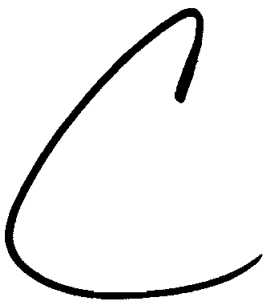


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 10, 2006

Michael Stankovich
Director of Public Works
Town of North Attleborough
240 Smith Street
North Attleborough, MA 02760

Re: Public Notice
NPDES Application No. MA0101036

Dear Mr. Stankovich:

In accordanee with Section 402 of the Clean Water Act, as amended, the Environmental Protection Agency (EPA), New England Region intends to issue a National Pollutant Discharge Elimination System (NPDES) permit to your facility in the near future.

The enclosed draft permit, developed by this office and the Massachusetts Department of Environmental Protection, Division of Watershed Management, (MADEP) contains effluent limitations and conditions to assure that the discharge receives adequate treatment and will not violate State water-quality standards. Also enclosed is the Statement of Basis or Fact Sheet which briefly describes the basis for the permit conditions. You are encouraged to closely review all terms and conditions contained in this draft.

If you have any questions or concerns regarding this draft permit or if you believe the draft permit does not accurately describe your discharge or contain a reasonable compliance schedule (where appropriate), you should notify each office, in writing, no later than the last day of the public comment period.

Your attention is directed to those portions of the permit and fact sheet that present and explain the effluent limitations to control discharges of nitrogen and phosphorous. You will note that there is no accompanying schedule in the permit for the Town to achieve compliance. EPA and the MassDEP will work with you and your representatives to negotiate an Administrative Order that will include an appropriate schedule to plan, design and construct the facilities necessary to achieve compliance with these limits. It is the Agency's intention to begin this process while the public notice period is in progress.

The law requires public notice to be given of the preparation of a draft permit to allow opportunity for public comments and, if necessary, a public hearing. Concurrently with this letter EPA and the MassDEP have proceeded to publish the public notice of the proposed issuance of this permit.

In order to preserve the right to contest provisions in a final permit, all persons, including the applicant, who believe any condition of the draft is inappropriate must raise all reasonably ascertainable issues and submit all reasonable available arguments supporting their position by the close of the public comment period (40 C.F.R. §124.13).

Following the close of the public comment period, your final permit will be issued provided no new substantial questions are raised. If new questions develop during the comment period, it may be necessary to draft a new permit, revise the Statement of Basis or Fact Sheet, and/or reopen the public comment period.

If you have any questions or would like to discuss any of the conditions contained in this draft permit, do not hesitate to contact David Pincumbe at (617) 918-1695.

Sincerely,

Roger A. Janson, Chief
Municipal NPDES Permits Branch
Office of Ecosystem Protection

Enclosures: Draft Permit and Fact Sheet with related Attachments

cc: Glenn Haas, MassDEP
Paul Hogan, MassDEP

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 seg.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

City of Attleboro
Department of Water and Wastewater
Government Center, 77 Park Street
Attleboro, MA 02703

Is authorized to discharge from a facility located at

Attleboro Water Pollution Control Facility
Pond Street
Attleboro, MA 02703

To receiving water named **Ten Mile River**,

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

This Permit shall become effective on **(*See Below)**

This Permit and the authorization to discharge expire at midnight, five years from the effective date.

This Permit supersedes the permit issued on September 30, 1999.

This Permit consists of 14 pages in Part I including effluent limitations, monitoring requirements, etc., Attachments A, B, and C, and 35 pages in Part II including General Conditions and Definitions.

Signed this day of

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

** If no comments are received during public notice, this permit will become effective on the date of signature. If comments are received during public notice, this permit will become effective 60 days after signature.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001** treated wastewater.

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

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow, MGD	4.61 [1]	----	----	Daily	Continuous
Flow, MGD [1]	Report		Report	Daily	Continuous
BOD, mg/l (lbs/day) [2]					
(May 1 - October 31)	5 (192)	10 (385)	15 (577)	3/Week	24-Hr. Comp. [3]
(November 1 - April 30)	15 (577)	25 (961)	30 (1,153)	3/Week	24-Hr. Comp. [3]
TSS, mg/l (lbs/day) [2]					
(May 1 - October 31)	7 (269)	10 (385)	15 (577)	3/Week	24-Hr. Comp. [3]
(November 1 - April 30)	15 (577)	25 (961)	30 (1,153)	3/Week	24-Hr. Comp. [3]
Fecal Coliform, CFU/100 ml [4,5]	200	----	400	3/Week	Grab
Total Chlorine Residual, ug/l [6,7]	11	----	19	3/Day	Grab
Total Phosphorus, mg/l [8]					
(April 1 - October 31)	0.2	----	Report	3/Week	24-Hr. Comp. [3]
Total Phosphorus, mg/l [9]					
(November 1 - March 31)	1.0	----	Report	2/Week	24-Hr. Comp. [3]
Dissolved Ortho Phosphorus [9]					
(November 1 - March 31)	Report	----	Report	2/Week	24-Hr. Comp. [3]

Effluent Characteristics	Discharge Limitations			Monitoring Requirement	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Ammonia-Nitrogen, mg/l (lbs/day)					
(May 1- May 31)	3	----	----	2/Week	24-Hr. Comp. [3]
(June 1 - October 31)	1 (38)	1.5 (58)	2	2/Week	24-Hr. Comp. [3]
(November 1 - November 30)	7	----	----	2/Week	24-Hr. Comp. [3]
(December 1 - April 30)	10	----	----	2/Week	24-Hr. Comp. [3]
Total Nitrogen, mg/l [10]					
(May 1 - October 31)	8.0	----	Report	3/Week	24-Hr. Comp. [3]
(November 1 - April 30)	Report	----	Report	1/Week	24-Hr. Comp. [3]
pH, s.u. [4]	See Part I.A.1.b.			1/Day	Grab
Dissolved Oxygen, mg/l [4]	See Part I.A.1.c.			1/Day	Grab
Copper, Total, ug/l [11]	9.9	----	14.8	1/Month	24-Hr. Comp. [3]
Lead, Total, ug/l [11]	3.4	----	Report	1/Month	24-Hr. Comp. [3]
Aluminum, Total, ug/l	92	----	140	1/Month	24-Hr. Comp. [3]
Zinc, Total, ug/l [11]	127	----	127	1/Month	24-Hr. Comp. [3]
Cadmium, ug/l [11]	0.3	----	2.2	1/Month	24-Hr. Comp. [3]
Cyanide, ug/l [11]	5.0	----	22	1/Month	24-Hr. Comp. [3]
Whole Effluent Toxicity Testing [12,13,14]		LC50≥ 100%		4/Year	24 Hr. Comp. [3]
		NOEC≥ 94%		4/Year	24 Hr. Comp. [3]

All sampling shall be representative of the effluent that is discharged through outfall 001 to the Ten Mile River. 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 §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

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.

Letter dated 12-12-05 did analysis & supported it.

2. Sampling required for influent and effluent.

3. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during one working day, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

4. Required for state certification.

5. Fecal coliform discharges shall not exceed a monthly geometric mean of 200 colony forming units (cfu) per 100 ml, nor shall they exceed 400 cfu per 100 ml as a daily maximum. This monitoring shall be conducted concurrently with the TRC sampling.

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 Wastes, 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.

   The monthly DMR shall include an attachment documenting the individual grab sample results for each day, including the date and time of each sample, and a summary of any operational modifications implemented in response to sample results. All test results shall be used in the calculation and reporting of the monthly average and maximum daily data submitted on the DMR (see Part II. Section D.1.d.(2)).

7. Chlorination and dechlorination 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 or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent 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 or dechlorination chemicals occurred.

8. Consistent with Section B.1 of Part II of the Permit, the Permittee shall properly operate and maintain the phosphorus removal facilities in order to obtain the lowest effluent concentration possible.

9. The Permittee shall comply with the 1.0 mg/l monthly average total phosphorus limit within one year of the effective date of the permit. The maximum daily concentration value reported for dissolved ortho phosphorus shall be the value from the same day that the maximum daily total phosphorus concentration was measured.

10. This permit limit is a requirement of the U. S. Environmental Protection Agency (EPA) permit and is not a requirement of the Massachusetts Department of Environmental Protection (MassDEP) permit. Total Nitrogen is the sum of TKN, NO_2, and NO_3 . The permittee shall operate the treatment facility to reduce the discharge of total nitrogen during the months of November - April to the maximum extent possible, using all available treatment equipment in place at the facility. The addition of a carbon source that may be necessary in order to meet the total nitrogen limit during the months of May - October is not required during the months of November - April.

11. Total recoverable lead, copper, and cadmium shall be measured using the Furnace Atomic Absorption method and total cyanide shall be measured using the Flame Atomic Absorption method. The MLs for lead, copper, cadmium, and cyanide, respectively, are 3 ug/l, 3 ug/l, 0.5 ug/l, and 10 ug/l. Any effluent value which is below its respective ML shall be reported as zero.

    Total recoverable values of all other metals may be measured using either the Inductively Coupled Plasma ICP method or the Furnace AA method.

12. 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 daphnid, Ceriodaphnia dubia, only. Toxicity test samples shall be collected during the second week of the months of 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 by 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 Second Week in	**Submit Results By:**	**Test Species**	**Acute Limit LC_{50}**	**Chronic Limit C-NOEC**
February May August November	March 31st June 30th September 30th December 31st	Ceriodaphnia dubia (daphnid) See **Attachment A**	≥ 100%	≥ 94%

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**.

13. 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.

14. 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 "100% or greater" limit is defined as a sample which is composed of 100% (or greater) effluent, the remainder being dilution water.

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 8.3 at any time.

c. The dissolved oxygen content in the effluent shall not be less than 6.0 mg/l.

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

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

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

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

h. The permittee shall, when the average annual flow exceeds eighty percent (80%) of the permitted facility's design flow, submit a report to the Department describing what steps the permittee will take in order to remain in compliance with the limitations and conditions in its permit, including in particular, limitations on the amount of flow authorized to be discharged under the permit.

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. 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.

4. Numerical Effluent Limitations for Toxicants

   EPA or DEP 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. DEVELOPMENT OF LIMITATIONS FOR INDUSTRIAL USERS

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.

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 120 days of the effective date of 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 shall complete and submit the attached form **Attachment B** with the technical evaluation 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).

C. 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 necessary industrial user control mechanisms within 90 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.

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

b. In accordance with 40 CFR Part 403.12(i), the permittee shall provide the EPA and the MassDEP with an annual report describing the permittee's pretreatment program activities for the twelve month period ending December 31. The annual report shall be consistent with the format described in **Attachment C** of this permit and shall be submitted no later than March 1st 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.

e. The permittee must modify its pretreatment program to conform to all changes in the Federal Regulations that pertain to the implementation and enforcement of the industrial pretreatment program. The permittee must provide EPA, in writing, within 180 days of this permit's effective date proposed changes to the permittee's pretreatment program deemed necessary to assure conformity with current Federal Regulations. At a minimum, the permittee must address in its written submission, if applicable, the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The permittee will implement these proposed changes pending EPA Region I's approval under 40 CFR 403.18. This submission is separate and distinct from any local limits analysis submission described above.

D. UNAUTHORIZED DISCHARGES

The permit only authorizes discharges in accordance with its terms and conditions and only from the outfall listed in Part I A.1. 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).

E. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

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

1. Maintenance Staff

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

2. Preventative Maintenance Program

The permittee and co-permittee shall 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.

3. Infiltration/Inflow Control Plan:

The permittee and co-permittee shall develop and implement a plan to control infiltration and inflow (I/I) to the separate sewer system. The plan 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 program for preventing I/I related effluent limit violations, and all unauthorized discharges of wastewater, including

overflows and by-passes due to excessive I/I.

The plan shall include:

- An ongoing program to identify and remove sources of I/I. 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 I/I to the system.
- An educational public outreach program for all aspects of I/I control, particularly private inflow.

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 annually, **by March 31**. 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 I/I 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 I/I 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.

