

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

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

Hull Permanent Sewer Commission 1111 Nantasket Avenue Hull, MA 02045	is authorized to discharge from the Hull Water Pollution Control Facility 1111 Nantasket Avenue Hull, MA 02045
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to the receiving water named **Massachusetts Bay/Atlantic Ocean** (Boston Harbor Segment MA 70-01),

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

The Towns of Cohasset and Hingham are co-permittees for PART 1.D. UNAUTHORIZED DISCHARGES, PART 1.E. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM, and PART 1. F. ALTERNATIVE POWER SOURCE, which include conditions regarding the operation and maintenance of the portions of the collection systems owned and operated by the Towns which discharge to the Hull WPCF. The responsible Town authorities are:

Cohasset Sewer Commission Cohasset Town Hall 41 Highland Avenue Cohasset, MA 02025	Hingham Sewer Commission 210 Central Street Hingham, MA 02043-2759
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This permit shall become effective on**

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

This permit supersedes the permit issued on May 6, 2002

This permit consists of 10 Pages in Part I including effluent limitations, monitoring requirements, etc., Attachments A-Marine Acute Toxicity Test procedure and Protocol, B-Monitoring Program, and Part II including Standard Conditions.

Signed this 1st day of SEPTEMBER, 2009

/S/ SIGNATURE ON FILE

Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

** This permit will become effective no sooner than 30 days after signature.

PART I

1.A. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001**, treated industrial and sanitary wastewater to the Massachusetts Bay. Such discharges shall be limited and monitored as specified below.

<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>				<u>MONITORING REQUIREMENTS</u>	
PARAMETER	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE³ TYPE</u>
FLOW ² (Rolling Average)	*****	*****	3.07 MGD	*****	Report MGD	CONTINUOUS	RECORDER
FLOW ²	*****	*****	Report MGD	*****	*****	CONTINUOUS	RECORDER
BOD ₅ ⁴	768 lbs/Day 349 kgs/Day	1152 lbs/Day 523 kgs/Day	30 mg/l	45 mg/l	50 mg/l	1/WEEK	24-HOUR COMPOSITE ⁵
TSS ⁴	768 lbs/Day 349 kgs/Day	1152 lbs/Day 523 kgs/Day	30 mg/l	45 mg/l	50 mg/l	1/WEEK	24-HOUR COMPOSITE ⁵
pH RANGE ¹	6.5 - 8.5 SU SEE PERMIT PAGE 4 OF 10, PARAGRAPH I.A.1.b.					1/DAY	GRAB
TOTAL CHLORINE RESIDUAL ⁷	*****	*****	0.70 mg/l	*****	1.0 mg/l	3/DAY	GRAB
FECAL COLIFORM ^{1,6}	***** *****	***** *****	88 CFU/100 ml	***** *****	260 CFU/100 ml	1/WEEK	GRAB
ENTEROCOCCI BACTERIA ⁶	***** *****	***** *****	35 CFU/100 ml	***** *****	276 CFU/100 ml	1/WEEK	GRAB
WHOLE EFFLUENT TOXICITY SEE FOOTNOTES 8, 9, and 10	Acute LC ₅₀ ≥ 100%					4/YEAR	24-HOUR COMPOSITE ⁵

Footnotes:

1. Required for State Certification.
2. Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the previous eleven months. The actual monthly average shall also be reported.
3. All required effluent samples shall be collected at the point specified in Permit Attachment B. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report.

4. Sampling required for influent and effluent.
5. 24-hour composite samples will consist of at least twenty four (24) grab samples taken during one consecutive 24 hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.
6. Enterococci samples shall be taken concurrently with the fecal coliform samples. Each bacterium sampling event will also be conducted concurrent with a required total residual chlorine sample. The monthly average limit for fecal coliform is expressed as a geometric mean. The units may be expressed as MPN for samples tested using the Most Probable Number method, or CFU when using the Membrane Filter method.
7. Chlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection, shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem, and the estimated amount of time that the reduced levels of chlorine occurred.
8. The permittee shall conduct acute toxicity tests four times per year. The permittee shall test the Inland Silverside (Menidia beryllina), only. Toxicity test samples shall be collected in February, May, August, and November. The test results shall be submitted by the last day of the month following the completion of the test. The results are due March 31st, June 30th, September 30th and December 31st, respectively.

