STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

September 2, 2004

Mr. Gary Lorfano
Scarborough Sanitary District
415 Black Point Road
Scarborough, ME 04074

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102059
Maine Waste Discharge License (WDL) Application #W002668-5L-G-R
Final Permit/License

Dear Mr. Lorfano:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. This permit/license for your facility, supersedes or replaces National Pollutant Discharge Elimination System (NPDES) permit #ME0102059, last issued for your facility by the Environmental Protection Agency (EPA) on September 25, 2000. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

The Department would like to make you aware that your monthly Discharge Monitoring Report (DMR) forms may not reflect the revisions in this permitting action for several months after permit issuance, however, you are required to report applicable test results for parameters required by this permitting action that do not appear on the DMR.

If you have any questions regarding the matter, please feel free to call me at 287-6114.

Sincerely,

Robert D. Stratton

Robert D. Stratton
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc./cc: Matt Hight, MEDEP, Ted Lavery, USEPA

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17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
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(207) 941-4570 FAX: (207) 941-4584

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DMR Lag

(reprinted from April 2003 O&M Newsletter)

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months. This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.

2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.

3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

   EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

SCARBOROUGH SANITARY DISTRICT	)	MAINE POLLUTANT DISCHARGE
SCARBOROUGH, CUMBERLAND COUNTY	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
#ME0102059	)	WASTE DISCHARGE LICENSE
#W-002668-5L-G-R **APPROVAL**	)	**RENEWAL AND MODIFICATION**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq. and Maine Law 38 M.R.S.A., Section 414-A et. seq., the Department of Environmental Protection (Department hereinafter) has considered the application of the SCARBOROUGH SANITARY DISTRICT (SCARBOROUGH hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The applicant has applied for renewal and modification of Maine Waste Discharge License (WDL) #W-002668-5L-F-R, which was issued on January 10, 2001, and is due to expire on January 10, 2006. The WDL approved the discharge of secondary treated sanitary wastewater from a municipal treatment facility to the Atlantic Ocean, Class SB waters, in Scarborough, Maine, under two tiers of limits. The first tier was for a monthly average flow of 1.8 million gallons per day (mgd), representative of existing facility conditions. The second tier was for a monthly average flow of 4.5 mgd, representative of the facility capacity after a proposed expansion. The second tier was never implemented and Scarborough's projections of future needs have changed. Scarborough is currently upgrading the facility and is applying for the monthly average discharge of 2.5 mgd of secondary treated sanitary wastewater.

PERMIT SUMMARY

January 12, 2001 – The Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine, excluding areas of special interest to Maine Indian Tribes. The Department's request for program delegation in those areas was referred by the USEPA to the U.S. Department of Justice which, on October 30, 2003, resulted in extension of Maine's NPDES program delegation to all but tribally owned lands. In those areas, the Department maintains the authority to issue WDLs pursuant to Maine law. The extent of Maine's delegated authority is under appeal at the time of this permitting action. From this point forward, the program will be referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program and permit #ME0102059 (same as NPDES permit number) will be utilized as the primary reference number.

This permitting action is similar to the 1/10/01 WDL action in that it is carrying forward all the terms and conditions with the following exceptions:

1. Eliminating the two tiers of effluent limits and monitoring requirements in favor of a single set based on facility design capacity;

2. Revising the monthly average discharge flow to 2.5 mgd;

3. Revising the monthly, weekly, and daily technology based mass limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) based on the revised effluent flow;

4. Establishing a requirement for a minimum of 85% removal of BOD_5 and TSS;

5. Revising the effluent monitoring frequency for total residual chlorine (TRC) to twice per day from Monday through Friday and once per day from Saturday through Sunday based on facility effluent flow, Department guidance, and best professional judgement;

6. Revising the daily maximum pH range limit from 6.0 – 8.5 standard units to 6.0 – 9.0 standard units based on a new Department regulation;

7. Requiring screening level whole effluent toxicity (WET) and priority pollutant testing during calendar year 2005 as well as beginning one year prior to the expiration date of the permit;

8. Establishing a requirement to develop or update the wet weather flow management plan for the facility.

9. Establishing a requirement to maintain an up-to-date Operations and Maintenance Plan for the facility.

10. Revising Scarborough's allowable amount of septage introduced per day from 6,500 gallons to 9,000 gallons.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated August 2, 2004, and revised September 2, 2004, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

THEREFORE, the Department APPROVES the above noted application of the SCARBOROUGH SANITARY DISTRICT to discharge secondary treated wastewaters from a publicly owned treatment works to the Atlantic Ocean off Prout's Neck, Class SB, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. The term of this permit is five (5) years from the date of signature.

DONE AND DATED AT AUGUSTA, MAINE, THIS 3RD DAY OF SEPTEMBER, 2004.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY: _____, FOR
Dawn Gallagher, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January, 14, 2004
Date of application acceptance: February 3, 2004

FILED
SEP - 7 2004
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection _____.

This Order prepared by Robert D. Stratton, BUREAU OF LAND & WATER QUALITY

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge **secondary treated sanitary wastewater** from **Outfall #001A** to the Atlantic Ocean off Prout's Neck. Such discharges shall be limited and monitored by the permittee as specified below [1]:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average lb/day	Weekly Average lb/day	Daily Maximum lb/day	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	2.5 mgd *[03]*	---	---	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	625 *[26]*	938 *[26]*	1,042 *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite *[24]*
BOD_5 Percent Removal[2] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	625 *[26]*	938 *[26]*	1,042 *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite *[24]*
TSS Percent Removal[2] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Day *[01/01]*	Grab *[GR]*
Fecal Coliform Bacteria[3] *[31633]*	---	---	---	15/100 ml[4] *[13]*	---	50/100 ml *[13]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine[3] *[50060]*	---	---	---	---	---	1.0 mg/L *[19]*	2/Day[5] *[01/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0-9.0 S.U. *[12]*	1/Day *[01/01]*	Grab *[GR]*

The italicized numeric values bracketed in the table above are code numbers that Department personnel utilized to code the monthly Discharge Monitoring Reports (DMRs). **FOOTNOTES:** See Pages 8 and 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. Outfall #001A: DURING CALENDAR YEAR 2005 – SCREENING LEVEL TESTING

Effluent Characteristic	Discharge Limitations			Minimum Monitoring Requirements				
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
WET Testing								
A-NOEC[6] Mysidopsis bahia [TDA3E]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
A-NOEC[6] Menidia berrylina [TDA6B]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
C-NOEC[6] Menidia berrylina [TDA6B]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
C-NOEC[6] Arbacia punctulata [TBH3A]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Chemical Specific[7] Testing [50008]	---	---	---	---	---	Report ug/L[8] *[28]*	1/Quarter *[01/90]*	Grab/ Composite *[24]*

The italicized numeric values bracketed in the table above are code numbers that Department personnel utilized to code the monthly Discharge Monitoring Reports (DMRs). FOOTNOTES: See Pages 8 and 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. Outfall #001A: BEGINNING SEPTEMBER 2008 – SCREENING LEVEL TESTING

Effluent Characteristic	Discharge Limitations			Minimum Monitoring Requirements				
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
WET Testing								
A-NOEC[6] Mysidopsis bahia [TDA3E]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
A-NOEC[6] Menidia berrylina [TDA6B]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
C-NOEC[6] Menidia berrylina [TDA6B]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
C-NOEC[6] Arbacia punctulata [TBH3A]	---	---	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Chemical Specific[7] Testing [50008]	---	---	---	---	---	Report ug/L[8] *[28]*	1/Quarter *[01/90]*	Grab/ Composite *[24]*

The italicized numeric values bracketed in the table above are code numbers that Department personnel utilized to code the monthly Discharge Monitoring Reports (DMRs). **FOOTNOTES:** See Pages 8 and 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

FOOTNOTES:

1. **Monitoring** – All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

2. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS for wastewaters receiving a secondary level of treatment. The percent removal shall be based on a monthly average calculation using influent and effluent concentrations. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report *"NODI-9"* on the monthly Discharge Monitoring Report.

