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),

Lynn Water & Sewer Commission (LWSC)

is authorized to discharge from the facility located at

Lynn Regional Wastewater Treatment Facility and
Combined Sewer Overflows
Lynn, MA 01905

to receiving waters named **Lynn Harbor (Broad Sound), Saugus River, Strawberry Brook and Nahant Bay,** in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

The Town of Nahant, the Town of Swampscott and the Town of Saugus are co-permittees for Part I.B. Unauthorized Discharges and Part I.C. Operation and Maintenance of the Sewer System which include conditions regarding the operation and maintenance of the collection systems owned and operated by the Towns. The responsible Town Departments are,

Town of Nahant	**Town of Swampscott**	**Town of Saugus**
Selectmen, Town of Nahant	**Selectmen, Town of Swampscott**	**Selectmen, Board of Public Works**
334 Nahant Road	**Elihu Thomson Adm. Building**	**298 Central Street**
Nahant, MA 01908	**Swampscott, MA 01907**	**Saugus, MA 01906**

This permit shall become effective on the first day of the calender month immediately following 60 days after signature.

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

This permit supersedes the permit issued on May 31, 2000.

This permit consists of 21 pages in Part I including effluent limitations, monitoring requirements, and 27 pages in Part II including General Conditions and Definitions.

Signed this 30th day of MARCH, 2007

/S/ SIGNATURE ON FILE

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Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

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

PART I

A.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 effluent to Lynn Outer Harbor . Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[2] TYPE**
FLOW[1]	*********	*********	25.8 mgd [1]	********	********	Continuous	Recorder
FLOW[1]	********	********	Report mgd	********	Report mgd	Continuous	Recorder
BOD5[3]	6459 lbs/Day	9688 lbs/Day	30 mg/l	45 mg/l	Report mg/l	1/Day	24-Hour Composite[4]
TSS [3]	6459 lbs/Day	9688 lbs/Day	30 mg/l	45 mg/l	Report mg/l	1/Day	24-Hour Composite[4]
pH RANGE[12]	6.2 - 8.5 SU SEE PERMIT PAGE 7 OF 20, PARAGRAPH I.A.1.d.					1/Day	Grab
TOTAL CHLORINE RESIDUAL[6]	**********	**********	143 ug/l	*********	247 ug/l	3/Day	Grab
FECAL COLIFORM[5,12]	**********	**********	88 cfu/100 ml	*********	260 cfu/100 ml	1/Day	Grab
ENTEROCOCCI	********	********	Report cfu/100ml	******	Report cfu/100ml	1/Month	Grab

A.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 effluent to Lynn Outer Harbor . Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[2] TYPE**
OIL AND GREASE[12]	*********	*********	Report mg/l	*******	15 mg/l	1/Week	GRAB
TOTAL-COPPER[7]	*********	*********	Report mg/l	*********	0.110 mg/l	1/Month	24-Hour Composite[4]
TOTAL KJELDAHL NITROGEN	********	********	Report mg/l	******	Report mg/l	1/Month	24-Hour Composite[4]
NITRATE/NITRITE	********	********	Report mg/l	******	Report mg/l	1/Month	24-Hour Composite[4]
WHOLE EFFLUENT TOXICITY SEE FOOTNOTES 8, 9, 10, and 11	Acute $LC_{50} \geq 100\%$ Chronic C-NOEC $\geq 5.26\%$					4/Year	24-Hour Composite[4]

