UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSSETTS

UNITED STATES OF AMERICA, Plaintiff, COMMONWEALTH OF MASSACHUSETTS, Plaintiff-Intervenor, v. GREATER LAWRENCE SANITARY DISTRICT Defendant.	CIVIL ACTION NO. O6-11975-PBS

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UNITED STATES OF AMERICA, Plaintiff, COMMONWEALTH OF MASSACHUSETTS, Plaintiff-Intervenor, v. GREATER LAWRENCE SANITARY DISTRICT, Defendant.	CIVIL ACTION NO. 06-11975-PBS

CONSENT DECREE

WHEREAS, the Greater Lawrence Sanitary District ("GLSD" or "the District") discharges pollutants into navigable waters of the United States from its wastewater treatment plant ("WWTP") and Combined Sewer Overflow ("CSO") outfalls pursuant to National Pollutant Discharge Elimination System ("NPDES") Permit No. MA0100447 (hereinafter "the Permit"). A copy of the Permit is attached as Appendix A;

WHEREAS, the plaintiff, the United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), has filed a complaint simultaneously herewith, alleging that GLSD has violated the Permit and Section 301(a) of the Clean Water Act ("CWA"), 33 U.S.C. § 1311(a);

WHEREAS, the Commonwealth of Massachusetts ("Commonwealth"), on behalf of the Massachusetts Department of Environmental Protection ("MA DEP"), has filed an assented-to

motion to intervene as a plaintiff in the action brought by the United States and has filed a complaint that alleges that GLSD was, and is, in ongoing violation of Section 301 of the CWA, 33 U.S.C. § 1311, and further alleging that GLSD was, and is, in ongoing violation of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 et seq. (the "Massachusetts Act") and provisions of the Permit and State Permit No. M-186 issued by MA DEP under the Massachusetts Act (said Federal and State permits having been issued as a single permit);

WHEREAS, the Commonwealth has joined this action pursuant to Section 309(e) of the CWA, 33 U.S.C. § 1319(e), as an intervening plaintiff;

WHEREAS, entry of this Consent Decree by the Court will resolve all claims in the complaint of the United States and the complaint of the Commonwealth, referred to herein collectively as the "Complaints"; and

WHEREAS, the United States, the Commonwealth, and GLSD (collectively "Parties") agree, without admission of facts or law except as expressly stated herein, that settlement of this matter is in the public interest and that entry of this Consent Decree without further litigation is an appropriate resolution of the dispute, and the Parties consent to the entry of this Consent Decree;

NOW, THEREFORE, it is hereby ordered, adjudged, and decreed as follows:

I. STATEMENT OF CLAIM

1. The Complaints state claims upon which relief can be granted against GLSD pursuant to Section 309 of the CWA, 33 U.S.C. § 1319, and pursuant to Section 42 of the Massachusetts Act, M.G.L. c. 21, § 42.

II. JURISDICTION AND VENUE

2. This Court has jurisdiction over the subject matter of this action pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1331, 1345, and 1355, and under the doctrine of pendent jurisdiction. This Court has personal jurisdiction over the Parties to this Consent Decree. Venue properly lies in this district pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), 28 U.S.C. § 1391(b) and (c), and 28 U.S.C. § 1395. GLSD waives all objections it might have raised to such jurisdiction or venue.

III. APPLICABILITY

3. The provisions of this Consent Decree shall apply to, and be binding upon, GLSD and its officers, directors, agents, employees acting in their official capacities, its successors, and assigns. GLSD shall provide a copy of this Consent Decree to all contractors and consultants retained to perform any obligation required by this Consent Decree on behalf of GLSD, and shall require that contractors and consultants provide a copy of this Consent Decree to their subcontractors. Such parties shall be deemed agents for the purposes of this Consent Decree.

IV. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in the CWA or in regulations promulgated under the CWA shall have the meaning ascribed to them in the CWA or in the regulations promulgated thereunder. Whenever the terms listed below are used in this Consent Decree, the following definitions shall apply:

a. The phrases "approval by EPA and MA DEP," and "approved by EPA and MA DEP" shall mean GLSD's receipt of one joint, written approval document from both, or a

written approval from each, EPA and MA DEP.

b. "Collection System" shall mean the wastewater collection, storage and transmission system owned or operated by GLSD which is tributary to the WWTP, including, but not limited to, all devices, minisystems, pump stations, force mains, gravity sewer lines, manholes, and appurtenances.

c. "Consent Decree" or "Decree" shall mean this decree and all appendices attached hereto. In the event of conflict between this decree and any appendix, this decree shall control.

d. "Day" shall mean a calendar day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal or Commonwealth holiday, the period shall run until the close of business of the next working day.

e. "Place In Operation" means to achieve steady-state operation and to consistently operate in such a way as to accomplish the intended function, even though all construction close-out activities (such as completion of a punchlist and resolution of contract disputes or close-outs) may not yet be completed.

V. OBJECTIVES

5. It is the express purpose of the Parties in executing this Consent Decree to require GLSD to perform all measures necessary to achieve and maintain compliance with the CWA, the Massachusetts Act, its Permit, any federal NPDES permit and state surface water discharge permit that may be issued to GLSD in the future ("Future Permit"), and any applicable state and federal regulations.

6. Engineering designs and analyses required to be performed pursuant to this

Consent Decree shall be conducted using sound engineering practices, and, as applicable, consistent with (a) EPA's Handbook: Sewer System Infrastructure Analysis and Rehabilitation, EPA/625/6-91/030, Oct. 1991; (b) EPA's Handbook for Sewer System Evaluation and Rehabilitation, EPA 430/9-75-021, Dec. 1975; (c) the currently effective edition of "TR 16: Guides for the Design of Wastewater Treatment Works."

VI. REMEDIAL MEASURES

7. GLSD shall construct CSO controls identified in the November 2002, Draft Long-Term CSO Control Plan and Environmental Impact Report (the "LTCP") prepared for GLSD by Camp Dresser Mckee ("CDM"), and updated by the April 2004 "Updated Conceptual Plan Development Report for the Greater Lawrence Sanitary District" ("April 2004 Report") prepared for GLSD by Wright-Pierce (attached as Appendix B hereto). GLSD shall upgrade its WWTP to accommodate a peak wet weather flow of 135 million gallons per day ("mgd") ("Phase 1") and ensure that Phase 1 is designed so that the WWTP is capable of handling potential future flow up to 165 mgd. The Phase 1 upgrade shall be consistent with the "Recommended Improvement Plan" as described in Section 8 of the April 2004 Report, and include, inter alia: modifications to increase the capacity of the Riverside Pump Station; construction of new headworks facilities; construction of a secondary bypass pipe; construction of new disinfection and dechlorination facilities; and, installation of a new aeration system to increase secondary treatment capacity. In accordance with the LTCP and April 2004 Report, GLSD shall achieve the milestones set forth in the following table:

TABLE I

Date	Scheduled CSO Projects
Sept. 1, 2007	Submit Post-Construction Monitoring Plan ("PCMP")
Dec. 31, 2007	Substantially Complete Phase 1 Construction and Place In Operation Additional Capacity (135 mgd)
Dec. 31, 2008	Obtain Engineer's Performance Certificate
March 31, 2009	Submit Post-Construction Monitoring Report ("PCMR")
June 30, 2010	Update LTCP and Submit Revised LTCP to EPA and MA DEP

8. As described in Table I above, GLSD shall submit to EPA and MA DEP for approval a post-construction monitoring plan ("PCMP"). The PCMP shall include a monitoring protocol to assess how effective CSO controls constructed pursuant to this Consent Decree are in terms of capturing and treating stormwater and protecting receiving waters from CSO impacts. The PCMP shall include a schedule for: a) assessing the impacts of varying precipitation amounts on effluent characteristics and ambient water quality; and, b) submitting a post-construction monitoring report ("PCMR"), which shall be submitted no later than March 31, 2009. The PCMR shall: compare actual frequency of CSO discharges after substantial completion of Phase I construction to the frequency of CSO discharges predicted by the sewer system model used by GLSD in preparing the LTCP, using actual rainfall records as model input; identify the expected frequency of CSOs remaining in a typical year after full implementation of Phase I; characterize the impacts of the expected remaining CSOs in a typical year; and, identify a full range of alternatives for eliminating the environmental impacts from any remaining CSOs including consideration of coordination of CSO control planning with a water quality standards

("WQS") review of any receiving water into which GLSD discharges as currently set forth in Guidance: Coordinating CSO Long-Term Planning With Water Quality Standards Reviews, EPA-833-R-01-002, July 31, 2001, as may be amended in the future. The PCMR shall include GLSD's preferred alternative and a proposed schedule for implementing the preferred alternative for addressing the remaining CSOs.