3. **Year-round Limits** - Fecal Coliform bacteria and Total Residual Chlorine effluent limits and monitoring requirements are in effect on a year round basis to protect the health, safety, and welfare of the public because of the proximity of shellfish areas to the outfall.

4. **Bacteria Reporting** – The monthly average Fecal Coliform bacteria limitation is a geometric mean limitation and sample results shall be reported as such.

5. **TRC Monitoring Frequency** – The minimum monitoring frequency for TRC shall be twice per day from Monday through Friday and once per day from Saturday through Sunday.

6. **Whole Effluent Toxicity Testing** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic dilution of 0.83% and 0.16% respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points.

   During calendar year 2005, the permittee shall conduct screening level WET testing once per year. Acute tests shall be conducted on the mysid shrimp (*Mysidopsis bahia*) and the inland silverside (*Menidia berrylina*). Chronic tests shall be conducted on the inland silverside (*Menidia berrylina*) and the sea urchin (*Arbacia punctulata*). Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing.

   Beginning one year prior (September 2008) to the expiration date of this permit, the permittee shall conduct screening level WET testing once per year. Acute tests shall be conducted on the mysid shrimp (*Mysidopsis bahia*) and the inland silverside (*Menidia berrylina*). Chronic tests shall be conducted on the inland silverside (*Menidia berrylina*) and the sea urchin (*Arbacia punctulata*). Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – FOOTNOTES cont'd

The permittee is also required to analyze the effluent for the parameters specified in the analytic chemistry on the form in Attachment A of this permit every time a WET test is performed.

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals:

a. Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Marine and Estuarine Organisms, Fifth Edition, October 2002, EPA-821-R-02-014.

b. Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, Third Edition, October 2002, EPA-821-R-02-012.

7. **Priority Pollutant Testing -** Priority Pollutants (chemical specific testing under Chapter 530.5) are those listed by the USEPA pursuant to Section 307(a) of the Clean Water Act and published at 40 CFR Part 122, Appendix D, Tables II and III.

   During calendar year 2005, screening level chemical specific testing shall be conducted once per quarter (1/quarter) for four consecutive quarters. Chemical specific testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, where applicable. Chemical specific testing shall be conducted using methods that permit detection of a pollutant that achieve minimum reporting levels of detection as specified by the Department. Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing.

   Beginning one year prior (September 2008) to the expiration date of this permit, screening level chemical specific testing shall be conducted once per quarter (1/quarter) for four consecutive quarters. Chemical specific testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, where applicable. Chemical specific testing shall be conducted using methods that permit detection of a pollutant that achieve minimum reporting levels of detection as specified by the Department. Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing.

   All mercury sampling shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, *Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels*. All mercury analysis shall be conducted in accordance with EPA Method 1631, *Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Flourescence Spectrometry*.

8. **Reporting:** For the purposes of Discharge Monitoring Report (DMR) reporting, enter a "1" for *yes, testing done this monitoring period* or "NODI-9" *monitoring not required this period.* Testing results shall be submitted in a separate document accompanying the applicable DMR.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharge shall not cause visible discoloration or turbidity in the receiving waters, which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

If chlorination is used as a means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized, followed by a dechlorination system if the Total Residual Chlorine (TRC) cannot be met by dissipation in the detention tank. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall be sufficient to leave a TRC concentration that will effectively reduce bacteria to levels below those specified in Special Condition A, *"Effluent Limitations and Monitoring Requirements"*, above.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade IV** certificate pursuant to Title 32 M.R.S.A., Section 4171 et seq. All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

E. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

SPECIAL CONDITIONS

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following.

1. Any introduction of pollutants into the wastewater collection and treatment system from an indirect discharger in a primary industrial category discharging process wastewater; and

2. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:

   (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
   (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

G. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the wastewater collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

H. MONITORING AND REPORTING

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

Department of Environmental Protection
Bureau of Land and Water Quality
312 Canco Road
Portland, Maine 04103

SPECIAL CONDITIONS

I. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff shall develop and maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

On or before 6-months following completion of the facility upgrade, ***(PCS Code 06799)*** the permittee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan which conforms to Department guidelines for such plans. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

Once the Wet Weather Management Plan has been approved, the permittee shall review their plan annually and record any necessary changes to keep the plan up to date.

J. OPERATION & MAINTENANCE (O&M) PLAN

On or before 6-months following completion of the facility upgrade, the permittee shall submit to the Department a current written comprehensive Operation & Maintenance (O&M) Plan ***[PSC Code 007VA].*** The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and USEPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the wastewater treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

K. CHAPTER 530.5(B)(7)(c)(iii) CERTIFICATION

By January 1 of each calendar year, the permittee shall provide the Department with a certification that none of the following has occurred since the effective date of this permit:

a. Increases in the number, types and flows of industrial, commercial or domestic discharges to the facility that in the judgement of the Department may cause the receiving water to become toxic.
b. Changes in the condition or operations of the facility that may increase the toxicity of the discharge.
c. Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge.
d. Increases in the type or volume of hauled wastes accepted by the facility.

SPECIAL CONDITIONS

L. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to **store up to a maximum of 11,100 gallons** of septage on site and **introduce up to a maximum of 9,000 gallons per day** of septage into its wastewater treatment facility subject to the following terms and conditions:

1. This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.

2. At no time shall addition of septage cause or contribute to effluent quality violations. If such conditions do exist, receipt of septage shall be suspended until effluent quality can be maintained.

3. The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler transporting the septage, the dates and volume of septage added to the waste treatment influent and test results.

4. The addition of septage shall not cause the treatment facility's design capacity to be exceeded. If, for any reason, the treatment facility becomes overloaded, receipt of septage shall be reduced or terminated in order to eliminate the overload condition.

5. Septage known to be harmful to the treatment processes shall not be accepted. Wastes that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.

6. Holding tank wastewater shall not be recorded as septage and should be reported in the treatment facility's influent flow.

M. RE-OPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of test results required by Special Conditions of this permitting action, additional site specific or any other information or test results obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements and or limitations based on new information.

ATTACHMENT A

(Toxicity Testing Forms)

MARINE WHOLE EFFLUENT TOXICITY (WET) TEST REPORT

Facility _____ DEP License No _____ NPDES permit No _____

Contact person _____ Telephone No _____

Date initially sampled _____ (mm/dd/yy) Date tested _____ (mm/dd/yy) Chlorinated? _____

Test type screening _____ surveillance _____ Dechlorinated? _____

Test required by: DEP/EPA _____

Results % effluent

	Mysid shrimp	sea urchin	silverside
LC50			
A-NOEL			
C-NOEL			

Receiving Water Concentration

A-NOEL	
C-NOEL	

Data summary

	Mysid shrimp	sea urchin	silver side		
	% survival	% fertilized	% survival		final wt (mg)
QC standard	A>90	>70	A>90	C>80	>0.50
lab control					
receiving water contrl					
conc. 1 (%)					
conc. 2 (%)					
conc. 3 (%)					
conc. 4 (%)					
conc. 5 (%)					
conc. 6 (%)					
stat test used					

place * next to values statistically different from controls

Reference toxicant

	Mysid shrimp	sea urchin	silver side	
	LC50/A-NOEL	C-NOEL	LC50/A-NOEL	C-NOEL
toxicant /date				
limits (mg/l)				
results (mg/l)				

Salinity Adjustment

brine	
sea salt	
other	

Comments _____

Laboratory Conducting Tests. To the best of my knowledge this information is true, accurate, and complete

signature _____ company _____

printed name _____ address _____

tel. no. _____

Report analytical chemistry on reverse side.