F. ALTERNATE POWER SOURCE

In order to maintain compliance with the terms and conditions of this permit, the permittee and co-permittee shall continue to provide an alternate power source with which to sufficiently operate the Publicly Owned Treatment Works as defined at 40 CFR §403.3.

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 thc 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 (e.g.lagoons-reed beds), or are otherwise excluded under 40 CFR 503.6.

5. The permittee shall comply with the 40 CFR, Part 503 regulations. A compliance guidance document is attached to help 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 than1500	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

Reports required in Sections B and C (local limits and pretreatment program) shall also be submitted to the State at:

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

I. STATE PERMIT CONDITIONS

1. 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 (unless otherwise noted) are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap. 21, §43.

2. 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.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES.

NPDES PERMIT NO.: **MA0101036**

NAME AND ADDRESS OF APPLICANT:

Board of Selectmen
240 Smith Street
North Attleborough, MA 02760

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

North Attleborough WWTF
Cedar Road
North Attleborough, MA 02760

NAME AND ADDRESS OF C0-PERMITTEE:

Board of Selectmen
Plainville Town Hall
142 South Street, P.O. Box 1717
Plainville, MA 02762

RECEIVING WATER: **Ten Mile River**

CLASSIFICATION: **B, warm water fishery**

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

The above named applicant has requested that the U.S. Environmental Protection Agency reissue its NPDES permit to discharge into the designated receiving waters. The permit application shows that the facility is engaged in collection and treatment of municipal and industrial wastewater from the Town of North Attleborough and the Town of Plainville. The Town of Plainville is included as a co-permittee for Section D (Unauthorized Discharges, Section E (Operation and Maintenance of the Sewer System), and Section F (Alternate Power Source) of the Draft Permit. See Part VI of this fact sheet (Operation and Maintenance) for a further discussion of these requirements.

II. Description of Discharge.

A quantitative description of the discharge in terms of significant effluent parameters based on recent monitoring data is shown in **Attachment A.**

III. Limitations and Conditions.

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

IV. Permit Basis and Explanation of Effluent Limitation Derivation

A. General Statutory and Regulatory Background

EPA is issuing this permit pursuant to Section 402(a) of the Clean Water Act. The Commonwealth of Massachusetts is also issuing this permit, except for certain limitations and conditions discussed below, pursuant to Massachusetts General Laws ch. 21, § 43 (2004).

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. The draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and any applicable State administrative rules. The regulations governing EPA's NPDES permit program are generally found in 40 CFR Parts 122, 124, 125 and 136.

EPA is required to consider technology and water quality-based requirements as well as those requirements and limitations included in the existing permit when developing the renewed permit's effluent limits. Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA. Secondary treatment technology guidelines (i.e. effluent limitations) for POTWs can be found at 40 CFR Part 133.

All statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired. When technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. See 40 CFR §125.3(a)(1). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by an NPDES permit. Compliance schedules to meet water quality based effluent limits may be included in permits only when the state's water quality standards clearly authorize such schedules and where the limits are established to meet a water quality standard that is either newly adopted, revised, or interpreted after July 1, 1977.

Section 301(b)(1)(C) of the CWA requires NPDES permits to contain effluent limits more stringent

than technology-based limits where more stringent limits are necessary to comply with, among other things, any applicable state or federal water quality standards. A water quality standard consists of three elements: (1) beneficial designated use or uses for a water body or a segment of a water body; (2) numeric and narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) antidegradation requirements to ensure that existing uses and high quality waters are protected and maintained.

EPA's regulation at 40 C.F.R. § 122.4(d) prohibits the issuance of an NPDES permit unless its conditions can "ensure compliance with the applicable water quality requirements of all affected States." As discussed below, both Massachusetts and Rhode Island are "affected states" in the context of this permit issuance, and both states' water quality standards are relevant to the permit limitations. Similarly, 40 C.F.R. § 122.44(d) requires EPA to impose conditions that achieve applicable water quality standards.

The Massachusetts Surface Water Quality Standards (314 CMR 4.00, February, 1996) establish designated uses of the State's waters, criteria to protect those uses, and an antidegradation provision to ensure that existing uses and high quality waters are protected and maintained. They also include requirements for the regulation and control of toxic constituents and specify that EPA's recommended water quality criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site specific criterion is established.

Rhode Island's Water Quality Standards (Regulation EVM 112-88.97-1, June 2000) also establish designated uses of the State's waters, criteria to protect those uses, and an antidegradation provision to ensure that existing uses and high quality waters are protected and maintained.

Section 401(a)(1) of the CWA forbids the issuance of a federal license for a discharge to waters of the United States unless the state where the discharge originates, in this case Massachusetts, either certifies that the discharge will comply with, among other things, state water quality standards, or waives certification. EPA's regulations at 40 CFR § 122.44(d)(3), §124.53 and §124.55 describe the manner in which NPDES permits must conform to conditions contained in state certifications. Section 401(a)(2) of the CWA and 40 CFR § 122.44(d)(4) require EPA to condition NPDES permits in a manner that will ensure compliance with the applicable water quality standards of a "downstream affected state," in this case Rhode Island. The statute directs EPA to consider the views of the downstream state concerning whether a discharge would result in violations of the state's water quality standards. If EPA agrees that a discharge would cause or contribute to such violations, EPA must condition the permit to ensure compliance with the water quality standards. If the downstream affected state believes that the permit fails to include such requirements, then it may appeal the permit (like any other interested person with proper standing).

Section 402(o) of the CWA provides, generally, that the effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the previous permit. Unless certain limited exceptions are met, "backsliding" from effluent limitations contained in previously issued permits that were based on CWA §§ 301(b)(1)(C) or 303 is prohibited. EPA has

also promulgated anti-backsliding regulations, which are found at 40 CFR § 122.44(l). Unless statutory and regulatory backsliding requirements are met, the limits in the reissued permit must be at least as stringent as those in the previous permit.

B. Development of Water Quality-based Limits

Receiving stream requirements are established according to numerical and narrative standards adopted under state law for each stream classification. When using chemical-specific numeric criteria from the state's water quality standards to develop permit limits both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentration. Maximum daily limits are generally derived from the acute aquatic life criteria, and the average monthly limit is generally derived from the chronic aquatic life criteria. Chemical specific limits are established in accordance with 40 CFR §122.44(d) and §122.45(d).

The permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality criterion. An excursion occurs if the projected or actual in stream concentration exceeds the applicable criterion.

In determining reasonable potential, EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from permit application, monthly discharge monitoring reports (DMRs), and State and Federal water quality reports; (3) sensitivity of the species to toxicity testing; (4) statistical approach outlined in *Technical Support Document for Water Quality-based Toxics Controls,* March 1991, EPA/505/2-90-001 in Section 3; and, where appropriate, (5) dilution of the effluent in the receiving water. In accordance with Massachusetts Water Quality Standards [314CMR 4.03(3)], available dilution for rivers and streams is based on a known or estimated value of the lowest average flow which occurs for seven (7) consecutive days with a recurrence interval of once in ten (10) years (7Q10). Rhode Island's Water Quality Standards provide for a similar dilution calculation for freshwaters. See Rule 8.E.(2)(a).

C. Description of Treatment Facility and Receiving Water

The North Attleborough Wastewater Treatment Facility (WWTF) is a 4.61 MGD advanced wastewater treatment plant which treats municipal and industrial wastewater, septage, and infiltration/inflow from sewer systems serving the Town of North Attleborough and the Town of Plainville. The WWTF's unit operations include influent pumping, flow measurement, screening, grit removal, comminution, flash mixing, flocculation, primary sedimentation, intermediate pumping, two stage activated sludge with nitrification, sand filtration, chlorination, dechlorination, and sludge thickening. According to the permit application this facility serves a population of 26,000 in North Attleborough and 8,000 in Plainville, and also serves13 significant industrial users (SIUs).

The Ten Mile River is an interstate water which has its headwaters in Plainville Massachusetts and flows through North Attleborough, Attleboro, and Seekonk, Massachusetts before entering Rhode Island in Pawtucket, flowing through East Providence, and ultimately discharging to the Seekonk River.

The Ten Mile River in Massachusetts is designated by the Massachusetts Water Quality Standards as a Class B Warm Water Fishery. Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. Where designated they shall be suitable as a source of public water supply with appropriate treatment. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value. In warm water fisheries the temperature shall not exceed 83°F nor shall the rise in temperature due to a discharge exceed 5°F.

The Ten Mile River is listed on the Massachusetts Year 2004 Integrated List of Waters (which incorporates the CWA § 303(d) list) as a water that is impaired (not meeting water quality standards) and requires one or more Total Maximum Daily Loads (TMDL) to be prepared to reduce pollutant loadings into the River so that it can attain water quality standards. The segment of the Ten Mile River from the North Attleborough WWTP to the MA/RI border is listed as impaired due to unknown toxicity, metals, nutrients, organic enrichment/low DO, pathogens, and noxious aquatic plants. No TMDL has been completed nor is any underway.

The Ten Mile River in Rhode Island is designated by the Rhode Island Water Quality Regulations as a Class B1 water from the MA/RI border to the Newman Avenue Dam in East Providence, and a Class B water from the Newman Avenue Dam to the confluence with the Seekonk River. The Seekonk River is a marine water (seawater) designated as a Class SB{a} water.

Class B waters are designated for fish and wildlife habitat and primary and secondary contact recreational activities. They shall be suitable for compatible industrial process and cooling, hydropower, aquacultural uses, navigation, irrigation and other agricultural uses. These waters shall have good aesthetic value. A Class B1 water has the same designated uses as a Class B water, except that primary contact recreational uses may be impacted due to pathogens from approved wastewater discharges. Class SB waters are designated for primary and secondary contact recreational activities; shellfish harvesting for controlled relay and depuration; and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. An "{a}" partial use restriction indicates a water which is likely to be impacted by combined sewer overflows in accordance with an approved CSO facilities plan; therefore primary contact recreational activities, shellfishing uses, and fish and wildlife habitat will likely be restricted.

The free flowing segments of the Ten Mile River in RI are listed on the State's 2004 CWA § 303(d) List of Impaired Waters as waters needing a TMDL for copper, lead, and cadmium. Two impoundments are also listed. Turner Reservoir is listed for copper, lead, low DO, and phosphorus, and Omega Pond is listed for copper, lead and phosphorus.

The Seekonk River is listed on the State's 2004 CWA § 303(d) List of Impaired Waters as a water with a TMDL underway for nutrients, low DO, and excess algal growth/chlorophyll(a). The TMDL has not been completed, but as is discussed in the Total Nitrogen section of this fact sheet, the State has performed a physical model assessing the impacts of total nitrogen on non- attainment of water quality standards in the Seekonk River, Providence River and Upper Narragansett Bay and has recommended total nitrogen effluent limitations for POTWs discharging to these receiving waters.

D. Effluent Limits Development

The effluent limits on all of the pollutants discussed below, with the exception of total nitrogen, are established to ensure compliance with technology- based requirements and the Massachusetts Water Quality Standards. Since the applicable water quality criteria for Massachusetts are similar to, and in some cases more stringent than, the applicable water quality criteria for Rhode Island, the effluent limits also ensure compliance with Rhode Island Water Quality Standards. The limits and requirements on total nitrogen are established solely to ensure compliance with the Rhode Island Water Quality Standards. The Town will likely be unable to immediately comply with the limits proposed for nitrogen and phosphorus. EPA will work with the Town and its representatives to develop a schedule for the planning, design and construction of facilities that may be necessary to meet the specified limits. It is EPA's intent to begin this process as soon as possible.

Conventional Pollutants:

The effluent concentration limits for BOD and TSS are the same as those limits found in the previous permit, in accordance with anti-backsliding requirements. These limits were originally established in accordance with a 1975 waste load allocation for the Ten Mile River.

The flow limit has been established as an annual average limit. MassDEP adopted a policy establishing flow limits in POTW permits as an annual average in order to account for seasonal flow variations, particularly those associated with high flow and high groundwater which commonly occur in the spring time. See June 12, 2000, MADEP-DWM NPDES Permit Program Policies Related to Flow and Nutrients in NPDES Permits ("Flow Policy"). Consistent with the Flow Policy, the Agencies have imposed mass limits in order to maintain approximate overall pollutant loadings of BOD and TSS in the receiving water.