The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates	Submit Results By:	Test Species	Acute Limit LC ₅₀
February May August November	March 31 st June 30 th September 30 th December 31 st	Inland Silverside (<u>Menidia beryllina</u>) See Attachment A	≥100%

9. The LC₅₀ is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.
10. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water.

The self implementing guidance is found in Attachment G of NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs) which is sent to all permittees with their annual set of DMRs and may also be found on the EPA, Region I web site at <http://www.epa.gov/region1/enforcementandassistance/dmr2005.pdf>. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**.

Any modification or revocation to this guidance will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

Part I.A.1. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

- e. The permittee's treatment facility shall maintain a minimum of 85 percent removal of total suspended solids and biochemical oxygen demand or carbonaceous biochemical oxygen demand (depending on the season). The percent removal shall be based on monthly average values.
- f. The permittee shall minimize the use of chlorine while maintaining adequate bacterial control.
- g. If the average annual flow in any calendar year exceeds 80% of the facility's design flow, the permittee shall submit a report to MassDEP by March 31 of the following calendar year describing plans for further flow increases and discuss how the permittee will remain in compliance with the effluent limitations in the permit.

A.2. All POTWs must provide adequate notice to the Director of the following:

- a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category discharging process water; and
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For purposes of this paragraph, adequate notice shall include information on:
 - (1) the quantity and quality of effluent introduced into the POTW; and
 - (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

B.1. Limitations for Industrial Users:

- a. Pollutants introduced into POTWs by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.

B.2. Toxics Control

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

- c. EPA or MassDEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

D.1. Unauthorized Discharges

The permit only authorizes discharges in accordance with the terms and conditions of this permit and only from the outfalls listed in PART 1.A.1. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) from any portion of the collection system owned and operated by the permittee or co-permittees are not authorized by this permit and shall be reported to EPA and MassDEP in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes DEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at <http://www.mass.gov/dep/water/approvals/surffms.htm#sso>.

E.1. 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. The permittee and co-permittees shall independently meet the following conditions for those portions of the collection system which it owns and operates.

E.2. Maintenance Staff

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.

E.3. Preventative Maintenance Program

Maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges.

E.4. Infiltration/Inflow Control

The permittee shall update (as needed) and the co-permittees shall each develop and implement a plan to control infiltration and inflow (I/I) to their own sewerage systems.

The plans shall be submitted to EPA and MassDEP **within six months of the effective date of this permit** (see page 1 of this permit for the effective date) and shall describe the permittee's and co-permittees' programs for preventing infiltration/inflow related effluent limit violations, and all unauthorized discharges of wastewater, including overflows and by-passes due to excessive infiltration/inflow.

The plan shall include:

- An ongoing program to identify and remove sources of infiltration and inflow. The program shall include the necessary funding level and the source(s) of funding.
- An inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts. Priority should be given to removal of public and private inflow sources that are upstream from, and potentially contribute to, known areas of sewer system backups and/or overflows.
- Identification and prioritization of areas that will provide increased aquifer recharge as the result of reduction/elimination of infiltration and inflow to the system.
- An educational public outreach program for all aspects of I/I control, particularly private inflow.

Reporting Requirements:

By **March 31 of each year** the permittee and co-permittees shall each submit a summary report of all actions taken to minimize I/I during the previous calendar year. The summary report shall, at a minimum, include:

- A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- Expenditures for any infiltration/inflow related maintenance activities and corrective actions taken during the previous year.
- A map with areas identified for I/I-related investigation/action in the coming year.
- A calculation of the annual average I/I and the maximum month I/I for the reporting year.
- A report of any infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Part 1, Section D.1 Unauthorized Discharges of this permit.

F.1. Alternative Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee and co-permittees shall continue to provide an alternative power source with which to sufficiently operate its treatment works (as defined at 40 CFR §122.2).

G. Sludge Conditions

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.
2. The permittee shall comply with the more stringent of either the state or federal (40 CFR part 503), requirements.
3. The requirements and technical standards of 40 CFR part 503 apply to facilities which perform one or more of the following use or disposal practices:
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge only landfill
 - c. Sewage sludge incineration in a sludge only incinerator
4. The 40 CFR part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (lagoons- reed beds), or are otherwise excluded under 40 CFR 503.6.
5. The permittee shall use and comply with the attached compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:
 - General requirements
 - Pollutant limitations
 - Operational standards (pathogen reduction requirements and vector attraction reduction requirements)
 - Management practices
 - Record keeping
 - Monitoring
 - Reporting

Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year:

less than 290	1/ year
290 to less than 1500	1 /quarter
1500 to less than 15000	6 /year
15000 +	1 /month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.
8. The permittee shall submit an annual report containing the information specified in the guidance by **February 19**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by **February 19** containing the following information:
- Name and address of contractor responsible for sludge disposal
 - Quantity of sludge in dry metric tons removed from the facility by the sludge contractor

H. Monitoring and Reporting

1. Reporting

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the following month.

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Southeast Regional Office
Bureau of Resource Protection
20 Riverside Drive
Lakeville, MA 02347

Signed and dated Discharge Monitoring Report Forms and toxicity test reports required by this permit shall also be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

And

Division of Marine Fisheries, Shellfish Program
30 Emerson Avenue,
Gloucester, MA 01930.

I.1. State Permit Conditions

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap.21, §43.

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

**PERMIT ATTACHMENT A
MARINE ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL**

I. GENERAL REQUIREMENTS

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

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

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

II. METHODS

Methods to follow are those recommended by EPA in:

Weber, C.I. et al. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. August 1993, EPA/600/4-90/027F.

Any exceptions are stated herein.

III. SAMPLE COLLECTION

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

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

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

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected at a point away from the discharge which is free from toxicity or other sources of contamination. Avoid collecting near areas of obvious road or agricultural runoff, storm sewers or other point source discharges. An additional control (0% effluent) of a standard laboratory water of known quality shall also be tested.

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

Director
Office of Ecosystem Protection
U. S. Environmental Protection Agency-New England
One Congress Street
Suite 1100 - CAA
Boston, MA 02114-2023

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

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

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

**EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS
FOR THE MYSID, MYSIDOPSIS BAHIA 48 HOUR TEST¹**

1. Test type	Static, non-renewal
2. Salinity	25ppt \pm 10 percent for all dilutions by adding dry ocean salts
3. Temperature (°C)	20°C \pm 1°C or 25°C \pm 1°C
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml
7. Test solution volume	200 ml
8. Age of test organisms	1-5 days
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted effluent concentration (%effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding

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

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND RECOMMENDED TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST¹

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

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

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

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

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Quanti- fication Level (mg/L)</u>
pH	x	x	---
Salinity	x	x	PPT(o/oo)
Total Residual Oxidants ^{*1}	x	x	0.05
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
<u>Total Metals</u>			
Cd		x	0.001
Cr		x	0.005
Pb		x	0.005
Cu		x	0.0025
Zn		x	0.0025
Ni		x	0.004
Al		x	0.02

Superscript:

^{*1} Total Residual Oxidants

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

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

or use USEPA Manual of Methods Analysis of Water or Wastes, Method 330.5.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

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

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See flow chart in Figure 6 on page 77 of EPA 600/4-90/027F for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 94 of EPA 600/4-90/027F.

