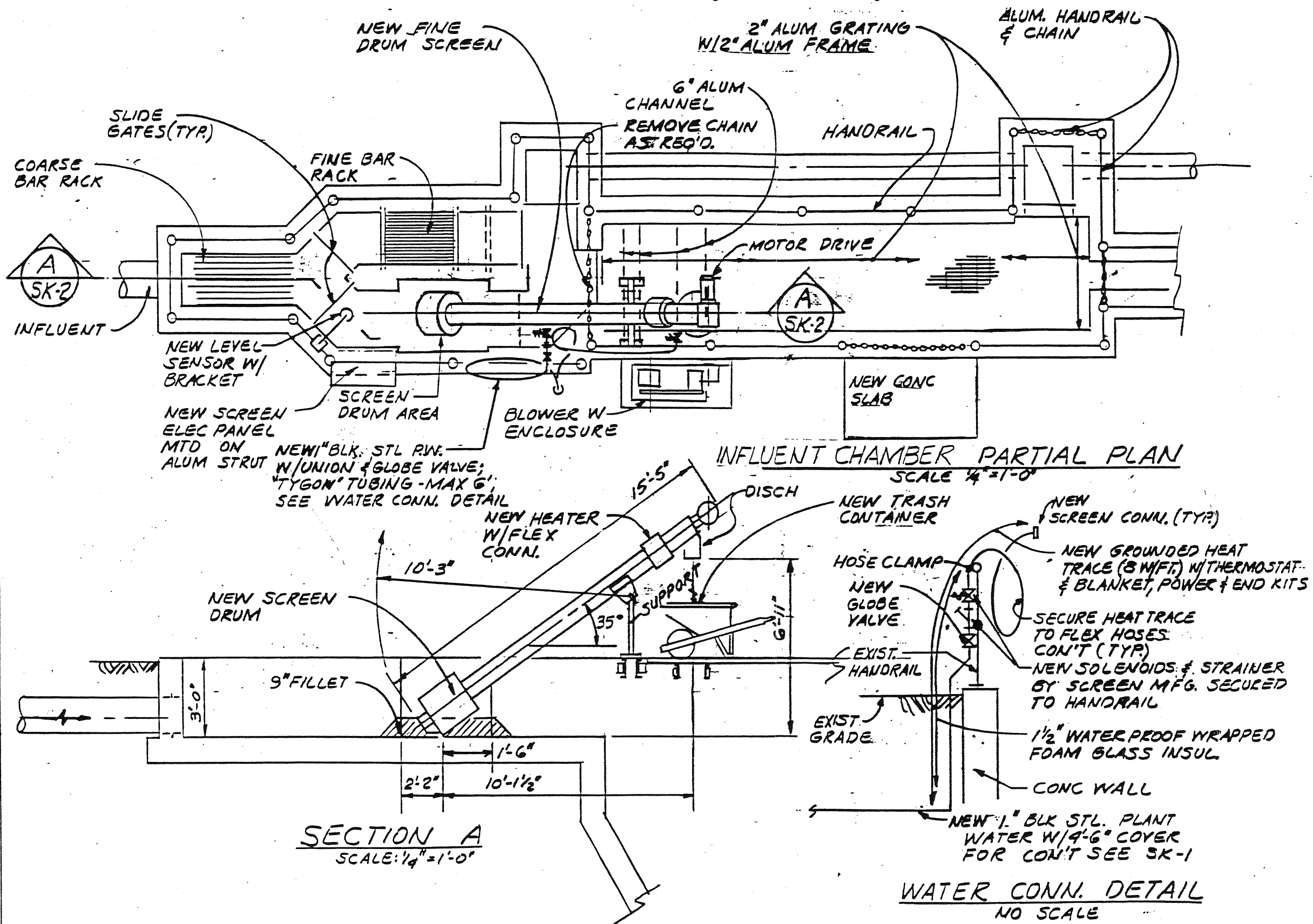
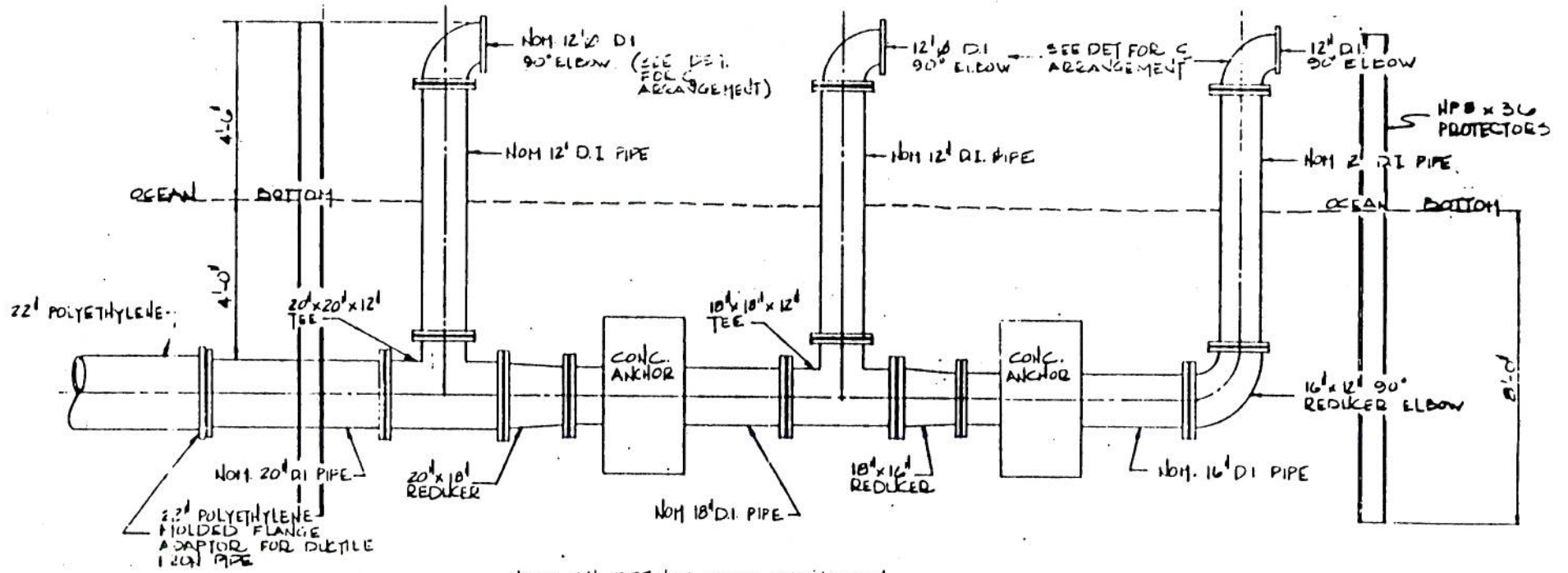