9. EPA and MA DEP reserve the right to propose additional CSO mitigation projects to be incorporated into, and made enforceable under, Section VI of this Consent Decree if, after receipt of the PCMR that is the subject of Paragraphs 7 and 8 of this Consent Decree, EPA and/or MA DEP determine(s) that additional controls are necessary to achieve compliance with the CWA or the Massachusetts Act, including state water quality standards promulgated pursuant to the Massachusetts Act, and provide(s) written notification of this determination ("Additional Controls Determination") to GLSD. GLSD agrees to submit, within 90 days of receipt of the Additional Controls Determination, a plan or plans for completion of a subsequent phase of CSO control and abatement projects and an implementation schedule that will address any outstanding CWA or Massachusetts Act violations. This 90 day deadline may be extended if necessary upon approval of EPA and MA DEP. If such schedule for additional CSO controls is necessary in order to attain compliance with the CWA or the Massachusetts Act, including WQS, the additional CSO controls shall be constructed as expeditiously as practicable. GLSD agrees that, following approval of EPA and MA DEP, these plans and implementation schedule shall be submitted to the Court for incorporation into this Consent Decree and shall become fully enforceable under this Decree upon approval of the Court. The Additional Controls Determination is not subject to the provisions of Section XIII (Dispute Resolution) of this

Consent Decree. GLSD shall submit a revised LTCP to EPA and MA DEP by June 30, 2010, and shall fully implement the LTCP as approved.

VII. INTERIM PERMIT CONDITIONS

10. Except as set forth below, the requirements of GLSD's NPDES permit with respect to the flow and mass discharge limitations shall not be enforced through this Consent Decree. In addition to the requirements of Paragraph 8, the PCMP shall include a plan for monitoring wastewater flows and calculating mass discharges of biochemical oxygen demand ("BOD") and total suspended solids ("TSS") from the WWTP commencing when GLSD places in operation the Phase I upgrade referenced in Paragraph 7. GLSD shall implement the plan when it places in operation the Phase I upgrade. The PCMR shall include the results of such monitoring and calculations. If the monitoring and calculations indicate to the satisfaction of EPA and MA DEP that GLSD can meet the flow and mass discharge limits of its then current NPDES permit, then upon written notificaton by EPA and MA DEP, GLSD shall comply with those flow and mass discharge limits. If the results of such monitoring indicate that GLSD cannot reasonably meet the flow and mass discharge limits of its then-current NPDES permit, GLSD shall, within 90 days of submission of the PCMR, submit to EPA and MA DEP for approval proposed alternative interim flow and mass discharge limits. Upon written approval by EPA and MA DEP, such alternative flow and mass discharge limits shall be enforceable as interim discharge limits under this Consent Decree.

VIII. REPORTS ON COMPLIANCE

11. Following Entry of the Consent Decree, and until termination of the Consent Decree, GLSD shall report to EPA and MA DEP on its compliance with Section VI (Remedial

Measures) every three months. The reports shall be submitted to EPA and MA DEP by the 30th day of the month following each quarter (January, April, July, October). Each progress report submitted under this Paragraph shall:

a. Describe activities undertaken during the reporting period directed at achieving compliance with this Consent Decree;

b. Describe the expected activities to be taken during the next reporting period in order to achieve compliance with this Consent Decree; and

c. Identify any noncompliance with this Consent Decree's requirements, including the schedule set forth in Table I of this Consent Decree. If noncompliance is reported, notification shall include the following information:

(i) A description of the noncompliance;

(ii) A description of any actions taken or proposed by GLSD to comply with any missed schedule requirements;

(iii) A description of any factors not anticipated at the time of this agreement that tend to explain or mitigate the noncompliance; and,

(iv) An approximate date by which GLSD will perform the required action.

The reporting requirements set forth in this Section do not relieve GLSD of its obligation to submit any other reports or information as required by state, federal or local law.

IX. CIVIL PENALTY

12. In full settlement, satisfaction, and discharge of the United States' and the Commonwealth of Massachusetts' civil penalty claims for the violations alleged in their

Complaints through the date of lodging of this Consent Decree, GLSD shall pay a civil penalty in the total amount of **$254,000**, one half ($127,000) of which shall be payable to the United States and the other half ($127,000) shall be payable to the Commonwealth of Massachusetts, as set forth in Subparagraphs 12.b and 12.c below, within 30 days after receiving notice of entry of this Consent Decree.

a. In the event that full payment is not made within 30 days after receiving notice of entry of this Consent Decree, GLSD shall pay interest ("Interest") on the balance due, at the rate provided in 28 U.S.C. § 1961(a), that is, a rate equal to the coupon issue yield equivalent (as determined by the Secretary of Treasury) of the average accepted auction price for the last auction of 52-week U.S. Treasury bills settled prior to the date of lodging of this Consent Decree. Interest shall be computed daily and compounded annually.

b. GLSD shall pay a civil penalty in satisfaction of the United States' claims in the amount of **$127,000**. GLSD shall make payment by electronic funds transfer in accordance with written instructions to be provided by the United States Attorney's Office, Financial Litigation Unit, Boston, Massachusetts. The costs of such electronic funds transfer shall be the responsibility of GLSD. GLSD shall send a copy of the electronic funds transfer authorization form, the electronic funds transfer transaction record, and the transmittal letter to EPA and the United States Department of Justice as specified in Section XV (Form of Notice). Payment of the civil penalty shall be made within 30 days after GLSD receives notice of entry of the Consent Decree. If GLSD fails to pay the civil penalty within 30 days after receiving notice of entry of the Consent Decree, GLSD shall pay Interest on the late payment. Nothing in this Paragraph shall be construed to limit the United States or the Commonwealth from seeking any

remedy otherwise provided by law for failure of GLSD to pay any civil penalties.

c. GLSD shall pay a civil penalty in satisfaction of the Commonwealth of Massachusetts' claims in the amount of **$127,000.** Interest shall accrue at the rate provided for in 28 U.S.C. § 1961. GLSD shall make payment by electronic funds transfer to the Office of the Massachusetts Attorney General, in accordance with written instructions to be provided by the Office of the Massachusetts Attorney General. The costs of such electronic funds transfer shall be the responsibility of GLSD. GLSD shall send a copy of the electronic funds transfer authorization form, the electronic funds transfer transaction record, and the transmittal letter to MA DEP as specified in Section XV (Form of Notice) and to the Office of the Massachusetts Attorney General. Payment of the civil penalty plus any interest shall be made within 30 days after GLSD receives notice of entry of the Consent Decree.

X. STIPULATED PENALTIES

GLSD shall pay stipulated penalties to the United States and the Commonwealth for violations of this Consent Decree, as set forth below:

13. **Failure to Complete Remedial Measures**

For every day that GLSD is late in meeting the requirements of Section VI (Remedial Measures), including but not limited to submitting an approvable plan or report, or fails to implement remedial requirements in a plan or report approved by EPA and/or MA DEP, as appropriate, GLSD shall pay stipulated penalties as follows:

Period of Noncompliance	**Penalty Per Violation Per Day**
1-10 days	$1,000
11-20 days	$2,500
over 21 days	$5,000

14. **Delay in Payment of Penalty**

GLSD shall pay to the United States and/or the Commonwealth, as applicable, a stipulated penalty of $2,000 for each day that the GLSD is late in paying the civil penalty required under Section IX (Civil Penalty).

15. **All Other Violations**

GLSD shall pay a stipulated penalty of $1,000 per violation per day for any violation of the Consent Decree that is not addressed in this Section.

16. Stipulated penalties shall automatically begin to accrue on the first day GLSD fails either to meet any of the schedules of performance required by this Consent Decree or to satisfy any obligation or requirement of this Consent Decree and shall continue to accrue through the final day of the correction of the noncompliance or completion of the required activity.

17. Stipulated penalty payments as specified in this Section shall be made by delivering such payments to the United States and the Commonwealth, in equal amounts, in accordance with the instructions set forth in this Paragraph. Each stipulated penalty payment shall be accompanied by a letter describing the basis for each penalty.

a. Stipulated penalty payments to the United States shall be paid within 30 days of EPA's written demand for payment of stipulated penalties by certified check payable to "Treasurer, United States of America" and shall be delivered by certified mail to the Office of the United States Attorney for the District of Massachusetts, with notice to EPA and the Department of Justice, at the addresses listed in Section XV (Form Of Notice).

b. Stipulated penalty payments to the Commonwealth shall be made within 30 days of the Commonwealth's written demand for payment of stipulated penalties by certified

or cashier's check payable to the "Commonwealth of Massachusetts" and shall be delivered to the Office of the Attorney General, as described in Section XV (Form Of Notice).