ANALYTICAL CHEMISTRY RESULTS
MARINE WATERS

Date collected _____ mm/dd/yy Date analyzed _____ mm/dd/yy

Lab ID No. _____

Analyte	Report Units	Results receiving water	Results effluent	Detection level	Method
Ammonia nitrogen	µg/L			µg/L	
Salinity	ppt			ppt	
Total residual oxidants	mg/L			mg/L	
Total organic carbon	mg/L			mg/L	
Total solids	mg/L			mg/L	
Total suspended solids	mg/L			mg/L	
Total aluminum	µg/L			µg/L	
Total cadmium	µg/L			µg/L	
Total chromium	µg/L			µg/L	
Total copper	µg/L			µg/L	
Total lead	µg/L			µg/L	
Total nickel	µg/L			µg/L	
Total zinc	µg/L			µg/L	
other (pH)	S.U.			S.U.	
other ( )					

Comments

_____

Laboratory conducting test. To the best of my knowledge this information is true, accurate, and complete

signature _____ lab name _____

printed name _____ address _____

tel. no. _____

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: August 2, 2004
Revised: September 2, 2004

PERMIT NUMBER: #ME0102059
LICENSE NUMBER: #W-002668-5L-G-R

NAME AND ADDRESS OF APPLICANT:

Scarborough Sanitary District
415 Black Point Road
Scarborough, Maine 04074

COUNTY: Cumberland County

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Prout's Neck
Scarborough, Maine

RECEIVING WATER/CLASSIFICATION: Atlantic Ocean, Class SB waters, Scarborough, Maine

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: Gary Lorfano, Superintendent
(207) 883-4663

1. APPLICATION SUMMARY

The applicant has applied for renewal and modification of Maine Waste Discharge License (WDL) #W002668-5L-F-R, which was issued on January 10, 2001, and is due to expire on January 10, 2006. The WDL approved the discharge of secondary treated sanitary wastewater from a municipal treatment facility to the Atlantic Ocean, Class SB waters, in Scarborough, Maine, under two tiers of limits. The first tier was for a monthly average flow of 1.8 million gallons per day (mgd), representative of existing facility conditions. The second tier was for a monthly average flow of 4.5 mgd, representative of the facility capacity after a proposed expansion. The second tier was never implemented and Scarborough's projections of future needs have changed. Scarborough is currently upgrading the facility and is applying for the monthly average discharge of 2.5 mgd of secondary treated sanitary wastewater.

2. PERMIT SUMMARY

a. Regulatory - On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine, excluding areas of special interest to Maine Indian Tribes. The Department's request for program delegation in those areas was referred by the USEPA to the U.S. Department of Justice which, on October 30, 2003, resulted in extension of Maine's NPDES program delegation to all but tribally owned lands. In those areas, the Department maintains the authority to issue WDLs pursuant to Maine law. The extent of Maine's delegated authority is under appeal at the time of this permitting action. From this point forward, the program will be referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program and permit #ME0102059 (same as NPDES permit number) will be utilized as the primary reference number. The NPDES permit last issued by the EPA will be superseded by the MEPDES permit upon issuance. Once retired, all terms and conditions of the NPDES permit are null and void.

b. Terms and conditions - This permitting action is similar to the 1/10/01 WDL action in that it is carrying forward all the terms and conditions with the following exceptions:

1. Eliminating the two tiers of effluent limits and monitoring requirements in favor of a single set based on facility design capacity;

2. Revising the monthly average discharge flow to 2.5 mgd;

3. Revising the monthly, weekly, and daily technology based mass limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) based on the revised effluent flow;

4. Establishing a requirement for a minimum of 85% removal of BOD_5 and TSS;

5. Revising the effluent monitoring frequency for total residual chlorine (TRC) to twice per day from Monday through Friday and once per day from Saturday through Sunday based on facility effluent flow, Department guidance, and best professional judgement;

6. Revising the daily maximum pH range limit from 6.0 – 8.5 standard units to 6.0 – 9.0 standard units based on a new Department regulation;

7. Requiring screening level whole effluent toxicity (WET) and priority pollutant testing during calendar year 2005 as well as beginning one year prior to the expiration date of the permit;

8. Establishing a requirement to develop or update the wet weather flow management plan for the facility.

9. Establishing a requirement to maintain an up-to-date Operations and Maintenance Plan for the facility.

10. Revising Scarborough's allowable amount of septage introduced per day from 6,500 gallons to 9,000 gallons.

c. History - The most recent licensing/permitting actions include the following:

November 17, 1995 - The Department issued WDL renewal #W002668-46-E-R for a 5-year term. This WDL superseded a previous WDL renewal issued on November 2, 1992, and all prior licensing actions to the earliest recorded action on March 26, 1984.

March 1, 1996 – The Department notified Scarborough that the facility was subject to year-round effluent disinfection because of shellfish areas in proximity of the outfall. The notification served to formally modify WDL #W-002668-46-E-R.

November 3, 1997 – The Department administratively modified WDL #W-002668-46-E-R to incorporate a daily maximum fecal coliform bacteria limit of 50 colonies per 100 milliliters (ml) and a monthly average limitation of 15 colonies per 100 ml. The revisions were enacted to ensure consistency with the National Shellfish Sanitation Program standards.

May 23, 2000 – The Department administratively modified WDL #W-002668-46-E-R to incorporate monthly average and daily maximum mercury concentration limits of 82.5 nanograms per liter (ng/L) and 123.8 ng/L respectively. The sampling frequency was established at 4 tests per year.

June 29, 2000 – The Department issued W-002668-68-F-N certifying that the discharge proposed in a pending NPDES permit was in compliance with applicable sections of the Federal Water Pollution Control Act.

September 25, 2000 – The USEPA issued NPDES permit #ME0102059 for a 5-year term. This permit superseded a previous NPDES permit issued on September 19, 1995.

January 10, 2001 – The Department issued WDL #W002668-5L-F-R for a 5-year term.

January 14, 2004 – Scarborough submitted a complete application to the Department for renewal and modification of the WDL pursuant to facility upgrades underway.

d. Source Description: The facility receives residential, commercial, and industrial sanitary wastewater from the Town of Scarborough. There are no industrial users within the collection system that contribute greater than 10 percent of the flow and there are no combined sewer overflows. In recent years, two large commercial food processors, Humpty Dumpty Potato Chip Company and Snow's Canning, have discontinued operation and ceased contributions to the treatment system. The facility was previously authorized to receive and introduce up to 6,500 gallons per day (gpd) of septage and has requested approval to introduce up to 9,000 gpd. Scarborough submitted a Septage Management Plan, dated April 3, 2000, in compliance with Department Regulations, Chapter 555, which remains applicable.

e. Wastewater Treatment: Scarborough is currently undergoing significant upgrading of its facility and projects the new infrastructure to be operational by the fall of 2005. The upgrade involves two new pump stations, renovation of the headworks building, a new grit chamber, three new aeration tanks, renovation of the blower building, one new secondary clarifier, additional sludge storage capacity, and renovation of the sludge processing building. The existing primary clarifiers, aeration tanks, secondary clarifiers, and aerated sludge holding tanks will also be refurbished. The following represents the upgraded infrastructure and practices.