Figure 3-1

ATTACHMENT A-4 – SCARBOROUGH WWTF DIFFUSER SCHEMATIC

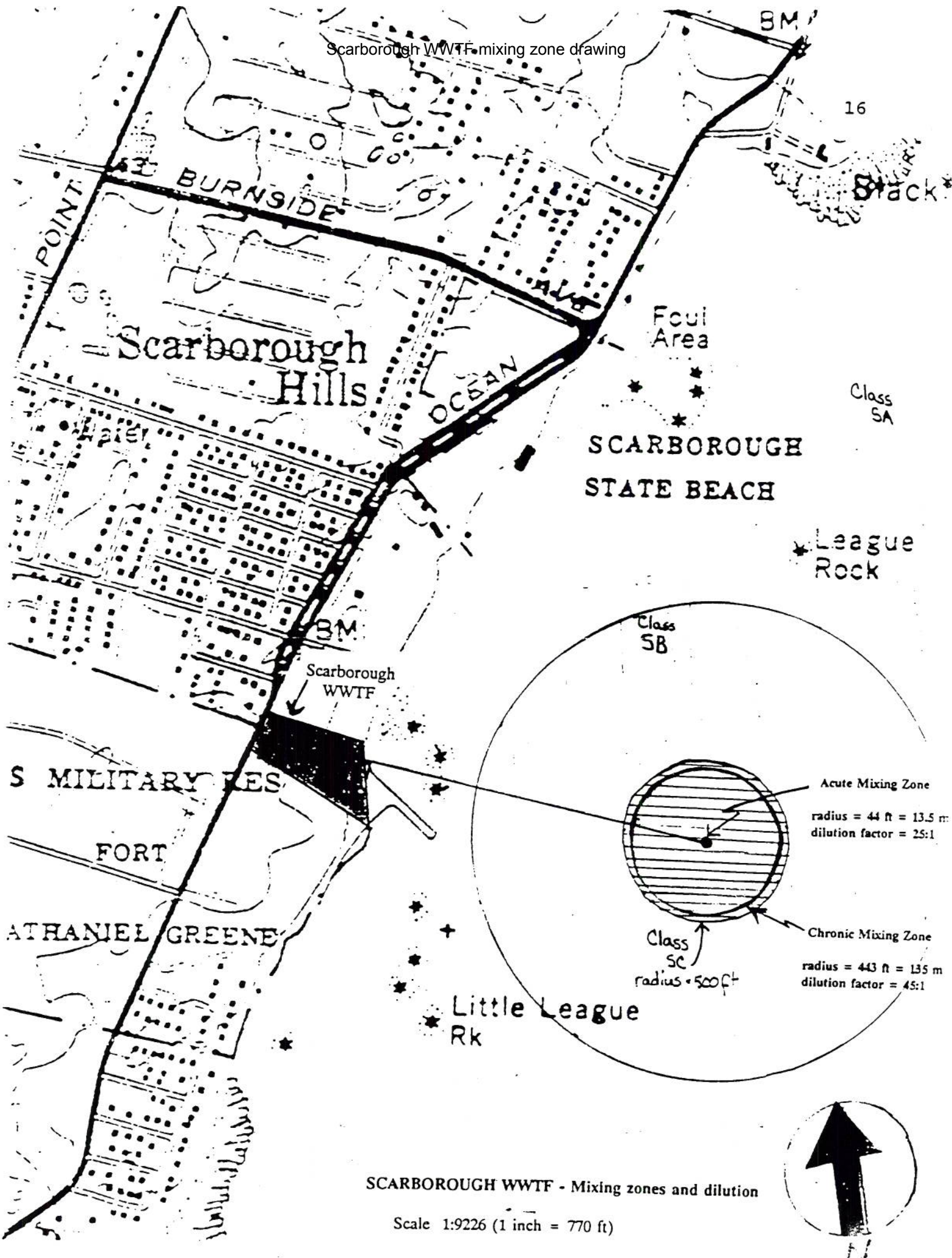
Scarborough WWTF diffuser schematic



NOTE: ALL FITTINGS TO BE DUCTILE IRON

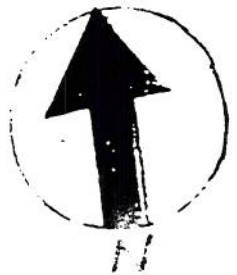
Scarborough WWTF Outfall Diffuser Diagram

ATTACHMENT A-5 - SCARBOROUGH WWTF MIXING ZONE DRAWING

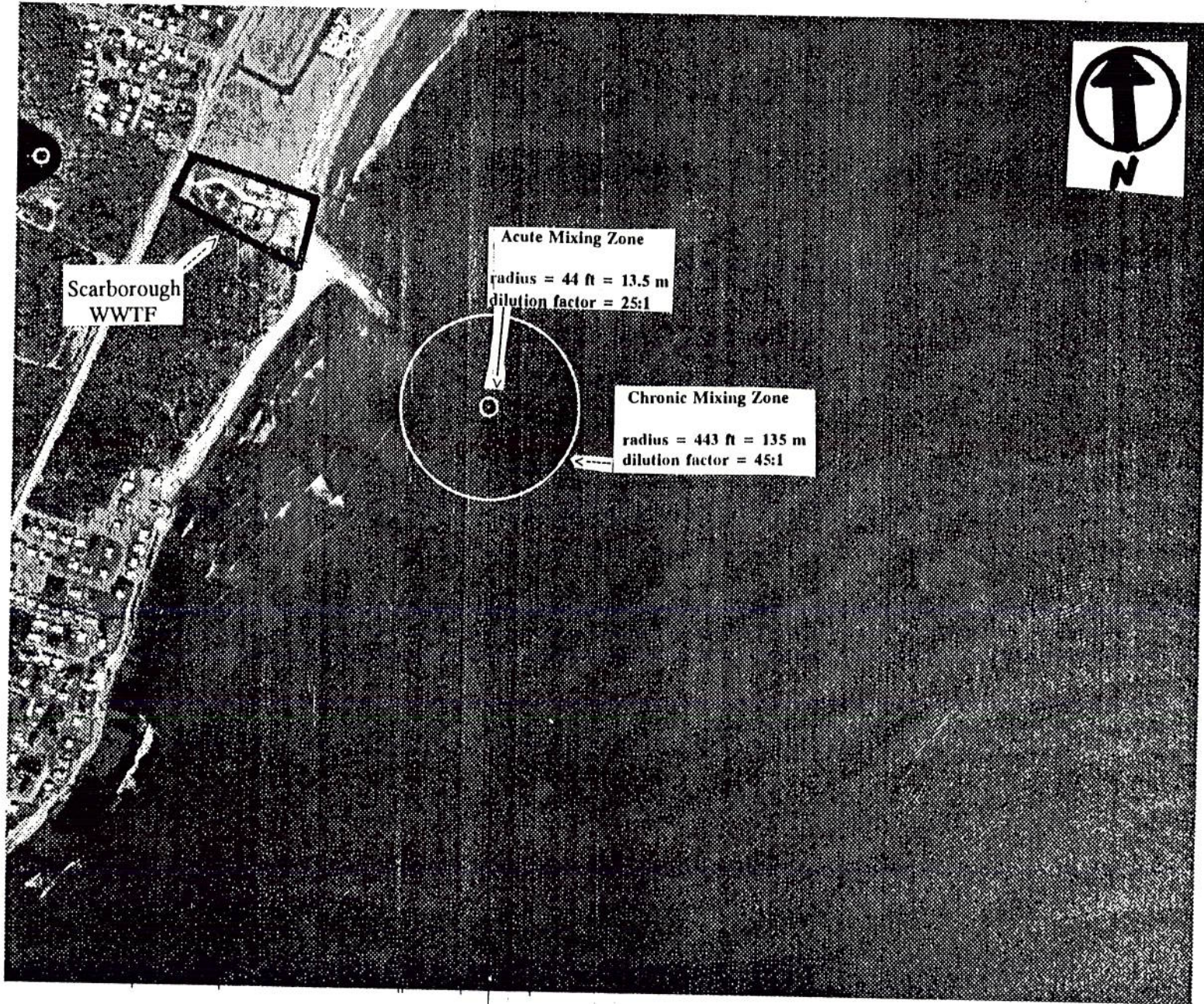


SCARBOROUGH WWTF - Mixing zones and dilution

Scale 1:9226 (1 inch = 770 ft)



ATTACHMENT A-6 – SCARBOROUGH WWTF AERIAL PHOTOGRAPH WITH MIXING ZONES



Scarborough WWTF aerial photograph with mixing zones

Scarborough WWTF Mixing Zones and Dilution

Scale 1:9000 (1 inch = 750 feet)

ATTACHMENT A-7 – WQ CALCULATIONS

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS
FACILITY SPECIFIC DATA INPUT SHEET**

NOTE: LIMITS BASED ON RI WATER QUALITY CRITERIA DATED JULY 2006

FACILITY NAME: **SCARBOROUGH WWTF**

RIPDES PERMIT #: **RI0100188**

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	NA	NA	NA
ARSENIC	NA	1	1
CADMIUM	NA	0.994	0.994
CHROMIUM III	NA	NA	NA
CHROMIUM VI	NA	0.993	0.993
COPPER	NA	0.83	0.83
LEAD	NA	0.951	0.951
MERCURY	NA	0.85	NA
NICKEL	NA	0.99	0.99
SELENIUM	NA	0.998	0.998
SILVER	NA	0.85	0.85
ZINC	NA	0.946	0.946

USE NA WHEN NO DATA IS AVAILABLE

NOTE 1: METAL TRANSLATORS FROM RI WATER
QUALITY REGS.