The numerical limitations for fecal coliform, pH, and dissolved oxygen are based on state certification requirements under Section 401(a)(1) of the CWA, as described in 40 CFR §124.53 and §124.55. These limitations are the same as in the existing permit and so are in accordance with antibacksliding requirements.

Phosphorus

The Massachusetts Water Quality Standards do not contain numerical criteria for total phosphorus. The criterion for nutrients is found at 314 CMR 4.05(5)(c), which states that nutrients "shall not

exceed the site specific limits necessary to control accelerated or cultural eutrophication." The Massachusetts Water Quality Standards also require that "any existing point source discharges containing nutrients in concentrations which encourage eutrophication or growth of weeds or algae shall be provided with the highest and best practicable treatment to remove such nutrients." (314 CMR 4.04). The Massachusetts Department of Environmental Protection (MassDEP) has established that a monthly average total phosphorus limit of 0.2 mg/l represents highest and best practical treatment for POTWs.

EPA has produced several guidance documents which contain recommended total phosphorus criteria for receiving waters. The 1986 Quality Criteria of Water (the Gold Book) recommends in-stream phosphorus concentrations of no greater than 0.05 mg/l in any stream entering a lake or reservoir, 0.1 mg/l for any stream not discharging directly to lakes or impoundments, and 0.025 mg/l within the lake or reservoir.

More recently, EPA has released "Ecoregional Nutrient Criteria," established as part of an effort to reduce problems associated with excess nutrients in water bodies in specific areas of the country. The published criteria represent conditions in waters in that ecoregion that are minimally impacted by human activities, and thus representative of water without cultural eutrophication. North Attleborough is within Ecoregion XIV, Eastern Coastal Plains. The total phosphorus criterion for this ecoregion, found in Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Ecoregion XIV, published in the December, 2000 is 24 ug/l (0.024 mg/l).

The present permit has a monthly average limit of 1.0 mg/l and a daily maximum limit of 2.0 mg/l from May 1 to October 31. Effluent data from DMRs for the period May 2003 to April 2004 show a range of 0.6 to 1.1 mg/l of total phosphorus.

The impacts associated with the excessive loading of phosphorus are documented in the Ten Mile River Basin 1997 Water Quality Assessment Report published by MassDEP in March 2000, and in the RI 2004 303(d) List of Impaired Waters as discussed above. These include violations of the minimum dissolved oxygen criteria, dense filamentous algal cover in some shallow free flowing reaches of the river, and eutrophic conditions in downstream impoundments.

The current monthly average limit in the permit of 1.0 mg/l would be expected to significantly exceed the national guidance for in-stream phosphorus concentration due to the absence of any significant dilution under 7Q10 conditions. It is clear that the existing limits must be made more stringent to address the documented eutrophication problems in the receiving water. A monthly average total phosphorus limit of 0.2 mg/l has been established based on the "highest and best" practical treatment as defined by the MAWQS. This limit will be in effect seasonally, from April 1 to October 31. The application of the lower seasonal limit has been extended to the month of April in order to encompass the entire season when aquatic plant growth is active.

In addition to the seasonal total phosphorus limit of 0.2 mg/l, the permit contains a winter period

total phosphorus limit of 1.0 mg/l for November through March. The winter period limitation on total phosphorus is necessary to ensure that the higher levels of phosphorus discharged in the winter period do not result in the accumulation of phosphorus in the downstream sediments. The limitation assumes that the vast majority of the phosphorus discharged will be in the dissolved fraction and that dissolved phosphorus will pass through the system and not accumulate in the sediments. A dissolved orthophosphorous monitoring requirement has been included to verify the dissolved fraction. If future evaluations indicate that phosphorus may be accumulating in downstream sediments, the winter period phosphorus limit may be reduced in future permit actions.

If MassDEP adopts numeric nutrient criteria, a TMDL is completed, or additional water quality information shows that the phosphorus limits are not stringent enough to meet water quality standards, more stringent limits may be imposed.

In its report titled "Project Engineering Report - Supplement To Comprehensive Project Evaluation-North Attleborough Wastewater Treatment Facility", the Town has proposed an upgrade of the wastewater treatment plant which will achieve the proposed limit. The proposed phosphorus removal facilities include biological phosphorus removal followed by chemical-physical phosphorus removal with sand filtration. The estimated completion date for the entire five phase plant upgrade is April 2008; the estimated completion date of all facilities necessary to achieve the phosphorus limit is April 2007 (Phase IV).

Nitrogen

- Ammonia:

The permit limits ammonia-nitrogen in order to control both in-stream oxygen demand and the degree of toxicity associated with the discharge. For the period of May 1 - October 31, the permit limits ammonia nitrogen at the level in the previous permit. The period of November 1 - April 30 has limits to protect against in-stream toxicity to aquatic species and is also limited at the level in the previous permit.

The November through April limits in the previous permit were established in accordance with the EPA guidance document titled 1998 Update of Ambient Water Quality Criteria for Ammonia. This guidance document has been replaced with the 1999 Update of Ambient Water Quality Criteria for Ammonia, which includes less stringent criteria. EPA considered whether less stringent limits based on the 1999 criteria should be allowed. Although the current permit limits are stringent enough to ensure that the discharge does not result in an exceedance of instream ammonia toxicity or dissolved oxygen criteria, there is a concern that the receiving water's current nonattainment for toxicity and dissolved oxygen could be exacerbated by increased discharges of ammonia. Consequently, the current limits, which the permittee has demonstrated the ability to meet, are retained in this permit.

The limits in the draft permit for November through April are:

November - 7.0 mg/l monthly average.

December 1 - April 30 - 10.0 mg/l monthly average.

The limits for May through October are from the current permit. The limits are stringent enough to ensure that the discharge does not result in an exceedance of instream ammonia toxicity or dissolved oxygen criteria.

The limit in the draft permit for May is 3.0 mg/l monthly average.

The limit in the draft permit for June through October is 1.0 mg/l monthly average.

- Total Nitrogen:

Upper Narragansett Bay, which includes the Providence and Seekonk Rivers, has suffered from severe cultural eutrophication for many years. This cultural eutrophication results in periodic low dissolved oxygen levels and associated fish kills. In addition, historic estimates of eel grass in Narragansett Bay ranged from 8,000 - 16,000 acres and current estimates of eel grass indicate that less than 100 acres remain. No eel grass remains in the upper two thirds of Narragansett Bay. Severe eutrophieation is believed to be a significant contributor to the dramatic decline in eel grass (see Rhode Island Department of Environmental Management (DEM), February 1, 2005 report "Plan for Managing Nutrient Loadings to Rhode Island Waters")

Upper Narragansett Bay has a water quality classification of SB1. The designated uses include primary and secondary contact recreational activities and fish and wildlife habitat. Rhode Island Water Quality Standards Rule 8.B.(2)(c). Applicable criteria include the following:

> "At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that:
>
> i. Adversely affect the composition of fish and wildlife;
> ii. Adversely affect the physical, chemical, or biological integrity of the habitat;
> iii. Interfere with the propagation of fish and wildlife;
> iv. Adversely alter the life cycle functions, uses, processes and activities of fish and wildlife....", Rule 8.D.(1)
>
> The dissolved oxygen shall be "not less than 5 mg/l at any place or time, except as naturally occurs. Normal seasonal and diurnal variations which result in *insitu* concentrations above 5.0 mg/l not associated with cultural eutrophication will be maintained in accordance with the Antidegradation Implementation Policy." Table 2, Rule 8.D.(3)1.
>
> There shall be no nutrients "in such concentration that would impair any usages specifically assigned to said Class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication." Nutrients "shall not exceed site-specific limits if deemed necessary

by the Director to prevent or minimize accelerated or cultural eutrophication. Total phosphorus, nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies." Table 2, Rule 8.D.(3)10; see also Rule 8.D.(1)(d).

Additional relevant regulations include Rule 9.A. and B., which prohibit discharges of pollutants which alone or in combination will likely result in violation of any water quality criterion or interfere with one or more existing or designated uses, and prohibit discharges that will further degrade waters which are already below the applicable water quality standards.

It is clear that eutrophication in Upper Narragansett Bay has reached a level where it is adversely affecting the composition of fish and wildlife; adversely affecting the physical, chemical, or biological integrity of the habitat; interfering with the propagation of fish and wildlife; adversely altering the activities of fish and wildlife; and causing dissolved oxygen to drop well below 5 mg/l. The effects of eutrophication, including algae blooms and fish kills, are also interfering with the designated uses of the water. Eutrophication has, therefore, reached a point where it is causing violations of water quality standards.

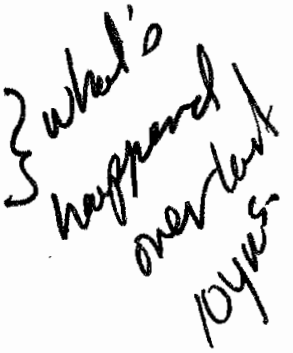
Excessive loadings of nitrogen have been identified as the cause of the eutrophication. This link has been clearly demonstrated by water quality data and by various studies and reports issued over the years. One key report, which summarizes and references many of the studies and reports, is titled "Evaluation of Nitrogen Targets and WWTF Load Reductions for the Providence and Seekonk Rivers" (DEM Report), and was completed by DEM in December 2004. This report analyzes both water quality data and information about major discharges to the Providence and Seekonk Rivers. The report, drawing in part on data developed in earlier studies, divides the rivers into segments and analyzes pollutant loadings and specific water quality impairments in each segment. Much of the data used in the analysis is from a 1995 - 1996 study by DEM Water Resources that consisted of measurements of nitrogen loadings from point source discharges and the five major tributaries to the Providence/Seekonk River system. The report also includes an analysis of data produced by a physical model of the Providence/Seekonk River system. That physical model was operated by the Marine Ecosystems Research Laboratory (MERL), and was part of an experiment to evaluate the impact of various levels of nutrient loading on the rivers and Narragansett Bay.

The Commonwealth of Massachusetts submitted detailed comments (February 11, 2005) on the DEM report, questioning the report's evaluation of the nitrogen issue and the basis for nitrogen reductions. Rhode Island responded to those comments on June 27, 2005.

EPA has reviewed all of the available data, including the comments by Massachusetts on the DEM Report and Rhode Island's responses. EPA has concluded that there is convincing evidence that excessive nitrogen loading is impairing the designated uses of the Seekonk and Providence Rivers and that wastewater facilities in Massachusetts contribute a significant portion of the nitrogen loading.

One key issue raised by Massachusetts is whether the impact of nitrogen discharges from

Massachusetts POTW sources is significantly reduced by instream attenuation before the nitrogen reaches impaired portions of Upper Narragansett Bay. The DEM report estimates a 40% attenuation rate for the Ten Mile River. Even assuming this level of attenuation, substantial reductions in nitrogen discharges are needed to meet water quality standards. Moreover, part of this attenuation is due to phosphorus-driven eutrophication in the Ten Mile River (nitrogen attenuation increases as eutrophication levels increase). Phosphorus discharges to the Ten Mile River are expected to be significantly lower during the term of this permit than they were during the 1995-96 period considered in the DEM Report, and the resulting decline in phosphorus-driven eutrophication should reduce the attenuation of nitrogen below the 40% level. Significant reductions in nitrogen discharges are, therefore, clearly necessary.



Another issue raised by Massachusetts is that there are inherent uncertainties in the conclusions of the DEM report due to its reliance on a physical model. EPA agrees that the use of the physical model does introduce uncertainty in determining the precise level of nitrogen control which will ultimately be needed in the river. Based on the available evidence, however, including the analysis of loadings included in the DEM report, EPA has concluded that the amount of nitrogen reduction needed to meet water quality standards will be at least as great as required by the proposed limit in this permit (described below). The uncertainties in the physical model may ultimately mean that additional nitrogen reductions are needed, but there is no realistic likelihood that water quality standards could be met with a less stringent nitrogen limit than the one proposed.