18. In the event that a stipulated penalty payment is not made on time to the United States or the Commonwealth, such penalty (or portion thereof) shall be subject to interest at the statutory judgment rate set forth at 28 U.S.C. § 1961, for each day of late payment or non-payment. Nothing in this Paragraph shall be construed to limit the United States or the Commonwealth from seeking any remedy otherwise provided by law for failure of GLSD to pay any stipulated penalties.

19. The stipulated penalties set forth above shall be in addition to any other remedies, sanctions, or penalties which may be available by reason of GLSD's failure to comply with the requirements of this Consent Decree. All Parties to this Consent Decree expressly reserve any and all legal and equitable remedies, including contempt sanctions, which may be available to enforce the provisions of this Consent Decree.

XI. FORCE MAJEURE

20. "Force Majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of GLSD, including its contractors and subcontractors, that delays or prevents the timely performance of any obligation under this Consent Decree notwithstanding GLSD's best efforts to avoid the delay. Stipulated penalties shall not be due for the number of days of noncompliance caused by a Force Majeure event as defined in this Section, provided that GLSD complies with the terms of this Section. Examples of events that are not Force Majeure events include, but are not limited to, normal inclement weather, unanticipated or increased costs or expenses of work, the financial difficulty of GLSD to perform such work, acts

or omissions attributable to GLSD's contractors or representatives, and the failure of GLSD or GLSD's contractors or representatives to make complete and timely application for any required approval or permit. "Best efforts" include using best efforts to anticipate any potential Force Majeure event and to address the effects of any such event: (a) as it is occurring; and, (b) after is has occurred, such that the delay is minimized to the greatest extent possible.

21. If any event occurs which may delay or prevent the performance of any obligation under this Consent Decree, whether or not caused by a Force Majeure event, GLSD shall notify EPA and MA DEP within 72 hours after GLSD first knew, or should have known, that the event might cause a delay. Within five working days thereafter, GLSD shall provide to EPA and MA DEP, at the addresses specified in Section XV (Form Of Notice), a written explanation of the cause(s) of any actual or expected delay or noncompliance, the anticipated duration of any delay, the measure(s) taken and to be taken by GLSD to prevent or minimize the delay, a proposed schedule for the implementation of such measures, and a statement as to whether, in the opinion of GLSD, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Notwithstanding the foregoing, GLSD shall notify EPA and MA DEP orally within 24 hours of becoming aware of any event which presents an imminent threat to the public health or welfare or the environment and provide written notice to EPA and MA DEP within 72 hours. Failure to give timely and complete notice in accordance with this Paragraph shall constitute a waiver of any claim of Force Majeure with respect to the event in question.

22. If EPA and MA DEP agree that a delay or anticipated delay is attributable to Force Majeure, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event shall be extended by mutual, written agreement of the

Parties for a period of time, not to exceed the actual time lost due to the unavoidable delay, as may be necessary to allow performance of such obligations to the extent the delay was caused by a Force Majeure event.

23. If the Parties are unable to agree as to whether a delay or anticipated delay is attributable to Force Majeure, or on the number of days of noncompliance caused by such event, GLSD may initiate the dispute resolution process set forth in Section XIII (Dispute Resolution). If GLSD does not initiate the dispute resolution process set forth in Section XIII within15 days of receiving written notice that EPA and MA DEP disagree as to whether a delay or anticipated delay is attributable to Force Majeure, or disagree as to the number of days of noncompliance that are attributable to such circumstances, then GLSD shall be deemed to have waived any Force Majeure claims or any rights to initiate Dispute Resolution with regard to such claims.

24. Delay in performance of any obligation under this Consent Decree shall not automatically justify or excuse delay in complying with any subsequent obligation or requirement of this Consent Decree.

25. Failure of GLSD to obtain any state or federal grants or loans shall not be considered a Force Majeure event under this Consent Decree.

XII. APPROVAL OF DELIVERABLES

26. After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, EPA and MA DEP, shall in writing: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; or (c) disapprove, in whole or in part, the submission.

27. Upon approval pursuant to Paragraph 26(a), GLSD shall take all actions required

by the plan, report, or other item, as approved by EPA and MA DEP. In the event of approval in part pursuant to Paragraph 26(a) or approval upon specified conditions pursuant to Paragraph 26(b), upon written direction of EPA and MA DEP, GLSD shall take all actions required by the approved plan, report, or other item, that EPA and MA DEP determine are technically severable from any disapproved portions, subject to GLSD's right to dispute only the specified conditions or the non-approved portions pursuant to Section XIII (Dispute Resolution).

28. Upon receipt of a written notice of approval in part pursuant to Paragraph 26(a) or of disapproval pursuant to Paragraph 26(c), GLSD shall, within 45 days or such other time as the Parties agree in writing, correct deficiencies and resubmit the plan, report, or other item, or portion thereof, for approval. Upon receipt of a written notice of approval upon specified conditions pursuant to Paragraph 26(b) GLSD shall, within 45 days or such other time as the Parties agree in writing, provide written notice of acceptance of such specified conditions, or indicate that it intends to dispute such specified conditions pursuant to Section XIII (Dispute Resolution). Any stipulated penalties applicable to the submission, shall accrue during the 45-day period or specified period but shall not be payable unless the resubmission is untimely and/or disapproved as provided in Paragraph 26(c). The 45-day period described in this Paragraph does not apply to GLSD's response to an Additional Controls Determination pursuant to Paragraph 9.

29. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by EPA and/or MA DEP, EPA and/or MA DEP may again require GLSD to correct the deficiencies, in accordance with the preceding Paragraphs 26-28.

30. If upon resubmission, a plan, report, or item, or portion thereof, is disapproved by

EPA and MA DEP, GLSD shall be deemed to have failed to submit such plan, report, or item, or portion thereof, unless GLSD invokes the dispute resolution procedures set forth in Section XIII (Dispute Resolution) within 15 days of receipt of EPA's and MA DEP's written position. If EPA's and MA DEP's disapproval is upheld after dispute resolution, stipulated penalties shall accrue and be payable for such violation from the date of the disapproval of the original submission.

31. All plans, reports, and other items required to be submitted to EPA and MA DEP under this Consent Decree shall, upon approval by EPA and MA DEP, be enforceable under this Consent Decree. In the event EPA and MA DEP approve a portion of a plan, report, or other item required to be submitted under this Consent Decree, the approved portion shall be enforceable under this Consent Decree.

32. In the event a dispute arises among the Parties regarding EPA's and MA DEP's approval upon specified conditions or disapproval in part or in whole of any plans, reports, and other items required to be submitted to EPA and MA DEP under this Consent Decree, the position of EPA and MA DEP shall govern unless GLSD invokes the dispute resolution process set forth in Section XIII (Dispute Resolution) within 15 days of receipt of EPA's and MA DEP's written position.

XIII. DISPUTE RESOLUTION

33. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under, or with respect to, this Consent Decree. However, the procedures set forth in this Section shall not apply to actions by the United States or the Commonwealth to enforce obligations that

GLSD has not disputed in accordance with this Section, or as provided in Paragraph 9.

34. If GLSD objects to disapproval or conditions in an approval of any item required to be submitted to EPA and MA DEP under this Consent Decree, or if the Parties are unable to agree as to whether a delay or anticipated delay is attributable to Force Majeure or the number of days of noncompliance caused by such event, or on the amount of Stipulated Penalties due, GLSD may initiate informal, good faith negotiations among the Parties to the dispute for a period of up to 30 days from the time GLSD gives notice of the existence of the dispute, provided that GLSD gives EPA and MA DEP written notice of the existence of the dispute within 15 days after receipt of a notice of disapproval or conditional approval, or a Force Majeure or Stipulated Penalty determination by EPA and/or MA DEP, as appropriate. The period for negotiations may be extended by written agreement of the Parties.

35. In the event that the Parties cannot resolve any such dispute by informal negotiations under the preceding Paragraph, then the position advanced by EPA and MA DEP shall be considered binding unless, within 21 days of the end of the negotiation period, GLSD shall file a petition with this Court setting forth the matter in dispute, the efforts of the Parties to resolve it, and the relief requested. EPA and/or MA DEP, as appropriate, shall then have 30 days to respond to any such petition.