PART I

A.1.b. During the period beginning the effective date and lasting through expiration, when effluent flows exceed the hydraulic capacity of outfall 001(at least 60 MGD), the permittee is authorized to discharge effluent from outfall serial number 002 to the Lynn Inner Harbor . Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[2] TYPE**
FLOW[14]	*********	*********	Report, mgd	********	Report, mgd	Continuous	RECORDER
BOD5[13]	*********	*********	30 mg/l	45 mg/l	Report mg/l	1/Day	24-Hour Composite[4]
TSS [13]	*********	*********	30 mg/l	45 mg/l	Report mg/l	1/Day	24-Hour Composite[4]
pH RANGE[12]	6.2 - 8.5 SU SEE PERMIT PAGE 7 OF 20, PARAGRAPH I.A.1.d.					1/Day	Grab
TOTAL CHLORINE RESIDUAL[6,13]	**********	**********	7.5 ug/l	*********	13 ug/l	3/Day	Grab
FECAL COLIFORM[5,12,13]	**********	**********	88 cfu/100 ml	*********	260 cfu/100 ml	1/Day	Grab
ENTEROCOCCI	********	********	Report cfu/100ml	*******	Report cfu/100ml	1/Month	Grab
OIL AND GREASE[12,13]	*********	*********	Report mg/l	********	15 mg/l	1/Week	Grab
TOTAL-COPPER[7,13]	*********	*********	Report mg/l	********	5.8 ug/l	1/Month	24-Hour Composite[4]

Footnotes:

1. This is an annual average limit, which shall be reported as a rolling average. The first value will be calculated using the monthly average flow for the first full month ending after the effective date of the permit and the eleven previous monthly average flows. Each subsequent month's DMR will report the annual average flow that is calculated from that month and the previous 11 months. The monthly average and maximum daily flows for each month shall also be reported.

2. All sampling shall be representative of the effluent that is discharged. Samples of the discharge from outfall 001 for pollutants other than fecal coliform and TRC shall be collected from either contact tank B or A.

   A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136..

3. Sampling required for influent and effluent.

4. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during one consecutive 24 hour period (e.g. 7 a.m. Monday to 7 a.m. Tuesday), either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

5. Fecal coliform and total residual chlorine monitoring will be conducted year-round. Fecal coliform discharges shall not exceed a monthly geometric mean of 88 colony forming units (cfu) per 100 ml, nor shall they exceed 260 cfu per 100 ml as a daily maximum. This monitoring shall be conducted concurrently with the TRC sampling described below.

   The permittee must ensure that all discharges from outfall 001 are monitored daily for chlorine residual and bacteria. If the facility is unable to monitor all flows to outfall 001 at a single point, then each contact tank contributing flow to outfall 001 must be monitored separately on a daily basis and utilized in the DMR calculations.

6. The minimum level (ML) for total residual chlorine is defined as 20 ug/l. This value is the minimum level for chlorine using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G, or USEPA Manual of Methods of Analysis of Water and Wastewater, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 20 ug/l, compliance/non-compliance will be determined based on the ML. Sample results of 20 ug/l or less shall be reported as zero on the discharge monitoring report.

7. The minimum level (ML) for copper is defined as 3 ug/l. This value is the minimum level for copper using the Furnace Atomic Absorption analytical method (EPA Method 220.2). For effluent limitations of less than 3 ug/l, compliance/non-compliance will be determined based on the ML from this method, or another approved method that has an equivalent or lower ML, one of which must be used. Sample results of 3 ug/l or less shall be reported as zero on the Discharge Monitoring Report.

8. The permittee shall conduct chronic (and modified acute) toxicity tests four times per year. The chronic test may be used to calculate the acute LC_{50} at the 48 hour exposure interval. The permittee shall test the Inland Silverside (Menidia beryllina) and Sea Urchin (Arbacia punctulata). Toxicity test samples shall be collected during the second week of the months of March, June, September and December. The test results shall be submitted by the last day of the month following the completion of the test. The results are due April 30th, July 31st, October 31st and January 31st, respectively. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates Second Week in	**Submit Results By:**	**Test Species**	**Acute Limit LC_{50}**	**Chronic Limit C-NOEC**
March June September December	April 30th July 31st October 31st January 31st	Inland Silverside (Menidia beryllina) and Sea Urchin (Arbacia punctulata) See Attachment A	≥ 100%	≥ 5.26%

After submitting **one year** and a **minimum** of four consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

9. The LC_{50} 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. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction

at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The "5.26% or greater" limit is defined as a sample which is composed of 5.26% (or greater) effluent, the remainder being dilution water. This is a maximum daily limit derived as a percentage of the inverse of the dilution factor of 19.

11. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined in **Attachment A Section IV., DILUTION WATER** in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required **in Attachment A**, EPA-New England has developed a Self-Implementing Alternative Dilution Water Guidance document (called "Guidance Document") which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. If this Guidance document is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A**. The "Guidance Document" has been sent to all permittees with their annual set of DMRs and Revised Updated Instructions for Completing EPA's Pre-Printed NPDES Discharge Monitoring Report (DMR) Form 3320-1 and is not intended as a direct attachment to this permit. Any modification or revocation to this "Guidance Document" 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**.

12. State certification requirement.

13. Report based on days on which discharges occur. (e.g. if discharge occurs on one day during the month, report the result in all columns; if discharges occur on two days during the month, report the average of the two results in the monthly average column and the greater of the two results in the daily maximum column, etc).

14. Report average daily and maximum daily flows on the discharge monitoring report for days which discharge occurs. Also attach a report to the discharge monitoring report summarizing the dates, times, and flow rates of discharges through outfall 002, and the flows through outfall 001 during those same periods.

Part I.A.1. (Continued)

c. The discharge shall not cause a violation of the water quality standards of the receiving waters.

d. The pH of the effluent shall not be less than 6.2 nor greater than 8.5 at any time, unless these values are exceeded as a result of an approved treatment process.

e. The discharge shall not cause objectionable discoloration of the receiving waters.

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

g. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand during dry weather. Dry weather is defined as any calendar day on which there is less than 0.1 inch of rainfall and no snow melt. The percent removal shall be calculated as a monthly average using the influent and effluent BOD and TSS values collected during dry weather days.

h. The results of sampling for any parameter above its required frequency must also be reported.

i The permittee shall complete a Toxicity Identification Evaluation (TIE) and a Toxicity Reduction Evaluation (TRE). The TIE shall be completed within one year of the effective date of the permit and the TRE shall be completed within one year of the completion of the TIE.

The TIE and TRE are to be performed in accordance with EPA guidance. (Refer to EPA Research and Development Manual Methods for Aquatic Toxicity Identification Evaluations, Phase I Toxicity Characterization Procedures EPA/600/3-88/034, Sept. 1988, Phase II Toxicity Identification Procedures, EPA/600/3-88/035, Feb. 1989, and Phase III Toxicity confirmation Procedures, EPA/600/3-88/036, Feb.1989, and EPA Research and Development Manual, Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs) EPA/600/2- 88/070).

Reports documenting the required TIE and TRE shall be submitted to EPA and MassDEP for review. The TRE report shall include a schedule for recommended corrective measures. These measures shall be implemented upon approval by EPA and MassDEP.

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.

3. Prohibitions Concerning Interference and Pass Through:

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

4. 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.

5. Numerical Effluent Limitations for Toxicants

   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.

B. UNAUTHORIZED DISCHARGES

The permittee and co-permittees are authorized to discharge only in accordance with the terms and conditions of this permit and only from outfalls listed in Part I A.1.a and Attachment B (CSOs) of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer systems owned by the permittee and co-permittees shall be in compliance with the General Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

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

2. Preventative Maintenance Program

The permittee and co-permittees shall maintain ongoing preventative maintenance programs 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.

3. Infiltration/Inflow Control Plan:

The permittee and co-permittees shall develop and implement plans to control infiltration and inflow (I/I) to the separate sewer systems it owns. 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-permittee's 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 plans 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.

- The permittee shall require, through appropriate agreements, that all member communities have flow limits sufficient to ensure that high flows do not cause or contribute to a violation of the permittee's effluent limitations, or cause overflows from the permittee's collection system.

Reporting Requirements:

A summary report of all actions taken to minimize I/I during the previous calendar year shall be submitted to EPA and the MassDEP by the permittee and co-permittees annually, **by March 1**. 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, 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 Unauthorized Discharges section of this permit.

4. Alternate Power Source

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

D. SLUDGE CONDITIONS

1. Standard Conditions

a. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and the Clean Water Act section 405(d) technical standards.

b. The permittee shall comply with the more stringent of either the state or federal requirements.

c. No person shall fire sewage sludge in a sewage sludge incinerator except in compliance with the requirements of 40 CFR part 503 subpart E.

2. Pollutant Limitations

a. Firing of sewage sludge shall not violate the requirements of the national Emission Standard for beryllium in 40 CFR part 61, subpart C - 10 grams per 24 hour period.

b. Firing of sewage sludge shall not violate the requirements in the National Emission Standard for mercury in 40 CFR part 61, subpart E - 3200 grams per 24 hour period.

c. The daily concentration of the metals in the sewage sludge fed to the

incinerator shall not exceed the limits specified below (dry weight basis):

	Maximum Daily
Arsenic	2.1×10^4 mg/kg
Cadmium	1.8×10^5 mg/kg
Chromium	3.6×10^5 mg/kg
Lead	9.6×10^5 mg/kg
Nickel	3.2×10^7 mg/kg

3. Operational Standards

a. The exit gas from the sewage sludge incinerator stack shall be monitored continuously for carbon monoxide.

b. The monthly average concentration of carbon monoxide in the exit gas from the sewage sludge incinerator, corrected for zero percent moisture and to seven percent oxygen, does not exceed - **100 ppm on a volumetric basis**

c. The CO concentration shall be corrected to zero percent moisture using the correction factor below:

$$\text{Correction factor} = \frac{1}{(1-X)}$$

Where : X = decimal fraction of the percent moisture in the sewage sludge incinerator exit gas in hundreths.

d. The measured CO concentration shall be corrected to seven percent oxygen using the correction factor below:

$$\text{Correction factor} = \frac{14}{(21-Y)}$$

Where: Y = percent oxygen concentration in the sewage sludge incinerator stack exit gas (dry volume/dry volume).

e. The measured CO value shall be multiplied by the correction factors in items c and d. The corrected CO value shall be used to determine compliance with paragraph b.

4. Management Practices

a. An instrument that continuously measures and records the carbon monoxide concentration in the sewage sludge incinerator stack exit gas

shall be installed, calibrated, operated and maintained for the incinerator.

b. An instrument that continuously measures and records the oxygen concentration in the sewage sludge incinerator stack exit gas shall be installed, calibrated, operated and maintained for the incinerator.

c. An instrument that continuously measures and records combustion temperatures shall be installed, calibrated, operated and maintained for the incinerator.

d. Operation of the incinerator shall not cause the operating combustion temperature for the incinerator to exceed the performance test combustion temperature by more than 20 percent.

f. Any air pollution control devices shall be appropriate for the type of incinerator and operating parameters for the air pollution control device shall be adequate to indicate proper performance of the air pollution control device. For incinerators subject to the requirements of 40 CFR subpart O, operation of the air pollution control device shall not violate the air pollution control device requirements of that part.

g. Sewage sludge shall not be fired in an incinerator if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

h. The permittee shall notify the EPA and MassDEP if any continuous emission monitoring equipment is shut down or broken down for more that 72 hours while the incinerator continues to operate.

i. Notification shall include the following:

i. The reason for the shut down or break down;
ii. Steps taken to restore the system;
iii. Expected length of the down time; and
iv. The expected length of the incinerator operation during the down time of the monitoring system.

j. Break downs or shut downs of less than 72 hours shall be recorded in the operations log along with an explanation of the event.

k. Copies of all manufacturer's instructions shall be kept on file and be available during inspections.

5. Monitoring Frequency

a. The frequency of monitoring beryllium shall be as required in 40 CFR part

61, subpart C.

b. The frequency of monitoring for mercury shall be as required in 40 CFR part 61, subpart E.

c. The pollutants in paragraph 2c shall be monitored at the following frequency - **6 times per year** . Each time, concentration of the metals should be under the maximum daily limits as stated in paragraph 2.c.

d. After the sewage sludge has been monitored for the pollutants in paragraph 2c for two years at the frequency specified above, the permittee may request a reduction in the monitoring frequency.

e. The operating parameters for the air pollution control devices shall be monitored at the following frequency - **1/day**.

f. The CO concentration in the exit gas, the oxygen concentration in the exit gas, information from the instrument used to determine moisture content, and combustion temperatures shall be monitored at the following frequency - **continuously**.