The predominate source of the nitrogen loading in Narragansett Bay is municipal wastewater treatment facilities in Rhode Island and in Massachusetts. The State of Rhode Island has recently reissued several Rhode Island Pollutant Discharge Elimination System (RIPDES) permits for POTWs which discharge to Upper Narragansett Bay and its tributaries. These permits include limitations on the discharge of total nitrogen, in order to address the cultural eutrophication in Upper Narragansett Bay. There are five municipal POTWs in Massachusetts which discharge nitrogen into tributaries of the Seekonk and Providence Rivers, including North Attleborough. EPA is responsible for issuing permits to these facilities, which as a group represent approximately 38% of the total nitrogen load to Upper Narragansett Bay, and approximately 73% of the total nitrogen load to the Seekonk River, which is the most severely impaired section of Upper Narragansett Bay. (These values are based on permitted flows and loadings, and an assumed effluent nitrogen concentration of 15 mg/l for POTWs without nitrogen permit limits or nitrogen control facilities.)

EPA recognizes that Upper Narragansett Bay and the rivers that discharge into it comprise a complex system, and, as noted above, that there are uncertainties associated with the physical model used in the MERL experiment. EPA has reviewed the available evidence, including the DEM report, in light of that uncertainty, and has concluded that the nitrogen limit proposed in this permit is necessary to meet Rhode Island Water Quality Standards.

In particular, based on the available evidence, EPA has concluded that, at a minimum, a seasonal reduction to no more than 8.0 mg/l is required at the North Attleborough facility in order to achieve water quality standards. Therefore, pursuant to §§ 301(1)(b)(1)(C) and 401(a)(2) of the CWA and

40 C.F.R. §§ 122.4(d) and122.44(d), EPA has included in the draft permit a total nitrogen limit of 8 mg/l monthly average from May through October. Nitrogen discharged from May through October is believed to be the dominant source of available nitrogen in the Providence and Seekonk Rivers during the critical growing period (see DEM "Response to Comments Received on Proposed Permit Modifications for the Fields Point, Bucklin Point, Woonsocket and East Providence WWTFs"). EPA's draft permit also includes a treatment optimization requirement for November through April, in order to maximize the nitrogen removal benefits. These nitrogen limits and requirements are contained only in EPA's NPDES permit. Massachusetts is not including these limits in its state-issued permit; the Massachusetts permit establishes limits that are necessary to protect Massachusetts waters only.

DEM has, in partnership with several research and academic institutions in Rhode Island, established an extensive monitoring network in order to provide the data necessary to evaluate compliance with water quality standards upon implementation of the recommended nitrogen reductions (see (DEM), February 1, 2005 report "Plan for Managing Nutrient Loadings to Rhode Island Waters"). It is possible that this monitoring will demonstrate that additional pollutant reductions are ultimately needed to meet water quality standards. EPA therefore strongly recommends that treatment facility upgrades implemented in order to achieve the 8.0 mg/l total nitrogen limit be compatible with alternatives for further reducing the nitrogen level in the discharge.

Toxic Pollutants

- Chlorine

Chlorine and chlorine compounds produced by the chlorination of wastewater can be extremely toxic to aquatic life. The effluent limits for average monthly and maximum daily total residual chlorine (TRC) were developed using the chronic and acute TRC criteria defined the EPA Quality Criteria for Water, 1986 (the "Gold Book"), as adopted by the Massachusetts Department of Environmental Protection (MassDEP) into the state water quality standards.

The criteria state that the average TRC in the receiving water should not exceed 11 ug/l for chronic toxicity protection and 19 ug/l for acute toxicity protection. The effluent limits are set at the criteria due to the lack of dilution in the receiving water. See Attachment B for the dilution factors.

The average monthly and maximum daily TRC limits are below the analytical detection limit for this pollutant. In these situations, EPA, Region I is following guidance set forth in the Technical Support Document for Water Quality-Based Toxics Control, EPA/505/2-90-001, March 1991, page 111, which recommends "... that the compliance level be defined in the permit as the minimum level (ML)." EPA has defined the ML as "the level at which the entire analytical system shall give recognizable signal and acceptable calibration points." The minimum level for TRC is 0.020 mg/l or 20 ug/l, and is defined as such in the draft permit. Therefore, compliance/non-compliance determinations will be based on the Minimum Level (ML). This ML value of 20 ug/l may be reduced by permit modification as more sensitive test methods are approved by the EPA and the

MassDEP.

The permit also includes a requirement that the chlorination and dechlorination systems include alarms for indicating system interruptions or malfunctions and that interruptions or malfunctions be reported with the monthly compliance reports. This requirement is intended to supplement the grab sampling requirements for chlorine and bacteria and is a recognition of the limitations of a grab sampling program for determining consistent compliance with permit limits. In the future, continuous monitoring of effluent chlorine levels may be required.

- Metals and Cyanide:

The limitations in the current permit are taken from the Ten Mile River Basin 1984 Water Quality Program and NPDES Permit Development Final Report (MADEP). These recommended limits were considered to satisfy water quality concerns based on "Clean Water" or background levels in the receiving water. However, the studies conducted in the mid-1980's are not consistent with current policies and guidance relative to developing site specific metals criteria, and the downstream segments continue to be listed in nonattainment of water quality standards for metals despite attainment of the effluent limitations. Accordingly, limitations were calculated using the EPA recommended water quality criteria found in National Recommended Water Quality Criteria 2002. These limits have been used in the draft permit where a reasonable potential analyses shows that limits are necessary and where these limits are more stringent than the existing limits.

For chromium and nickel, the data indicate that there is no reasonable potential to cause or contribute to a violation of water quality standards since the reported data is well below the effluent limitations that would be necessary to ensure compliance with water quality standards. The routine monitoring requirements have therefore been deleted, although chromium and nickel analyses must continue to be performed in conjunction with whole effluent toxicity testing. This is consistent with the antibacksliding requirements of Clean Water Act sections 402(o) and 303(d)(4)(B).

For cyanide and cadmium, the discharge data submitted by the facility and presented in **Attachment A**, shows that the discharge for these pollutants has been consistently reported below the minimum level. (The ML is defined in EPA's Technical Support Document for Water Quality-Based Toxics Control as "the level at which the entire analytical system shall give recognizable signal and acceptable calibration points". The minimum level (ML) for cyanide associated with the method specified in the permit is 20 ug/l and for cadmium is 1 ug/l. However, because the calculated water quality limits for cyanide and cadmium are significantly below the respective MLs, EPA cannot be certain that there is no reasonable potential for the discharge of these pollutants to cause or contribute to a violation of water quality standards. Since the calculated monthly average and maximum daily cyanide limits are higher than the monthly average and maximum daily limits in the current permit, the current permit limits have been maintained in accordance with antibacksliding requirements. An analytical method with a lower ML (10 ug/l) has been specified. Cadmium limits have been established using National Recommended Water Quality Criteria and specifying an analytical method with an ML of 0.5 ug/l. The calculations are as follows:

Cyanide:

Chronic Criteria = 5.2 ug/l
Acute Criteria = 22 ug/l
Dilution Factor (DF) = 1.06 (see Attachment B for dilution calculations)

Monthly Average Limit = (chronic criteria)(dilution factor) = (5.2 ug/l)(1.06) = 5.5 ug/l
Daily Maximum Limit = (acute criteria)(dilution factor) = (22 ug/l)(1.06) = 23.3 ug/l

Cadmium

Hardness = 100 mg/l
Chronic Criteria = 0.3 ug/l
Acute Criteria = 2.1 ug/l
Dilution Factor (DF) = 1.06 (see Attachment B for dilution calculations)

Monthly Average Limit = (chronic criteria)(dilution factor) = (0.3 ug/l)(1.06) = 0.3 ug/l
Daily Maximum Limit = (acute criteria)(dilution factor) = (2.1 ug/l)(1.06) = 2.2 ug/l

For copper and aluminum, limitations and monitoring requirements have been retained in the draft permit, and for zinc and lead, limitations and monitoring requirements have been included in the draft permit, because the discharge data indicate that the discharge has a reasonable potential to cause or contribute to a violation of water quality standards for these pollutants. As described above, limits were calculated using National Recommended Water Quality Criteria, as required by the Massachusetts Water Quality Standards, at 314 CMR.§ 4.05(5)(e). If the recalculated value was more stringent than the existing limit, it was used. If the existing limit was more stringent it was used, consistent with the antibacksliding requirements of CWA § 402(o). The receiving water has been identified on the Massachusetts and Rhode Island § 303(d) lists as being in nonattainment for metals, and establishing less stringent limits would not comply with the exception to the antibacksliding prohibition provided by CWA §§ 402(o)(1) and 303(d)(4). Furthermore, none of the other antibacksliding exceptions in § 402(o)(2) applies. The calculated limits are as follows:

Copper

Hardness = 100 mg/l
Chronic Criteria (total recoverable) = 9.3 ug/l
Acute Criteria (total recoverable) = 14.0 ug/l
Dilution Factor = 1.06 (see Attachment B for calculations)

Monthly Average Limit = (chronic criteria)(dilution factor)
= (9.3 ug/l)(1.06) = 9.9 ug/l

Daily Maximum Limit = (acute criteria)(dilution factor)
= (14.0 ug/l)(1.06) = 14.8 ug/l

Aluminum

Chronic Criteria= 87 ug/l
Acute Criteria = 750 ug/l
Dilution Factor (DF)= 1.06 (see Attachment B for dilution calculations)

Monthly Average Limit = (chronic criteria)(dilution factor) = (87 ug/l)(1.06) = 92 ug/l

Daily Maximum Limit = (acute criteria)(dilution factor) = (750 ug/l)(1.06) = 795 ug/l

Since the calculated daily maximum limit is higher then the daily maximum limit in the current permit, the current permit limit has been maintained in accordance with antidegradation requirements.

Zinc

Hardness = 100 mg/l
Chronic Criteria (total recoverable) = 119.8 ug/l
Acute Criteria (total recoverable) = 119.8 ug/l
Dilution Factor = 1.06 (see Attachment B for calculations)

Monthly Average Limit = (chronic criteria)(dilution factor)
= (119.8 ug/l)(1.06) = 127.0 ug/l

Daily Maximum Limit = (acute criteria)(dilution factor)
= (119.8 ug/l)(1.06) = 127.0 ug/l

Lead

Hardness = 100 mg/l
Chronic Criteria (total recoverable) = 3.2 ug/l
Acute Criteria (total recoverable) = 81.6 ug/l
Dilution Factor = 1.06 (see Attachment B for calculations)

Monthly Average Limit = (chronic criteria)(dilution factor)
= (3.2 ug/l)(1.06) = 3.4 ug/l

Daily Maximum Limit = (acute criteria)(dilution factor)
= (81.6 ug/l)(1.06) = 86.5 ug/l

For iron, the reported effluent iron concentrations range from 62 ug/l to 182 ug/l (see Attachment A). The chronic water quality criterion is 1,000 ug/l; there is no acute criterion. Since the reported effluent concentrations are significantly less than the criteria, there is no reasonable potential for the discharge of iron to cause or contribute to a violation of water quality standards, and a limit has not

been included in the permit. Effluent monitoring has been dropped from the permit.

While both Massachusetts and Rhode Island water quality criteria for metals are based on dissolved metals, national guidance recommends that permit limits be based on total recoverable metals and not dissolved metals. Consequently, it is necessary to apply a translator in order to develop a total recoverable permit limit from a dissolved criteria. The translator reflects how a discharge partitions between the particulate and dissolved phases after mixing with the receiving water. In the absence of site specific data on how a particular discharge partitions in the receiving water, a default assumption that the translator is equivalent to the inverse of the conversion factor (the conversion factor converts a criteria based on total metals to a criteria based on dissolved metals) is used in accordance with the EPA Metals Translator Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion (EPA-823-B-96-007).