DILUTION FACTORS	
ACUTE =	25 x
CHRONIC =	45 x
HUMAN HEALTH =	45 x

NOTE: TEST WWTF'S DILUTION
FACTORS OBTAINED FROM A
DYE STUDY.

TOTAL AMMONIA CRITERIA (ug/L)	
WINTER ACUTE =	21000
CHRONIC =	3100
SUMMER ACUTE =	7300
CHRONIC =	1100

NOTE 1: LIMITS ARE FROM TABLE 3 IN
THE RI WATER QUALITY REGS.
USING:
SALINITY = 30 g/Kg; pH = 8.0 s.u.
WINTER (NOV-APRIL) TEMP=5.0 C;
SUMMER (MAY-OCT) TEMP=20.0 C.

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: SCARBOROUGH WWTF RIPDES PERMIT #: RI0100188

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:							
TOXIC METALS AND CYANIDE							
ANTIMONY	7440360			No Criteria		640	23040
ARSENIC (limits are total recoverable)	7440382	NA	69	1380	36	1.4	50.4
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417			No Criteria			No Criteria
CADMIUM (limits are total recoverable)	7440439	NA	40	804.8289738	8.8		318.7122736
CHROMIUM III (limits are total recoverable)	16065831	NA		No Criteria			No Criteria
CHROMIUM VI (limits are total recoverable)	18540299	NA	1100	22155.0856	50		1812.688822
COPPER (limits are total recoverable)	7440508	NA	4.8	115.6626506	3.1		134.4578313
CYANIDE	57125		1	20.00	1	140	36
LEAD (limits are total recoverable)	7439921	NA	210	4416.403785	8.1		306.6246057
MERCURY (limits are total recoverable)	7439976	NA	1.8	42.35294118	0.94	0.15	5.4
NICKEL (limits are total recoverable)	7440020	NA	74	1494.949495	8.2	4600	298.1818182
SELENIUM (limits are total recoverable)	7782492	NA	290	5811.623246	71	4200	2561.122244
SILVER (limits are total recoverable)	7440224	NA	1.9	44.70588235			No Criteria
THALLIUM	7440280			No Criteria		0.47	16.92
ZINC (limits are total recoverable)	7440666	NA	90	1902.748414	81	26000	3082.452431
VOLATILE ORGANIC COMPOUNDS							
ACROLEIN	107028			No Criteria		290	10440
ACRYLONITRILE	107131			No Criteria		2.5	90
BENZENE	71432			No Criteria		510	18360
BROMOFORM	75252			No Criteria		1400	50400
CARBON TETRACHLORIDE	56235			No Criteria		16	576
CHLOROBENZENE	108907			No Criteria		1600	57600
CHLORODIBROMOMETHANE	124481			No Criteria		130	4680
CHLOROFORM	67663			No Criteria		4700	169200
DICHLOROBROMOMETHANE	75274			No Criteria		170	6120
1,2DICHLOROETHANE	107062			No Criteria		370	13320
1,1DICHLOROETHYLENE	75354			No Criteria		7100	255600
1,2DICHLOROPROPANE	78875			No Criteria		150	5400
1,3DICHLOROPROPYLENE	542756			No Criteria		21	756
ETHYLBENZENE	100414			No Criteria		2100	75600
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	54000
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092			No Criteria		5900	212400

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: SCARBOROUGH WWTF RIPDES PERMIT #: RI0100188

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,1,2,2TETRACHLOROETHANE	79345			No Criteria		40	1440
TETRACHLOROETHYLENE	127184			No Criteria		33	1188
TOLUENE	108883			No Criteria		15000	540000
1,2TRANSDICHLOROETHYLENE	156605			No Criteria		10000	360000
1,1,1TRICHLOROETHANE	71556			No Criteria			No Criteria
1,1,2TRICHLOROETHANE	79005			No Criteria		160	5760
TRICHLOROETHYLENE	79016			No Criteria		300	10800
VINYL CHLORIDE	75014			No Criteria		2.4	86.4
ACID ORGANIC COMPOUNDS							
2CHLOROPHENOL	95578			No Criteria		150	5400
2,4DICHLOROPHENOL	120832			No Criteria		290	10440
2,4DIMETHYLPHENOL	105679			No Criteria		850	30600
4,6DINITRO2METHYL PHENOL	534521			No Criteria		280	10080
2,4DINITROPHENOL	51285			No Criteria		5300	190800
4NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865		13	260	7.9	30	284.4
PHENOL	108952			No Criteria		1700000	61200000
2,4,6TRICHLOROPHENOL	88062			No Criteria		24	864
BASE NEUTRAL COMPUNDS							
ACENAPHTHENE	83329			No Criteria		990	35640
ANTHRACENE	120127			No Criteria		40000	1440000
BENZIDINE	92875			No Criteria		0.002	0.072
POLYCYCLIC AROMATIC HYDROCARBONS							
BIS(2CHLOROETHYL)ETHER	111444			No Criteria		5.3	190.8
BIS(2CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	2340000
BIS(2ETHYLHEXYL)PHTHALATE	117817			No Criteria		22	792
BUTYL BENZYL PHTHALATE	85687			No Criteria		1900	68400
2CHLORONAPHTHALENE	91587			No Criteria		1600	57600
1,2DICHLOROENZENE	95501			No Criteria		1300	46800
1,3DICHLOROENZENE	541731			No Criteria		960	34560
1,4DICHLOROENZENE	106467			No Criteria		190	6840
3,3DICHLOROENZIDENE	91941			No Criteria		0.28	10.08
DIETHYL PHTHALATE	84662			No Criteria		44000	1584000
DIMETHYL PHTHALATE	131113			No Criteria		1100000	39600000
DInBUTYL PHTHALATE	84742			No Criteria		4500	162000
2,4DINITROTOLUENE	121142			No Criteria		34	1224

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: SCARBOROUGH WWTF RIPDES PERMIT #: RI0100188