VIII. TOXICITY TEST REPORTING

The following must be reported:

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

Permit Attachment B Sampling Locations

Parameter	Sample Type	Sample Location
Flow (Effluent)	Continuous	Magnetic flow meter
BOD (Influent)	24 Hour Composite	Plant influent line prior to the step screen and aerated grit chamber
TSS (Influent)	24 Hour Composite	Plant influent line prior to the step screen and aerated grit chamber
BOD (Effluent)	24 Hour Composite	3/4 of the way through the contact chamber
TSS (Effluent)	24 Hour Composite	3/4 of the way through the contact chamber
pH (Effluent)	Grab	3/4 of the way through the contact chamber
TRC (Effluent)*	Grab	3/4 of the way through the contact chamber
Fecal Coliform (Effluent)*	Grab	3/4 of the way through the contact chamber
Enterococci Bacteria (Effluent)*	Grab	3/4 of the way through the contact chamber.
Whole Effluent Toxicity (Effluent)	24 Hour Composite	3/4 of the way through the contact chamber
Whole Effluent Toxicity (Dilution Water)	Grab	Hull Gut, 1/2 mile from plant outfall

* Samples for total residual chlorine, fecal coliform, and enterococci bacteria shall be collected at the same time.



THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
251 Causeway Street, Suite 800, Boston, MA 02114-2136
(617) 626-1200 FAX: (617) 626-1240

August 10, 2009

Peter Nyberg
Hull Water Pollution Control Facility
AOS-United Water
1111 Nantasket Avenue
Hull, MA 02045-1313

RE: CZM Federal Consistency Review: Hull Water Pollution Control Facility, NPDES permit #MA0101231; Hull

Dear Mr. Nyberg:

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the Hull Water Pollution Control Facility discharge to the Atlantic Ocean.

We concur with your certification and find that the activity's effects on resources and uses in Massachusetts coastal zone as proposed are consistent with the CZM enforceable program policies.

If the above-referenced project is modified in any manner, including any changes resulting from permit, license or certification revisions, including those ensuing from an appeal, or the project is noted to be having effects on coastal resources or uses that are different than originally proposed, it is incumbent upon the proponent to notify CZM and submit an explanation of the nature of the change pursuant to 15 CFR 930. CZM will use this information to determine if further federal consistency review is required.

Thank you for your cooperation with CZM.

Sincerely,

Deerin Babb-Brott,
Director

DBB/tpc
czm#1807

cc: Doug Corb, USEPA
Paul Hogan, DEP Worcester
Jason Burtner, CZM South Shore Regional Coordinator



RESPONSE TO PUBLIC COMMENTS
Hull Water Pollution Control Facility
National Pollutant Discharge Elimination System (NPDES), No. MA0101231

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) are issuing a final National Pollutant Discharge Elimination System (NPDES) permit for the Hull Water Pollution Control Facility in Hull, Massachusetts. The Final Permit authorizes the Town of Hull to discharge wastewater to Massachusetts Bay in accordance with the requirements of the Federal Clean Water Act (CWA), 33 U.S.C. §§ 1251 *et. seq.*, and the Massachusetts Clean Waters Act, M.G.L. Ch. 21, §26-35.

The Draft Permit public comment period began June 19, 2009 and ended on July 18, 2009. The sole comment received by MassDEP and EPA is from Paul Diodati, Director of the Commonwealth of Massachusetts, Division of Marine Fisheries.

Comment: The existing permit contains the provision to send copies of monthly data monitoring reports (DMRs) to our Shellfish Program, but this has been removed from the draft renewal permit. In order to assist *Marine Fisheries* with the timely sanitary classification and management of adjacent shellfish growing areas in Boston Harbor, Hull Bay, and Stony and Nantasket beaches, we are requesting the continuation of receiving monthly DMRs at Part I.H.1 “Reporting” in this renewal permit. Copies of DMRs should be sent to: Division of Marine Fisheries, Shellfish Program, 30 Emerson Avenue, Gloucester, MA 01930.

Response: The omission of the Division of Marine Fisheries from the “Reporting” section of the draft permit was inadvertent. The Final Permit requires that copies of the monthly Discharge Monitoring Reports (DMRs) be submitted to Marine Fisheries.