36. In proceedings on any dispute regarding a delay in performance as set forth in this Section, GLSD shall have the burden of proving that: (1) the delay or noncompliance is, or was, caused by a Force Majeure event, and (2) the amount of additional time requested is necessary to compensate for that event. In no event shall the time for performance be extended for a period longer than the actual delay resulting from the Force Majeure event.

37. Notwithstanding the previous Paragraph, in all disputes under this Section, GLSD shall have the burden of proving that the position of the United States and the Commonwealth is arbitrary and capricious, an abuse of discretion, or otherwise contrary to law. EPA or MA DEP shall maintain an administrative record of the dispute, which shall contain all statements of the Parties, including supporting documentation, submitted pursuant to this Section.

XIV. RIGHT OF ENTRY

38. EPA and MA DEP and their contractors, consultants, and attorneys shall have authority to enter any property and/or facility covered by this Consent Decree at any time, upon proper identification, for the purposes of monitoring the progress of activity required by this Consent Decree, verifying any data or information submitted to EPA and MA DEP under this Consent Decree, and assessing GLSD's compliance with this Consent Decree. This requirement is in addition to, and does not limit, the authority of EPA or MA DEP pursuant to the CWA, the Massachusetts Act, or any other provision of state or federal law.

XV. FORM OF NOTICE

39. Submissions required by this Consent Decree shall be made in writing by certified mail with return receipt, or by any reliable commercial delivery service that provides written verification of delivery, to the following respective addressees, unless written notice is given that another individual has been designated to receive the submissions. Any submission required by this Consent Decree must be received by EPA and MA DEP, as appropriate, upon the date due stated in the Consent Decree.

As to the Department of Justice

Bruce Gelber, Chief
Environmental Enforcement Section,
Environment & Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044

As to the United States Attorney

Anita Johnson
Assistant United States Attorney
John Joseph Moakley U.S. Courthouse
1 Courthouse Way, Suite 9200
Boston, MA 02210

As to EPA

George Harding
Environmental Engineer
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Mail Code: SEW
Boston, MA 02114-2023

Jeffrey Kopf
Enforcement Counsel
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Mail Code: SEL
Boston, MA 02114-2023

Reports and plans required to be submitted by GLSD to EPA shall be submitted to George Harding, with a copy of the transmittal letter only to Jeffrey Kopf. GLSD shall provide complete copies to both George Harding and Jeffrey Kopf of all other submissions required to be made by GLSD to EPA pursuant to this Consent Decree.

As to MA DEP

Lisa Dallaire
Massachusetts Department of Environmental Protection
Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

Richard Lehan
Massachusetts Department of Environmental Protection
Office of General Counsel
3rd Floor
One Winter Street
Boston, MA 02108

Reports and plans required to be submitted by GLSD to MA DEP shall be submitted to Lisa Dallaire, with a copy of the transmittal letter only to Richard Lehan. GLSD shall provide complete copies to both Lisa Dallaire and Richard Lehan of all other submissions required to be made by GLSD to MA DEP pursuant to this Consent Decree.

As to the Massachusetts Attorney General's Office

Matthew Ireland
Assistant Attorney General
Environmental Protection Division
Office of the Attorney General
One Ashburton Place, 18th Floor
Boston, MA 02108

As to GLSD

Richard Hogan
Executive Director
Greater Lawrence Sanitary District
240 Charles Street
North Andover, MA 01845

with a copy to

William H. DiAdamo
DiAdamo Law Office LLP
40 Appleton Way
Lawrence, MA 01840

40. All written notices, reports or any other submissions required by this Consent Decree shall contain the following certification by a duly authorized representative of GLSD:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

XVI. EFFECT OF SETTLEMENT

41. This Consent Decree is neither a permit nor a modification of an existing permit under any federal, state, or local law and in no way relieves GLSD of its responsibilities to comply with all applicable federal, state, and local laws and regulations, nor shall it be construed to constitute approval by EPA and/or MA DEP of any equipment or technology installed by GLSD under the terms of this Consent Decree.

XVII. RESERVATION OF CLAIMS AND DEFENSES

42. This Consent Decree does not limit any rights or remedies available to the United States or the Commonwealth of Massachusetts for any violation by GLSD of the CWA, the Massachusetts Act, and associated regulations or permit conditions other than for the civil violations, through the date of lodging, specifically alleged in the Complaints. This Consent

Decree does not limit any rights or remedies available to the United States or the Commonwealth of Massachusetts for any criminal violations. This Consent Decree does not limit the standing of any person under Section 505 of the CWA to sue for any violations of the CWA not addressed by this Consent Decree. The United States and the Commonwealth of Massachusetts expressly reserve all rights and remedies, legal and equitable, available to each of them for all violations of the CWA, the Massachusetts Act, or other applicable law where such violations are not alleged in their respective Complaints, and reserve all rights and remedies, legal and equitable, available to enforce the provisions of this Consent Decree. Nothing herein shall be construed to limit the power of the United States or the Commonwealth of Massachusetts, consistent with their respective authorities, to undertake any action against any person, in response to conditions which may present an imminent and substantial endangerment to the public's health or welfare, or the environment. Nothing herein shall be construed as preventing or limiting GLSD from asserting any valid claim or defense it has or may have to any action referred to in this Section. In addition, GLSD reserves all legal rights to seek modification of the water quality designation for any water bodies into which it discharges, including but not limited to seeking modification or removal of a use, designation of a partial use, or a variance to authorize discharge under Massachusetts or Federal law, rule or regulation.

43. This Consent Decree does not resolve any claims for contingent liability under Section 309(e) of the Clean Water Act, 33 U.S.C. § 1319(e). The United States specifically reserves any such claims against the Commonwealth, and the Commonwealth specifically reserves all defenses to any such claims.

XVIII. COSTS

44. Each party shall bear its own costs and attorneys' fees in this action, except that GLSD shall be responsible for all reasonable expenses incurred by the United States and the Commonwealth in collecting any outstanding penalties due under Sections IX (Civil Penalty) and X (Stipulated Penalties) of this Consent Decree and in enforcing the requirements of this Consent Decree. However, should GLSD prevail before a court in any dispute resolution brought pursuant to Section XIII (Dispute Resolution), it shall not be responsible for any costs or attorneys' fees incurred by the United States or the Commonwealth related to that dispute.

XIX. RETENTION OF JURISDICTION

45. The Court shall retain jurisdiction to modify and enforce the terms and conditions of this Consent Decree and to resolve disputes arising hereunder as may be necessary or appropriate for the construction or execution of this Consent Decree and to assess any stipulated penalties that may have accrued during the term of the Consent Decree.

XX. MODIFICATION

46. Any material modification to the terms of this Consent Decree shall be by written agreement of the Parties and approval of the Court, provided, however, that, without otherwise altering the obligations of the Consent Decree: (a) the Parties may by written agreement modify the schedules specified in this Consent Decree; and, (b) EPA and MA DEP may approve modifications of submissions to EPA and MA DEP, subject to the rights of GLSD in Section XIII (Dispute Resolution). Such modifications shall become effective upon agreement of the Parties or approval by EPA and MA DEP, as appropriate.

47. EPA and/or MA DEP may, prior to termination of this Consent Decree, propose that additional CSO mitigation projects be incorporated into Section VI (Remedial Measures) of this Consent Decree if, after receipt of the PCMR under Paragraph 9 of this Consent Decree, EPA and/or MA DEP determine that additional controls are necessary to achieve compliance with the CWA or the Massachusetts Act, including WQS. Upon motion by EPA and/or MA DEP, the Court may incorporate a schedule for additional CSO controls into this Consent Decree over the objection of GLSD.

XXI. FUNDING

48. Compliance with the terms of this Consent Decree by GLSD is not conditioned on the receipt of any federal or state grant funds or loans. In addition, compliance is not excused by the lack of any federal or state grant funds or loans.

XXII. SEVERABILITY PROVISION

49. The provisions of this Consent Decree shall be severable, and should any provisions be declared by a court of competent jurisdiction to be unenforceable, the remaining provisions shall remain in full force and effect.

XXIII. TERMINATION

50. The Court shall terminate this Consent Decree upon joint motion of the Parties after GLSD has paid any outstanding penalties, has completed all remedial measures (including post-construction monitoring and, if necessary, any projects proposed pursuant to Paragraph 9) required under Section VI (Remedial Measures) of this Consent Decree, and has demonstrated compliance with its then current joint Federal and State NPDES permit to the satisfaction of EPA and MA DEP for one year.

XXIV. FINAL JUDGMENT

51. Entry of this Consent Decree constitutes Final Judgment under Rule 54 of the Federal Rules of Civil Procedure.

XXV. WAIVER OF SERVICE OF SUMMONS AND COMPLAINT

52. GLSD hereby acknowledges receipt of the Complaints and waives service of the summonses pursuant to Rule 4 of the Federal Rules of Civil Procedure.

XXVI. PUBLIC COMMENT

53. GLSD consents to the entry of this Consent Decree without further notice. Final approval of this Consent Decree is subject to the public notice requirements of 28 C.F.R. § 50.7. After reviewing the public comments, if any, the United States shall advise the Court by motion whether it supports entry of the Consent Decree.

XXVII. APPENDICES

54. The following appendices are attached to and incorporated into this Consent Decree:

"Appendix A" is the jointly issued EPA NPDES Permit No. MA0100447 and Massachusetts DEP Permit, dated and approved August 11, 2005.

"Appendix B" is the April 2004 "Updated Conceptual Plan Development Report for the Greater Lawrence Sanitary District" prepared for GLSD by Wright-Pierce.

Judgment is hereby entered in accordance with the foregoing Consent Decree this _____ day of _____ 2006 .

_____
UNITED STATES DISTRICT JUDGE

The following parties hereby consent to the entry of this Consent Decree in the matter of *United States of America and Commonwealth of Massachusetts v. Greater Lawrence Sanitary District.*

For Plaintiff UNITED STATES OF AMERICA

Sue Ellen Wooldridge
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044

10/23/06
Date

MICHAEL J. SULLIVAN
United States Attorney

By: Anita Johnson
Anita Johnson
Assistant United States Attorney
District of Massachusetts

October 12, 2006
Date

For UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Walker B. Smith, Director
Office of Civil Enforcement
Office of Enforcement and
Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

9/22/06
Date

For UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

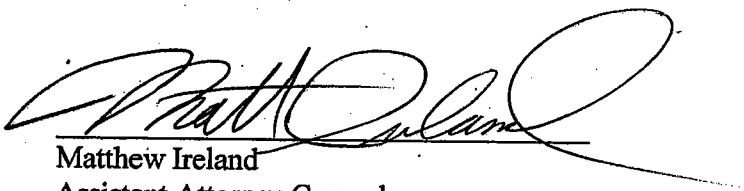
SEPT 25, 2006

Stephen S. Perkins, Director
Office of Environmental Stewardship
United States Environmental Protection Agency, Region I
One Congress Street
Boston, MA 02114

Date

For Plaintiff COMMONWEALTH OF MASSACHUSETTS

THOMAS F. REILLY
ATTORNEY GENERAL



10/11/06
Date

Matthew Ireland
Assistant Attorney General
Environmental Protection Division
Office of the Attorney General
One Ashburton Place, 18th Floor
Boston, MA 02108

For Defendant GREATER LAWRENCE SANITARY DISTRICT

Thomas Connors, Chair of the Board,
Greater Lawrence Sanitary District

9-27-06
Date

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

Greater Lawrence Sanitary District (the Permittee)

is authorized to discharge from the facility located at

240 Charles Street
North Andover, Massachusetts 01845
and five combined sewer overflows (CSO)

to receiving waters named

Merrimack River and Spicket River

in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein. The Massachusetts municipalities of Lawrence, Andover, North Andover, and Methuen, and Salem, New Hampshire, (the Co-permittees) are co-permittees for specific activities required in Part I. D., Unauthorized Discharges, Part I.E., Operation and Maintenance of the Sewer System, and Part I.F., Alternate Power Source. The Massachusetts municipalities of Lawrence and Methuen are co-permittees for specific activities in Part I.G., Combined Sewer Overflows. The responsible Municipal Departments are:

City of Lawrence
Department of Public Works
200 Common Street
Lawrence, MA 01840

Town of Andover
Department of Public Works
397 Lowell Street
Andover, MA 01810

Town of North Andover
Department of Public Works
384 Osgood Street
North Andover, MA 01845

Town of Methuen
41 Pleasant Street, Rm 205
Methuen, MA 01844

and

Town of Salem New Hampshire *
Public Works Department
21 Cross Street
Salem, New Hampshire 03079

This permit shall become effective sixty days from the date of signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date. This permit supersedes the permit issued on February 26, 1998, and modified on March 17, 1998. This permit consists of 17 pages in Part I including effluent limitations, monitoring requirements, Attachments A through E, and 35 pages in Part II including General Conditions and Definitions.

Signed this 11 day of August, 2006

Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

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

* This permit is issued jointly by EPA and MADEP to GLSD and the Co-permittees in Massachusetts. The permit is issued to Town of Salem, New Hampshire solely by EPA.

A.1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001,** treated effluent to the Merrimack River. Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
FLOW[2]	****	****	52 MGD	****	Report MGD	CONTINUOUS	RECORDER
BOD_5	13,010 lbs/day	Report lbs/day	30 mg/l	45 mg/l	50 mg/l[1]	5/WEEK	24-HOUR COMPOSITE[3,4,5]
TSS	13,010 lbs/day	Report lbs/day	30 mg/l	45 mg/l	50 mg/l[1]	5/WEEK	24-HOUR COMPOSITE[3,4,5]
pH RANGE[1]	6.5 - 8.3 SU SEE PERMIT PAGE 6 OF 17, PARAGRAPH I.A.1.b.					1/DAY	GRAB[3]
TOTAL CHLORINE RESIDUAL[6,7]	****	****	Report	****	Report	CONTINUOUS	RECORDER
TOTAL CHLORINE RESIDUAL[6,7]	****	****	150 ug/l	****	260 ug/l	1/DAY	GRAB[3]
FECAL COLIFORM[1,6]	****	****	200/100 cfu's/ml	****	400/100 cfu's/ml	5/WEEK	GRAB[3]
DISSOLVED OXYGEN (April 1- October 31)	NOT LESS THAN 5.0 mg/l					1/DAY	GRAB[3]

CONTINUED FROM PREVIOUS PAGE

A.1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number **001**, treated effluent to the Merrimack River. Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
AMMONIA NITROGEN[8]	********	********	********	********	REPORT	1/QUARTER	24-HOUR COMPOSITE[4,5]
TOTAL KJELDAHL NITROGEN[8]	********	********	********	********	REPORT	1/QUARTER	24-HOUR COMPOSITE[4,5]
NITRITE & NITRATE NITROGEN[8]	********	********	********	********	REPORT	1/QUARTER	24-HOUR COMPOSITE[4,5]
TOTAL PHOSPHORUS[8]	********	********	********	********	REPORT	1/MONTH	24-HOUR COMPOSITE[4,5]
WHOLE EFFLUENT TOXICITY[9,10,11,12]	Acute $LC_{50} \geq 100\%$ Chronic C-NOEC $\geq$ Report					4/YEAR	24-HOUR COMPOSITE[5]

All sampling shall be representative of the effluent that is discharged through outfall 001 to the Merrimack 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.

Footnotes:

1. Required for State Certification.

2. For flow, report maximum and minimum daily rates and total flow for each operating date. Total flow 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.

3. Effluent parameters that require 24-hour composite samples shall be taken prior to the effluent discharging at the chlorine contact chamber. One year from the effective date of the permit, effluent parameters that require 24-hour composite samples shall be taken at the outfall structure. Effluent parameters that require grab samples shall be taken at the outfall structure.

   Any change in sampling location must be reviewed and approved in writing by EPA and MADEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Samples shall be 24-hour composites unless specified as a grab sample in 40 CFR §136.

4. Sampling required for influent and effluent.

5. A 24-hour composite sample will consist of at least twenty four (24) flow proportional grab samples, which are flow proportional, and taken during one working day. Working day is defined as a twenty-four hour period such as midnight on Monday through midnight on Tuesday the following day.

6. Fecal coliform and total residual chlorine monitoring will be conducted year round. Fecal coliform is a State certification requirement. Fecal coliform discharges shall not exceed a monthly geometric mean of 200 colony forming units (cfu's) per 100 ml, nor shall they exceed 400 cfu's per 100 ml as a daily maximum. Fecal coliform samples shall be taken 5 times per week and conducted concurrently with the TRC sampling described below.

   The chlorination system shall include an alarm for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem and, the estimated amount of time that the reduced levels of chlorination occurred.

   The permittee has thirty days from the effective date of the permit to have any new equipment fully operational to meet the TRC requirements.

7. The permittee shall collect one TRC grab sample per day for compliance purposes. Any additional grab sample monitoring results shall be included in the compliance report. The results of the grab samples and a comparison to the continuous analyzer reading, including the time of the grab samples, shall be included with the DMRs.

The permittee shall also report the average monthly and maximum daily discharge of TRC using data collected by the continuous TRC analyzer. The permittee shall collect and analyze a minimum of one grab sample per day for calibration purposes. The same daily grab sample can be used for both compliance and calibration. Four continuous recording graphs (1/week) showing weekly data or an equivalent alternative record that provides the same data, shall be submitted with the monthly DMRs.

The permittee shall substitute three TRC grab sample per day, for any day that they are unable to comply with the continuous recording requirement.

The permittee has thirty days from the effective date of the permit to have any new equipment fully operational to meet the TRC requirements.

8. The permittee shall report two of the quarterly samples during high flow events when secondary treatment is bypassed. A high flow event is defined as flow that exceeds 30 MGD.

9. 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 in the months of January, April, July, and October. The test results shall be submitted by the last day of the month following the completion of the test. The results are due February 28, May 31, August 31, and November 30, 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**
January April July October	February 28th May 31th August 31th November 30 th	Ceriodaphnia dubia (daphnid)	≥ 100%	Report

10. 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.

11. 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.

12. 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.**

Part I.A.1. (Continued)

a. The discharge shall not cause a violation of the water quality standards in 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 discharge shall not cause objectionable discoloration, odor or turbidity of the receiving waters.

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

e The permittee shall minimize the use of chlorine while maintaining adequate bacterial control. A reasonable margin of safety shall be maintained in chlorine use to ensure continuous effective disinfection.

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

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

a. Any new introduction of pollutants into the 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 the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For purposes of this paragraph, adequate notice shall include information on:

(1) the quantity and quality of effluent introduced into the POTW; and

(2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

3. Prohibitions Concerning Interference and Pass Through:

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

4. Toxics Control

a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

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

5. Numerical Effluent Limitations for Toxicants

EPA or MA 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. LIMITATIONS FOR INDUSTRIAL USERS:

1. 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.

2. 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 and 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 on whether or not its currently approved local limits need to be revised. 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) to the pretreatment coordinator along with a 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 limit revisions in accordance with EPA Guidance Manual for the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program (December, 1987).

C. INDUSTRIAL PRETREATMENT PROGRAM

1. 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):

    a. 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.

    b. Issue or renew all 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.

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

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

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

3. 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).

4. 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.

5. 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, **if applicable**, 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 the following areas: (1) revisions to an enforcement response plan; (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with Federal Regulations; (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 in Part I.B., If the permittee has already submitted the above documents to EPA for approval and is awaiting an EPA decision, this section shall not apply.

D. UNAUTHORIZED DISCHARGES

The permit only authorizes discharges in accordance with its terms and conditions and only from outfalls listed in Part 1.A.1. of this permit and the combined sewer overflow outfalls identified in Attachment D of the 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 Part II. 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 separate sewer system shall be in compliance with the General Requirements in Part II, and the following terms and conditions. Each co-permittee is required to complete the following activities for the collection system which it owns.

1. Maintenance Staff

Provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Preventative Maintenance Program

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

3. Infiltration/Inflow Control Plan:

Develop and implement a plan to control infiltration and inflow (I/I) to the separate sewer systems. The plan shall be submitted to EPA, MA DEP and, GLSD within six months of the effective date of this permit (see page 1 of this permit for the effective date) and shall describe the co-permittees' program for preventing I/I related effluent limit violations, and all unauthorized discharges of wastewater, including overflows and bypasses due to excessive I/I. In addition, the plan shall also prioritize the I/I removal program in areas tributary to combined sewer areas so that the frequency, duration and volume of discharges from combined sewer overflows is minimized or reduced during the effective period of this permit.

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 MA DEP annually, by the anniversary date of the effective date of this permit. 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 monthly 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 Section 1.D., Unauthorized Discharges section of this permit.

- A report documenting all new extensions/connections, including the location of the extensions/connections and the quantity of wastewater flow added to the system. The location of work completed on I/I removal, the nature of the work and, an estimate of the amount of I/I removed from the system shall also be documented. The report shall include a summary of the net effect of new extensions/connections and I/I removed on the frequency, duration and volume of discharges from combined sewer overflows.

F. ALTERNATE POWER SOURCE

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

G. COMBINED SEWER OVERFLOWS (CSOs)

1. Effluent Limitations

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

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

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

(2) Maximum use of the collection system for storage.

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

(4) Maximization of flow to the POTW for treatment.

(5) Prohibition of dry weather overflows from CSOs.

(6) Control of solid and floatable materials in CSO.

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

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

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

Implementation of these controls is required by the effective date of the permit. Documentation of the implementation of these controls has been submitted and is currently under review by EPA and the State. EPA and the State consider that approvable documentation must include the minimum requirements set forth in Part I.G.2 of this Permit and additional activities the permittee can reasonably undertake.

b. The discharges shall not cause **or contribute to** violations of Federal or State Water Quality Standards.

2. Nine Minimum Controls, Minimum Implementation Levels

a. The permittee must implement the nine minimum controls in accordance with the documentation provided to EPA and MADEP or as subsequently modified to enhance the effectiveness of the controls. This implementation must include the following controls plus other controls the Permittee can reasonably implement as set forth in the documentation.

The Cities of Lawrence and Methuen must implement NMCs #1, 2 and, 7. NMCs # 1, 2 and, 7 pertain to operation and maintenance of their separate collection systems and runoff to their collection systems.

b. Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected, at a minimum of once per month, to insure that they are in good working condition and adjusted to minimize combined sewer discharges and tidal surcharging. (NMC # 1, 2 and 4). The following inspection results shall be recorded: the date and time of the inspection, the general condition of the facility, and whether the facility is operating satisfactorily. If maintenance is necessary, the permittee shall record: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. The permittee shall maintain all records of inspections for at least three years.

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

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

d. Dry weather overflows (DWOs) are prohibited (NMC# 5). All dry weather sanitary and/or industrial discharges from CSOs must be reported to EPA and the

State within 24 hours and provide a written report within 5 days in accordance with the reporting requirements for plant bypass (Paragraph D.1.e (1) of Part II, the General Requirements, of this permit).

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

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

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

Annually no later than March 31st, the permittee shall submit a certification to the State and EPA which states that all discharges from combined sewer overflow outfalls were recorded and records maintained for the previous calendar year.

f. The permittee shall install and maintain identification signs for all combined sewer outfall structures (NMC# 8). The signs must be located at or near the combined sewer outfall structures and be easily readable by the public. These signs shall be in English. In areas where the primary language in not English, additional signs shall be located at or near the CSO structures in languages that notify the Community of the CSO. These signs shall be a minimum of 12 x 18 inches in size, with white lettering against a green background, and shall contain the following information:

GREATER LAWRENCE SANITARY DISTRICT
WET WEATHER
SEWAGE DISCHARGE
OUTFALL (discharge serial number)

3. Annual CSO Report from Permittee

By April 30, 2006 and April 30th each year thereafter that the permit is in effect, the permittee shall submit a report which includes the following information;

a. Activation frequency and discharge volume for each CSO during the previous calendar year. The report shall include this information for each of the authorized CSO discharges listed on Attachment E.

b. Precipitation during the previous year for each day, including total rainfall, peak intensity, and average intensity.

c. A certification which states that the previous calendar year's monthly inspections were conducted, results recorded, and records maintained.

d. A summary of modifications to the approved NMC program which have been evaluated, and a description of those which will be implemented during the upcoming year.

In the first annual report submitted in accordance with this permit, the permittee shall submit a public notification plan to describe the measures actively being taken to meet NMC #8 (see NMC #8 in Part I.G.a.8), and an evaluation of further measures to enhance the public notification program, including the following;

i. Outfall signs visible from both water and land.

ii. Signs/Notices at areas where people may be using CSO-impacted waters for recreation such as swimming, boating or fishing. The notice would include information on the health risks posed by CSOs and links for additional information on CSOs and water quality.

iii. Evaluate the infield instruments, including the interceptor levels and river level to determine threshold events which will cause overflows.

iv. Quarterly postings on the permittee's website which would give the locations of the CSOs, and associated health risks and estimates of CSO activations and volumes.

v. Annual press release and notification to interested individuals and groups on the progress of the CSO abatement work, also noting contacts for additional information on CSOs and water quality.

vi. Notice to local health agents and other downstream public officials, including drinking water treatment plants (where appropriate), shellfish wardens, and harbor masters, and the Massachusetts Department of Environmental Protection within 24 hours of activation of CSOs. The public notification plan shall include a schedule for implementation of enhanced public notice measures.

H. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state or federal (40 CFR part 503), requirements.

3. The requirements and technical standards of 40 CFR part 503 apply to facilities which perform one or more of the following use or disposal practices.

   a. Land application - the use of sewage sludge to condition or fertilize the soil

   b. Surface disposal - the placement of sewage sludge in a sludge only landfill

   c. Sewage sludge incineration in a sludge only incinerator

4. The 40 CFR part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge e.g lagoons, reed beds, or are otherwise excluded under 40 CFR 503.6. See Sludge Guidance.

5. The permittee shall use and comply with the attached sludge compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements.

   - General requirements
   - Pollutant limitations
   - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
   - Management practices
   - Record keeping
   - Monitoring
   - Reporting

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

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

less than 290	1/ year
290 to less 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

I. MONITORING AND REPORTING

1. Reporting

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

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

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

The State Agency is:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Resource Protection
1 Winter Street
Boston, MA 02108

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

Signed and dated Industrial Pretreatment reports and Industrial User reports revising local limits required by this permit shall also be submitted to the State at:

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

J. STATE PERMIT CONDITIONS

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

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

Attachment A
FRESHWATER CHRONIC
TOXICITY TEST PROCEDURE AND PROTOCOL
Greater Lawrence Sanitary District
NPDES #: MA0100447

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.**

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:[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 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:	≥ 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 Quantification Level (mg/l)
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 II.

* List what your existing TBLLs are - as they appear in your current Sewer Use Ordinance (SUO).

ITEM III.

* Identify how your existing TBLLs are allocated out to your industrial community. Some pollutants

may be allocated differently than others, if so please explain.

ITEM IV.

* Since your existing TBLLs were calculated, identify the following in detail:

(1) if your POTW has experienced any upsets, inhibition, interference or pass-through as a result of an industrial discharge.

(2) if your POTW is presently violating any of its current NPDES permit limitations - include toxicity.

ITEM V.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in pounds per day) received in the POTW's influent. Current sampling data is defined as data obtained over the last 24 month period.

All influent 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.

* Based on your existing TBLLs, as presented in Item II., list in Column (2) each Maximum Allowable Industrial Headworks Loading (MAIHL) value corresponding to each of the local limits derived from an applicable environmental criteria or standard, e.g. water quality, sludge, NPDES, inhibition, etc. For each pollutant, the MAIHL equals the calculated Maximum Allowable Headwork Loading (MAHL) minus the POTW's domestic loading source(s). For more information, please see p.,3-28 in EPA's *Guidance Manual on the Development and Implementation of Local Limits Under the Pretreatment Program, 12/87.*

Item VI.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in micrograms per liter) present your POTW's effluent. Current sampling data is defined as data obtained during the last 24 month period.

(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.

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

POTW Name & Address : _____

NPDES PERMIT # : _____

Date EPA approved current TBLLs : _____

Date EPA approved current Sewer Use Ordinance : _____

ITEM I.

In Column (1) list the conditions that existed when your current TBLLs were calculated. In Column (2), list current conditions or expected conditions at your POTW.

	Column (1) EXISTING TBLLs	Column (2) PRESENT CONDITIONS
POTW Flow (MGD)	_____	_____
SIU Flow (MGD)	_____	_____
Dilution Ratio or 7Q10 (from NPDES Permit)	_____	_____

Safety Factor _____ N/A

Biosolids Disposal Method(s) _____ _____

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 V.

Using current POTW influent sampling data fill in Column (1). In Column (2), list your Maximum Allowable Industrial Headwork Loading (MAIHL) values used to derive your TBLLs listed in Item II. In addition, please note the Environmental Criteria for which each MAIHL value was established, i.e. water quality, sludge, NPDES etc.

Pollutant	Column (1) Influent Data Analyses Maximum (lb/day)	Average (lb/day)	Column (2) MAIHL Values (lb/day)	Criteria
Arsenic	----------	---------	---------	---------
Cadmium	----------	---------	---------	---------
Chromium	----------	---------	---------	---------
Copper	----------	---------	---------	---------
Cyanide	----------	---------	---------	---------
Lead	----------	---------	---------	---------
Mercury	----------	---------	---------	---------
Nickel	----------	---------	---------	---------
Silver	----------	---------	---------	---------
Zinc	----------	---------	---------	---------
Other (List)				
-------	----------	---------	---------	---------
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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 Maximum (ug/l)	Average (ug/l)	Columns (2A) (2B) Water Quality Criteria (Gold Book) 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 VII.

In Column (1), identify all pollutants limited in your new/reissued NPDES permit. In Column (2), identify all pollutants that were limited in your old/expired NPDES permit.

Column (1) NEW PERMIT		Column (2) OLD PERMIT	
Pollutants	Limitations (ug/l)	Pollutants	Limitations (ug/l)
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
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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.

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

Zinc	-------	-------	--------
Molybdenum	-------	-------	--------
Selenium	-------	-------	--------
Other (List)			
--------	--------	--------	--------
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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 GLSD's Wastewater Treatment Plant 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 GLSD's Wastewater Treatment Plant shall be conducted for the following pollutants:

   a.) Total Cadmium
   b.) Total Chromium
   c.) Total Copper
   f.) Total Nickel
   g.) Total Silver
   h.) Total Zinc

d.) Total Lead
e.) Total Mercury
i.) Total Cyanide
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.

ATTACHMENT D
GREATER LAWRENCE SANITARY DISTRICT
NPDES MA0100447
LIST of OUTFALLS and CSO'S

Serial Discharge Number	Location	Type of Discharge	Composition of Discharge	Receiving Water
001	G.L.S.D. (main outfall)	continuous	sanitary and industrial wastewater	Merrimack River
002	South Bank main overflow (CSO)	intermittent	combined wastewater	Merrimack River
003	South Bank (CSO) secondary overflow	intermittent	combined wastewater	Merrimack River
004	North Bank main overflow (CSO) @ mouth of Spicket River	intermittent	combined wastewater	Merrimack River
005	North Bank (CSO) secondary overflow	intermittent	combined wastewater	Merrimack River
006	Spicket River (CSO) secondary overflow	intermittent	combined wastewater	Spickett River

ATTACHMENT E
NINE MINIMUM TECHNOLOGY BASED CONTROLS DOCUMENTATION AND IMPLEMENTATION GUIDANCE

The following guidance is for communities preparing documentation to demonstrate adequate implementation of the nine minimum technology based control measures for combined sewer overflows.

EPA has made a Best Professional Judgement (BPJ) determination that adequate implementation of these nine minimum control measures satisfies technology based requirements (Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants.

Documentation Requirements

Documentation should provide sufficient information to demonstrate:

- that alternatives were considered for each of the nine minimum control measures.
- the reasoning for the alternatives that were selected.
- that the selected alternatives have been implemented.
- that the permittee has developed a schedule for actions that have been selected but not yet fully implemented.

Nine Minimum Technology Based Limitations (MTBL)

The following is a summary of specific information which must be included in the documentation of each of the MTBLs.

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

a. An organizational chart showing the staff responsible for operation and maintenance (O&M) of the combined sewer system. Document that organization and staffing levels are adequate.

b. The funding allocated for O&M of the combined sewer system. Document that funding is adequate.

c. A list of facilities and structures that are critical to the performance of the combined sewer system, including all regulators, tide gates, pumping stations, and sections of sewer lines which are prone to sedimentation or obstruction.
Include an inspection plan which identifies the locations, frequency, procedures, documentation, and reporting of periodic and emergency inspections and maintenance.
Document that these facilities are adequately operated and maintained.

d. A summary of safety training and equipment provided to inspection and maintenance personnel. For instance, workers entering sewers must be trained and equipped for confined space entry. Document that training listed is adequate.

e. A summary of technical training and maintenance equipment provided to inspection and maintenance personnel. Document that training and equipment are adequate to maintain the facilities identified in item 1.c. above.

2. Maximum Use of the Collection System for Storage

a. Collection system inspection: This should focus on the identification of maintenance or design deficiencies that restrict the use of otherwise available system capacity. This evaluation should document that inadequate regulators, piping bottlenecks, and pumping deficiencies have been identified and corrected, or scheduled for correction. Where increased inspection and/or maintenance is proposed, this shall be reflected in the inspection plan required in item 1.c.

b. Tide gate maintenance and repair: Tide gates prevent significant volumes of water from entering the conveyance system, thereby freeing up system storage capacity during wet weather periods. Where appropriate, document that tide gate maintenance and repair procedures are adequate.

c. Adjustment of regulator settings: Adjustment of regulating devices can increase in-system storage of CSO flows and maximize transport to the POTW. Care should be taken to ensure that the regulator adjustment will not result in unacceptable surcharging of the system. Document that regulators have been adjusted to optimum settings. The method by which the community determined the optimum regulator setting (e.g. modeling, trial and error) shall be included in the documentation.

d. Removal of obstructions to flow: Document that accumulations of debris which may cause flow restrictions are identified, and debris is removed routinely. Documentation shall include a summary of the locations where sediment is removed, the number of times each year the sediment is removed and the total quantity of material removed each year.

3. Review and Modification of the Industrial Pretreatment Program to assure CSO impacts are minimized.

a. Review legal authority: Review the community's legal authority (i.e. pretreatment program, sewer use ordinance) to regulate non domestic discharges to its collection system. Identify those activities for which the community has or can obtain legal authority to address CSO induced water quality violations. For example, does the community have legal authority to require non domestic dischargers to store wastewater discharges during precipitation events or can the community require non domestic dischargers to implement runoff controls?

b. Inventory non domestic dischargers: Identify those non domestic discharges that may,

through quantity of flow or pollutant concentration or loadings, contribute to CSO induced water quality violations,

c. Assess the significance of identified dischargers to CSO control issues: Assess whether the identified non domestic sources cause or contribute to CSO induced water quality standards by using monitoring, dilution calculations or other reasonable methods.

d. Evaluate and propose feasible modifications: Identify, evaluate, and propose site-specific modifications to the pretreatment program which would address the non domestic dischargers identified as significant. Modifications which shall be considered include;

Volume-related controls: Document that detaining wastewater flows (sanitary, industrial, and/or storm water) within the industrial facility until they can be safely discharged to the POTW for treatment was considered and implemented where reasonable. Pollutant Load-related controls: Document that reduction of concentrations of pollutants that enter the collection system during storm periods was considered and implemented where reasonable. Methods to be considered for reducing pollutant concentrations from stormwater runoff controls include structural and non-structural controls such as covering material storage areas, reducing impervious area, detention structures, and good housekeeping.

4. Maximization of flow to the POTW for treatment

It is recognized that most of the actions recommended for maximization of the collection system for storage will also serve to maximize flow to the POTW. In addition to optimizing those controls to maximize flow to the POTW, the following specific controls should be evaluated and implemented where possible;

a. Use of off-line or unused POTW capacity for storage of wet weather flows.

b. Use of excess primary treatment for treatment of wet weather flows. If the use of excess primary capacity will result in violations of the community's NPDES permit limits, the community shall get approval of the proposed bypass from the permitting authority prior to implementation.

5. Prohibition of CSO discharges during dry weather

a. Document that the community's monitoring and inspections are adequate to detect and correct dry weather overflows (DWOs) in a timely manner.

b. Document that DWOs due to inadequate sewer system capacity have been eliminated. If elimination is scheduled but not yet completed, the documentation shall include the schedule.

c. Document that DWOs due to clogging of pipes and regulators or due to other maintenance problems have been eliminated to the maximum extent practicable. Increased inspection and maintenance of problem areas must be considered as well as

modification or replacement of existing structures.

6. **Control of Solid and Floatable Material in CSO Discharges**

Document that low cost control measures have been implemented which reduce solids and floatables discharged from CSOs to the maximum extent practicable. Alternatives which shall be considered include;

a. baffles in regulators or overflow structures.

b. trash racks in CSO discharge structures.

c. static screens in CSO discharge structures.

d. catch basin modifications.

e. end of pipe nets.

f. outfall booms (on surface of receiving water)

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

a. Prevention: through public education or increased awareness. For example, a water conservation outreach effort could result in less dry weather sanitary flow to the POTW and an increase in the volume of wet weather flows that can be treated at the POTW.

b. Control of disposal: through the use of garbage receptacles, more efficient garbage collection, or again, through public education.

c. Anti-litter campaigns: Campaigns through public outreach and public service announcements can be employed to educate the public about the effects of littering, overfertilizing, pouring used motor oil down catch basins, etc.

d. Illegal dumping: Programs such as law enforcement and public education can be used as controls for illegal dumping of litter, tires, and other materials into water bodies or onto the ground. Free disposal of these products at centrally located municipal dump sites can also reduce the occurrence of illegal dumping.

e. Street cleaning

f. Hazardous waste collection days: Communities are encouraged to schedule one or two days a year where household hazardous wastes can be brought to a common collection area for collection and environmentally safe disposal.

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

The objective of this control element is to ensure that the public receives adequate notification of CSO impacts on pertinent water use areas. Of particular concern are beach and recreational areas that are affected by pollutant discharges in CSOs.

Where applicable, the permittee shall provide users of these types of areas with a reasonable opportunity to inform themselves of the existence of potential health risks associated with the use of the water body (bodies). The minimum control level, found in Section C.2.e. of the permit is posting of CSO discharge points.

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

If possible, the permittee shall initiate monitoring and/or inspection activities above and beyond the minimum control levels specified in the permit. The purpose of these additional monitoring and/or inspection events is to better characterize quality of the CSOs and their impacts on all receiving waters. Examples of such events include CSO monitoring or receiving water monitoring for pollutants of particular concern.

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 CWA for toxic pollutants and with standards for sewage 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 requirement.

b. The CWA provides that any person who violates Sections 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 negligently violates such requirements is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates such requirements is subject to a fine of not less than $5,000 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, 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 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.

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 a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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.

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.

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 any 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 with the procedures in 40 CFR Part 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 at 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 F, of 40 CFR 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 invasion 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 operation 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 provisions 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.

The permittee shall submit notice of an unanticipated bypass as required in Paragraph D.1.e (24-hour notice).

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 bypass, 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 judgment 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.

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 of 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 at 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.

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 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 authorized 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 monitoring and control equipment), practices, 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 to pollutants which are subject to the effluent limitations in the permit, nor to the notification requirements under 40 CFR §122.42(a)(1).

(3) The alteration or addition results in a significant change in the permittee'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 as may be necessary under the Clean Water Act. (See §122.61; in some cases, modification or revocation 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 Report (DMR) or forms provided or specified by the 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 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 data submitted in the DMR or sludge reporting form specified by the Regional Administrator.

(3) Calculations for all limitations which require averaging of 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 aware 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 in 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 is 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 the EPA standard national forms for applying 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 (or 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 of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged 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 representative. Conversely, it also could 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 be 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 channelled 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 Discharger 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), the Clean Air Act, the Toxic Substances Control Act, 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 a 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.

Large and Medium municipal separate storm sewer system means all municipal separate storm sewers 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 are 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 of 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 to 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"; and

(d) Which has 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 a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and 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 by the Regional Administrator in the 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 be 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 or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge which exits 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, concentrated 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 dredged 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, as 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

(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. 2120 (D.D.C. 1976),

modified 12 E.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."

Section 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 Reauthorization 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 CFR §116.4; or

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

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 advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation Device pumpings (33 CFR Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge use or disposal practice 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 in food processing or production; hazardous substances designated under section 101(14) of CERCLA; 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 of 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 to 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 and drainage.

Storm Water discharge associated with industrial activity means the discharge from any conveyance with is used 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 systems, 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 sewage 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 noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

Waters of the United States means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

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

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats,

sandflats, "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 shellfish are or could be taken and sold in interstate or foreign commerce; or

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

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

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

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) through (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.)

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency 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 sludge or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, or 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.

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

Bulk sewage sludge is sewage sludge that is not sold 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 40 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 §501.2, required to have an approved pretreatment program under 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 mass 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 from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not 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 and 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 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 a 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.

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 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, an inorganic substance, a combination or organic and inorganic substances, or pathogenic organism a that, 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 requirements) 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 a 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).

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 judgments 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 a 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 0.10 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 sewage 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, 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 Islands, the Commonwealth of the Northern 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 and industrial waste of a liquid nature.

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 not 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 degrees 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.

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous 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 M^3/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

Nitrogen	
Total N	Total nitrogen
NH_3-N	Ammonia nitrogen as nitrogen
NO_3-N	Nitrate nitrogen as nitrogen
NO_2-N	Nitrite nitrogen as nitrogen
NO_3-NO_2	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 Nephelometric 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 adverse 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.