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,2DIPHENYLHYDRAZINE	122667			No Criteria		2	72
FLUORANTHENE	206440			No Criteria		140	5040
FLUORENE	86737			No Criteria		5300	190800
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.1044
HEXACHLOROBUTADIENE	87683			No Criteria		180	6480
HEXACHLOROCYCLOPENTADIENE	77474			No Criteria		1100	39600
HEXACHLOROETHANE	67721			No Criteria		33	1188
ISOPHORONE	78591			No Criteria		9600	345600
NAPHTHALENE	91203			No Criteria			No Criteria
NITROBENZENE	98953			No Criteria		690	24840
NNITROSODIMETHYLAMINE	62759			No Criteria		30	1080
NNITROSODINPROPYLAMINE	621647			No Criteria		5.1	183.6
NNITROSODIPHENYLAMINE	86306			No Criteria		60	2160
PYRENE	129000			No Criteria		4000	144000
1,2,4trichlorobenzene	120821			No Criteria		70	2520
PESTICIDES/PCBs							
ALDRIN	309002		1.3	26		0.0005	0.018
Alpha BHC	319846			No Criteria		0.049	1.764
Beta BHC	319857			No Criteria		0.17	6.12
Gamma BHC (Lindane)	58899		0.16	3.2		1.8	64.8
CHLORDANE	57749		0.09	1.8	0.004	0.0081	0.144
4,4DDT	50293		0.13	2.6	0.001	0.0022	0.036
4,4DDE	72559			No Criteria		0.0022	0.0792
4,4DDD	72548			No Criteria		0.0031	0.1116
DIELDRIN	60571		0.71	14.2	0.0019	0.00054	0.01944
ENDOSULFAN (alpha)	959988		0.034	0.68	0.0087	89	0.3132
ENDOSULFAN (beta)	33213659		0.034	0.68	0.0087	89	0.3132
ENDOSULFAN (sulfate)	1031078			No Criteria		89	3204
ENDRIN	72208		0.037	0.74	0.0023	0.06	0.0828
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	10.8
HEPTACHLOR	76448		0.053	1.06	0.0036	0.00079	0.02844
HEPTACHLOR EPOXIDE	1024573		0.053	1.06	0.0036	0.00039	0.01404
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.03	0.00064	0.02304
2,3,7,8TCDD (Dioxin)	1746016			No Criteria		0.000000051	0.000001836
TOXAPHENE	8001352		0.21	4.2	0.0002	0.0028	0.0072
TRIBUTYL TIN			0.42	8.4	0.0074		0.2664

5/22/2017

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: SCARBOROUGH WWTF RIPDES PERMIT #: RI0100188

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS:							
OTHER SUBSTANCES							
ALUMINUM (limits are total recoverable)	7429905	NA		No Criteria			No Criteria
AMMONIA as N (winter/summer)	7664417		17262 6000.6	345240 120012	2548 904.2		91735.2 32551.2
4BROMOPHENYL PHENYL ETHER CHLORIDE	16887006			No Criteria			No Criteria
CHLORINE	7782505		13	325	7.5		337.5
4CHLORO2METHYLPHENOL				No Criteria			No Criteria
1CHLORONAPHTHALENE				No Criteria			No Criteria
4CHLOROPHENOL	106489			No Criteria			No Criteria
2,4DICHORO6METHYLPHENOL				No Criteria			No Criteria
1,1DICHLOROPROPANE				No Criteria			No Criteria
1,3DICHLOROPROPANE	142289			No Criteria			No Criteria
2,3DINITROTOLUENE				No Criteria			No Criteria
2,4DINITRO6METHYL PHENOL				No Criteria			No Criteria
IRON	7439896			No Criteria			No Criteria
pentachlorobenzene	608935			No Criteria			No Criteria
PENTACHLOROETHANE				No Criteria			No Criteria
1,2,3,5tetrachlorobenzene				No Criteria			No Criteria
1,1,1,2TETRACHLOROETHANE	630206			No Criteria			No Criteria
2,3,4,6TETRACHLOROPHENOL	58902			No Criteria			No Criteria
2,3,5,6TETRACHLOROPHENOL				No Criteria			No Criteria
2,4,5TRICHLOROPHENOL	95954			No Criteria			No Criteria
2,4,6TRINITROPHENOL	88062			No Criteria			No Criteria
XYLENE	1330207			No Criteria			No Criteria

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: SCARBOROUGH WWTFRIPDES PERMIT #: RI0100188

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:			
TOXIC METALS AND CYANIDE			
ANTIMONY	7440360	No Criteria	23040.00
ARSENIC, TOTAL	7440382	1380.00	50.40
ASBESTOS	1332214	No Criteria	No Criteria
BERYLLIUM	7440417	No Criteria	No Criteria
CADMIUM, TOTAL	7440439	804.83	318.71
CHROMIUM III, TOTAL	16065831	No Criteria	No Criteria
CHROMIUM VI, TOTAL	18540299	22155.09	1812.69
COPPER, TOTAL	7440508	115.66	115.66
CYANIDE	57125	20.00	20.00
LEAD, TOTAL	7439921	4416.40	306.62
MERCURY, TOTAL	7439976	42.35	5.40
NICKEL, TOTAL	7440020	1494.95	298.18
SELENIUM, TOTAL	7782492	5811.62	2561.12
SILVER, TOTAL	7440224	44.71	No Criteria
THALLIUM	7440280	No Criteria	16.92
ZINC, TOTAL	7440666	1902.75	1902.75
VOLATILE ORGANIC COMPOUNDS			
ACROLEIN	107028	No Criteria	10440.00
ACRYLONITRILE	107131	No Criteria	90.00
BENZENE	71432	No Criteria	18360.00
BROMOFORM	75252	No Criteria	50400.00
CARBON TETRACHLORIDE	56235	No Criteria	576.00
CHLOROBENZENE	108907	No Criteria	57600.00
CHLORODIBROMOMETHANE	124481	No Criteria	4680.00
CHLOROFORM	67663	No Criteria	169200.00
DICHLOROBROMOMETHANE	75274	No Criteria	6120.00
1,2DICHLOROETHANE	107062	No Criteria	13320.00
1,1DICHLOROETHYLENE	75354	No Criteria	255600.00
1,2DICHLOROPROPANE	78875	No Criteria	5400.00
1,3DICHLOROPROPYLENE	542756	No Criteria	756.00
ETHYLBENZENE	100414	No Criteria	75600.00
BROMOMETHANE (methyl bromide)	74839	No Criteria	54000.00
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria
METHYLENE CHLORIDE	75092	No Criteria	212400.00
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	1440.00

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
TETRACHLOROETHYLENE	127184	No Criteria	1188.00
TOLUENE	108883	No Criteria	540000.00
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	360000.00
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria
1,1,2TRICHLOROETHANE	79005	No Criteria	5760.00
TRICHLOROETHYLENE	79016	No Criteria	10800.00
VINYL CHLORIDE	75014	No Criteria	86.40
ACID ORGANIC COMPOUNDS			
2CHLOROPHENOL	95578	No Criteria	5400.00
2,4DICHLOROPHENOL	120832	No Criteria	10440.00
2,4DIMETHYLPHENOL	105679	No Criteria	30600.00
4,6DINITRO-2-METHYL PHENOL	534521	No Criteria	10080.00
2,4DINITROPHENOL	51285	No Criteria	190800.00
4-NITROPHENOL	88755	No Criteria	No Criteria
PENTACHLOROPHENOL	87865	260.00	260.00
PHENOL	108952	No Criteria	6120000.00
2,4,6-TRICHLOROPHENOL	88062	No Criteria	864.00
BASE NEUTRAL COMPOUNDS			
ACENAPHTHENE	83329	No Criteria	35640.00
ANTHRACENE	120127	No Criteria	1440000.00
BENZIDINE	92875	No Criteria	0.07
PAHs		No Criteria	6.48
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	190.80
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	2340000.00
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	792.00
BUTYL BENZYL PHTHALATE	85687	No Criteria	68400.00
2CHLORONAPHTHALENE	91587	No Criteria	57600.00
1,2DICHLOROBENZENE	95501	No Criteria	46800.00
1,3DICHLOROBENZENE	541731	No Criteria	34560.00
1,4DICHLOROBENZENE	106467	No Criteria	6840.00
3,3DICHLOROBENZIDENE	91941	No Criteria	10.08
DIETHYL PHTHALATE	84662	No Criteria	1584000.00
DIMETHYL PHTHALATE	131113	No Criteria	3960000.00
DI-n-BUTYL PHTHALATE	84742	No Criteria	162000.00
2,4DINITROTOLUENE	121142	No Criteria	1224.00
1,2DIPHENYLHYDRAZINE	122667	No Criteria	72.00
FLUORANTHENE	206440	No Criteria	5040.00

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: SCARBOROUGH WWTF

RIPDES PERMIT #: RI0100188

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	190800.00
HEXACHLORO BENZENE	118741	No Criteria	0.10
HEXACHLORO BUTADIENE	87683	No Criteria	6480.00
HEXACHLORO CYCLOPENTADIENE	77474	No Criteria	39600.00
HEXACHLORO ETHANE	67721	No Criteria	1188.00
ISOPHORONE	78591	No Criteria	345600.00
NAPHTHALENE	91203	No Criteria	No Criteria
NITROBENZENE	98953	No Criteria	24840.00
N-NITROSODIMETHYLAMINE	62759	No Criteria	1080.00
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	183.60
N-NITROSODIPHENYLAMINE	86306	No Criteria	2160.00
PYRENE	129000	No Criteria	144000.00
1,2,4trichlorobenzene	120821	No Criteria	2520.00
PESTICIDES/PCBs			
ALDRIN	309002	26.00	0.02
Alpha BHC	319846	No Criteria	1.76
Beta BHC	319857	No Criteria	6.12
Gamma BHC (Lindane)	58899	3.20	3.20
CHLORDANE	57749	1.80	0.14
4,4DDT	50293	2.60	0.04
4,4DDE	72559	No Criteria	0.08
4,4DDD	72548	No Criteria	0.11
DIELDRIN	60571	14.20	0.02
ENDOSULFAN (alpha)	959988	0.68	0.31
ENDOSULFAN (beta)	33213659	0.68	0.31
ENDOSULFAN (sulfate)	1031078	No Criteria	3204.00
ENDRIN	72208	0.74	0.08
ENDRIN ALDEHYDE	7421934	No Criteria	10.80
HEPTACHLOR	76448	1.06	0.03
HEPTACHLOR EPOXIDE	1024573	1.06	0.01
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.02
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	4.20	0.01
TRIBUTYLTIN		8.40	0.27

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS:			
OTHER SUBSTANCES			
ALUMINUM, TOTAL	7429905	No Criteria	No Criteria
AMMONIA (as N), WINTER (NOV-APR)	7664417	345240.00	91735.20
AMMONIA (as N), SUMMER (MAY-OC)	7664417	120012.00	32551.20
4BROMOPHENYL PHENYL ETHER		No Criteria	No Criteria
CHLORIDE	16887006	No Criteria	No Criteria
CHLORINE	7782505	325.00	325.00
4CHLORO2METHYLPHENOL		No Criteria	No Criteria
1CHLORONAPHTHALENE		No Criteria	No Criteria
4CHLOROPHENOL	106489	No Criteria	No Criteria
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria
1,1DICHLOROPROPANE		No Criteria	No Criteria
1,3DICHLOROPROPANE	142289	No Criteria	No Criteria
2,3DINITROTOLUENE		No Criteria	No Criteria
2,4DINITRO6METHYL PHENOL		No Criteria	No Criteria
IRON	7439896	No Criteria	No Criteria
pentachlorobenzene	608935	No Criteria	No Criteria
PENTACHLOROETHANE		No Criteria	No Criteria
1,2,3,5tetrachlorobenzene		No Criteria	No Criteria
1,1,1,2TETRACHLOROETHANE	630206	No Criteria	No Criteria
2,3,4,6TETRACHLOROPHENOL	58902	No Criteria	No Criteria
2,3,5,6TETRACHLOROPHENOL		No Criteria	No Criteria
2,4,5TRICHLOROPHENOL	95954	No Criteria	No Criteria
2,4,6TRINITROPHENOL	88062	No Criteria	No Criteria
XYLENE	1330207	No Criteria	No Criteria

ATTACHMENT A-8 – DISCHARGE MONITORING REPORT DATA

SCARBOROUGH WWTF
DMR Data Summary 11/21/16

***** NOT ICIS CERTIFIED*****

001A

BOD, 5-day, 20 deg. C Location= 1

	MO AVG lb/d	DAILY MX lb/d		
Mean	28.743	56.712		
Minimum	10.4	15.		
Maximum	60.	238.		
Data Count	60	60		

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	6.0442	7.5588	10.4167
Minimum	3.	2.	5.1
Maximum	10.	13.31	16.
Data Count	60	60	60

Chlorine, total residual Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	7.7813	26.596
Minimum	.	.01
Maximum	70.	190.
Data Count	60	60

Coliform, fecal general Location= 1

	MO AVG MPN/100mL	MO GEO MPN/100mL	WKLY GEO MPN/100mL	DAILY MX MPN/100mL
Mean	3.1266	4.335	13.9525	20.7417
Minimum	1.56	3.52	10.93	1.8
Maximum	15.	5.51	18.77	280.
Data Count	56	4	4	60

Enterococci Location= 1

	MO AVG CFU/100mL	DAILY MX CFU/100mL
Mean	2.9908	50.3643
Minimum	.1	.1
Maximum	22.06	1700.
Data Count	56	56

Flow, in conduit or thru treatment plant |

	MO AVG MGD	DAILY MX MGD
Mean	.5887	1.1323
Minimum	.279	.365
Maximum	1.008	3.61
Data Count	60	60

Nitrogen, Kjeldahl, total [as N] Location:

	DAILY MX mg/L
Mean	9.3828
Minimum	.
Maximum	26.
Data Count	29

Nitrogen, nitrate total [as N] Location= 1

	DAILY MX mg/L
Mean	10.0893
Minimum	.01
Maximum	27.
Data Count	29

Nitrogen, nitrite total [as N] Location= 1

	DAILY MX mg/L
Mean	1.613
Minimum	.
Maximum	18.
Data Count	28

Nitrogen, total [as N] Location= 1

	DAILY MX mg/L
Mean	18.5038
Minimum	1.6
Maximum	32.
Data Count	29

Oil & Grease Location= 1

	DAILY MX mg/L
Mean	3.3188
Minimum	.
Maximum	10.
Data Count	48

pH Location= 1

	MINIMUM SU	MAXIMUM SU
Mean	6.5325	7.5888
Minimum	6.03	6.95
Maximum	7.35	8.8
Data Count	60	60

Solids, settleable Location= 1

	WKLY AVG mL/L	DAILY MX mL/L
Mean	.3827	.466
Minimum	.01	.01
Maximum	10.	10.
Data Count	60	60

Solids, total suspended Location= 1

	MO AVG lb/d	DAILY MX lb/d		
Mean	38.4857	75.5667		
Minimum	3.	14.		
Maximum	83.	444.		
Data Count	60	60		
	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L	
Mean	8.0438	9.9537	13.76	
Minimum	1.03	2.4	3.2	
Maximum	18.92	23.67	34.	
Data Count	60	60	60	

BOD, 5-day, 20 deg. C Location= G

	MO AVG lb/d	DAILY MX lb/d		
Mean	644.8052	1094.945		
Minimum	349.	567.		
Maximum	1278.	2137.		
Data Count	60	60		
	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L	
Mean	144.245	176.9612	236.3	
Minimum	56.	67.	92.	
Maximum	256.15	286.67	420.	
Data Count	60	60	60	

Solids, total suspended Location= G

	MO AVG lb/d	DAILY MX lb/d		
Mean	650.0983	1103.2737		
Minimum	63.9	22.71		
Maximum	1328.18	1969.		
Data Count	60	60		
	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L	
Mean	145.42	194.7535	231.2	
Minimum	79.	94.	111.	
Maximum	279.23	1261.	480.	
Data Count	60	60	60	

BOD, 5-day, percent removal Location=

	MO AV MN %
Mean	95.12
Minimum	90.
Maximum	98.
Data Count	60

Solids, suspended percent removal Loc

	MO AV MN %
Mean	93.675
Minimum	88.
Maximum	100.
Data Count	60

001Q

Aluminum, total [as Al] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	17.3643	17.3643
Minimum	.	.
Maximum	50.	50.
Data Count	14	14

Cadmium, total [as Cd] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	1.0857	1.0971
Minimum	.	.
Maximum	5.	5.
Data Count	14	14

Chromium, total [as Cr] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	1.9857	1.9857
Minimum	.	.
Maximum	7.	7.
Data Count	14	14

Copper, total [as Cu] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	11.1297	11.1297
Minimum	.	.
Maximum	120.	120.
Data Count	18	18

Cyanide, total [as CN] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	4.3593	4.3593
Minimum	.	.
Maximum	10.	10.
Data Count	14	14

Lead, total [as Pb] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	4.6357	4.6357
Minimum	.	.
Maximum	50.	50.
Data Count	14	14

Nickel, total [as Ni] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	1.9406	1.9394
Minimum	.	.
Maximum	5.1	5.1
Data Count	18	18

Zinc, total [as Zn] Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	32.0148	32.0148
Minimum	.	.
Maximum	120.	120.
Data Count	18	18

001T

LC50 Static 48Hr Acute Mysid. Bahia Lc

	MINIMUM %
Mean	100.
Minimum	100.
Maximum	100.
Data Count	19

ATTACHMENT A-9 – USER FEE PROGRAM AND PRIORITY POLLUTANT SCAN DATA

Attachment A-9 - Scarborough UFP data and PPS data

test source	test date or collection date	parameter	conc.	units	sum	num	ave.	max.
UFP	9/28/2011	4,4'- DDE	0.06	ug/L			0.06	0.06
UFP	9/28/2011	4,4'- DDT	0.06	ug/L			0.06	0.06
PPS	8/26/2014	Arsenic	1	ug/L				
UFP	9/28/2011	Arsenic	3	ug/L			2	3
PPS	7/30/2013	Barium	6.8	ug/L				
PPS	7/30/2015	Barium	9.6	ug/L				
PPS	9/10/2012	Barium	10	ug/L			8.8	10
UFP	9/28/2011	Bromoform	19	ug/L			19	19
UFP	9/28/2011	Chromium, Total	2	ug/L			2	2
PPS	8/26/2014	Copper	4	ug/L				
PPS	9/10/2012	Copper	5.5	ug/L				
PPS	7/30/2015	Copper	6	ug/L				
UFP	9/28/2011	Copper	9	ug/L				
PPS	7/30/2013	Copper	10	ug/L				
PPS	7/26/2016	Copper	12	ug/L			7.75	12
UFP	9/28/2011	Dibromochloromethane	4.3	ug/L			4.3	4.3
PPS	9/10/2012	Nickel	1	ug/L				
PPS	7/30/2015	Nickel	1.3	ug/L				
PPS	8/26/2014	Nickel	2	ug/L				
UFP	9/28/2011	Nickel	22	ug/L			6.58	22
PPS	9/10/2012	Phenol	38	ug/L			38	38
UFP	9/28/2011	Selenium, Total	8	ug/L			8	8
UFP	9/28/2011	Toluene	4.8	ug/L			4.8	4.8
UFP	9/28/2011	Zinc	37	ug/L				
PPS	7/30/2013	Zinc	45	ug/L				
PPS	7/26/2016	Zinc	48	ug/L				
PPS	7/30/2015	Zinc	50	ug/L				
PPS	9/10/2012	Zinc	52	ug/L				
PPS	8/26/2014	Zinc	57	ug/L			48.2	57

ATTACHMENT A-10 – COMPARISON OF ALLOWABLE LIMITS

Facility Name: Scarborough WWTF
RIPDES Permit #: RI0023868
Outfall #: 001A

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Conc. Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L) Monthly Ave	Ave UFP Data (ug/l) 9/11 - 7/16		Ave. DMR Data (ug/L) 7/11-6/16		Potential Permit Limits (ug/L)		Reasonable Potential?	
		Daily Max	Monthly Ave		Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave
PRIORITY POLLUTANTS												
TOXIC METALS AND CYANIDE												
ANTIMONY	7440360	No Criteria	23040.00	---	---	---	---	---	---	23040		
ARSENIC (limits are total recoverable)	7440382	1380.00	50.40	---	3	2	---	---	1380	50.4	N	N
ASBESTOS	1332214	No Criteria	No Criteria	---	---	---	---	---	---	---		
BERYLLIUM	7440417	No Criteria	No Criteria	---	---	---	---	---	---	---		
CADMIUM (limits are total recoverable)	7440439	804.83	318.71	---	---	---	1.097	1.086	804.8289738	318.7122736	N	N
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	No Criteria	---	---	---	---	---	---	---		
CHROMIUM VI (limits are total recoverable)	18540299	22155.09	1812.69	---	2	2	1.986	1.986	22155.0856	1812.688822	N	N
COPPER (limits are total recoverable)	7440508	115.66	115.66	---	12	7.75	11.13	11.13	115.6626506	115.6626506	N	N
CYANIDE	57125	20.00	20.00	---	---	---	4.359	4.359	20	20	N	N
LEAD (limits are total recoverable)	7439921	4416.40	306.62	---	---	---	4.6357	4.6357	4416.403785	306.6246057	N	N
MERCURY (limits are total recoverable)	7439976	42.35	5.40	---	---	---	---	---	42.35294118	5.4		
NICKEL (limits are total recoverable)	7440020	1494.95	298.18	---	22	6.58	1.94	1.94	1494.949495	298.1818182	N	N
SELENIUM (limits are total recoverable)	7782492	5811.62	2561.12	---	8	8	---	---	5811.623246	2561.122244		
SILVER (limits are total recoverable)	7440224	44.71	No Criteria	---	---	---	---	---	44.70588235	44.70588235		
THALLIUM	7440280	No Criteria	16.92	---	---	---	---	---	---	16.92		
ZINC (limits are total recoverable)	7440666	1902.75	1902.75	---	57	48.2	32.01	32.01	1902.748414	1902.748414	N	N
VOLATILE ORGANIC COMPOUNDS												
ACROLEIN	107028	No Criteria	10440.00	---	---	---	---	---	---	10440		
ACRYLONITRILE	107131	No Criteria	90.00	---	---	---	---	---	---	90		
BENZENE	71432	No Criteria	18360.00	---	---	---	---	---	---	18360		
BROMOFORM	75252	No Criteria	50400.00	---	19	19	---	---	---	50400		N
CARBON TETRACHLORIDE	56235	No Criteria	576.00	---	---	---	---	---	---	576		
CHLORO BENZENE	108907	No Criteria	57600.00	---	---	---	---	---	---	57600		
CHLORODIBROMOMETHANE	124481	No Criteria	4680.00	---	4.3	4.3	---	---	---	4680		
CHLOROFORM	67663	No Criteria	169200.00	---	---	---	---	---	---	169200		
DICHLOROBROMOMETHANE	75274	No Criteria	6120.00	---	---	---	---	---	---	6120		
1,2DICHLOROETHANE	107062	No Criteria	13320.00	---	---	---	---	---	---	13320		
1,1DICHLOROETHYLENE	75354	No Criteria	255600.00	---	---	---	---	---	---	255600		
1,2DICHLOROPROPANE	78875	No Criteria	5400.00	---	---	---	---	---	---	5400		