6. Sampling and Analysis

a. The sewage sludge shall be sampled at a location which is prior to entering the incinerator and provides a representative sample of the sewage sludge being incinerated.

b. The metal is the sewage sludge shall be analyzed using "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA publication SW-846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987).

c. If emission testing is done for demonstration of NESHAPS, testing shall be in accordance with Method 101A in 40 CFR part 60, Appendix B, "Determination of Particulate and Gaseous Mercury Emissions from Sewage Sludge Incinerators".

d. Sewage sludge samples for mercury shall be sampled and analyzed using Method 105 in 40 CFR part 61, Appendix B, "Determination of Mercury in Wastewater Treatment Plant Sewage Sludge".

7. Record Keeping Requirements

a. The concentrations of the pollutants in paragraph 2c. Report the maximum value of each pollutant.

b. The CO concentration in the exit gas from the incinerator stack. Report the average monthly concentration.

c. Information that demonstrates compliance with the National Emission Standard for beryllium.

d. Information that demonstrates compliance with the National Emission Standard for mercury. If sludge sampling is used, include calculation for compliance demonstration.

e. The operating combustion temperature for the sewage sludge incinerator.

f. Values for the air pollution control devices operating parameters. Report average monthly values.

g. The oxygen concentration and the information used to measure moisture content in the exit gas from the sewage sludge incinerator. Report the oxygen concentration and percent moisture results which were used to determine the CO values reported in paragraph 7b.

h. The sewage sludge feed rate to the incinerator. Record the average daily and average monthly feed rate.

i. The stack height of the incinerator.

j. The dispersion factor for the site where the incinerator is located.

k. The control efficiency for arsenic, lead, chromium, cadmium and nickel.

l. A calibration and maintenance log for the instruments used to measure the CO concentration and the oxygen concentration in the exit gas; the information need to determine moisture content in the exit gas, and the combustion temperatures.

8. Reporting

The permittee shall report the information in paragraphs 7 (a-h) annually by February 19.

E. PRETREATMENT

1. DEVELOPMENT OF 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. The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond. Within 180 days of the effective date this permit, the permittee shall prepare and submit a written technical evaluation to the EPA analyzing the need to revise local limits. As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee may use the attached form (**Attachment C**) to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by EPA and submit the revisions to EPA for approval. The Permittee shall carry out the local limits revisions in accordance with EPA's Local Limits Development Guidance (July 2004).

2. INDUSTRIAL PRETREATMENT PROGRAM

a. The permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the permittee's approved Pretreatment Program, and the General Pretreatment Regulations, 40 CFR 403. At a minimum, the permittee must perform the following duties to properly implement the Industrial Pretreatment Program ("IPP"):

1. Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.

2. Issue or renew all necessary industrial user control mechanisms within 120 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.

3. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment standard and/or requirement; and

4. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

b. The permittee shall provide the EPA and the MassDEP with an annual report describing the permittee's pretreatment program activities over the twelve month period ending 60 days prior to the due date in accordance with 403.12(i). The annual report shall be consistent with the format described in **Attachment D** of this permit and shall be submitted no later than March 1 of each year.

c. The permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR 403.18(c).

d. The permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal Regulations at 40 CFR 405 et. seq.

F . COMBINED SEWER OVERFLOWS

1. EFFLUENT LIMITATIONS

a. During wet weather, the permittee is authorized to discharge storm water/wastewater from combined sewer outfalls listed in **Attachment B**, subject to the following effluent limitations.

i. The discharges shall receive treatment at a level providing Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants. The EPA has made a Best Professional Judgement (BPJ) determination that BPT, BCT, and BAT for combined sewer overflow (CSO) control include the implementation of Nine Minimum Controls (NMC) specified below and detailed further in **Part I.F.2.** "Nine Minimum Controls, Minimum Implementation Levels", of this permit:

1. Proper operation and regular maintenance programs for the sewer system and the combined sewer overflows.

2. Maximum use of the collection system for storage.

3. Review and modification of the pretreatment program to assure CSO impacts are minimized.

4. Maximization of flow to the POTW for treatment.

5. Prohibition of dry weather overflows from CSOs.

6. Control of solid and floatable materials in CSOs.

7. Pollution prevention programs that focus on contaminant reduction activities.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Implementation of these controls is required by the effective date of the permit. The permittee is required to submit an updated report on its NMC program within one year of the effective date of the permit to EPA and MassDEP. EPA and the State consider that approvable documentation must include the minimum requirements set forth in Part I.F.2 of this permit and additional activities the permittee can reasonably undertake.

ii. The discharges shall not cause violations of Federal or State Water Quality Standards.

2. NINE MINIMUM CONTROLS, MINIMUM IMPLEMENTATION LEVELS

a. The Permittee must implement the nine minimum controls in accordance with the documentation provided under Part I.F.1.a.i. of this permit. This implementation must include the following controls plus other controls the Permittee can reasonably implement as set forth in the documentation.

b. Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected, at a minimum of once per month, to insure that they are in good working condition and adjusted to minimize combined sewer discharges and tidal surcharging. (NMC # 1, 2 and 4).

The following inspection results shall be recorded: the date and time of the inspection, the general condition of the facility, and whether the facility is operating satisfactorily. If maintenance is necessary, the permittee shall record: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. The permittee shall maintain all records of inspections for at least three years.

Annually, no later than January 15th, the permittee shall submit a certification to the State and EPA which states that the previous calendar year's monthly inspections were conducted, results recorded, and records maintained.

The State and EPA have the right to inspect any CSO related structure or outfall at any time without prior notification to the permittee.

c. Discharges to the combined system of septage, holding tank wastes or other material which may cause a visible oil sheen or containing floatable material are prohibited during wet weather when CSO discharges may be active. (NMC# 3,6, and 7).

d. Dry weather overflows (DWOs) are prohibited (NMC# 5). All dry weather sanitary and/or industrial discharges from CSOs must be reported to EPA and the State within 24 hours in accordance with the reporting requirements for plant bypass (Paragraph D.1.e of Part II of this permit).

e. The permittee shall quantify and record all discharges from combined sewer outfalls (NMC# 9). Quantification may be through direct measurement or estimation. When estimating, the permittee shall make reasonable efforts, i.e. gaging, measurements, to verify the validity of the estimation technique. The following information must be recorded for each combined sewer outfall for each discharge event:

- Estimated duration (hours) of discharge;
- Estimated volume (gallons) of discharge; and
- National Weather Service precipitation data from the nearest gage where precipitation is available at daily (24-hour) intervals and the nearest gage where precipitation is available at one-hour intervals. Cumulative precipitation per discharge event shall be calculated.

The permittee shall maintain all records of discharges for at least six years after the effective date of this permit.

Annually, no later than January 15th, the permittee shall submit a certification to the State and EPA which states that the all discharges from combined sewer outfalls were recorded, and records maintained for the previous calendar year.

f. The permittee shall install and maintain identification signs for all combined sewer outfall structures (NMC# 8) The signs must be located at or near the combined sewer outfall structures and easily readable by the public. These signs shall be a minimum of 12 x 18 inches in size, with white lettering against a green background, and shall contain the following information:

LWSC
WET WEATHER
SEWAGE DISCHARGE
OUTFALL (discharge serial number)

G. 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
Northeast Regional Office
Bureau of Resource Protection
205B Lowell Street
Wilmington, MA 01887

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

Reports required in Section E. [Development of Limitations for Industrial Users] and [Industrial Pretreatment Program] shall be submitted to the state at:

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention
Industrial Wastewater Section
1 Winter Street
Boston, MA 02108

The Massachusetts Division of Marine Fisheries shall be provided notice within 24 hours of any of the following events: (a) any effluent limitation violation for fecal coliform or any interruption of the disinfection system, (b) any activation of Outfall002, or (c) a discharge from any combined sewer overflow. The notice shall provide estimated flow volume and duration for each occurrence.

Notice shall be submitted to:

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

H. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) 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 MA DEP 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.