The permit specifies the Furnace Atomic Absorption (AA) method for measuring lead, copper and cadmium. These determinations were made from the minimum levels (MLs) that this method provides for each parameter. EPA's definition of the ML is given here again as "the level at which the entire analytical system shall give recognizable signal and acceptable calibration points". For any of these metals, any effluent value less than its corresponding ML shall be recorded as zero.

- Whole Effluent Toxicity:

Massachusetts' Water Quality Standards contain a narrative toxicity criterion which states that "All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife." 314 CMR 4.05(5)(e).

National studies conducted by the EPA have demonstrated that industrial and domestic sources contribute toxic constituents, such as metals, chlorinated solvents, aromatic hydrocarbons, and others to POTWs. The impacts of such complex mixtures are often difficult to assess. Therefore, the toxicity of several constituents in a single effluent can only be accurately examined by whole effluent toxicity (WET) testing. Furthermore, 40 CFR 122.44 (d) requires WET limits in NPDES permits when the permittee has a "reasonable potential" to cause toxicity.

The low dilution factor calculated for the receiving water at the North Attleborough treatment plant's outfall contributes to a "reasonable potential" that the discharge could cause an excursion of the no toxics provision in the State's regulations. Inclusion of the whole effluent toxicity limit in the draft permit will ensure compliance with the State's narrative water quality criterion of "no toxics in toxic amounts". Therefore, based on the potential for toxicity, water quality standards, and available dilution, the draft permit includes chronic and acute whole effluent toxicity limitations and monitoring requirements. (See, e.g., "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants", 50 Fed. Reg. 30,784- July 24, 1985. See also EPA's Technical Support Document for Water Quality-Based Toxics Control, EPA/505/1-90-001.) Attachment B contains the calculation for chronic whole effluent toxicity, which is based on available dilution.

The Chronic No Observed Effect Concentration (C-NOEC) limitation in the draft permit prohibits

chronic adverse effects (e.g., on survival, growth, and reproduction) when aquatic organisms are exposed to the POTW discharges at the calculated available dilution. The LC50 limitations prohibits acute effects (lethality), to more than 50% of the test organisms when exposed to undiluted POTW effluent for 48 hours.

The draft permit calls for modified acute and chronic toxicity tests using one specie, the Ceriodaphnia dubia. These tests shall be conducted four times per year. Toxicity tests will be conducted on the second Tuesday of the months of February, May, August, and November. See the Toxicity Testing Protocol in Attachment A of the draft permit for a more complete description of the testing requirements. The test results shall be submitted by the last day of the month following the test.

E. Other Monitoring Requirements.

The effluent monitoring requirements have been specified in accordance with 40 CFR 122.41(j), 122.44 (i) and 122.48 to yield data representative of the discharge.

V. Pretreatment Program.

The permittee is required to administer a pretreatment program based on the authority granted under 40 CFR Section 122.44 (j), 40 CFR Section 403 and Section 307 of the Act. The Town of North Attleborough's pretreatment program received EPA approval on September 30, 1985 and, as a result, appropriate pretreatment program requirements were incorporated into the current permit which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued.

In the reissued permit, activities that the permittee must address if applicable include, but are not limited to, the following: (1) implement and enforce specific effluent limits (technically-based local limits); (2) revise the local sewer-user ordinance or regulation to be consistent with federal regulations; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant noncompliance for industrial users; and (6) establish a definition of and track significant industrial users.

These requirements are necessary to ensure continued compliance with the POTW's NPDES permit and its sludge use or disposal practices. Lastly, the permittee must continue to submit, annually by March 1st, a pretreatment report detailing the

VI. Operation and Maintenance

Regulations regarding proper operation and maintenance are found at 40 CFR § 122.41(e). These regulations require, "that the permittee shall at all times 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 the permit." The treatment plant and collection system are included in the definition "facilities and systems of treatment and control"and

are therefore subject to proper operation and maintenance requirements.

Similarly, permittees have a "duty to mitigate" pursuant to 40 CFR §122.41(d). This requires the permittees to "take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely affecting human health or the environment."

General requirements for proper operation and maintenance, and mitigation have been included in Part II of the permit. Specific permit conditions have also been included in Part I.D, I.E, and I.F of the Draft Permit. These requirements include: reporting of unauthorized discharges including SSOs, maintaining an adequate maintenance staff, performing preventative maintenance, developing and maintaining an inflow and infiltration (I/I) control program , and maintaining alternate power where necessary.

Because Plainville owns and operates a collection system that discharges to North Attleborough's treatment plant, this municipality has been included as a co-permittee for the specific permit requirements discussed in the paragraph above.

The MassDEP has stated that inclusion of the I/I conditions in the draft permit shall be a standard State Certification requirement under Section 401 of the Clean Water Act and 40 CFR §124.55(b).

VII. Sludge Conditions

Section 405(d) of the CWA requires that EPA develop technical standards regulating the use and disposal of sewage sludge. These regulations were signed on November 25, 1992, published in the Federal Register on February 19, 1993, and became effective on March 22, 1993. Domestic sludge which is land applied, disposed of in a surface disposal unit, or fired in a sewage sludge incinerator are subject to Part 503 technical standards. Part 503 regulations have a self implementing provision, however, the CWA requires implementation through permits. Domestic sludge which is disposed of in a municipal solid waste landfill is in compliance with Part 503 regulations provided that the sludge meets the quality criteria of the landfill and the landfill meets the requirements of 40 C.F.R. Part 258.

The draft permit requires that sewage sludge use and disposal practices meet Section 405(d) Technical Standards of the CWA. In addition, the EPA Region I – NPDES Permit Sludge Compliance Guidance document dated November 4, 1999 is available for use by the permittee in determining its appropriate sludge conditions for its chosen method of sludge disposal.

The North Attleborough facility generates sludge consisting of municipal and industrial waste and sends it out for disposal. The draft permit requires that sewage sludge use and disposal practices meet the CWA Section 405(d) Technical Standards. In addition, EPA New England has included with the draft permit a 72-page *Sludge Compliance Guidance* document for use by the permittee in determining their appropriate sludge conditions for their chosen method of sludge disposal.

The permittee is also required to submit to EPA an annual report containing the information

specified in the *Sludge Compliance Guidance* document for the permittee's chosen method of sludge disposal.

VIII. State Certification Requirements.

The staff of the Massachusetts Department of Environmental Protection has reviewed the draft permit. EPA has requested permit certification by the State pursuant to CWA § 401(a)(1) and 40 CFR § 124.53 and expects that the draft permit will be certified. EPA also expects that Rhode Island will be commenting on the permit pursuant to its authorities under CWA § 401(a)(2).

IX. Public Comment Period, Public Hearing, and Procedures for Final Decision.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full before the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection "CMP", Region 1, 1 Congress Street, Suite 1100, Boston, MA 02114-2023. Any person, prior to such date, may submit a request in writing to EPA and the state agency for a public hearing to consider the draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing.

A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office. Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Permits may be appealed to the Environmental Appeals Board in the manner described at 40 CFR § 124.19.

X. EPA Contact.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

David Pincumbe
Municipal Permits Branch (CMP)
Office Of Ecosystem Protection
US Environmental Protection Agency
Congress Street, Suite 1100
Boston, MA 02114-2023
Tele: (617) 918-1695

Paul Hogan, Chief
Surface Water Permit Program
Division of Watershed Management
Department of Environmental Protection
627 Main Street, Second Floor
Worcester, MA 01608
Tele: (508) 767-2796

June , 2006
Date

Linda M. Murphy, Director
Office of Ecosystem Protection

Attachment A
Effluent Data

Month	Flow (MGD)	BOD (mg/l)		TSS (mg/l)		Ammonia (mg/l)		Total Nitrogen (mg/l)	Phosphorus (mg/l)		Fecal Coliform (CFU/100ml)		DO (mg/l)	WET ceriodaphnia (% effluent)	
	ave	ave	max	ave	max	ave	max	max	ave	max	ave	max	ave	LC50	NOEC
Jan 03	5.14	29.3	82.4	20.1	39.9	5		9		1.80	4	33	6.6		
Feb 03	4.13	19.0	30.2	10.9	40.4	7		19		1.20	5	115	6.1	100	100
Mar 03	3.07	13.3	14.8	6.0	11.0	4		12		2.50	11	178	6.1		
Apr 03	4.85	12.8	30.8	6.7	13.2	2		7		1.10	2	100	6.3		
May 03	6.13	4.4	9.8	5.1	10.2	0		17.2	1.0	1.2	1	5	7.9	>100	100
June 03	4.36	5.0	9.1	4.8	12.9	0.3	0.6	9	0.7	0.8	1	7	6.2		
July 03	3.90	5.3	8.0	5.2	11.6	0.5	1.5	8.4	0.7	1.0	3	3	6.2		
Aug 03	3.96	4.5	7.5	4.1	5.8	0.3	1.7	10	0.6	0.0	2	29	6.6	100	100
Sept 03	3.52	4.2	7.7	4.7	14.5	0.2	0.4	11	0.9	1.0	1	4	6.0		
Oct 03	3.60	4.3	7.8	6.5	11.8			16	0.8	1.0	3	53	7.0		
Nov 03	3.92	7.8	12.6	8.2	14.4	1		8		2.1	7	105	7.0	>100	100
Dec 03	5.79	21.5	86.2	17.3	86.8	4		13		1.9	10	11200	4.4		
Jan 04	4.41	10.7	14.5	5.1	10.4	6		10		1.9	2	88	5.8		
Feb 04	3.51	9.1	10.8	2.9	4.8	8		16		2.1	2	73	6.4	100	100
Mar 04	3.47	8.2	11.4	2.4	3.7	8		19		2.0	1	07	6.2		
Apr 04	6.55	15.6	57.6	19.5	139.7	1		6		1.0	5	5200	5.2		
May 04	4.19	9.1	29.5	11.0	106.0	0		6	1.10	1.3	2	18	6.8	>100	100

Effluent Data

Month	Flow (MGD)	BOD (mg/l)		TSS (mg/l)		Ammonia (mg/l)		Total Nitrogen (mg/l)	Phosphorus (mg/l)		Fecal Coliform (CFU/100ml)		DO (mg/l)	WET ceriodaphnia (% effluent)	
	ave	ave	max	ave	max	ave	max	max	ave	max	ave	max	ave	LC50	NOEC
June 04	3.11	4.9	8.7	5.8	15.0	0.2	0.6	9	0.9	1.1	1	4	6.9		
July 04	2.80	3.2	4.3	3.1	5.0	0.1	0.3	9.6	0.9	1.1	2	3	6.8		
Aug 04	3.05	3.8	4.6	3.0	6.6	0.0	0.1	10	0.8	1.0	1	5	6.4	100	100
Sept 04	3.09	3.5	4.6	3.3	5.3	0.0	0.0	10	0.8	1.1	4	25	6.5		
Oct 04	3.12	2.5	3.6	1.7	2.5			8.4	0.7	0.7	2	3	6.4		
Nov 04	3.11	2.9	4..8	2.2	6.0	0.2		8		0.7	2	6	6.6	100	100
Dec 04	4.69	4.2	6.9	2.8	3.9	0.4		2		1.4	9	43	7.9		
Limits															
5/1-5/31	4.61	5.0	15.0	7.0	15.0	3	---	---	1	2	200	400	6.0	100	94
6/1-10/31	4.61	5.0	15.0	7.0	15.0	1	2	---	1	2	200	400	6.0	100	94
11/1-11/30	4.61	15.0	30.0	15.0	30.0	7	---	---	---	---	200	400	6.0	100	94
12/1-4/30	4.61	15.0	30.0	15.0	30.0	10	---	---	---	---	200	400	6.0	100	94