Sanitary wastewater generated in Scarborough is conveyed via a sewer collection system and 23 pump stations to the facility headworks building, where coarse screening of influent flow occurs followed by a 20,000-gallon aerated grit chamber. After the headworks building, wastewater flows by gravity to two 50-foot diameter, 132,000-gallon primary clarifiers, followed by nine fine bubble membrane diffused aeration tanks with a total volume of 0.938 million gallons. Wastewater then flows by gravity to three 55-foot diameter, 213,000-gallon secondary clarifiers. The effluent pumping station has three pumps, each with a capacity of 2,750 gallons per minute. Sodium hypochlorite is added in the twenty-inch diameter, 9,400 foot long effluent discharge pipe, which provides the chlorine contact time necessary for disinfection. Treated effluent is discharged 800 feet offshore on the south end of Prout's Neck, 40 feet below mean low water. The outfall equipment consists of a 16-inch diameter, 360-foot long diffuser header with thirty-four, 3-inch diffuser ports located 10-feet on center.

Scarborough has applied and is approved to introduce a maximum of 9,000 gpd of septage into its wastewater treatment facility. The facility has three 3,700-gallon aeration/storage tanks where septage mixing and aeration is provided through coarse bubble diffusion, providing a total of 11,100 gallons of septage storage capacity. Scarborough is investigating adding additional storage capacity in the future. Septage is added into the waste flow prior to coarse screening at the headworks building.

Primary sludge is pumped to three aerated holding tanks with a total volume of 84,000 gallons. Waste activated (secondary) sludge and scum are pumped to a gravity belt thickener, then to the aerated sludge holding tanks. Blended sludge is then pumped to two rotary presses for dewatering. Dewatered sludge is mixed with sawdust and wood ash, composted on site in aerated static piles, and sold for reuse.

See Attachment A of this fact sheet for a location map and Attachment B for a schematic of the collection system and treatment process.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420, requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

4. RECEIVING WATER QUALITY STANDARDS:

Maine law, 38 M.R.S.A., Section 469 classifies the marine waters off the southern end of Prout's Neck at the point of discharge as a Class SB waterway. Maine law, 38 M.R.S.A., Section 465-B(2) describes the standards for Class SB waters.

5. RECEIVING WATER QUALITY CONDITIONS:

The State of Maine 2002 Integrated Water Quality Monitoring and Assessment Report, prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists two areas associated with Prout's Neck (#811-3, #811-4) as *"Category 3: Estuarine and Marine Waters with Insufficient Data or Information to Determine if Designated Uses are Attained.* Attainment in this context is in regard to the designated use of harvesting of shellfish. Currently, the Maine Department of Marine Resources (MEDMR) lists Area #C12 (Prout's Neck, Scarborough) of the receiving water as closed to the harvesting of shellfish due to insufficient (limited) ambient water quality data to meet the standards in the National Shellfish Sanitation Program. Compliance with the fecal coliform bacteria limits in this permitting action ensures that the discharge from the Scarborough wastewater treatment facility will not cause or contribute to the shellfish harvesting closure. See Attachment A of this fact sheet for a map of the MEDMR closure area.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS:

A. Dilution Factors: Department Regulation Chapter 530.5, *Surface Water Toxics Control Program*, §D(3)(b) states that for discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis and at mean tide for the chronic exposure analysis using appropriate models determined by the Department, such as MERGE or CORMIX. Using plan and profile information provided by the licensee and an average of both MERGE and CORMIX model runs, the Department has determined the dilution factors for the discharge of 2.5 mgd from the wastewater treatment facility to be as follows:

Acute = 120:1 Chronic = 630:1 Harmonic mean [(1)] = 1,890:1

Footnote:

(1) The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the USEPA publication *"Technical Support Document for Water Quality-Based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

The previous licensing action contained two tiers of dilution factors and effluent limits for the then existing monthly average discharge flow capacity of 1.8 mgd as well as a monthly average flow capacity of 4.5 mgd, representative of a proposed future expansion. The second tier was never implemented and Scarborough's projections of future needs have changed, as indicated by the 2.5-mgd monthly average flow limitation in this permitting action.

B. Flow: As stated above, the previous licensing action contained a two tiered monthly average flow limitation of 1.8 mgd, representative of the existing conditions and design capacity, and 4.5 mgd, representative of the facility capacity after a proposed expansion. The WDL contained effluent limitations and monitoring requirements applicable for the two flow limitations, with a requirement that the licensee adhere to the limitations and requirements associated with the 1.8 mgd flow until others are authorized through written Department approval. Due to a lack of ambient water quality data, the license stated that water quality monitoring may be required prior to expansion of flow capacity above 1.8 mgd. The Department's Division of Environmental Assessment (DEA) has reviewed the facility's outfall location and chronic dilution and determined that a monthly average discharge flow of 2.5 mgd is unlikely to significantly impact water quality. DEA recommends that Scarborough conduct ambient monitoring prior to any future increases above a monthly average flow of 2.5 mgd, which is being established as a flow limitation in this permitting action. Specific monitoring details will be determined in the future.

C. BOD_5 & TSS: The previous licensing action contained two tiers of biochemical oxygen demand (BOD_5) and total suspended solids (TSS) concentration and mass limits based on monthly average discharge flows of 1.8 mgd and 4.5 mgd. The monthly and weekly average concentration limits for BOD_5 and TSS are based on secondary treatment requirements of the Clean Water Act §301(b)(1)(B), as defined in 40 CFR 133.102 and Department rule Chapter 525(3)(III). Limits for maximum daily BOD_5 and TSS concentration limits are based on Maine Board of Environmental Protection policy regarding the certification of NPDES permits. Technology based concentration limits are being carried forward in this permitting action. All BOD_5 and TSS mass limitations are calculated utilizing the monthly average flow limitation. Therefore, mass limits are being revised based on the revised monthly average discharge flow of 2.5 mgd. The monitoring frequency of 3/Week is being carried forward from the previous licensing action based on Department guidance for facilities discharging between 1.5 and 5.0 mgd. Prior to any future increases above a monthly average flow of 2.5 mgd, DEA recommends that Scarborough conduct ambient water quality monitoring. Specific monitoring details will be determined in the future.

This permitting action is also establishing a new requirement for a minimum of 85% removal of BOD_5 and TSS pursuant to Chapter 525(3)(III)(a)(3) and (b)(3) of the Department's rules.

D. Settleable Solids: The previous licensing action contained a daily maximum settleable solids limit of 0.3 ml/L and a monitoring requirement of 1/Day, based on Department guidance for publicly owned treatment works facilities (POTWs). The effluent limitation and monitoring requirement are being carried forward in this permitting action.

E. Fecal Coliform Bacteria: The monthly average and daily maximum fecal coliform limits of 15 colonies/100 ml and 50 colonies/100 ml contained in the previous licensing action are based on the Water Classification Program criteria for the Class SB waterways and are consistent with the National Shellfish Sanitation Program. The testing frequency of 3/week is based on Department guidance for facilities discharging between 1.5 and 5.0 mgd. The effluent limits and monitoring requirements are being carried forward in this permitting action and will continue to be in effect on a year-round basis on recommendation from the Maine Department of Marine Resources, as clarified in a March 1, 1996 Department letter.

F. Total Residual Chlorine: Limits on total residual chlorine (TRC) are specified to ensure that ambient water quality standards are maintained and that best practicable treatment (BPT) technology is being applied to the discharge. Permits issued by this Department impose the more stringent of the calculated water quality based or BPT based limits. The previous licensing action evaluated TRC limitations based on two tiers of effluent discharge flows, establishing a technology based daily maximum limit of 1.0 mg/L for the 1.8 mgd flow and a water quality based daily maximum limit of 0.84 mg/L for the 4.5 mgd flow.

With a permitted flow of 2.5 mgd, water quality based thresholds for TRC may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Limit	Calculated Chronic Limit
0.013 mg/L	0.0075 mg/L	120:1 (A) 630:1 (C)	1.56 mg/L	4.72 mg/L

Regarding the daily maximum limitation, the Department's BPT limitation of 1.0 mg/l is more stringent than the calculated water quality based limit. Therefore, the BPT limitation is being imposed. The monitoring frequency of 1/Day is being revised to 2/Day from Monday through Friday and 1/day from Saturday through Sunday based on Department guidance for facilities discharging between 1.5 and 5.0 mgd, a request from the permittee, and Department best professional judgement.

G. pH: The previous licensing action contained a pH range limitation of 6.0 - 8.5 standard units (s.u.), considered by the Department at the time as BPT for secondary treated wastewater and a monitoring frequency requirement of 1/Day. Pursuant to a new Department rule found at Chapter 523(3)(III)(c), the pH range limitation is being revised to 6.0-9.0 s.u., which is now considered BPT for secondary treated wastewater. This permitting action is carrying forward the 1/Day monitoring frequency based on Department guidance for POTWs.

H. Whole Effluent Toxicity (WET) & Chemical Specific Testing: Maine Law, 38 M.R.S.A., Sections 414-A and 420, prohibits the discharge of effluents containing substances in amounts which would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the U.S. EPA. Department Rules, 06-096 CMR Chapter 530.5, *Surface Water Toxics Control Program*, set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET and chemical specific (priority pollutant) monitoring, as required by Chapter 530.5, is included in order to fully characterize the effluent. The permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute WET tests are performed on invertebrate species mysid shrimp (*Mysidopsis bahia*) and vertebrate species Inland silverside (*Menidia beryllina*). Chronic WET tests are performed on sea urchin (*Arbacia punctulata*) and Inland silverside. Chemical specific, or "priority pollutant", monitoring is required to assess the

levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria.

Pursuant to criteria established in Department Rule Chapter 530.5, the Scarborough facility has been placed in the low frequency category for WET testing as the facility has a chronic dilution factor greater than 100:1 and in the high frequency category for chemical specific (priority pollutant) testing as the facility is permitted to discharge greater than 1.0 MGD. A recent review of Scarborough's data indicates that they have fulfilled the Chapter 530.5 testing requirements to date. See Attachment C of this Fact Sheet for a summary of the WET test results and the chemical specific test dates.

Department Regulation Chapter 530.5 and Protocol E(1) of a document entitled *Maine Department of Environmental Protection, Toxicity Program Implementation Protocols*, dated July 1998, states that statistical evaluations shall be periodically performed on the most recent 60 months of WET and chemical specific data for a given facility to determine if water quality based limitations must be included in the permit for a facility.

Chapter 530.5 §C(2) states when a discharge *"...contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality based limits must be established in the permit upon issuance."* Chapter 530.5 §C(3) also states that if data indicates that a discharge is causing an exceedence of applicable AWQC, then:"(1) *the Department must notify the licensee of the exceedence; (2) the licensee must submit a toxicity reduction evaluation (TRE) plan for review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutant and meet receiving water classification standards within 180 days of the Department's approval of the TRE."*

Maine Department of Environmental Protection Guidance entitled *Toxicity Program Implementation Protocols*, July 1998, protocol #F(9) establishes the criteria for reduced surveillance level testing for publicly owned treatment works. The protocol states that for facilities with all dilution factors greater than 20:1 and no reasonable potential or exceedences of AWQC over a full five-year cycle may receive a reduction to one round of screening testing for the complete suite of chemical specific (priority pollutants) and acute and chronic WET tests for all required species and that all screening tests must be completed in the screening year. The screening year begins 12-months prior to the expiration date of the permit.

Pursuant to a January 10, 2001 statistical evaluation conducted for the previous licensing action in accordance with EPA's March 1991 document entitled *Technical Support Document (TSD) for Water Quality Based Toxics Control*, Chapter 3.3.2 and Maine Department of Environmental Protection Guidance, July 1998, entitled *Toxicity Program Implementation Protocols*, the Department determined that the discharge did not **exceed, or have a reasonable potential to exceed, acute, chronic, or human health ambient water quality criteria (AWQC) for the chemical specific parameters tested to date or ambient water quality thresholds for any of the WET species tested to date.**

In the previous licensing action, Pursuant to Maine Department of Environmental Protection guidance entitled *Toxicity Program Implementation Protocols*, July 1998, protocol #F(9), the Department granted Scarborough a reduction in both WET and chemical specific testing to a screening level of testing. For

WET testing that resulted in a frequency of 1/year and for chemical specific testing it resulted in a frequency of 4/year, beginning calendar year 2005. No surveillance level (1/year) of testing was required in the interim for either WET or chemical specific testing. In accordance with protocol F(9), Scarborough was required submit to the Department on an annual basis, a written statement evaluating its current status for each of the four conditions listed in Department regulation, Chapter 530.5(B)(7)(c)(iii).

As the previous licensing action was scheduled to expire in January 2006, Scarborough has not yet reached the screening year (January 2005) as of the date of this permitting action. Therefore, in this permitting action, Scarborough is required to complete the previously required 2005 WET and chemical specific testing. In this permitting action, the Department is carrying forward the reduction in testing requiring that Scarborough conduct WET testing at a frequency of 1/year and chemical specific testing at a frequency of 4/year, beginning September 2008, which entails the new screening year. No surveillance level (1/year) testing is required in the interim for either WET or chemical specific testing. In accordance with protocol F(9) and pursuant to Permit Special Condition K, the permittee is required submit to the Department on an annual basis, a written statement evaluating its current status for each of the four conditions listed in Department regulation, Chapter 530.5(B)(7)(c)(iii). If the testing results indicate any reasonable potential or exceedences of AWQC, the Department will reopen this permit pursuant to Permit Special Condition M, to reevaluate and reestablish WET and chemical specific testing requirements.

It is noted the discharge of mercury is being regulated by a separate licensing document that has established monthly average and daily maximum concentration limits of 82.5 nanograms per liter (ng/L) and 123.8 ng/L respectively. The sampling frequency for mercury has been established as 4/Year.

7. ANTI-BACKSLIDING

Federal regulation 40 CFR, §122(l) contain the criteria for what is often referred to as the anti-backsliding provisions of the Federal Water Pollution Control Act (Clean Water Act). In general, the regulation states that except for provisions specified therein, effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit. Allowable exceptions to the anti-backsliding provisions include when:

(1) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation and

(2) information is available which was not available at the time of the permit issuance (other than revised regulations, guidance or test methods) and which would justify the application of less stringent effluent limitations at the time of permit issuance.

This permitting action increases the monthly average flow limitation from 1.8 mgd to 2.5 mgd based on an upgrade of the facility that is designed to provide greater treatment capacity. Mass limitations for BOD_5 and TSS are calculated based on concentration limits and the monthly average flow limit. Although the concentration limits are not changing, the increase in the monthly average flow limit results in increased BOD_5 and TSS mass limits in this permitting action. The rationale for this action is contained in Fact Sheet Section 6, *Effluent Limitations & Monitoring Requirements*. The Department believes that this action is consistent with the anti-backsliding provisions.