1,3DICHLOROPROPYLENE	542756	No Criteria	756.00	---	---	---	---	---	---	756	
ETHYLBENZENE	100414	No Criteria	75600.00	---	---	---	---	---	---	75600	
BROMOMETHANE (methyl bromide)	74839	No Criteria	54000.00	---	---	---	---	---	---	54000	
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria	---	---	---	---	---	---	---	
METHYLENE CHLORIDE	75092	No Criteria	212400.00	---	---	---	---	---	---	212400	
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	1440.00	---	---	---	---	---	---	1440	
TETRACHLOROETHYLENE	127184	No Criteria	1188.00	---	---	---	---	---	---	1188	
TOLUENE	108883	No Criteria	540000.00	---	4.8	4.8	---	---	---	540000	N
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	360000.00	---	---	---	---	---	---	360000	
1,1,1-TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1,2-TRICHLOROETHANE	79005	No Criteria	5760.00	---	---	---	---	---	---	5760	
TRICHLOROETHYLENE	79016	No Criteria	10800.00	---	---	---	---	---	---	10800	
VINYL CHLORIDE	75014	No Criteria	86.40	---	---	---	---	---	---	86.4	
ACID ORGANIC COMPOUNDS											
2-CHLOROPHENOL	95578	No Criteria	5400.00	---	---	---	---	---	---	5400	
2,4-DICHLOROPHENOL	120832	No Criteria	10440.00	---	---	---	---	---	---	10440	
2,4-DIMETHYLPHENOL	105679	No Criteria	30600.00	---	---	---	---	---	---	30600	
4,6-DINITRO-2-METHYL PHENOL	534521	No Criteria	10080.00	---	---	---	---	---	---	10080	
2,4-DINITROPHENOL	51285	No Criteria	190800.00	---	---	---	---	---	---	190800	
4-NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---	---	
PENTACHLOROPHENOL	87865	260.00	260.00	---	---	---	---	---	260	260	
PHENOL	108952	No Criteria	6120000.00	---	38	38	---	---	---	6120000	N
2,4,6-TRICHLOROPHENOL	88062	No Criteria	864.00	---	---	---	---	---	---	864	
BASE NEUTRAL COMPOUNDS											
ACENAPHTHENE	83329	No Criteria	35640.00	---	---	---	---	---	---	35640	
ANTHRACENE	120127	No Criteria	1440000.00	---	---	---	---	---	---	1440000	
BENZIDINE	92875	No Criteria	0.07	---	---	---	---	---	---	0.072	
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	6.48	---	---	---	---	---	---	6.48	
BIS(2-CHLOROETHYL)ETHER	111444	No Criteria	190.80	---	---	---	---	---	---	190.8	
BIS(2-CHLOROISOPROPYL)ETHER	108601	No Criteria	2340000.00	---	---	---	---	---	---	2340000	
BIS(2-ETHYLHEXYL)PHTHALATE	117817	No Criteria	792.00	---	---	---	---	---	---	792	
BUTYL BENZYL PHTHALATE	85687	No Criteria	68400.00	---	---	---	---	---	---	68400	
2-CHLORONAPHTHALENE	91587	No Criteria	57600.00	---	---	---	---	---	---	57600	
1,2-DICHLOROBENZENE	95501	No Criteria	46800.00	---	---	---	---	---	---	46800	
1,3-DICHLOROBENZENE	541731	No Criteria	34560.00	---	---	---	---	---	---	34560	
1,4-DICHLOROBENZENE	106467	No Criteria	6840.00	---	---	---	---	---	---	6840	
3,3-DICHLOROBENZIDENE	91941	No Criteria	10.08	---	---	---	---	---	---	10.08	
DIETHYL PHTHALATE	84662	No Criteria	1584000.00	---	---	---	---	---	---	1584000	
DIMETHYL PHTHALATE	131113	No Criteria	3960000.00	---	---	---	---	---	---	3960000	
Di-n-BUTYL PHTHALATE	84742	No Criteria	162000.00	---	---	---	---	---	---	162000	

2,4DINITROTOLUENE	121142	No Criteria	1224.00	---	---	---	---	---	1224		
1,2DIPHENYLHYDRAZINE	122667	No Criteria	72.00	---	---	---	---	---	72		
FLUORANTHENE	206440	No Criteria	5040.00	---	---	---	---	---	5040		
FLUORENE	86737	No Criteria	190800.00	---	---	---	---	---	190800		
HEXACHLOROBENZENE	118741	No Criteria	0.10	---	---	---	---	---	0.1044		
HEXACHLOROBUTADIENE	87683	No Criteria	6480.00	---	---	---	---	---	6480		
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	39600.00	---	---	---	---	---	39600		
HEXACHLOROETHANE	67721	No Criteria	1188.00	---	---	---	---	---	1188		
ISOPHORONE	78591	No Criteria	345600.00	---	---	---	---	---	345600		
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---		
NITROBENZENE	98953	No Criteria	24840.00	---	---	---	---	---	24840		
NNITROSODIMETHYLAMINE	62759	No Criteria	1080.00	---	---	---	---	---	1080		
NNITROSODINPROPYLAMINE	621647	No Criteria	183.60	---	---	---	---	---	183.6		
NNITROSODIPHENYLAMINE	86306	No Criteria	2160.00	---	---	---	---	---	2160		
PYRENE	129000	No Criteria	144000.00	---	---	---	---	---	144000		
1,2,4trichlorobenzene	120821	No Criteria	2520.00	---	---	---	---	---	2520		
PESTICIDES/PCBs											
ALDRIN	309002	26.00	0.02	---	---	---	---	26	0.018		
Alpha BHC	319846	No Criteria	1.76	---	---	---	---	---	1.764		
Beta BHC	319857	No Criteria	6.12	---	---	---	---	---	6.12		
Gamma BHC (Lindane)	58899	3.20	3.20	---	---	---	---	3.2	3.2		
CHLORDANE	57749	1.80	0.14	---	---	---	---	1.8	0.144		
4,4DDT	50293	2.60	0.04	---	0.06	0.06	---	2.6	0.036	N	N
4,4DDE	72559	No Criteria	0.08	---	0.06	0.06	---	---	0.0792		N
4,4DDD	72548	No Criteria	0.11	---	---	---	---	---	0.1116		
DIELDRIN	60571	14.20	0.02	---	---	---	---	14.2	0.01944		
ENDOSULFAN (alpha)	959988	0.68	0.31	---	---	---	---	0.68	0.3132		
ENDOSULFAN (beta)	33213659	0.68	0.31	---	---	---	---	0.68	0.3132		
ENDOSULFAN (sulfate)	1031078	No Criteria	3204.00	---	---	---	---	---	3204		
ENDRIN	72208	0.74	0.08	---	---	---	---	0.74	0.0828		
ENDRIN ALDEHYDE	7421934	No Criteria	10.80	---	---	---	---	---	10.8		
HEPTACHLOR	76448	1.06	0.03	---	---	---	---	1.06	0.02844		
HEPTACHLOR EPOXIDE	1024573	1.06	0.01	---	---	---	---	1.06	0.01404		
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.02	---	---	---	---	---	0.02304		
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00	---	---	---	---	---	0.000001836		
TOXAPHENE	8001352	4.20	0.01	---	---	---	---	4.2	0.0072		
TRIBUTYL TIN		8.40	0.27	---	---	---	---	8.4	0.2664		
NON PRIORITY POLLUTANTS:											
OTHER SUBSTANCES											
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	---	---	17.364	17.364	---	NA	NA