Effluent Data

Month	Al (ug/l)		Cu (ug/l)		CN (ug/l)		Ni (ug/l)	Zn (ug/l)	Cr (ug/l)	Cd (ug/l)
	ave	max	ave	max	ave	max	max	max	max	max
Feb 03	614	614	104	104	0	0				
Mar 03	83	83	25	25	0	0	0	23	0	0
Apr 03	179	179	17	17	0	0				
May 03	101	101	82	82	0	0	0	25	0	0
June 03	398	398	34	34	0	0				
July 03	332	332	60	60	0	0	0	48	0	0
Aug 03	111	111	28	28	0	0				
Sept 03	99	99	47	47	0	0	0	31	0	0
Oct 03	293	293	29	29	0	0				
Nov 03	205	205	33	33	0	0	0	35	0	0
Dec 03	92	92	20	20	0	0				
Jan 04	36	72	23	23	0	0	0	31	0	0
Feb 04	65	65	0	0	0	0				
Mar 04	0	0	6	12	0	0	0	40	0	0
Apr 04	85	85	19	19	0	0				
May 04	115	115	32	32	0	0	0	42	0	0
June 04	524	524	48	48	0	0				
July 04	80	80	38	38	0	0	0	41	0	0
Aug 04	84	84	21	21	0	0				
Sept 04	83	83	27	27	0	0	0	36	0	0
Oct 04	0	0	0	0	0	0				
Nov 04	128	128	18	18	0	0	0	67	0	0
Dec 04	0	0	0	0	0	0				
Ave	149		30		0					
Limits	140	140	20	20	5	22	---	---	---	---

July 03, Fe=182 ug/l, Pb= 13 ug/l
July 04, Fe= 62 ug/l, Pb= 3 ug/l

ATTACHMENT - B
NPDES Permit No. MA0101036
North Attleborough, Massachusetts

Dilution calculations:

Design flow of the plant : 4.61 mgd = 7.14 cfs

Drainage Area Considered: 10.76 square miles

7Q10 flow factor : 0.043 cfs/square miles

Calculated 7Q10 : 0.463 cfs

Dilution Factor: $\frac{Qr + Qe}{Qe}$

Qr = Receiving water flow = 7Q10 = 0.463 cfs

Qe = Effluent flow = design flow = 7.14 cfs

dilution Factor = 1.06

LC50≥100%

1/Dilution factor X 100 = 94% (Receiving Water Concentration)

NOEC ≥ RWC

NOEC ≥ 94%

30Q10 flow factor = 7Q10 x 2.37 (based upon US Geological Survey flow gage records)

Ratio = 30Q10/7Q10 = 3.06/1.29 = 2.37 (for period of November-May)

30Q10 flow = 1.1 cfs

ATTACHMENT A
FRESHWATER CHRONIC
TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable chronic (and modified acute) toxicity tests on three samples collected during the test period. The following tests shall be performed in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) Survival and Reproduction Test.**
- **Fathead Minnow (Pimephales promelas) Larval Growth and Survival Test.**

Chronic and acute toxicity data shall be reported as outlined in Section VIII. The chronic fathead minnow and daphnid tests can be used to calculate an LC50 at the end of 48 hours of exposure when both an acute (LC50) and a chronic (C-NOEC) test is specified in the permit.

II. METHODS

Methods to follow are those recommended by EPA in:

Lewis, P.A. et al. Short Term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Third Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. July 1994, EPA/600/4-91/002.

Any exceptions are stated herein.

III. SAMPLE COLLECTION

For each sampling event, three discharge samples shall be collected. Fresh samples are necessary for Days 1, 3, and 5 (see Section V. for holding times). The initial sample is used to start the test on Day 1, and for test solution renewal on Day 2. The second sample is collected for use at the start of Day 3, and for renewal on Day 4. The third sample is used for renewal on Days 5, 6, and 7 (or until termination for the Ceriodaphnia dubia test). The initial (Day 1) sample will be analyzed chemically (see Section VI). Day 3 and 5 samples will be held until test completion. If either the Day 3 or 5 renewal sample is of sufficient potency to cause lethality to 50 percent or more test organisms in any of the dilutions for either species, then a chemical analysis shall be performed on the appropriate sample(s) as well.

Aliquots shall be split from the samples, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses. The remaining samples shall be measured for total residual chlorine and 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 chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater also describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1 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

Grab samples of dilution water used for chronic toxicity testing shall be collected from the receiving water at a point upstream of the discharge 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 hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids 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 alternate dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency-New England
JFK Federal Building (CAA)
Boston, MA 02203

It may prove beneficial to have the 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. See Section 7 of EPA/600/4-89/001 for further information.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA New England requires that fathead minnow tests be performed using four (not three) replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from only three replicates. Also, if a reference toxicant test was being performed concurrently with an effluent or receiving water test and fails, both tests must be repeated.

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA, SURVIVAL AND REPRODUCTION TEST[1]

1.	Test type: Static, renewal	
2.	Temperature (°C):	25 ± 1°C
3.	Light quality: laboratory illumination	Ambient
4.	Photoperiod:	16 hr. light, 8 hr. dark
5.	Test chamber size:	30 mL
6.	Test solution volume:	15 mL
7.	Renewal of test solutions:	Daily using most recently collected sample
8.	Age of test organisms:	Less than 24 hr.; and all released within an 8 hr. period of each other.
9.	Number of neonates per test chamber:	1
10.	Number of replicate test chambers per treatment:	10
11.	Number of neonates per test concentration:	10
12.	Feeding regime:	Feed 0.1 ml each of YCT and concentrated algal suspension per exposure chamber daily.
13.	Aeration:	None
14.	Dilution water:[2]	Receiving water, other surface water, synthetic soft water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^R or equivalent deionized water and reagent grade chemicals according to EPA chronic toxicity test manual) or deionized water combined with mineral water to appropriate hardness.

15.	Effluent concentrations:[3]	5 effluent concentrations and a control. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16.	Dilution factor:	≥ 0.5
17.	Test duration:	Until 60% of control females have three broods (generally 7 days and a maximum of 8 days).
18.	End points:	Survival and reproduction
19.	Test acceptability:	80% or greater survival and an average of 15 or more young/surviving female in the control solutions. At least 60% of surviving females in controls must produce three broods.
20.	Sampling requirements:	For on-site tests, samples are collected daily and used within 24 hr. of the time they are removed from the sampling device. For off-site tests a minimum of three samples are collected (i.e. days 1, 3, 5) and used for renewal (see Sec. III). Off-site tests samples must be first used within 36 hours of collection.
21.	Sample volume required:	Minimum 1 liter/day

Footnotes:

1. Adapted from EPA/600/4-91/002.
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.
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 EFFLUENT TEST CONDITIONS FOR THE FATHEAD MINNOW (PIMEPHALES PROMELAS) LARVAL SURVIVAL AND GROWTH TEST[1]

1.	Test type:	Static, renewal
2.	Temperature (°C):	25 ± 1°C
3.	Light quality:	Ambient laboratory illumination
4.	Photoperiod:	16 hr. light, 8 hr. dark
5.	Test chamber size:	500 mL minimum
6.	Test solution volume:	Minimum 250 mL/replicate
7.	Renewal of test concentrations:	Daily using most recently collected sample.
8.	Age of test organisms:	Newly hatched larvae less than 24 hr. old
9.	No. larvae/test chamber and control:	15 (minimum of 10)
10.	No. of replicate chambers/ concentration:	4
11.	No. of larvae/concentration:	60 (minimum of 40)
12.	Feeding regime:	Feed 0.1 g newly hatched, distilled water-rinsed Artemia nauplii at least 3 times daily at 4 hr. intervals or, as a minimum, 0.15 g twice daily, 6 hrs. between feedings (at the beginning of the work day prior to renewal, and at the end of the work day following renewal). Sufficient larvae are added to provide an excess. Larvae fish are not fed during the final 12 hr. of the test.
13.	Cleaning:	Siphon daily, immediately before test solution renewal.
14.	Aeration:	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L. Rate should be less than 100 bubbles/min.

15.	Dilution water:[1]	Receiving water, other surface water, synthetic soft water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^R or equivalent deionized and reagent grade chemicals according to EPA chronic toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
16.	Effluent concentrations:[3]	5 and a control. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
17.	Dilution factor:	$\geq$ 0.5
18.	Test duration:	7 days
19.	End points:	Survival and growth (weight)
20.	Test acceptability:	80% or greater survival in controls: average dry weight per control larvae equals or exceeds 0.25 mg.
21.	Sampling requirements:	For on-site tests samples are collected and used within 24 hours of the time they are removed from the sampling device. For off-site tests a minimum of three samples are collected (i.e. days 1, 3, 5) and used for renewal (see Sec.IV). Off-site tests samples must be first used within 36 hours of collection.
22.	Sample volume required:	Minimum 2.5 liters/day

Footnotes:

1. Adapted from EPA/600/4-91/002.
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.
3. When receiving water is used for dilution, an additional control made up of standard laboratory or culture water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

As part of each daily renewal procedure, pH, specific conductance, dissolved oxygen, and temperature must be measured at the beginning and end of each 24-hour period in each dilution and the controls. It is also recommended that total alkalinity and total hardness be measured in the control and highest effluent concentration on the Day 1, 3, and 5 samples. The following chemical analyses shall be performed for each sampling event.

Parameter	Effluent	Diluent	Minimum Level (mg/l)	Quantification
Hardness*1	x	x		0.5
Alkalinity	x	x		2.0
pH	x	x		--
Specific Conductance	x	x		--
Total Solids and Suspended Solids	x	x		--
Ammonia	x	x		0.1
Total Organic Carbon	x	x		0.5
Total Residual Chlorine (TRC)*2	x	x		0.05
Dissolved Oxygen	x	x		1.0
Total Metals				
Cd	x			0.001
Cr	x			0.005
Pb	x	x		0.005
Cu	x	x		0.0025
Zn	x	x		0.0025
Ni	x	x		0.004
Al	x	x		0.02
Mg, Ca	x	x		0.05

Superscripts:

*1 Method 2340 B (hardness by calculation) from APHA (1992) Standard Methods for the Examination of Water and Wastewater. 18th Edition.

*2 Total Residual Chlorine

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 Colorimetric Method.

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

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)
Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

Reference the flow chart on page 84 or page 172 of EPA 600/4-91/002 for the appropriate method to use on a given data set.

Chronic No Observed Effects Concentration (C-NOEC)
Methods of Estimation:

- Dunnett's Procedure
- Bonferroni's T-Test
- Steel's Many-One Rank Test
- Wilcoxin Rank Sum Test

Reference the flow charts on pages 50, 83, 96, 172, and 176 of EPA 600/4-91/002 for the appropriate method to use on a given data set.

In the case of two tested concentrations causing adverse effects but an intermediate concentration not causing a statistically significant effect, report the C-NOEC as the lowest concentration where there is no observable effect. The definition of NOEC in the EPA Technical Support Document only applies to linear dose-response data.

VIII. TOXICITY TEST REPORTING

A report of results will include the following:

- 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 toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

Attachment B

EPA - New England

Reassessment of Technically Based Industrial Discharge Limits

Under 40 CFR §122.21(j)(4), all Publicly Owned Treatment Works (POTWs) with approved Industrial Pretreatment Programs (IPPs) shall provide the following information to the Director: a written evaluation of the need to revise local industrial discharge limits under 40 CFR §403.5(c)(1).

Below is a form designed by the U.S. Environmental Protection Agency (EPA - New England) to assist POTWs with approved IPPs in evaluating whether their existing Technically Based Local Limits (TBLLs) need to be recalculated. The form allows the permittee and EPA to evaluate and compare pertinent information used in previous TBLLs calculations against present conditions at the POTW.

Please read direction below before filling out form.

ITEM I.

* In Column (1), list what your POTW's influent flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present influent flow rate. Your current flow rate should be calculated using the POTW's average daily flow rate from the previous 12 months.

* In Column (1) list what your POTW's SIU flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present SIU flow rate.

* In Column (1), list what dilution ratio and/or 7Q10 value was used in your old/expired NPDES permit. In Column (2), list what dilution ration and/or 7Q10 value is presently being used in your new/reissued NPDES permit.

  The 7Q10 value is the lowest seven day average flow rate, in the river, over a ten year period. The 7Q10 value and/or dilution ratio used by EPA in your new NPDES permit can be found in your NPDES permit "Fact Sheet."

* In Column (1), list the safety factor, if any, that was used when your existing TBLLs were calculated.