8. ANTI-DEGRADATION

Maine's anti-degradation policy is included in 38 M.R.S.A., Section 464(4)(F) and addressed in the *Conclusions* section of this permit. Pursuant to the policy, where a new or increased discharge is proposed, the Department shall determine whether the discharge will result in a significant lowering of existing water quality. Increased discharge means a discharge that would add one or more new pollutants to an existing effluent, increase existing levels of pollutants in an effluent, or cause an effluent to exceed one or more of its current licensed discharge flow or effluent limits, after the application of applicable best practicable treatment technology.

As stated in Fact Sheet Section 7 above, this permitting action increases the monthly average flow limitation based on an upgrade of the facility, which results in increased calculated mass limitations for BOD_5 and TSS. The rationale for this action is contained in Fact Sheet Section 6, *Effluent Limitations & Monitoring Requirements*. The Department has determined that the increases described are not anticipated to result in a significant lowering of water quality, that all existing and designated uses in the receiving water will be maintained and protected, and that the Department's anti-degradation policy has been satisfied.

9. DISCHARGE IMPACT ON RECEIVING WATER QUALITY:

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class SB classification.

10. PUBLIC COMMENTS

Public notice of this application was made in the Portland Press Herald newspaper on or about January 12, 2004. The Department receives public comment on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

11. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

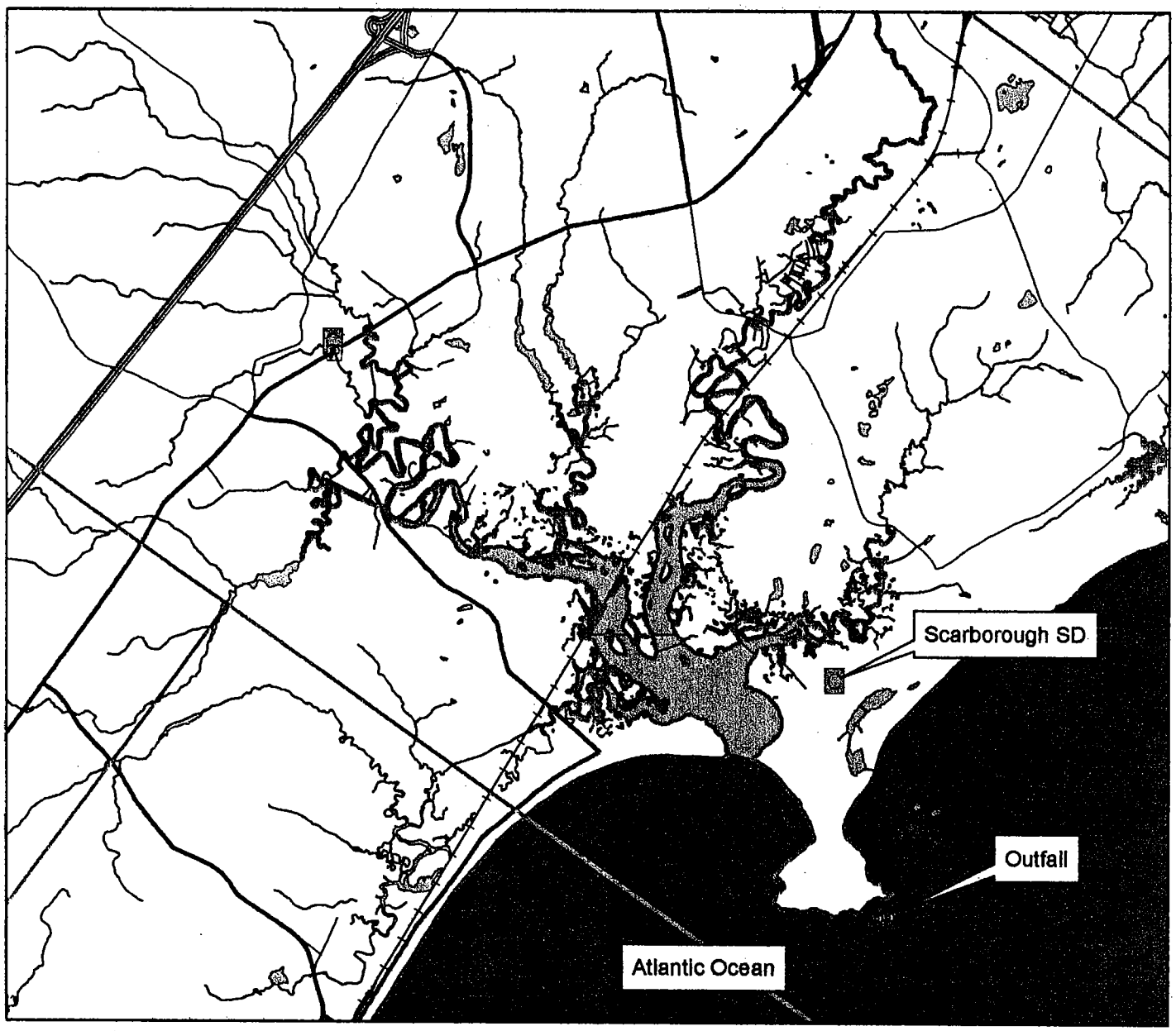
Robert Stratton
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-6114
Electronic mail: robert.d.stratton@maine.gov

12. RESPONSE TO COMMENTS

During the period of August 2, 2004 through September 1, 2004, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Scarborough Sanitary District for the proposed discharge. The Department did not receive any comments that resulted in significant revisions to the permit. Therefore, no response to comments has been prepared.

ATTACHMENT A

(Facility Location Map)
(MEDMR Shellfish Closure Map)



Legend

- Wastewater_Outfalls
- Wastewater_Facilities
- Railroads

Roads

- State aided
- State hwy
- Toll highway
- Towns
- Streams
- Ponds and Lakes
- Rivers

N

0 0.5 1 2 3 4 Miles

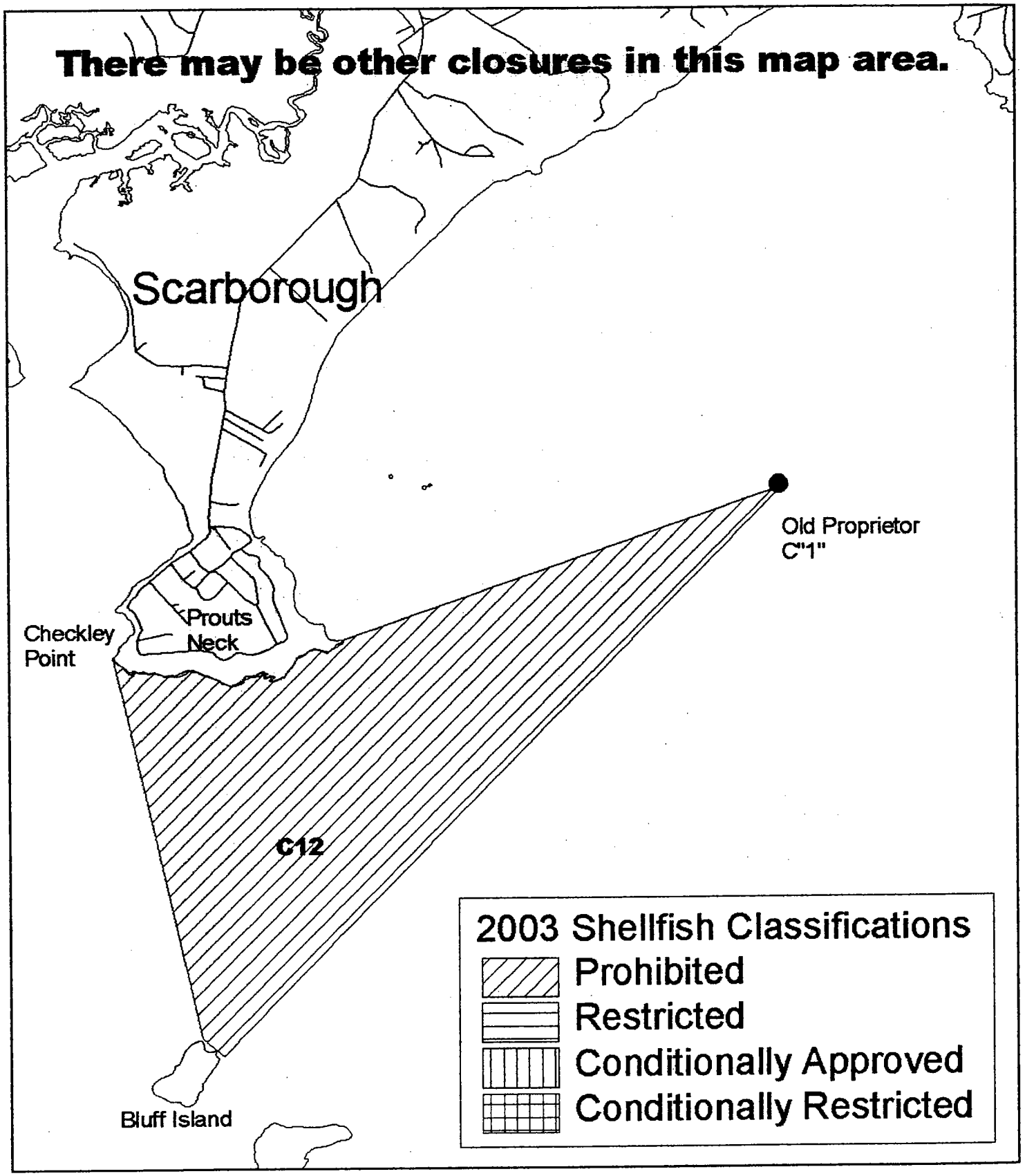
Scarborough Sanitary District
Scarborough, Maine

Maine Department of Marine Resources

Legal Notice of Shellfish Closure Area

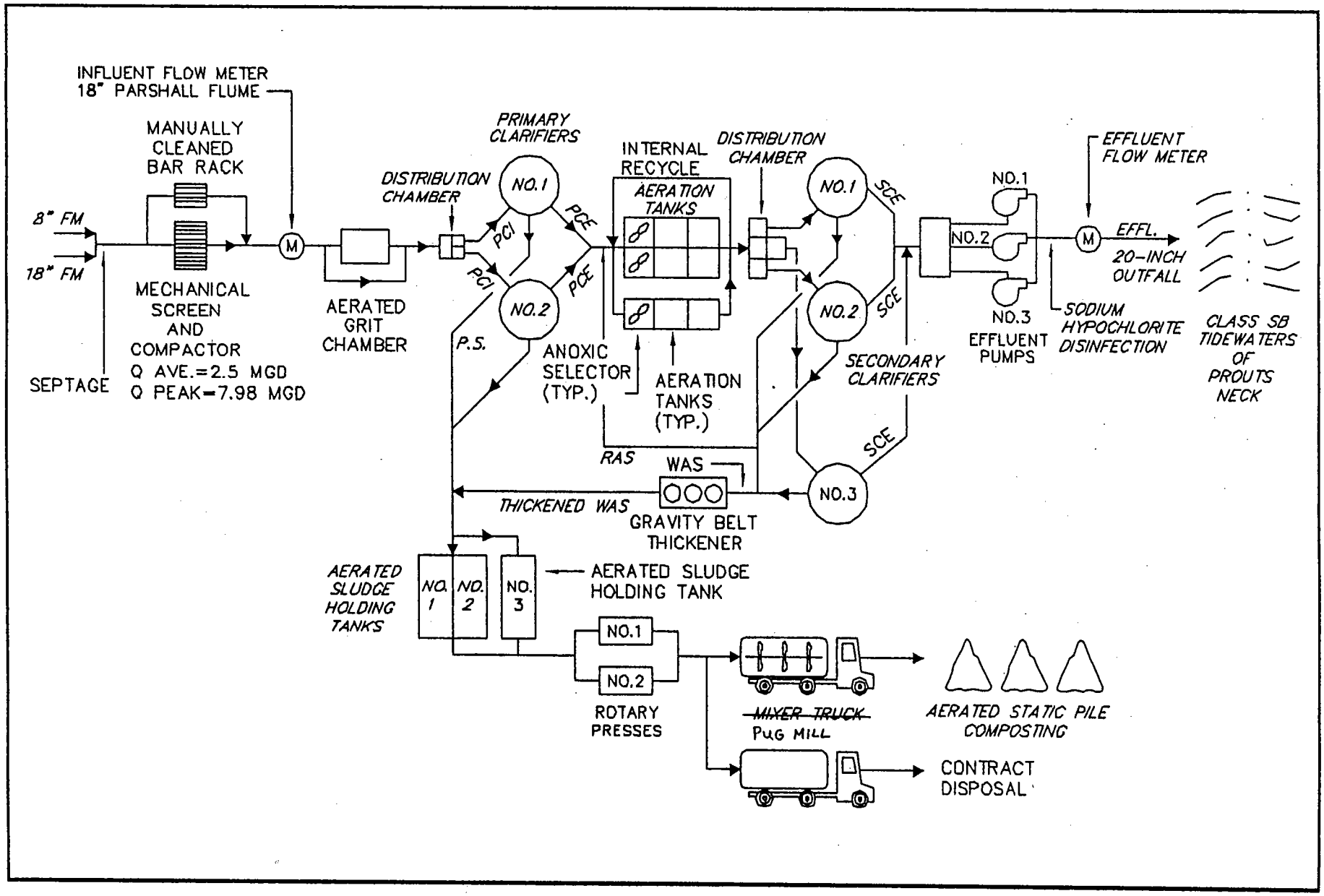
C12 Prouts Neck

4/3/01



ATTACHMENT B

(Facility Schematics)



PROCESS FLOW SCHEMATIC
LINE DRAWING
SCARBOROUGH SANITARY DISTRICT WWTF

EARTH TECH

NOT TO SCALE

ATTACHMENT C

(WET and Priority Pollutant Testing Results)

ATLANTIC OCEAN

Chronic dilution: 630.0:1
Acute dilution: 131.0:1

1/630 = 0.158%
1/131 = 0.76%

06/29/2004

Species	Test	Test Result %	Sample Date
SILVER SIDE	A_NOEL	100	09/26/1993
SILVER SIDE	C_NOEL	50	09/26/1993
SILVER SIDE	LC50	>100	09/26/1993
MYSID SHRIMP	A_NOEL	25	06/05/1994
MYSID SHRIMP	LC50	57	06/05/1994
SEA URCHIN	C_NOEL	50	06/05/1994
SILVER SIDE	A_NOEL	50	06/05/1994
SILVER SIDE	C_NOEL	50	06/05/1994
SILVER SIDE	LC50	66	06/05/1994
MYSID SHRIMP	A_NOEL	50	10/28/1994
MYSID SHRIMP	LC50	67	10/28/1994
SILVER SIDE	A_NOEL	50	10/28/1994
SILVER SIDE	C_NOEL	25	10/28/1994
SILVER SIDE	LC50	69	10/28/1994
MYSID SHRIMP	A_NOEL	50	05/21/1995
MYSID SHRIMP	LC50	>100	05/21/1995
SEA URCHIN	C_NOEL	50	05/21/1995
SILVER SIDE	A_NOEL	100	05/21/1995
SILVER SIDE	C_NOEL	25	05/21/1995
SILVER SIDE	LC50	78	05/21/1995
MYSID SHRIMP	A_NOEL	100	11/26/1995
MYSID SHRIMP	LC50	>100	11/26/1995
SEA URCHIN	C_NOEL	25	11/26/1995
SILVER SIDE	A_NOEL	100	11/26/1995
SILVER SIDE	C_NOEL	50	11/26/1995
SILVER SIDE	LC50	>100	11/26/1995
MYSID SHRIMP	A_NOEL	100	02/25/1996
MYSID SHRIMP	LC50	>100	02/25/1996
SILVER SIDE	A_NOEL	50	02/25/1996
SILVER SIDE	LC50	93.3	02/25/1996
MYSID SHRIMP	A_NOEL	50	08/25/1996
MYSID SHRIMP	LC50	79.4	08/25/1996
SEA URCHIN	C_NOEL	25	08/25/1996
SILVER SIDE	A_NOEL	50	08/25/1996
SILVER SIDE	C_NOEL	50	08/25/1996
SILVER SIDE	LC50	70.7	08/25/1996
MYSID SHRIMP	A_NOEL	100	02/23/1997
MYSID SHRIMP	LC50	>100	02/23/1997
SILVER SIDE	A_NOEL	50	02/23/1997
SILVER SIDE	LC50	>100	02/23/1997
MYSID SHRIMP	A_NOEL	81.2	08/17/1997
MYSID SHRIMP	LC50	>100	08/17/1997

Species	Test	Test Result %	Sample Date	
SEA URCHIN	C_NOEL	6.25	08/17/1997	
SILVER SIDE	A_NOEL	100	08/17/1997	
SILVER SIDE	C_NOEL	50	08/17/1997	
SILVER SIDE	LC50	>100	08/17/1997	
MYSID SHRIMP	A_NOEL	100	02/22/1998	
MYSID SHRIMP	LC50	>100	02/22/1998	
SILVER SIDE	A_NOEL	100	02/22/1998	
SILVER SIDE	LC50	>100	02/22/1998	
MYSID SHRIMP	A_NOEL	50	08/09/1998	
MYSID SHRIMP	LC50	>100	08/09/1998	
SILVER SIDE	A_NOEL	50	08/09/1998	
SILVER SIDE	C_NOEL	50	08/09/1998	
SILVER SIDE	LC50	>100	08/09/1998	
MYSID SHRIMP	A_NOEL	100	02/21/1999	Begin 5-year window
MYSID SHRIMP	LC50	>100	02/21/1999	
SILVER SIDE	A_NOEL	50	02/21/1999	EPA
SILVER SIDE	LC50	88	02/21/1999	
MYSID SHRIMP	A_NOEL	53.6	08/22/1999	
MYSID SHRIMP	LC50	78.1	08/22/1999	
SEA URCHIN	C_NOEL	100	08/22/1999	
SILVER SIDE	A_NOEL	100	08/22/1999	State
SILVER SIDE	C_NOEL	50	08/22/1999	
SILVER SIDE	LC50	>100	08/22/1999	
MYSID SHRIMP	A_NOEL	55.6	02/06/2000	
MYSID SHRIMP	LC50	76.2	02/06/2000	
SILVER SIDE	A_NOEL	55	02/06/2000	EPA
SILVER SIDE	LC50	70.7	02/06/2000	
MYSID SHRIMP	A_NOEL	52.8	08/27/2000	
MYSID SHRIMP	LC50	70.7	08/27/2000	
SEA URCHIN	C_NOEL	50	08/27/2000	State
SILVER SIDE	A_NOEL	75	08/27/2000	
SILVER SIDE	C_NOEL	50	08/27/2000	
SILVER SIDE	LC50	88.7	08/27/2000	1/10/01 New NOL
MYSID SHRIMP	A_NOEL	100	02/11/2001	
MYSID SHRIMP	LC50	>100	02/11/2001	
SILVER SIDE	A_NOEL	57	02/11/2001	EPA
SILVER SIDE	LC50	93.6	02/11/2001	
MYSID SHRIMP	A_NOEL	53.6	08/19/2001	
MYSID SHRIMP	LC50	81.7	08/19/2001	EPA
SILVER SIDE	A_NOEL	100	08/19/2001	
SILVER SIDE	LC50	>100	08/19/2001	
MYSID SHRIMP	A_NOEL	100	02/24/2002	

Species	Test	Test Result %	Sample Date	
MYSID SHRIMP	LC50	>100	02/24/2002	
SILVER SIDE	A_NOEL	83	02/24/2002	EPA
SILVER SIDE	LC50	>100	02/24/2002	
MYSID SHRIMP	A_NOEL	100	08/04/2002	
MYSID SHRIMP	LC50	>100	08/04/2002	
SILVER SIDE	A_NOEL	100	08/04/2002	EPA
SILVER SIDE	LC50	>100	08/04/2002	
MYSID SHRIMP	A_NOEL	83	02/09/2003	
MYSID SHRIMP	LC50	>100	02/09/2003	EPA
SILVER SIDE	A_NOEL	100	02/09/2003	
SILVER SIDE	LC50	>100	02/09/2003	
MYSID SHRIMP	A_NOEL	55.6	08/03/2003	
MYSID SHRIMP	LC50	76.2	08/03/2003	EPA
SILVER SIDE	A_NOEL	50	08/03/2003	
SILVER SIDE	LC50	63.7	08/03/2003	
MYSID SHRIMP	A_NOEL	55.0	02/08/2004	
MYSID SHRIMP	LC50	70.7	02/08/2004	EPA
SILVER SIDE	A_NOEL	54.7	02/08/2004	
SILVER SIDE	LC50	73.1	02/08/2004	

All Tests conducted prior to 1/10/01 WDL

Sample Date: 08/23/1999
Plant flows not provided

otal Tests: 129
issing Compounds: 0
ests With High DL: 8

M = 1	V = 0	A = 0
BN = 6	P = 1	other = 0

Sample Date: 11/12/1999
Plant flows provided

otal Tests: 124
issing Compounds: 0
ests With High DL: 1

mon.(MGD)= 1.233
day(MGD)= 1.219

M = 1	V = 0	A = 0
BN = 0	P = 0	other = 0

Sample Date: 02/06/2000
Plant flows provided

otal Tests: 139
issing Compounds: 0
ests With High DL: 3

mon.(MGD)= 1.265
day(MGD)= 1.166

M = 3	V = 0	A = 0
BN = 0	P = 0	other = 0

Sample Date: 05/05/2000
Plant flows provided

otal Tests: 124
issing Compounds: 0
ests With High DL: 0

mon.(MGD)= 1.345
day(MGD)= 1.418

M = 0	V = 0	A = 0
BN = 0	P = 0	other = 0

Sample Date: 08/28/2000
Plant flows provided

otal Tests: 132
issing Compounds: 1
ests With High DL: 12

mon.(MGD)= 1.281
day(MGD)= 1.168

M = 0	V = 1	A = 3
BN = 7	P = 1	other = 0