Comparison of Allowable Limits

AMMONIA (winter)	7664417	345240.00	91735.20	---	---	---	---	---	345240	91735.2		
AMMONIA (summer)		120012.00	32551.20	---	---	---	---	---	120012	32551.2		
4BROMOPHENYL PHENYL ETHER CHLORIDE	16887006 7782505	No Criteria	No Criteria	---	---	---	---	---	---	---		
CHLORINE		325.00	325.00	---	---	---	26.596	7.781	325	325	N-WQ	N-WQ
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---		
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	---		
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---		
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---		
1,1DICHLOROPROPANE	142289	No Criteria	No Criteria	---	---	---	---	---	---	---		
1,3DICHLOROPROPANE		No Criteria	No Criteria	---	---	---	---	---	---	---		
2,3DINITROTOLUENE		No Criteria	No Criteria	---	---	---	---	---	---	---		
2,4DINITRO6METHYL PHENOL	7439896	No Criteria	No Criteria	---	---	---	---	---	---	---		
IRON	608935	No Criteria	No Criteria	---	---	---	---	---	---	---		
pentachlorobenzene		No Criteria	No Criteria	---	---	---	---	---	---	---		
PENTACHLOROETHANE		No Criteria	No Criteria	---	---	---	---	---	---	---		
1,2,3,5tetrachlorobenzene	630206	No Criteria	No Criteria	---	---	---	---	---	---	---		
1,1,1,2TETRACHLOROETHANE	58902	No Criteria	No Criteria	---	---	---	---	---	---	---		
2,3,4,6TETRACHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---		
2,3,5,6TETRACHLOROPHENOL	95954	No Criteria	No Criteria	---	---	---	---	---	---	---		
2,4,5TRICHLOROPHENOL	88062	No Criteria	No Criteria	---	---	---	---	---	---	---		
2,4,6TRINITROPHENOL	1330207	No Criteria	No Criteria	---	---	---	---	---	---	---		
XYLENE		No Criteria	No Criteria	---	---	---	---	---	---	---		

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 PROMENADE STREET
PROVIDENCE, RHODE ISLAND 02908-5767**

PUBLIC NOTICE OF PROPOSED PERMIT ACTIONS UNDER THE RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PROGRAM WHICH REGULATES DISCHARGES INTO THE WATERS OF THE STATE UNDER CHAPTER 46-12 OF THE RHODE ISLAND GENERAL LAWS OF 1956, AS AMENDED.

DATE OF NOTICE: May 25, 2017

PUBLIC NOTICE NUMBER: PN 17-02

DRAFT RIPDES PERMITS:

RIPDES PERMIT NUMBER: **RI0100188**

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Narragansett
Narragansett Town Hall
25 Fifth Avenue
Narragansett, Rhode Island 02882

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Scarborough Wastewater Treatment Facility
990 Ocean Road
Narragansett, Rhode Island 02882

RECEIVING WATER: **Rhode Island Sound (Waterbody ID# RI0010042E-02A)**

RECEIVING WATER CLASSIFICATION: **SB1**

The facility, which is the source of the discharge, is located in Narragansett and is engaged in the treatment of wastewater from the sanitary sewer system in the town of Narragansett. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant, which includes the use of the following equipment and processes: coarse screening, fine screening, aerated grit removal, grit removal via screw conveyer, extended aeration, secondary settling, chlorination, and dechlorination. The discharge of treated effluent is made to Rhode Island Sound through outfall 001A. The draft permit has been updated to include reporting requirements to comply with the U.S. Environmental Protection Agency's NPDES Electronic Reporting Rule. This permit includes limits to ensure that the discharge will not cause a water quality violation.

RIPDES PERMIT NUMBER: **RI0100374**

NAME AND MAILING ADDRESS OF APPLICANT:

Town of South Kingstown
180 High Street
Wakefield, Rhode Island 02879

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

South Kingstown Regional Wastewater Treatment Plant
275 Westmoreland Street
Narragansett, Rhode Island

RECEIVING WATER: **Rhode Island Sound (Waterbody ID# RI0010042E-01A)**

RECEIVING WATER CLASSIFICATION: **SB1**

The facility, which is the source of the discharge, is located in South Kingstown and is engaged in the treatment of wastewater from the sanitary sewer system in the town of South Kingstown. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant, which includes the use of the following equipment and processes: coarse screening, comminution, primary settling, fine bubble aeration, secondary settling, chlorination, and dechlorination. The discharge of treated effluent is made to Rhode Island Sound through outfall 001A. The draft permit has been updated to include the addition of monthly average and daily maximum Cyanide limitations and updated reporting requirements to comply with the U.S. Environmental Protection Agency's NPDES Electronic Reporting Rule. This permit includes limits to ensure that the discharge will not cause a water quality violation.

RIPDES PERMIT NUMBER: **RI0023736**

NAME AND MAILING ADDRESS OF APPLICANT:

Fox Island LLC
50 Park Row West, Suite 113
Providence, RI 02903

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Fox Island
North Kingstown, RI 02852

RECEIVING WATER: **West Passage of Narragansett Bay (Waterbody ID# RI0007027E-03A)**

RECEIVING WATER CLASSIFICATION: **SA**

The facility, which is the source of the discharge, is an individual residence and catering building located on Fox Island. The applicant has installed a package desalination system at a residential home located on Fox Island with the sole purpose of providing potable water for the main residence and catering building to supplement water from the existing shallow fresh water well. The desalination unit is owned and operated by the applicant, who is also the homeowner, and is located at Fox Island off the coast of North Kingstown, Rhode Island. The discharge to the West Passage of Narragansett Bay consists of brine that has been concentrated by the reverse osmosis

desalination system. The draft permit has been updated to include updated reporting requirements to comply with the U.S. Environmental Protection Agency's NPDES Electronic Reporting Rule, requirements to maintain a logbook that documents RO system operation and maintenance activities, and a condition the permittee must implement Standard Operating Procedures for the RO system's annual winterization process and other maintenance activities.

FURTHER INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet (describing the type of facility and significant factual, legal and policy questions considered in these permit actions) may be downloaded at <http://www.dem.ri.gov/programs/water/permits/ripdes/> or a hard copy may be obtained at no cost by writing or calling DEM as noted below:

Aaron Mello
Rhode Island Department of Environmental Management
RIPDES Program
235 Promenade Street
Providence, Rhode Island 02908-5767
Phone: 401-222-4700, extension 7405
E-mail: aaron.mello@dem.ri.gov

The administrative record containing all documents relating to these permit actions is on file and may be inspected, by appointment, at the DEM's Providence office mentioned above between 8:30 a.m. and 4:00 p.m., Monday through Friday, except holidays.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

Pursuant to Chapters 46-12 and 42-35 of the Rhode Island General Laws, a public hearing has been tentatively scheduled to consider these draft RIPDES permits, if requested. Requests for a Public Hearing must be submitted in writing to the attention of Aaron Mello at the address indicated above. Notice should be taken that if DEM receives a request from twenty-five (25) people, a governmental agency or subdivision, or an association having no less than twenty-five (25) members on or before 4:00 PM, Monday, June 26, 2017, the public hearing will be held at the following time and place:

Thursday, June 29, 2017 at 5:00 PM
Room 280
235 Promenade Street
Providence, Rhode Island 02908

Interested persons should contact DEM in advance to confirm if a hearing will be held at the time and location noted above.

235 Promenade is accessible to the handicapped. Individuals requesting interpreter services for the hearing impaired must notify the DEM at 831-5508 (T.D.D.) 72 hours in advance of the hearing date.

Interested parties must submit comments on the permit actions and the administrative record to the address above no later than 4:00 P.M. June 30, 2017.

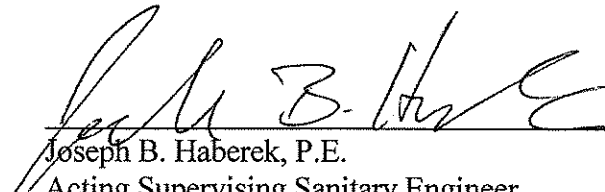
All persons who believe any condition of the draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period on June 30, 2017. Commenters may request a longer comment period if necessary to provide a reasonable opportunity to comply with these requirements. Comments should be directed to Aaron Mello as directed above.

If, during the public comment period, significant new questions are raised concerning the permit, DEM may require a new draft permit or fact sheet or may reopen the public comment period. A public notice will be issued for any of these actions.

FINAL DECISION AND APPEALS:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final permit decision and forward a copy of the final decision to each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision, any interested person may submit a request for a formal hearing in accordance with the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

5/19/17
Date



Joseph B. Haberek, P.E.
Acting Supervising Sanitary Engineer
Office of Water Resources
Department of Environmental Management