* In Column (1), note how your bio-solids were managed when your existing TBLLs were calculated. In Column (2), note how your POTW is presently disposing of its biosolids and how your POTW will be disposing of its biosolids in the future.

(Item VI. continued)

All effluent data collected and analyzed must be in accordance with 40 CFR §136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

* List in Column (2A) what the Water Quality Standards (WQS) were (in micrograms per liter) when your TBLLs were calculated, please note what hardness value was used at that time. Hardness should be expressed in milligram per liter of Calcium Carbonate.

  List in Column (2B) the current WQSs or "Chronic Gold Book" values for each pollutant multiplied by the dilution ratio used in your new/reissued NPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 25 mg/l - Calcium Carbonate (copper's chronic WQS equals 6.54 ug/l) the chronic NPDES permit limit for copper would equal 156.25 ug/l.

ITEM VII.

* In Column (1), list all pollutants (in micrograms per liter) limited in your new/reissued NPDES permit. In Column (2), list all pollutants limited in your old/expired NPDES permit.

ITEM VIII.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants in your POTW's biosolids. Current data is defined as data obtained during the last 24 month period. Results are to be expressed as total dry weight.

  All biosolids data collected and analyzed must be in accordance with 40 CFR §136.

  In Column (2A), list current State and/or Federal sludge standards that your facility's biosolids must comply with. Also note how your POTW currently manages the disposal of its biosolids. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria will be and method of disposal.

In general, please be sure the units reported are correct and all pertinent information is included in your evaluation. If you have any questions, please contact your pretreatment representative at EPA - New England.

ITEM II.

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)

ITEM III.

Note how your existing TBLLs, listed in Item II., are allocated to your Significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. Please specify by circling.

ITEM IV.

Has your POTW experienced any upsets, inhibition, interference or pass-through from industrial sources since your existing TBLLs were calculated?

If yes, explain.

_____

_____

Has your POTW violated any of its NPDES permit limits and/or toxicity test requirements?

If yes, explain.

_____

_____

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Water Quality Standards (Gold Book Criteria) were at the time your existing TBLLs were developed. List in Column (2B) current Gold Book values multiplied by the dilution ratio used in your new/reissued NPDES permit.

Pollutant	Column (1) Effluent Data Analyses		Columns (2A) (2B) Water Quality Criteria (Gold Book)	
	Maximum (ug/l)	Average (ug/l)	From TBLLs (ug/l)	Today (ug/l)
Arsenic				
*Cadmium				
*Chromium				
*Copper				
Cyanide				
*Lead				
Mercury				
*Nickel				
Silver				
*Zinc				
Other (List)				

*Hardness Dependent (mg/l - CaCO3)

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that was used at the time your existing TBLLs were calculated. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria would be and method of disposal.

Pollutant	Column (1) Biosolids Data Analyses Average (mg/kg)	Columns (2A) Biosolids Criteria From TBLLs (mg/kg)	(2B) New (mg/kg)
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

ATTACHMENT C

NPDES PERMIT REQUIREMENT
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

1. An updated list of all industrial users by category, as set forth in 40 C.F.R. 403.8(f)(2)(i), indicating compliance or noncompliance with the following:
   - baseline monitoring reporting requirements for newly promulgated industries
   - compliance status reporting requirements for newly promulgated industries
   - periodic (semi-annual) monitoring reporting requirements,
   - categorical standards, and
   - local limits;

2. A summary of compliance and enforcement activities during the preceding year, including the number of:
   - significant industrial users inspected by POTW (include inspection dates for each industrial user),
   - significant industrial users sampled by POTW (include sampling dates for each industrial user),
   - compliance schedules issued (include list of subject users),
   - written notices of violations issued (include list of subject users),
   - administrative orders issued (include list of subject users),
   - criminal or civil suits filed (include list of subject users) and,
   - penalties obtained (include list of subject users and penalty amounts);

3. A list of significantly violating industries required to be published in a local newspaper in accordance with 40 C.F.R. 403.8(f)(2)(vii);

4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority;

5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the Wastewater Treatment

System and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this Permit.

At a minimum, annual sampling and analysis of the influent and effluent of the Wastewater Treatment Plant shall be conducted for the following pollutants:

a.) Total Cadmium	f.) Total Nickel
b.) Total Chromium	g.) Total Silver
c.) Total Copper	h.) Total Zinc
d.) Total Lead	i.) Total Cyanide
e.) Total Mercury	j.) Total Arsenic

The sampling program shall consist of one 24-hour flow-proportioned composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually or shall consist of a minimum of 48 samples collected at 30 minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year;

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

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

9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users; and,

10. The date of the latest adoption of local limits and an indication as to whether or not the Town is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

CONTENTS - PART II
(September 1, 1993)

SECTION A. GENERAL REQUIREMENTS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the sludge use or disposal established under Section 405 (d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

b. The CWA provides that any person who violates Section 301, 302, 306 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any of such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Sections 402 (a)(3) or 402 (b)(8) of the CWA is subject to a civil penalty not to exceed $25,000 per day for each violation. Any person who knowingly violates such requirements is subject to a fine of not less than 45,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. Note: See 40 CFR §122.41(a)2) for additional enforcement criteria.

c. Any person may be assessed an administrative penalty by the Administrator for violating Sections 301, 302, 306,308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or notifications of planned changes or anticipated noncompliance does not stay any permit condition.

3. Duty to Provide Information

The permittee shall furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator may request to determine whether cause exists for modifying revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

4. Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be

authorized under the CWA in order to bring all discharges into compliance with the CWA.

For any permit issued to a treatment works treating domestic sewage (including "sludge-only facilities"), the Regional Administrator or Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under Section 405 (d) of the CWA. The Regional Administrator or Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or contains a pollutant or practice not limited in the permit.

Permit modification or revocation will be conducted according to 40 CFR §122.62, 122.63, 122.64, and 124.5.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive environmental Response, Compensation and Liability Act of 1980 (CERCLA).

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges.

7. Confidentiality of Information

a. In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance wit the procedures in 40 CFR pat 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

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

(2) Permit applications, permits, and effluent data as defined in 40 CFR §2.302(a)(2).

c. Information required by NPDES application forms provided by the Regional Administrator under §122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

8. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the

permittee must apply for and obtain a new permit. The permittee shall submit a new application t least 180

days before the expiration date of the existing permit, unless permission for a later date has been granted by the Regional Administrator. (The Regional Administrator shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

9. Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, any interested person, including the permittee, may submit a request to the Regional Administrator for an Evidentiary hearing under Subpart E, or a Non-Adversary Panel Hearing under Subpart E, or a Non-Adversary Panel hearing under subpart F, of 40 CR Part 124, to reconsider or contest that decision. The request for a hearing must conform to the requirements of 40 CFR §124.74.

10. State Authorities

Nothing in Part 122, 123, or 124 precludes more stringent State regulation of any activity covered by these regulations, whether or not under an approved State program.

11. Other Laws

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

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operator of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

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

4. Bypass

a. Definitions

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

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Paragraphs, B.4.c. and 4.d of this section.

c. Notice

(1) Anticipated bypass

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

(2) Unanticipated bypass

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

d. Prohibition of bypass

(1) Bypass is prohibited, and the Regional Administrator may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the by-pass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) (i) The permittee submitted notices as required under Paragraph 4.c of this section.

(ii) The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator

determines that it will meet the three conditions listed above in paragraph 4.d of this section

PART II

5. Upset

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary non-compliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph B.5.c of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

(3) The permittee submitted notice of the upset as required in Paragraphs D.1.a. and 1.e. (24-hour notice); and

(4) The permittee complied with any remedial measures required under B.3. above.

d. Burden of proof

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

SECTION C. MONITORING AND RECORDS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records for monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of a least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this

permit, and records of all data used to complete the application for this permit, for a period of at

least 3 years from the date of the sample, measurement, report or application except for the information concerning storm water discharges which must be retained for a total of 6 years. This retention period may be extended by request of the Regional Administrator at any time.

c. Records of monitoring information shall include:

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

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

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

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

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

d. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.

e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed. After a first conviction of such person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The permittee shall allow the Regional Administrator, or an authorize representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

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

c. Inspect at reasonable times any facilities, equipment (including, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. Planned changes. The permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies neither to pollutants which are subject to the effluent limitations in the permit nor to the notification requirements at 40 CFR §122.42(2)(1).

(3) The alteration or addition results in a significant change in the permittec's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. Anticipated noncompliance. The permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. Transfers. This permit is not transferable to any person except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements a may be necessary under the Clean Water Act. (See §122.61; in some cases, modification or evocation and reissuance is mandatory.)

d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Repot (DMR) or forms provided or specified by he Regional Administrator for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the

(3) in the DMR or sludge reporting form specified by the Regional Administrator.

(4) Calculations for all limitations which require averaging o measurements shall utilize an arithmetic mean unless otherwise specified by the Regional Administrator in the permit.

e. Twenty-four hour reporting.

(1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.

A written submission shall also be provided within 5 days of the time the permittee becomes are of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See §122.41(g).

b. Any upset which exceeds any effluent limitation in the permit.

c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Administrator in the permit to be reported within 24 hours. (See §122.44(g).)

(3) The Regional Administrator may waive the written report on a case-by-case basis for reports under Paragraph D.1.e if the oral report has been received within 24 hours.

f. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. Other noncompliance.

The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d, D.1.e and D.1.f of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e of this section.

h. Other information.

Where the permittee becomes aware that it failed to submit any relevant facts in a permit

application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See §122.22)

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. Availability of Reports

Except for data determined to be confidential under Paragraph A. 8 above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for the Section 309 of the CWA.

SECTION E. OTHER CONDITIONS.

1. DEFINITIONS FOR INDIVIDUAL NPDES PERMITS INCLUDING STORM WATER REQUIREMENTS.

For purposes of this permit, the following definitions shall apply.

Administrator means the Administrator of the United States Environmental protection Agency, or an authorized representative.

Applicable standards and limitations means all State, interstate, and Federal standards and limitations to which a "discharge", a "sewage sludge use or disposal practice", or a related activity us subject to, including "effluent limitations", water quality standards, standards of performance, toxic effluent standards or prohibitions, "Best management practices", pretreatment standards, and "standards for sewage sludge use and disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of CWA.

Application means that the EPA standard national forms for apply for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions.

Average - The arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms and Escherichia coli, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management practices (BMPs) means schedules of activities, prohibitions of practices; maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgement (BPJ means a case-by-case determination of Best Practicable Treatment (BPT), Best Available Treatment (BAT) or other appropriate technology based standard based on an evaluation of the available technology to achieve a particular pollutant reduction and other factors set forth in 40 CFR §125.3 (d).

Class I Sludge Management Facility means any POTW identified under 40 CFR §403.8(a) as being required to have an approved pretreatment program (including such POTWs located in a state that has elected to assume local program responsibilities pursuant to 40 CFR §403.10(e)) and any other treatment works treating domestic sewage classified as a "Class I sludge Management Facility" by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sludge use or disposal practices to adversely affect public health and the environment.

Coal pile runoff means the rainfall runoff from or through any coal storage pile.

Composite Sample A sample consisting of a minimum of eight grab samples collected at equal intervals during a 24-hour period (lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample continuously collected proportionally to flow over that same time period.

Construction Activities The following definitions apply to construction activities.

(a) Commencement of Construction is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

(b) Dedicated portable asphalt plant is a portable asphalt plant located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR Part 443.

(c) Dedicated portable concrete plant is a portable concrete plant located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

(d) Final Stabilization means that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(e) Runoff coefficient means the fraction of total rainfall that will appear at the conveyance as runoff.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95.217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117; 33 U.S.C. §§1251 et seq.

Daily Discharge means the "discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes o sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant is charged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Director normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representatives. Conversely, it also cold mean the Regional Administrator or the State Director as the context requires.

Discharge Monitoring Report Form (DMR) means the EPA standard national form, including any subsequent additions, revisions, or modifications, for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA. . EPA will supply DMRs to any approved State upon request. The EPA national forms may b modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone"

or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation (See "Point Source" definition).

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment

works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any "indirect discharger."

Discharge Monitoring Report (DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self monitoring results by permittees. DMRs must be used by "approved states" as well as by EPA. EPA will supply DMRs to any approve State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Effluent limitation means any restriction imposed by the Regional Administrator on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone" or the ocean.

Effluent limitations guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise "effluent limitations."

EPA means the United States "Environmental Protection Agency"

Flow-weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab Sample An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 CFR part 116 pursuant to Section 311 of CWA.

Indirect Discharge means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Interference means a Discharge which alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal: and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), and the Marine Protection Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not land application unit, surface impoundment, injection well , or waste pile.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

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Large and Medium municipal separate storm sewer system means all municipal separate storm sewer that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities listed in Appendices F and 40 CFR Part 122); or (ii) located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR 122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.

Maximum daily discharge limitation means the highest allowable "daily discharge" concentration that occurs only during a normal day (24-hour duration).

Maximum daily discharge limitation (as defined for the steam Electric Power Plants only) when applied to Total Residual Chlorine (TRC) or Total Residual Oxidant (TRO) is defined as "Maximum Concentration or "Instantaneous Maximum Concentration" during the two hours o a chlorination cycle (or fractions thereof) prescribed in the Steam electric Guidelines, 40 CFR part 423. These three synonymous terms all mean "a value that shall not be exceeded" during the two-hour chlorination cycle. This interpretation differs from the specified NPDES Permit requirement, 40 CFR §122.2 , where the two terms of "Maximum Daily discharge" and "Average Daily discharge" concentrations are specifically limited t the daily (24-hour duration) values.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under Section 208 of CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of CWA. The term includes an "approved program."

New discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants";

(b) That did not commence the "discharge of pollutants" at a particular "site prior to August 13, 1979;

(c) Which is not a "new source"; "site".

(d) Which ha never received a finally effective NPDES permit for discharges at that "site"

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site"

for
which it does not have a permit; an any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined b the regional Administrator in the

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issuance of a final permit to be an area of biological concern. In determining whether an area is an area of biological concern, the regional Administrator shall consider the factors specified in 40 CFR §§125.122.(a)(1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will e considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New Source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge which exists the POTW into Waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrate animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (See §122.2)

Pollutant means dredge spoil , solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic energy Act of 1954, a amended (42 U.S.C. §§2011 et seq.)) heat, wrecked or discarded

equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

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(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (natural Resources Defense Council et al. V. Train, 8 E.R.C, 2129 (D.D.C. 1976, modified 12E.R.C. 1833 (D.D.C. 1979)); also listed in appendix A of 40 CFR Part 122.

Privately owned treatments works means any device or system which is (a) use to treat wastes from any facility whose operation is not the operator of the treatment works or (b) not a "POTW".

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial, wastes of a liquid nature which is owned by a "State" or "municipality."

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator EPA, Region I, Boston, Massachusetts.

Secondary Industry Category means any industry category which is not a "primary industry category."

Second 313 water priority chemical means a chemical or chemical categories which are:

(1) listed at 40 CFR §372.65 pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) (also known as Title III of the superfund Amendments and Re-authorization Act (SARA) of 1986);

(2) present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and

(3) satisfies at least one of the following criteria:

(i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);

(ii) are listed as a hazardous substance pursuant to section 311(b)(2)(A) of the CWA at 40 CF §116.4; or

(iii) are pollutants for which EPA has published acute or chronic water quality criteria.

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Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system; or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to solids removed during primary, secondary, or advance wastewater treatment, scum, septage, portable toilet pumping, Type III Marine Sanitation Device pumping (33 CFR part 159), and sewage sludge products. Sewage sludge does not include grit or screening, or ash generated during the incineration of sewage sludge.

Sewage sludge use or disposal practices means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used n food processing or production; hazardous substanees designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to EPCLA; any chemical the facility is required to report pursuant to EPCRA Section 313; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean water Act (see 40 CFR §110.10 and CFR §117.21) or Section 102 CERCLA (see 40 CFR §302.4).

Sludge-only facility means any "treatment works treating domestic sewage: whose methods of sewage sludge use or disposal are subject regulations promulgated pursuant to Section 405(d) of the CWA, and is required to obtain a permit under 40 CFR §122.1(b)(3).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands.

Storm Water means storm water runoff, snow melt runoff, and surface runoff drainage.

Storm Water discharge associated with industrial activity mens the discharge from any conveyance with is use for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. (See 40 CFR §122.26(b)(14) for specifics of this definition).

Time-weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

Toxic pollutants means any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices", any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or system, regardless of ownership (including federal facilities), used in the storage, treatment recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and wastewater from humans or

household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for swage sludge use and disposal in 40 CFR Part 503 as a "treatment works treating domestic sewage", where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge
handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503.

Waste pile means any non-containerized accumulation of solid, non-flowing water that is used for treatment or storage.

Waters of the United States means:

(b) All waters which are currently used, were used in the past, or may be susceptible to use interstate or foreign commerce, including

(c) All interstate waters, including interstate "wetlands",

(d) All other waters such as intrastate lakes, rivers streams (including intermittent streams), mud flats, sand flats, "wetlands," sloughs, prairie potholes, wet meadows playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

  (1) which are or could be used by interstate or foreign travelers for recreational or other purposes;

  (2) From which fish or shell fish are or could be taken and solid interstate or foreign commerce; or

  (3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(e) All impoundments of waters otherwise defined as waters of the United States under this definition;

(f) Tributaries of waters identified in Paragraphs (a) through (d) of this definition;

(g) The territorial sea; and

(h) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) thought (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test. (See Abbreviations Section, following, for additional information.)

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Wetlands means those areas that are inundated or saturated by surface or ground water at a frequently and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

2. DEFINITIONS FOR NPDES PERMIT SLUDGE USE AND DISPOSAL REQUIREMENTS.

Active sewage sludge unit is a sewage sludge unit that has not closed.

Aerobic digestion is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Agricultural land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic rate is the whole sludge application rate dry weight basis) designed:

(1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and

(2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Air pollution control device is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Anaerobic digestion is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Annual pollutant loading rate is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

Annual whole sludge application rate is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

Apply sewage slude or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, of a portion of a geologic formation capable of yielding ground water to wells or springs.

Auxiliary fuel is fuel use to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Base flood is a flood that has a one percent change of occurring in any given year (i.e., a flood with a magnitude equaled once in 100 years).

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Bulk sewage sludge is sewage sludge that is not solid or given way in a bag or other container for application to the land.

Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level for nitrate in to CFR §141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR §141.11.

Class I sludge management facility is any publically owned treatments works (POTW), as defined in 40 CFR §403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 CFR §403.10 (e) and any treatment works treating domestic sewage, as defined in 40 CFR§122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for sewage sludge use or disposal practice to affect public health and the environmental adversely.

Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

Cover crop is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Cumulative pollutant loading rate is the maximum amount of an inorganic pollutant that can be applied to an area of land.

Density of microorganisms is the number of microorganisms per unit mas of total solids (dry weight) in the sewage sludge.

Dispersion factor is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Displacement is the relative movement of any two sides of a fault measured in any direction.

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed f rom a septic tank, cesspool, or similar treatment works that receives either cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does no include grease removed from a grease trap at

a restaurant.

Domestic Sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius (°C) until reaching a constant mass (i.e., essentially 100 percent solids content).

Fault is a fracture or zone of fractures in any materials along which strata on one side are displaced with

respect to strata on the other side.

Feed crops are crops produced primarily for consumption by animals

Fiber crops are crops such as flax and cotton.

Final cover is the last layer of soil or other material placed on a sewage sludge unit at closure.

Fluidized bed incinerator is an enclosed device in which organic matter inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Food crops are crops consumed by humans. These include, but are not limited to fruits, vegetables, and tobacco.

Forest is a tract of land thick with trees and underbrush.

Ground water is water below the land surface in the saturated zone.

Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Hourly average is the arithmetic mean of all measurements, taken during an hour. At least two measurements must be taken during the hour.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Industrial wastewater is wastewater generated in a commercial or industrial process.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land with a high potential for public exposure is land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g., a construction site located in a city).

Land with a low potential for public exposure is the land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest and a reclamation site located in an unpopulated area (e.g., a

strip mine located in a rural area).

Leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

Liner is soil or synthetic material that has hydraulic conductivity of 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

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Monthly average (Incineration) is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Monthly average (Land application) is the arithmetic mean of all measurements taken during the month.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian Tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201(e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use, or disposal of sewage sludge.

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permitting authority is either EPA or a State with an EPA-approved sludge management program.

Person is an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration. A measure of the acidity or alkalinity of a liquid or solid material.

Place sewage sludge or sewage sludge placed means disposal of sewage sludge on a surface disposal site.

Pollutant (as defined in sludge disposal requirements) is an organic substance, or inorganic substance, a

combination or organic and inorganic substances, or pathogenic organism, after discharge and upon exposure, ingestion, inhalation or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations in either organisms or offspring of the organisms.

Pollutant limit (for sludge disposal requirement) is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of pollutant that can be applied to unit area of land (e.g ., kilogram per hectare); or the volume of a material that can be applied to a unit area of land (e.g, gallons per acre).

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Public contact site is a land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Qualified ground-water scientist is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground-water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgement regarding ground-water monitoring , pollutant fate and transport, and corrective action.

Range land is open land with indigenous vegetation.

Reclamation site is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of the site where the sewage sludge incinerator is located.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of land surface and runs off the land surface.

Seismic impact zone is an area that has a 10 percent or greater probability that the horizontal ground level acceleration to the rock in the area exceeds 0.01 gravity once in 250 years.

Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in treatment works.

Sewage sludge feed rate is either the average daily amount of swage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is place for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR §122.2.

Sewage sludge unit boundary is the outermost perimeter of an active sewage sludge unit.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in sewage sludge.

Stack height is the difference between the elevation of the top of a sewage sludge incinerator stack and the

elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR §51.100(ii).

State is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Island, the Commonwealth of the North Mariana Islands, and an Indian Tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Total hydrocarbons means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Treatment works is either a federally owned, publicly owned, or privately owned device or system use to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

Unstable area is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is no limited to, land on which the soils are subject to mass movement.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitos, or other

organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degree Celsius in the presence of excess air.

Wet electrostatic precipitator is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet scrubber is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

3. THE COMMONLY USED ABBREVIATIONS ARE LISTED BELOW

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BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonacous BOD
COD	Chemical oxygen demand
CFS	Cubic feet per second
Chlorine	
Cl 2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc)
TRO	Total residual chlorine in marine waters where halogen compounds are present FAC Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont. (Continuous)	Continuous recording of the parameter being monitored, i.e.:flow, temperature, pH, etc.
Cu. M/day or M3/day	Cubic Meters per day
DO	Dissolved Oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day
mg/l	Milligram(s) per liter

ml/l	Milliliter(s) per liter
MGD	Million gallons per day

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Nitrogen	
Total N	Total nitrogen
NH3-N	Ammonia nitrogen as nitrogen
NO3-N	Nitrate nitrogen as nitrogen
No2-N	Nitrite nitrogen as nitrogen
NO3-NO2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
pH	A measure of the hydrogen ion concentration. A measure of alkalinity of a liquid or solid material.
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. Or Turbidity	Turbidity measured by the Nephelometic method (NTU)
ug/l	Micrograms per liter

WET	"Whole Effluent Toxicity" is the total effect of an effluent measured directly with a toxicity test.
C-NOEC	"Chronic (Long-term Exposure Test)-No Observed Effect Concentration". The highest tested concentration of an effluent or a toxicant at which no averse effects are observed on the aquatic test organisms at a specific time of observation.
A-NOEC	"Acute (Short-term Exposure Test)-No Observed Effect Concentration". See C-NOEC definition.
LC-50	LC-50 is the concentration of a sample that causes mortality

	Of 50% of the test population at a specific time of observation. The LC-50 = 100% is defined as a sample of undiluted effluent.
ZID	Zone of Initial Dilution means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports.