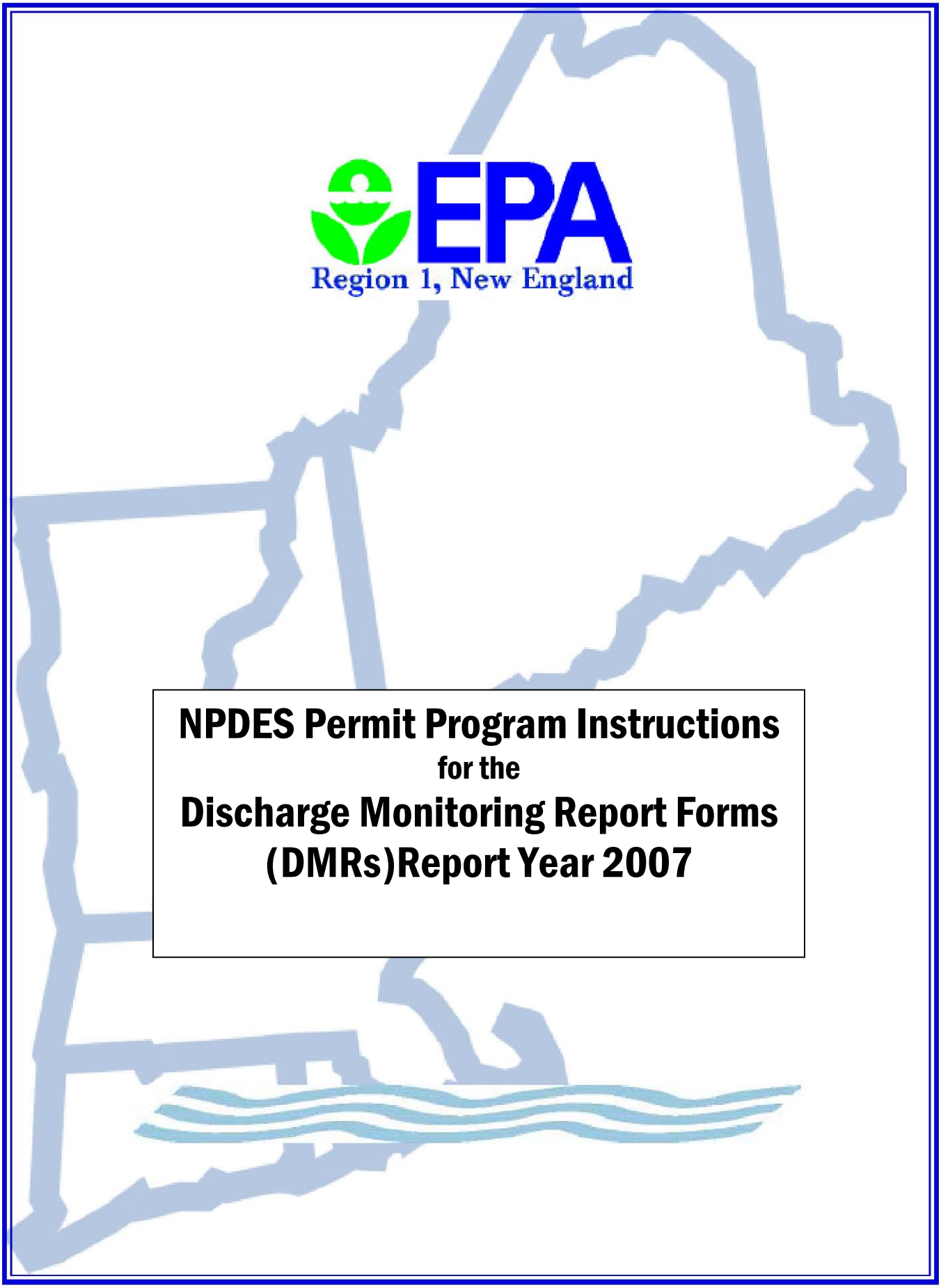

NPDES Permit Program Instructions
for the
Discharge Monitoring Report Forms (DMRs)Report Year 2007

[REVISED FINAL: MARCH 2007]

2007 Discharge Monitoring Report (DMR) Instruction Package For Massachusetts and New Hampshire NPDES Permits and Region I Sludge States

CONTENTS

THIS ENTIRE INSTRUCTION BOOKLET IS AVAILABLE ON-LINE AT

WWW.EPA.GOV/Region01/enforcementandassistance/DMR.HTML

or: http://www.epa.gov/Region01/enforcementandassistance/dmr2007.pdf

[FINAL MARCH 2007]

DMR INSTRUCTION PACKAGE - ADDITIONAL INFORMATION

Important information required to be kept at Facility location/on site:

- NPDES Permit, Fact Sheet, Attachments (if applicable), and the General Conditions
- Annual DMR letter from the US EPA
- DMRs for current year
- Enforcement Action(s), if applies to your Permit

Notify the US EPA:

- if the covered NPDES facility ceases discharge; ceases discharging through one of its Discharge Numbers (Outfall/Pipe) or permitted feature; changes operational practices; submits a Notice of Intent (NOI) for coverage under a General Permit;

- if there is a change in the agent authorized to sign the DMR, report (different from the printed name on the DMR - ATTN:*); or

- if there has been a change in mailing address (different from the printed address on the top left of your DMR) and/or telephone number.

Notification of all changes, including details, date(s), and certification(s) of said change in operation, operator, or address **must be conveyed to the Post Office box** noted on Chapter 1, Page 2 of these instructions. Once EPA receives notification of the changes, if required, the changes will be processed and new DMRs will be mailed to you.

These instructions supersede previous versions of these instructions and the regulatory contact address(es) previously specified in your NPDES permit, and/or enforcement order.

2007 DMR INSTRUCTION PACKAGE and REPORTING REVISIONS For NPDES Permit(s)

The Permit Compliance System (PCS) has been replaced with a new compliance tracking database called the **Integrated Compliance Information System** (ICIS-NPDES) as of June 23, 2006 for Region I and the states of Massachusetts, New Hampshire, Rhode Island; and August, 2006 for Connecticut.

ELECTRONIC DMR SUBMISSION WILL NOT BE AVAILABLE UNTIL AFTER 2008 unless otherwise notified.

This page highlights the transition in terminology from PCS to ICIS-NPDES:

*All changes refer to the **new DMR format, form, and reporting requirements**.*

Old program words -/- New program words:

1. Pre-Printed - Printed
2. Pipe/Outfall/Discharge - Feature
3. Parameter Limit - Limit Set
4. Measurement - Value
5. Column headers - deleted
6. Statistical Basis Code - Value (measurement) requirement
7. Measurement value - Sample Measurement Value
8. NODI - see changes to Attachment E, see Chapter 1 Page 6.b.

PLEASE NOTE the following changes in the specified chapter(s), page(s), and section(s) that have occurred since the June, 2006 version of the DMR Instructions:

Chapter 1,

Pretreatment Program: Compliance Contact change
MassDEP contact changes, address change (and name change from MA DEP)
US EPA contact change for Central MA

Chapter 2, updated

Chapter 3, updated

THIS ENTIRE INSTRUCTION BOOKLET IS AVAILABLE ON-LINE AT:

WWW.EPA.GOV/Region01/enforcementandassistance/DMR.HTML

or: http://www.epa.gov/Region01/enforcementandassistance/dmr2007.pdf

CHAPTER 1. INTRODUCTION

Each month's DMR should be carefully reviewed to familiarize yourself with seasonal reporting requirements and specific sampling that might be required less frequently than monthly, i.e. quarterly, semi-annual and annual requirements. After reviewing these DMRs for completeness, please read these directions in their entirety to be certain that you understand your reporting obligations.

If your printed DMRs include two sets of monitoring requirements to cover different production schemes or climatic considerations for the same Discharge Number (outfall/pipe) or permitted feature, please submit all DMRs for that Discharge Number (outfall/pipe) or permitted feature. Report quantitative data on the applicable DMR and indicate the applicable No Discharge Indicator Code (See **ATTACHMENT E** appended to the "Example DMR Calculations").

If you are required to report the results of toxicity testing on the DMR, please include with your submission a copy of the entire laboratory report including chain of custody information to the P.O. Box address listed on Chapter 1, Page 2 of this document. In addition, **ATTACHMENTS F and G** 'Toxicity Test Summary Sheet' and 'NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting Tips, Common Pitfalls and Guidance' are included in the instructions. Although submission of **ATTACHMENT F** is not mandatory, we encourage its use to ensure consistency of reporting. Utilization of this summary sheet will accelerate the process of reviewing toxicity test reports. However, this sheet is not to be used as a substitute for the actual laboratory report or the DMR.

If you are required to report the results of sludge sampling, please ensure that the appropriate data is included in the report, and that the entire laboratory report including chain-of-custody information is included, and mailed to the P.O. Box address listed on Chapter 1, Page 2 of these instructions.

You will note that the average and maximum quantity column headers and the minimum, average and maximum concentration headers that appeared on previous DMR forms have been removed. Please refer to the Permit Requirement block directly below the Sample Measurement block to determine the type of information that must be reported in each Sample Measurement block.

CONTACTS

Please contact the following US EPA Environmental Protection Specialist of the Water Technical Unit regarding any comments, questions or any errors that you identify on your DMR forms:

Massachusetts - Northeast - Robin Pearlman, 617.918.1873
Central - Norma Mason, 617.918.1879
Southeastern - Marie McDonald, 617.918.1878
Western - Robin Pearlman, 617.918.1873
MA General Permits - Marie McDonald, 617.918.1878

New Hampshire - Norma Mason, 617.918.1879
NH General Permits

Unless otherwise specified by your NPDES Permit (Permit), all original DMR submissions and an explanation of any reported violations shall be received by EPA no later than the 15th of the month following sample collection at the following address:

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

Questions concerning the permit application process should be directed to the following individuals:

Massachusetts - Olga Vergara, 617.918.1519
New Hampshire - Shelley Puleo, 617.918.1545

Questions concerning a new permit or an existing permit, and/or modifying an existing permit should be directed to your Permit Writer as noted in the Fact Sheet issued with your Draft Permit. If you do not know who that may be, you may telephone the following:

MA Permit Unit 617.918.1570
NH Permit Unit 617.918.1580

and you will be directed to the appropriate permit writer.

Other Permit-related and/or compliance or oral reporting or compliance questions should be directed to the following:

GENERAL PERMITS:
Remediation: Victor Alvarez, 617.918.1572
Drinking Water Facility Backwash: Mark Voorhees, 617.918.1537
MS4 (Phase 2): Thelma Murphy, 617.918.1615
Storm Water Assoc. w/Construction Activities: Thelma Murphy, 617.918.1615
Storm Water Assoc. w/Industrial Activities: Thelma Murphy, 617.918.1615
Non-contact Cooling Water: Thelma Murphy, 617.918.1615
Construction Dewatering: Austine Frawley, 617.918.1065
Non-FERC related Discharges from Hydroelectric Facilities: Bill Wandle, 617.918.1605

Sludge/Incinerator: Thelma Murphy, 617.918.1615

Whole Effluent Toxicity:
Test methods, David McDonald, 617.918.8609
Compliance, Joy Hilton, 617.918.1877

Stormwater: Permits - Thelma Murphy, 617.918.1615
Compliance - Steve Couto, 617.918.1765

Bypasses, SSOs, CSOs, DWOP: 24-hour oral reports to the following:

Massachusetts - Northeast - George Harding, 617.918.1870
Central - Doug Koopman, 617.918.1747
Southeastern - Steve Couto, 617.918.1765
Western - George Harding, 617.918.1870

New Hampshire - Joy Hilton, 617.918.1877

Pretreatment Program: Permit, Jay Pimpare, 617.918.1531
Compliance, Neil Handler, 617.918.1793

Questions regarding the QC/QA and US EPA Testing Methods and procedures: contact the US EPA Laboratory in Chelmsford, MA at, 617.918.8300, or, 978.937.8500.

You may also contact any US EPA employee via E-mail using the following format: last name.first name@epa.gov. For other general information regarding EPA, Region I, please visit www.epa.gov/region1/.

DMR PRINTED FORM

1. **Permittee Name/Address**
Verify that the correct corporate/municipal name and mailing address and correct facility name and location appears in the top left corner of the DMR.

2. **Permit Number**
Verify that the correct NPDES permit (Permit) number appears in the Permit Number block. All correspondence regarding any issues at the Facility including DMR and report submissions must prominently display the Permit Number.

3. **Discharge Number (Outfall/Pipe) or Permitted Feature** & **Monitoring Period**
The Region typically mails DMRs to permittees for an entire year. A separate DMR form has been printed for each monitoring period and for each Discharge Number (outfall/pipe) or permitted feature. Verify that you are reporting the correct measurement information on the correct Discharge Number DMR for the correct Monitoring Period. A narrative description of the Discharge Number (Outfall/Pipe) or permitted feature also appears in the top right corner of the DMR.

4. **Parameter**
Each parameter contained in your Permit is listed in the far left column of the DMR. Seasonal Discharge Numbers (outfalls/pipes) or permitted features and seasonal parameters are only included on the DMRs for the monitoring periods stipulated in your Permit. Parameters or entire Discharge Numbers (outfalls/pipes) or permitted features that must be reported less frequently than monthly (i.e. quarterly, semi-annually, etc...) will be included in the DMR's for

the last month of the reporting period. Example - unless otherwise specified in the Permit, reporting for the January thru March reporting quarter must be included on the March DMR. However, sampling for these parameters may be performed any time during the reporting period, unless otherwise specified in your Permit.

Please pay particular attention to the narrative description of the sampling location that appears on the bottom of the Parameter block. Multiple monitoring locations may appear for the same parameter on the same DMR form.

5. **Permit Requirement Row**

The Permit Requirement row lists the Permit effluent limit for each parameter and a description of the statistical basis (i.e. minimum monthly, average monthly, maximum daily, minimum daily, etc.) of the reporting requirement. If the parameter is not limited, but monitoring is required, the DMR lists the word "Report" followed by a narrative description of the statistical basis on which the information must be reported. If no information is required, "*********" and no statistical basis code will be printed in the Permit Requirement block.

The Permit Requirement row also lists the Units in which the Sample Measurement Values must be reported, the Frequency of Analysis, and Sample Type specified for each Parameter in your Permit.

6. **Sample Measurement Row**

The results of your analyses (Sample Measurement Values), the Units (See 6.d.) in which the samples were measured; the Number of Exceedances of your permit limits (See 6.e.); the Frequency of Analysis (See 6.f.) with which you've conducted your sampling and analyses and the Sample Type (See 6.g.) for each parameter must all be reported in this row. It is also important to note the following general rules:

- If Sample Measurement Values are not required to be reported, "*********" will appear in the Sample Measurement and associated Permit Requirement block;

- The monitoring frequencies specified in your Permit and included in the Permit Requirement row are minimum monitoring requirements. The results of any additional monitoring of parameters at location(s) designated in the Permit, using approved sampling procedures and analytical methods, must be included in the DMR calculations. Such increases in the frequency of sampling shall also be reported in the Frequency of Analysis block;

- The detection limit of the analytical method used to generate the reported Sample Measurements must be equal to, or less than, the minimum level specified for the particular parameter in your Permit. If a minimum level for the parameter is not specified in your Permit, the detection limit of the analytical method used to generate the Sample Measurement Values must be equal to, or less than, the Permit limit; and

- Do not leave blank spaces on the DMR unless measurement information is not available for a specific Discharge Number (pipe/outfall) or permitted feature or parameter. If any blanks appear on your DMR, EPA's automated violation tracking system will detect these blanks as non-reporting violations for which you may be subject to enforcement actions. Therefore, any blanks must be accompanied by an explanation, which must be attached to the DMR.

a. **Sample Measurements Below Minimum Levels**

As noted above, the detection limit of the analytical method used to generate the reported Sample Measurement Values must be equal to, or less than, the minimum level specified for the particular parameter in your Permit. If a minimum level for the parameter is not specified in your Permit, the detection limit of the analytical method used to generate the Sample Measurement Values must be equal to, or less than, the Permit limit. If all of the Sample Measurement Values for the reporting period for a specific parameter are below the minimum level(s) specified in your Permit, then report "0" on the DMR. If some of the Sample Measurement Values are below the minimum level, while other Sample Measurement Values that are part of the computation are above the minimum level specified in your Permit, substitute a "0" for the non-dectectable results prior to averaging. The only exception to this rule is the computation of Fecal Coliform results, which is discussed in the Example DMR Calculations. The analytical method used and the laboratory detection limit of the analytical method used for **each** parameter in which a value below the permitted minimum value is measured during the monitoring period shall be listed on the cover letter that accompanies the DMR.

b. **No Data Indicator Code (NODI)**

For those months when no sampling occurs for a specific Discharge Number (outfall/pipe) or permitted feature, write "No DATA" and the applicable NODI code across the DMR, or place the appropriate code in the box in the upper right corner of the DMR. If there is a NODI for a specific parameter, then write NODI and the appropriate code in the Parameter block. NODI codes have been updated and can be used to report no data for each individual required Value. A single NODI code can be used for an entire parameter, or a NODI code can be used for each parameter value. Available NODI codes are provided in **ATTACHMENT E**.

c. **Other acceptable codes**

Please note that codes of "B", "BDL", "ND", "T" and "TR" are **not** acceptable analytical results. In addition, please refer to the example DMR calculations regarding the protocols for reporting bacteria concentrations that are too numerous to count (TNTC). If the laboratory reports a trace amount, then the laboratory detection limit for the analytical procedure used to determine a "trace amount" preceded by the "<" sign shall be reported on the DMR. As noted above, the DMR shall also be accompanied by a cover letter which indicates the laboratory detection limit of the analytical method used for **each** parameter in which a trace value is measured during the monitoring period.

d. **Unit of Measure Code**
Enter the actual unit of measure used during the monitoring period in the Units column. The unit code specified by your Permit appears in the Permit Requirement row.

e. **No. Ex. (Number of Exceedances)**
Enter the number of Sample Measurement Values that exceeded the permit requirement(s) for each parameter. The total of all exceedances measured during the reporting period -- both of loading and concentration limits for each parameter shall be reported. If all samples are measured at, or below, the permit level, enter **"0"** (zero) on the DMR.

f. **Frequency of Analysis**
Enter the actual frequency that samples were taken and analyzed for each parameter during the reporting period; the minimum frequency is specified in the corresponding Permit Requirement row. Please enter the word that most accurately represents the actual sampling frequency.

g. **Sample Type**
Enter the actual Sample Type used during the monitoring period in the Sample Measurement row. Again, the sample type required by your Permit is shown in the corresponding Permit Requirement row. Enter the word that most accurately represents the actual sample type.

7. **Signature**
The DMR form shall be signed and dated by the principal executive officer or his/her authorized agent designated on the DMR form. **THE SIGNED ORIGINAL DMR FORM SHALL BE SUBMITTED TO EPA**. If an individual other than the one specified on the DMR form is signing the DMR, a written authorization must be provided to EPA. Should a duly authorized agent sign and certify the DMR form, a written authorization must be submitted to the Agency in accordance with 40 CFR §122.22(b)(1), (2), and (3). Any change to an authorization must be submitted in writing in accordance with 40 CFR §122.22(c). All certifications must be in accordance with 40 CFR §122.22(d). Following this chapter is a copy of §122.22 **[40 CFR Ch.1 (7-1-99 Edition)]**.

8. **Comments**
Please note any printed comments or instructions that appear on the bottom of the last page of the DMR form(s).

9. **Transmittal**

a. **To the US EPA**:
All DMRs shall be mailed to the following Post Office box in sufficient time to reach the **US EPA** by the date specified in your Permit:

Water Technical Unit (SEW)
U.S. Environmental Protection Agency
P.O. BOX 8127
Boston, MA 02114

Quality Assurance/Quality Control (QA/QC) submissions shall be mailed to:

US EPA - New England Regional Laboratory
11 Technology Drive
Chelmsford, MA 01863-2431

b. **To the New Hampshire Department of Environmental Services**:
For those permittees located in the State of New Hampshire, copies of your DMR must be submitted to:

New Hampshire Department of Environmental Services (NH DES)
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

c. **To the Massachusetts Department of Environmental Protection (MassDEP)** :
For those permittees located in the Commonwealth of Massachusetts, submit a photocopy of your DMR and all other notifications including overflow or bypass reports, but excluding toxicity test reports, to your local regional office listed below:

*****

MassDEP
Central Regional Office
Bureau of Resource Protection (POTWs)
or Bureau of Waste Prevention (Industrial Dischargers, others)
627 Main Street
Worcester, MA 01608

*****

MassDEP
Northeast Regional Office
Bureau of Resource Protection (POTWs)
or Bureau of Waste Prevention (Industrial Dischargers, others)
205B Lowell Street
Wilmington, MA 01887

*****

MassDEP
Southeast Regional Office
Bureau of Resource Protection (POTWs)
or Bureau of Waste Prevention (Industrial Dischargers, others)
20 Riverside Drive
Lakeville, MA 02347

*****

MassDEP
Western Regional Office
Bureau of Resource Protection (POTWs)
or Bureau of Waste Prevention (Industrial Dischargers, others)
436 Dwight Street
Suite 402
Springfield, MA 01003

*****

Note that the MassDEP website at www.mass.gov/dep/ has in the right hand column under "SPOTLIGHT" a button for "Regional Offices" which has specific information for each Region or you may go to:
http://www.state.ma.us/dep/cities.htm

NOTE: Submit Whole Effluent Toxicity tests, as well as an additional copy of DMRs and related notices to:

Massachusetts Department of Environmental Protection (MassDEP)
Division of Watershed Management (DWM)
627 Main Street, 2nd Floor
Worcester, MA 01608

Other MassDEP contacts:

If you are seeking information about MassDEP permitting, need application forms, or have questions about annual compliance fees, call the MassDEP Regional Service Center:

Central Region (Worcester)	508-792-7683
Northeast Region (Wilmington)	978-694-3314
Southeast Region (Lakeville)	508-946-2714
Western Region (Springfield)	413-755-2295

If you are reporting an overflow, bypass, or back up, (not including CSOs), provide immediate telephone notification during normal business hours to the appropriate MassDEP Regional Office at these numbers:

Central Region (Worcester)	508-792-2722
Northeast Region (Wilmington)	978-694-3200
Southeast Region (Lakeville)	508-946-2850
Western Region (Springfield)	413-784-2279

If you believe an overflow, bypass, or any other discharge may have resulted in an oil or hazardous material release, report it to MassDEP at any time, 24 hours a day, at this toll free number: 1-888-304-1133; Northeast Region Hotline 978-694-3215.

For general information about MassDEP permitting, call the MassDEP InfoLine:

617-338-2255 (From area code 617 and outside MA)
800-462-0444 (From area codes 413, 508, 781, and 978)

For information on wastewater treatment facility operator certification and training, contact the New England Interstate Water Pollution Control Commission (NEIWPCC):

978-323-7927

For information on Residuals Management information at MassDEP:

617-654-6517

For information about MassDEP grant and loan programs:
617-292-5779

Permit applications, publications, and compliance information are also available at the MassDEP website: http://www.state.ma.us/dep/water/

d. ***SLUDGE/Incinerator - all New England States***:

Permittees in the States of: Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont that are required to submit annual Sludge [Section 503 Regulations] reports to the US EPA shall submit the reports by February 19th of each year to the US EPA PO Box address specified on Chapter 1. If sludge DMR forms were mailed to you, submit the DMRs with your annual report.

Signature Requirements

[Code of Federal Regulations]
[Title 40, Volume 14, Parts 87 to 135]
[Revised as of July 1, 1999]
From the U.S. Government Printing Office via GPO Access
[CITE: 40CFR122.22]

[Page 745-746]
PART 122--EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM--Table of Contents

Subpart B--Permit Application and Special NPDES Program Requirements

Sec. 122.22 Signatories to permit applications and reports (applicable to State programs, see Sec. 123.25).

(a) Applications. All permit applications shall be signed as follows:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in Sec. 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Sec. 122.22(a)(1)(ii) rather than to specific individuals.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company,

(A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

(c) Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

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

[[Page 746]]
complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(Clean Water Act (33 U.S.C. 1251 et seq.), Safe Drinking Water Act (42 U.S.C. 300f et seq.), Clean Air Act (42 U.S.C. 7401 et seq.), Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.))

[48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39619, Sept. 1, 1983; 49 FR 38047, Sept. 29, 1984; 50 FR 6941, Feb. 19, 1985; 55 FR 48063, Nov. 16, 1990]

CHAPTER 2. ANSWERS TO FREQUENTLY ASKED QUESTIONS for DMRs

1. Who do I contact at the US EPA if there are any discrepancies between my Permit and the preprinted DMR Forms?
If there are any discrepancies, or you have questions regarding the Permit requirements contained on the DMR form, please call the Environmental Protection Specialist listed in the beginning of this manual or write to:

Water Technical Unit (SEW)
U.S. Environmental Protection Agency
P.O. BOX 8127
Boston, MA 02114

NOTE: You are required to sample and report the information required by your Permit and/or current enforcement action, if applicable. You are legally obligated to report the information required in your Permit despite any errors or omissions on the printed DMR forms. Any errors or discrepancies noted on your DMR forms shall be reported to the Environmental Protection Specialist for your Permit that is listed in Chapter 1, page 2.

2. What analytical procedures do I use?
Sampling and analytical procedures must comply with 4O CFR §136. [See EPA's home page on the WEB at www.epa.gov/ and click on LAWS & REGULATIONS, or go directly to www.access.gpo.gov/nara/cfr/index.html. The procedures are basically the same as those in Standard Methods For The Examination of Water And Wastewater. However, not all Standard Methods procedures are approved for EPA use. To ensure that your analytical procedures meet EPA's requirements, please check the cited EPA regulations.

3. Can any symbols other than numerals be entered on the DMR?
Other than the list of valid codes listed on **ATTACHMENT E**, the symbol "<" [less than], which can be used to identified measurement values that are less than laboratory detection limits and the letters "TNTC" used to indicate a coliform test count that is too numerous to count are the only other acceptable symbols or acronyms.

4. If a calendar **week** begins in one month and ends in the next month, which sample measurements do I report on my DMR?

All sample measurement values must be reported on the DMR for the month in which the samples were taken. The exception occurs when a calendar week begins in one month and ends in the next. In this instance, compliance with weekly reporting requirements must be reported for the month in which the calendar week ends.

5. What results do I report if I sample more frequently than required by my Permit?
All monitoring frequencies specified in your Permit are minimum monitoring requirements. The results of any additional monitoring of parameters at location(s) designated in the Permit, using approved sampling procedures and analytical methods, must be included in the DMR calculations. Such increases in the frequency of sampling must also be reported in the Frequency of Analysis block.

6. How and where do I report an error on the DMR?
To correct an error in reporting data on the DMR, or if you need to make a change due to an error in reporting, cross out the value(s), reenter the correct value, initial the field/box. Any errors in reporting need to be noted, either on the bottom of the DMR or in a cover letter. Please contact your Environmental Protection Specialist.

7. How and where do I report a bypass?
All bypasses, overflows, discharges without a permit shall comply with the reporting requirements listed in 40 CFR §122.41 and Part II. Section D.1.e. of the General Conditions attached to your Permit. Specifically, you are required to report the following information to EPA within 24 hours of your discovery of the bypass, overflow or discharge without a permit. Oral reports shall be made to the following contacts:

Massachusetts -	Northeast - George Harding, 617.918.1870 Central - Doug Koopman, 617.918.1747 Southeastern - Steve Couto, 617.918.1765 Western - George Harding, 617.918.1870
New Hampshire -	Joy Hilton, 617.918.1877

Written submissions are required within five (5) days of the time you become aware of the event. The written submission shall contain a description of the non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. Written submissions shall be mailed to the EPA address and the applicable MassDEP Regional Office or NHDES addresses provided above in **Chapter 1. Section 13.** Although not required, the format in **ATTACHMENT H**: (Bypass or Sewer Overflow Report) has been successfully used by permittees to report overflows to EPA.

The MassDEP accepts EPA's **ATTACHMENT H** or you may use the **Massachusetts DEP Emergency Overflow/Bypass Notification Form** which can be downloaded at: http://www.state.ma.us/dep/brp/npdes/surffms.htm

8. To whom do I submit the completed DMR form?
Please complete the DMR in accordance with these instructions, have each page of the DMR signed and dated by the principal executive officer or authorized agent and mail the signed original DMR to the following US EPA address with copies to the applicable state regulatory agency. One copy of the signed DMR should be retained in your files.

All New England States with SLUDGE reporting requirements, and for the states of MA and NH for all Permit and Special General Permit requirements/reporting shall be mailed to the following **US EPA** address:

Water Technical Unit (SEW)
U.S. Environmental Protection Agency
P.O. BOX 8127
Boston, MA 02114

9. When am I required to submit and what must be included on a cover letter to my DMR?

A cover letter must accompany your DMR when any of the following occurs:

- The DMR includes a violation of your Permit. The cover letter must explain the cause(s) of the violation; whether the violation is continuing, and if it is, when you expect to resolve the violation; the actions that have taken and/or plan to take to remedy the violations; and the date the actions were taken, or plan to be taken.

- If any reported Sample Measurement Values are less than the minimum level specified in your Permit, the analytical method used and laboratory detection limit of the analytical method used for **each** parameter in which a value below the permitted minimum value is measured during the monitoring period shall be included in the cover letter.

CHAPTER 3. EXAMPLE DMR CALCULATIONS

Monitoring results for a typical municipal wastewater treatment plant are provided in **ATTACHMENT A**. The resultant Discharge Monitoring Report (DMR) reflecting this information is included as **ATTACHMENT B**. A sample DMR for Whole Effluent Toxicity monitoring is also included as part of **ATTACHMENT B** (also see **ATTACHMENTS F and G**).

The following is an explanation of the derivation of the values that appear on the completed DMR. Minimum, Average, and Maximum column headings have been eliminated on the new DMR forms. For each parameter, the applicable NPDES quantity and concentration permit limits are listed in the Permit Requirement row.

1. **Five-day Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS)**

   a. Concentration Block Data Entry

   ATTACHMENT A lists nine effluent BOD_5 sample results for the month. The reported values are 40.6, 57.1, 46.2, 50.3, 10.2, 12.0, 7.1, 10.1, and 45.6 milligrams/liter (mg/l). The monthly average concentration is the arithmetic mean of all sample values measured over the calendar month. The calculation is performed by adding the nine values and dividing by the number of samples to determine a monthly average concentration of 31.0 mg/l. Similarly, the weekly average concentration is the arithmetic mean of all sample values measured over a calendar week. The highest weekly average concentration for the calendar month must be reported on the DMR. For DMR reporting purposes, a calendar week begins on Sunday and ends on Saturday, inclusive. In the specific instance where a calendar week begins in one month and ends in the next, the weekly monitoring results shall be reported on the DMR in which the calendar week ends.

   In the specific example, the weekly BOD_5 averages were calculated as follows:

Period	*Calculation*	*Weekly Average(mg/l)*
1/1-1/7	$\frac{40.6+57.1}{2}$	***48.9***
1/8-1/14	$\frac{46.2+50.3}{2}$	*48.25*
1/15-1/21	$\frac{10.2+12.0}{2}$	*11.1*
1/22-1/28	$\frac{7.1+10.1}{2}$	*8.6*

The highest average weekly concentration of **48.9 mg/l** occurred during the week of 1/1 - 1/7. (Note that the weekly average concentration for the calendar week beginning 1/29 has not been calculated for the January, DMR. This calculation

would be reported in the month in which the calendar week ends - February.) The Daily maximum discharge is defined as the highest "daily discharge" that occurs during the calendar month. Daily discharge is defined in your NPDES permit (Permit) as 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." Subsequently, a monthly average concentration of 31.0 mg/l, a weekly average concentration of 48.9 mg/l (1/1-1/7), and a daily maximum concentration of 57.1 mg/l (1/5) have been reported in the respective Sample Measurement blocks. Influent BOD_5, concentrations and influent and effluent Total Suspended Solids (TSS) concentrations were similarly calculated.

Specifically note the weekly average concentration reporting for TSS. Despite the fact that 62 mg/l of TSS was measured in the January 30th sample, and that this value is higher than the 34 mg/l of TSS calculated for the week ending on January 7th, 34 mg/l is reported as the highest weekly average concentration on the January DMR. In calculating the weekly averages, the January 30th result would be included on the February DMR since the week in which the sample was taken ends in February. Note however, that the January 30th result was used in the calculation of the monthly average TSS and is listed on the DMR as the daily maximum Sample Measurement Value for January.

b. Quantity or Loading Block Entry

The "average monthly loading" is calculated by dividing the total monthly load, by the number of days during the calendar month in which the samples were taken. These average quantities or loadings are to be reported in pounds/day (lb/day) or kilograms/day (kg/day) depending on the unit requirement stipulated in the Permit Requirement block using the following equations:

Quantity (lb/day) = Flow (MGD) x conc. (mg/l) x 8.34 (conversion)

Quantity (kg/day) = Flow (MGD) x conc. (mg/l) x 3.79 (conversion)

In the specific example; the Permit requires that BOD_5 and TSS monthly average influent quantities and the BOD_5 and TSS monthly and weekly average effluent quantities be calculated and reported in lbs/day.

As can be seen by the calculations summarized in ATTACHMENT C-1, the monthly average effluent loading was calculated by dividing the sum of the daily discharge loadings for the month by the number of sample measurements taken

during the month. Similarly, the weekly average effluent loadings were calculated by summing the individual daily loadings calculated for each calendar week and dividing the sum by the number of samples taken during the week. The monthly average and highest weekly average loading were then reported on the DMR. Subsequently, the monthly average and daily maximum BOD_5 effluent loadings have been reported as 106.5 lbs/day and 178.6 lbs/day (1/8 - 1/14), respectively. The TSS effluent and BOD_5 and TSS influent loadings were similarly calculated.

c. Units

All Sample Measurements must be reported in the same units as the effluent limits stipulated in your Permit. The units in which the sample was measured must be reported in the Sample Measurement Units' block. BOD_5 and TSS concentrations were measured in milligrams/liter (mg/l) and loadings were reported as pounds/day (lbs/day).

d. Exceedances

The total number of exceedances (permit conditions exceeded) for all of the limits of each parameter must be reported in the "No. Ex." Block. In the sample illustration, there were two exceedances of the BOD_5 weekly average permit concentration limits (1/1 - 1/7 and 1/8-1/14) and one exceedance monthly average permit concentration limit. Since there were no exceedances of the BOD_5 quantity limits, the total number of BOD_5 exceedances was reported as "3".

e. Frequency of Analysis

The example facility is required to take BOD_5 samples twice per week whereas the required sampling frequency for TSS is once per week. While this represents a highly unusual situation, this example has been used to illustrate different frequency of analyses. Narrative descriptions are now used to describe the Frequency of Analysis. Twice/week has been entered on the DMR for BOD_5 and once/week for TSS.

f. Sample Type

This block indicates the actual Sampled Type. Please complete this block whether or not the samples were taken using the correct sample type. In the example, Composite Samples were monitored for both BOD_5 and TSS.

2. pH

The Permit Requirement row requires that the minimum and maximum pH Sample Measurement Values shall be reported for the month. The pH Sample Measurement Values listed in **ATTACHMENT A** indicated a minimum pH of 5.33 SU (1/4) and a maximum pH of 8.43 SU (1/31). The Sample Measurement Values were reported in Standard Units (SU). Four exceedances (violations) were reported (three exceedances of the minimum limit - 5.33 SU (1/4) 6.26 SU (1/11) and 6.49 SU (1/12) plus one exceedance of the maximum limit - 8.43 SU (1/31). Note that exceedances of

minimum limits are those Sample Measurement Values that are less than the minimum limit contained in your Permit and on your DMR. The Frequency of Analysis was reported as Daily and the Sample Type was Grab. Note that unless otherwise defined in your Permit, "Daily" means that samples shall be taken during all sevens days of the calendar.

3. Flow

The Permit Requirement row of the DMR indicates that the monthly average and daily maximum flow for each calendar month shall be reported. The monthly average flow from the sample illustration in **ATTACHMENT A** was computed to be 0.44 Million gallons/day (mgd) by dividing the sum of the daily flow values by the number of days in the month. The daily maximum flow is the highest daily flow observed during the monthly reporting period. In the example, the maximum flow of 0.64 million gallons per day occurred on 1/29.

The Permit for this facility established an annual average flow limit of 0.5 million gallons per day (mgd). In this case, the Permit requires that the annual average flow be reported as a 12-month rolling average. The 12-month rolling average is calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows for the previous 11 months.

ATTACHMENT C-2 illustrates this calculation. The annual average value would be calculated using the monthly average flow for the month in which the DMR information is being reported, in this case January, 2007 and the eleven previous monthly average flows (February, 2006 thru December, 2006). The next DMR - February, 2007 would then report the annual average flow based upon monthly average flows for March, 2006 thru February, 2007.

4. Dissolved Oxygen

The Permit Requirement row of the DMR indicates that the monthly minimum Dissolved Oxygen Sample Measurement Values for the month shall be reported. Again referring to **ATTACHMENT A,** the minimum Dissolved Oxygen Sample Measurement Value for the month occurred on January 30th (5.8 mg/l). The Sample Measurement Values were reported in milligrams/liter. Two violations of the minimum limit - 5.9 mg/l (1/2) and 5.8 mg/l (1/30) were reported. The Frequency of Analysis was reported as Daily and the Sample Type was Grab. Note again that unless otherwise defined in your Permit, "Daily" means seven days a week.

5. Total Copper

The Permit Requirement row of the DMR indicates that the monthly average and daily maximum Total Copper Sample Measurement Values shall be reported. From **ATTACHMENT A**, only one Sample Measurement occurred during the month - <3 micrograms/liter (1/9). The "less than" symbol indicates that no Measurement Value was detected; the value of "3" represents the minimum detection level of the analytical method used to analyze the sample. In this case the furnace atomic absorption method was used. Although other Total Copper analytical methods are available, the furnace atomic absorption method is the only EPA-approved analytical method with a

detection limit less than the minimum level specified in the Permit. Because the reported values are less than the minimum level specified for Total Copper in the Permit and less than the monthly average concentration limit specified in your Permit, a value of "0" was reported in both the Monthly Average and Daily Maximum Sample Measurement blocks. The DMR cover letter would then note the analytical method that was used to measure the Total Copper concentrations in the composite sample and the laboratory detection limit for the analytical method.

Since only one sample was taken during the month, the single measurement value represents both the monthly average and daily maximum. No exceedances were reported and a Frequency of Analysis of Daily and a Sample Type of Composite were reported on the DMR.

6. Total Chlorine Residual

The Permit for this example facility contains a daily maximum Total Residual Chlorine (TRC) concentration limit of 0.03 mg/l. The Permit also requires the facility to sample the facility's effluent for TRC twice daily. The Permit also notes that the minimum level for TRC is 0.02 mg/l. **ATTACHMENT C-3** lists the raw data upon which the daily discharge results that appear in **ATTACHMENT A** were calculated. Daily discharge is defined in your Permit as 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." Since grab samples are taken for TRC, the daily discharge must be calculated as the **average** of the grab samples results for the **calendar day**. The daily maximum discharge reported on the DMR is the highest daily discharge concentration for the month. In this example, the highest daily discharge of 0.04 mg/l occurred on 1/23. The total number of reported exceedances was two - 0.035 (1/8) and 0.04 (1/23). Sample Type was Grab. Specifically note that on January 13th only one grab sample was taken. Since only one sample was taken, the average of all samples over the day was the value of the one sample. **Please note that this violation of the required sampling frequency must be reported on the DMR and noted and explained in the DMR cover letter.** Similarly note that on January 12th TRC samples were taken more frequently than required by the Permit (three vs. two). The daily discharge concentration was then calculated as the average of all three samples.

7. Fecal Coliform/Total Coliform/E-coli

The Permit Requirement row requires the calculation of the Fecal Coliform monthly geometric mean. The actual computation depends on the type of calculator used.

Example - Calculate the monthly geometric mean of all of the fecal coliform analytical results for January (240, 1000, 140, 300, 0, 200, 400, 200, 50):

- Convert all zeros to "1" and drop any "<" symbols (240, 1000, 140, 300, 1, 200, 400, 200, 50)
- Multiply all of the numbers (8.064×10^{18})
- Divide "1" by the number of measurements (1/9= 0.1111)

- Enter the product of the numbers in the calculator (8.064×10^{18})
- Push the y^x key
- Enter the answer from step #3 into the calculator (1/9= 0.1111)
- Push "= " key; Answer: **126.1**

For those calculators with reverse-polish logic:

- Convert all zeros to "1" and drop all "<" symbols (240, 1000, 140, 300, 1, 200, 400, 200, 50)
- Multiply all of the numbers (8.064×10^{18})
- Divide "1" by the number of measurements (1/9= 0.1111)
- Push the y^x key; Answer:**126.1**

The monthly geometric mean of the nine samples is **126.** The daily maximum Fecal Coliform concentration is **1000** (1/5).

TNTC: If any of the sample measurement value is too numerous to count (TNTC), write 'TNTC' in both the **monthly geometric mean** and **daily maximum** block(s). This instruction is a change from prior year instructions. The number of exceedances if any sample measurement value is reported as TNTC is at least two (the monthly geometric mean and daily maximum). Addditional exceedances must be reported if any other sample measurement values exceed the daily maximum permit limit. You are reminded that it is your responsibility to ensure that a sufficient number of dilutions are used to allow you to accurately measure the number of coliform that are discharged. You are also reminded that you must submit an explanation of the TNTC in your DMR cover letter including the dilutions used in the test, and if necessary, the measures that were implemented to resolve the problem and the measures that were implemented to eliminate future TNTC reporting. If additional monitoring was performed, report the additional monitoring in the Frequency of Analysis block.

8. BOD_5 and TSS Percent Removal Calculations

The monthly average percent removal is **not** calculated by averaging the daily percent removal values. Instead, the monthly average percent (%) removal is calculated from two numbers; the monthly average influent concentration and the monthly average effluent concentration. The percent removal calculations are performed using the following formula:

$$\% \text{ Removal} = \frac{\text{Monthly Avg. Influent Conc. - Monthly Avg. Effluent Conc.}}{\text{Monthly Avg. Influent Conc.}} \times 100$$

For this example:

From **ATTACHMENT A**:

Monthly Average Influent BOD Concentration = 197.3
Monthly Average Effluent BOD Concentration = 31.0

$$\text{BOD}_5 \text{ \% Removal} = \frac{197.3 - 31.0}{197.3} \times 100 = 84.3\%$$

A TSS % Removal of 84.0% was similarly calculated.

9. No Analytical Result

Although not displayed on the sample DMR, the ocassion may occur where no analytical result can be reported. Refer to **Chapter 1, page 6 and ATTACHMENT E** for a listing of acceptable NODI codes.

10. Toxicity Reporting

We encourage your use of **ATTACHMENT F**, the Toxicity Test Summary Sheet. This sheet should be filled out by your biomonitoring laboratory and forwarded along with your complete Whole Effluent Toxicity lab report. Completion of this sheet will facilitate the review of biomonitoring data. Test results should also be included on your DMR, where applicable, i.e. 001T. See **ATTACHMENT F and G**.

ATTACHMENT A

SAMPLE MEASUREMENT VALUES

			Flow	BOD			TSS			pH	TRC	Fecal	Copper	DO
				Inf.	Eff.	Week	Inf.	Eff.	Week					
			mgd	mg/l	mg/l	Avg.	mg/l	mg/l	Avg.	SU	mg/l	#/100 ml	ug/l	mg/l
1st Week		Date												
Day Count														
1	Sun	1-Jan	0.5							7.31	0			6.8
2	Mon	2-Jan	0.33	192.2	40.6		185.4	**34**		7.78	0.025	240		5.9
3	Tue	3-Jan	0.32							7.46	0			7.3
4	Wed	4-Jan	0.43							**5.33**	0.015			7.6
5	Thu	5-Jan	0.33	212	**57.1**					6.81	0	**1000**		7.3
6	Fri	6-Jan	0.34							7.24	0			7.2
7	Sat	7-Jan	0.25							7.45	0.02			6.8
Week Avg.						**48.9**			**34**					
2nd Week														
8	Sun	8-Jan	0.58							7.61	0.035			7.1
9	Mon	9-Jan	0.47	186.1	46.2		163.1	33.3		7.42	0	140	**<3**	6.9
10	Tue	10-Jan	0.42							7.07	0.03			6.3
11	Wed	11-Jan	0.41							6.26	0			7.1
12	Thu	12-Jan	0.42	200.3	50.3					6.49	0.01	300		5.9
13	Fri	13-Jan	0.32							7.07	0.03			7.2
14	Sat	14-Jan	0.27							7.08	0			7.2
Week Avg.						48.25			33.3					
3rd Week														
15	Sun	15-Jan	0.62							7.45	0			6.6
16	Mon	16-Jan	0.6	206.1	10.2		187	14.2		7.55	0	0		6.5
17	Tue	17-Jan	0.62							6.97	0			6.5
18	Wed	18-Jan	0.6							7.31	0.01			6.7
19	Thu	19-Jan	0.46	183	12					6.84	0	200		6.7
20	Fri	20-Jan	0.36							7.21	0			7.1
21	Sat	21-Jan	0.4							7.43	0			7.3
Week Avg.						11.1			14.2					
4th Week														
22	Sun	22-Jan	0.42							7.09	0			6.2
23	Mon	23-Jan	0.52	187.2	7.1		172.5	6.5		6.88	0.04	400		6.8
24	Tue	24-Jan	0.45							7.27	0.025			6.4
25	Wed	25-Jan	0.38							6.98	0			6.1
26	Thu	26-Jan	0.4	194.1	10.1					7.03	0	200		6.6
27	Fri	27-Jan	0.42							7.14	0			6.5
28	Sat	28-Jan	0.39							7.25	0			6.4
Week Avg.						8.6			6.5					
5th Week														
29	Sun	29-Jan	0.64							6.85	0.02			7.1
30	Mon	30-Jan	0.45	215	45.6		230	**62**		7.24	0.01	50		**5.8**
31	Tue	31-Jan	0.44							**8.43**	0.01			6.8
Monthly Averages			**0.44**	**197.3**	**31.0**		**187.6**	**30.0**						
Minimum										**5.33**				5.8
Maximum			**0.64**							**8.43**	**0.04**			

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

ATTACHMENT B

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME: EXAMPLE DMR FORM
ADDRESS: 1111 FIRST STREET
SPRINGFIELD, MA 02345

FACILITY: EXAMPLE DMR FORM
LOCATION: 1111 FIRST STREET
SPRINGFIELD, MA 011022208

ATTN:Sally Sue Sampson, Dir. DPW

MA0101234	001A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	07	01	01	TO	07	01	31

DMR MAILING ZIP CODE: 011022208

MINOR
(SUBRW)
TREATED EFFLUENT
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Oxygen, dissolved (DO)	SAMPLE MEASUREMENT	******	******		5.8	******	******	mg/L	2	Daily	Grab
00300 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		6 MINIMUM	******	******	mg/L		Daily	GRAB
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	106.5	178.6	lb/d	31	48.9	57.1	mg/L	3	2/wk	Comp24
00310 1 0 Effluent Gross	PERMIT REQUIREMENT	125 MO AVG	188 WKLY AVG	lb/d	30 MO AVG	45 WKLY AVG	Req. Mon. DAILY MX	mg/L		Twice Per Week	COMP24
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	727.0	******	lb/d	197.3	******	******	mg/L	0	2/wk	Comp24
00310 G 0 Raw Sewage Influent	PERMIT REQUIREMENT	Req. Mon. MO AVG	******	lb/d	Req. Mon. MO AVG	******	******	mg/L		Twice Per Week	COMP24
pH	SAMPLE MEASUREMENT	******	******		5.33	******	8.43	SU	4	Daily	Grab
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		6.6 MINIMUM	******	8 MAXIMUM	SU		Daily	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	111.2	130.5	lb/d	30.0	34.0	62.0	mg/L	0	Weekly	Comp24
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	125 MO AVG	188 WKLY AVG	lb/d	30 MO AVG	45 WKLY AVG	Req. Mon. DAILY MX	mg/L		Weekly	COMP24
Solids, total suspended	SAMPLE MEASUREMENT	739.3	******	lb/d	187.6	******	******	mg/L	0	Weekly	Comp24
00530 G 0 Raw Sewage Influent	PERMIT REQUIREMENT	Req. Mon. MO AVG	******	lb/d	Req. Mon. MO AVG	******	******	mg/L		Weekly	COMP24
Copper, total (as Cu)	SAMPLE MEASUREMENT	******	******		0	******	0	ug/L	0	Monthly	Comp24
01042 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		5 MO AVG	******	7 DAILY MX	ug/L		MONTHLY	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
S.S. Sampson, Dir.	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.	S.S. Sampson	413 555 1111		07	02	12
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

ATTACHMENT B

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME: EXAMPLE DMR FORM
ADDRESS: 1111 FIRST STREET
SPRINGFIELD, MA 02345
FACILITY: EXAMPLE DMR FORM
LOCATION: 1111 FIRST STREET
SPRINGFIELD, MA 011022208
ATTN:Sally Sue Sampson, Dir. DPW

MA0101234	001A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	07	01	01	TO	07	01	31

DMR MAILING ZIP CODE: 011022208
MINOR
(SUBRW)
TREATED EFFLUENT
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	0.44	0.64	mg/d	******	******	******		0	Cont	Cont
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	Req. Mon. MO AVG	Req. Mon. DAILY MX	Mgal/d	******	******	******			Continuous	CONTIN
Chlorine, total residual	SAMPLE MEASUREMENT	******	******		******	******	0.04	mg/L	2	Daily*	GR
50060 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		******	******	03 DAILY MX	mg/L		Twice Per Day	GRAB
Coliform, fecal general	SAMPLE MEASUREMENT	******	******		126	******	1000	CFU	1	2/wk	GR
74055 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		200 MO GEOMX	******	400 DAILY MX	CFU/100m		Twice Every Week	GRAB
BOD, 5-day, percent removal	SAMPLE MEASUREMENT	******	******		84.3	******	******	%	1	Month	CA
81010 K 0 Percent Removal	PERMIT REQUIREMENT	******	******		85 MO AVG	******	******	%		MONTHLY	CALCTD
Solids, suspended percent removal	SAMPLE MEASUREMENT	******	******		84.0	******	******	%	1	Month	CA
81011 K 0 Percent Removal	PERMIT REQUIREMENT	******	******		85 MO AVG	******	******	%		MONTHLY	CALCTD
Flow, total	SAMPLE MEASUREMENT	0.50	******	mg/d	******	******	******			Cont	CA
82220 1 0 Effluent Gross	PERMIT REQUIREMENT	5 12MO AVG	******	Mgal/d	******	******	******			Continuous	RCOTOT

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
J.S. Sampson, Dir.	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.	J.S. Sampson	413555 1111		07	02	12
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

ATTACHMENT B

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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ADDRESS: 1111 FIRST STREET
SPRINGFIELD, MA 02345
FACILITY: EXAMPLE DMR FORM
LOCATION: 1111 FIRST STREET
SPRINGFIELD, MA 011022208
ATTN:Sally Sue Sampson, Dir. DPW

MA0101234	001T
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	07	02	01	TO	07	02	28

DMR MAILING ZIP CODE: 011022208
MINOR
(SUBRW)
WHOLE EFFLUENT TOXICITY
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
LC50 Statre 48Hr Acute Ceriodaphnia	SAMPLE MEASUREMENT	******	******		100	******	******	%	0	4/yr	CP24
TAM3B 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		100 MINIMUM	******	******	%		Four Per Year	COMP24
%Effect Statre 7Day Chronic Ceriodaphnia	SAMPLE MEASUREMENT	******	******		10	******	******	%	0	4/yr	CP24
TCP3B 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******		10 MINIMUM	******	******	%		Four Per Year	COMP24

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
S.S. Sampson, Dir.	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.	S.S. Sampson, DW	4133551111		07	03	26
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

ATTACHMENT C-1

LOADING CALCULATIONS

				BOD		BOD		BOD			TSS	TSS	TSS	TSS	
			Flow	Influent	Conv.	Influent	Effluent	Conv.	Effluent		Influent	Influent	Effluent	Effluent	
			mgd	Conc.	Factor	Loading	Conc.	Factor	Loading		Conc.	Loading	Conc.	Loading	
				mg/l		lbs/day	mg/l		lbs/day		mg/l	lbs/day	mg/l	lbs/day	
1st Week		Date													
Day Count															
2	Mon	2-Jan	0.33	192.2	8.34	529.0	40.6	8.34	111.7		185.4	510.3	34	93.6	
5	Thu	5-Jan	0.33	212	8.34	583.5	57.1	8.34	157.2						
Week Avg.										134.44					93.6
2nd Week															
9	Mon	9-Jan	0.47	186.1	8.34	729.5	46.2	8.34	181.1		163.1	639.3	33.3	130.5	
12	Thu	12-Jan	0.42	200.3	8.34	701.6	50.3	8.34	176.2						
Week Avg.										**178.6**					**130.5**
3rd Week															
16	Mon	16-Jan	0.6	206.1	8.34	1031.3	10.2	8.34	51.0		187	935.7	14.2	71.1	
19	Thu	19-Jan	0.46	183	8.34	702.1	12	8.34	46.0						
Week Avg.										48.5					71.1
4th Week															
23	Mon	23-Jan	0.52	187.2	8.34	811.8	7.1	8.34	30.8		172.5	748.1	6.5	28.2	
26	Thu	26-Jan	0.4	194.1	8.34	647.5	10.1	8.34	33.7						
Week Avg.										32.2					28.2
5th Week															
30	Mon	30-Jan	0.45	215	8.34	806.9	45.6	8.34	171.1		230	863.2	**62**	232.7	
SUM						6543.2			958.9			3696.6		556.0	
AVG.						**727.0**			**106.5**			**739.3**		**111.2**	

ATTACHMENT C-2

12-Month Rolling Average Flow Calculations

Reporting Months	Mon. Avg.	Dly. Max.
	mgd	mgd
Feb-07	0.67	0.72
Jan-07	0.44	0.64
Dec-06	0.46	0.74
Nov-06	0.52	0.75
Oct-06	0.54	0.82
Sep-06	0.74	0.93
Aug-06	0.38	0.56
Jul-06	0.39	0.55
Jun-06	0.43	0.61
May-06	0.54	0.73
Apr-06	0.63	0.86
Mar-06	0.52	0.78
Feb-06	0.43	0.78
Feb 06 thru Jan 07 - Sum	6.02	
Mar 06 thru Feb 07 - Sum	6.26	
12-month Rolling average	Jan 07 DMR	**0.50**
12-month Rolling average	Feb 07 DMR	0.52

ATTACHMENT C-3

TRC DAILY DISCHARGE CALCULATIONS

			TRC1 (mg/l)	TRC2 (mg/l)		Daily Discharge (mg/l)		Fecal (#/100 ml)
1st Week		**Date**						
Day Count								
1	Sun	1-Jan	<0.02	<0.02		0		
2	Mon	2-Jan	0.03	0.02		0.025		240
3	Tue	3-Jan	<0.02	<0.02		0		
4	Wed	4-Jan	<0.02	0.03		0.015		
5	Thu	5-Jan	<0.02	<0.02		0		1000
6	Fri	6-Jan	<0.02	<0.02		0		
7	Sat	7-Jan	0.02	0.02		0.02		
2nd Week								
8	Sun	8-Jan	<0.02	0.07		0.035		
9	Mon	9-Jan	<0.02	<0.02		0		140
10	Tue	10-Jan	<0.02	0.06		0.03		
11	Wed	11-Jan	<0.02	<0.02		0		
12	Thu	12-Jan	0.03	<0.02	<0.02	0.01		300
13	Fri	13-Jan	NR	0.03		0.03		
14	Sat	14-Jan	<0.02	<0.02		0		
3rd Week								
15	Sun	15-Jan	<0.02	<0.02		0		
16	Mon	16-Jan	<0.02	<0.02		0		0
17	Tue	17-Jan	<0.02	<0.02		0		
18	Wed	18-Jan	0.02	<0.02		0.01		
19	Thu	19-Jan	<0.02	<0.02		0		200
20	Fri	20-Jan	<0.02	<0.02		0		
21	Sat	21-Jan	<0.02	<0.02		0		
4th Week								
22	Sun	22-Jan	<0.02	<0.02		0		
23	Mon	23-Jan	<0.02	0.08		0.04		400
24	Tue	23-Jan	<0.02	0.05		0.025		
25	Wed	25-Jan	<0.02	<0.02		0		
26	Thu	26-Jan	<0.02	<0.02		0		200
27	Fri	27-Jan	<0.02	<0.02		0		
28	Sat	28-Jan	<0.02	<0.02		0		
5th Week								
29	Sun	29-Jan	0.02	0.02		0.02		
30	Mon	30-Jan	0.02	<0.02		0.01		50
31	Tue	31-Jan	0.02	<0.02		0.01		

ATTACHMENT D - UNIT CODES

KG/ DAY	KILOGRAMS PER DAY
MGD	MILLION GALLONS PER DAY
MBTU/ HR	MILLION BTU'S PER HOUR
MBTU/ DAY	MILLION BTU'S PER DAY
GPD	GALLONS PER DAY
CFS	CUBIC FEET PER SECOND
JTU	JACKSON TURBIDITY(CANDLE) UNIT
NUMBER/ML	NUMBER PER MILLILITER
BTU	BRITISH THERMAL UNITS
UG/KG	MICROGRAMS PER KILOGRAM
FIBERS/ML	FIBERS/MILLILITER
LBS / 1000GL	POUNDS / 1000 GALLONS
RATIO	RATIO
KG/ MONTH	KILOGRAMS PER MONTH
GALLON/HOUR	GALLONS PER HOUR
PT-CO	COLOR - PLATINUM COBALT UNIT
SU	STANDARD UNITS (I.E. PH)
#/100ML	NUMBER PER 100 MILLILITERS
DEG.F	DEGREES FAHRENHEIT
MG/L	MILLIGRAMS PER LITER
MGAL/ YR	MILLION GALLONS PER YEAR
PPM	PARTS PER MILLION
PPB	PARTS PER BILLION
PPT	PARTS PER TRILLION
PER-CENT	PERCENT
ML/L	MILLILITERS PER LITER
LBS/DY	POUNDS PER DAY
UG/L	MICROGRAMS PER LITER
PSI	POUNDS PER SQUARE INCH
MGAL	MILLION GALLONS
CFU/100ML	COLONY FORMING UNITS PER 100ML
MPN/100ML	MOST PROBABLE NUMBER PER 100ML
THRESHNUMBER	THRESHOLD NUMBER
PPTH	PARTS PER THOUSAND
BTU/ HOUR	BTU'S PER HOUR
BTU/ DAY	BTU'S PER DAY
GR/ DAY	GRAMS PER DAY
GR/L	GRAMS PER LITER
KG/L	KILOGRAMS PER LITER
METRICTON/YR	METRIC TONS PER YEAR
METRICTON/H	METRIC TONS PER HECTARE
MPN/GRAM	MOST PROBABLE NUMBER PER GRAM
#DISCH/MONTH	# OF DISCHARGES PER MONTH
DILUTNRATIO	DILUTION RATIO
GRAMS/GRAM	GRAMS PER GRAMS
MEQ/L	MILLIEQUIVALENTS PER LITER
MW/CM2	MILLIWATTS/SQUARE CENTIMETER
MWS/CM2	MILLIWATT-SECONDS PER SQ CENT
UWS/CM2	MICROWATT-SECONDS PER SQ CENT
LITERS/DAY	LITERS PER DAY
# OF EXCDNC	NUMBER OF EXCEEDANCES
#/100 LITERS	NUMBER PER 100 LITERS
NUMBER	NUMBER OF BATCHES
LBS/ TONP	POUNDS PER TON OF PRODUCTION
NTU	NEPHELOMETRIC TURBIDITY UNITS
MGD/ CFSSF	MGD PER CFS OF STREAMFLOW/DAY
LBS/ CFSSF	LBS PER CFS OF STREAMFLOW/DAY
DAY	DAY
MIN/ DAY	MINUTES PER DAY
MGAL/BATCH	MILLION GALLONS PER BATCH
TONS	TONS
BBTU/DAY	BILLION BTUS PER DAY
TONS/YEAR	TONS PER YEAR
MILLI-VOLTS	MILLIVOLTS
TONS/MONTH	TONS PER MONTH
COLON/GRAM	COLONIES PER GRAM

NUMBER	NUMBER
MG/MONTH	MILLIGRAMS PER MONTH
NG/KG	NANOGRAMS PER KILOGRAMS
#/DISCDAY	NUMBER OF DISCHARGES PER DAY
LB/YR	POUNDS PER YEAR
KG/YR	KILOGRAMS PER YEAR
KG/BATCH	KILOGRAMS PER BATCH
GPB	GALLONS PER BATCH
MEGA-WATTS	MEGAWATTS
POUNDS	POUNDS
KG	KILOGRAMS
GAL	GALLONS
1000 CF	1000 CUBIC FEET
LBS/WEEK	POUNDS PER WEEK
MLBS	MILLION POUNDS
MICRO-POUNDS	MICRO-POUNDS
CUBIC FT	CUBIC FEET
ULBS/DAY	MICRO POUNDS PER DAY
G/ML	GRAMS PER MILLILETER
LB/BATCH	POUNDS PER BATCH
G/ML	GRAMS PER MILLILITER
PCI/MG	PICOCURIES PER MILLIGRAM
MG/KG	MILLIGRAMS PER KILOGRAM
DRY-TONS	DRY TONS
MLBS/YR	MILLION POUNDS PER YEAR
MG/SQ-MET	MILLIGRAMS PER SQUARE METER
TOXIC UNITS	TOXICITY UNITS
UC/ML	MICROCURIES PER MILLILITER
LB/MON	POUNDS PER MONTH
MG/CUBMSF	MG/DAY PER CU METER-STREAMFLOW
GPM	GALLONS PER MINUTE
HOURS/DAY	HOURS PER DAY
HOURS	HOURS
GAL/MO	GALLONS PER MONTH
GAL/YR	GALLONS PER YEAR
MGAL/YEAR	MILLION GALLONS PER YEAR
GAL/WEEK	GALLONS PER WEEK
MGAL/QTR	MILLION GALLONS PER QUARTER
SECS	SECONDS
MGAL/MONTH	MILLION GALLONS PER MONTH
HRS/WEEK	HOURS PER WEEK
HRS/MONTH	HOURS PER MONTH
DAYS/WEEK	DAYS PER WEEK
DAYS/MONTH	DAYS PER MONTH
FT3/DAY	CUBIC FEET PER DAY
OCCUR/DAY	OCCURRENCES PER DAY
OCCUR/WEEK	OCCURRENCES PER WEEK
OCCUR/YEAR	OCCURENCES PER YEAR
PEOPLESERVED	POPULATION SERVED
OCCUR/QTR	OCCURRENCES PER QUARTER
LBS/1000GA	POUNDS PER 1000 GALLONS
OCCUR/MONTH	OCCURRENCES PER MONTH

ATTACHMENT E

No Data Indicator Code (NODI)

NODI	ICIS DESCRIPTION	VALID/INVALID Yes / no	RNC Yes / no
1	Wrong Flow	no	Yes
2	Operations Shutdown	Yes	no
4	Discharge to Lagoon	Yes	no
5	Frozen Conditions	no	Yes
9	Conditional Limit not required	Yes	no
	Low Level Production		
	Production Based Limits Don't Apply		
	DMR Received - Production Or Flow Related		
	Other		
	Not Applicable During Sludge Period		
	Not Tracked For This Period		
A	General Permit Exemption	Yes	no
C	No Discharge	Yes	no
D	Lost Sample	no	Yes
E	Analysis Not Conducted	no	Yes
F	Insufficient Flow for Sampling	no	no
G	Sampling Equipment Failure	no	Yes
H	Invalid Test	no	Yes
I	Land Applied	Yes	no
J	Recycled - Water-Closed System	Yes	no
K	Flood Disaster	no	Yes
L	DMR Received but not Entered	no	no
S	Fire Conditions	no	Yes
W	Dry Lysimeter/Well	Yes	no

VALID = no violation; INVALID = violation

Reportable Non Compliance (RNC) = Yes violation; No violation

ATTACHMENT F

TOXICITY TEST SUMMARY SHEET

Facility Name: _____ Test Start Date: _____

NPDES Permit Number: _____ Outfall Number: _____

Test Type	Test Species	Sample Type	Sample Method
___ Acute	___ Fathead Minnow	___ Prechlorinated	___ Grab
___ Chronic	___ Ceriodaphnia dubia	___ Dechlorinated	___ Composite
___ Modified	___ Daphnia Pulex	___ Unchlorinated	___ Flow-thru
(Chronic	___ Mysid Shrimp	___ Chlorinated	___ Other
Reporting	___ Sheepshead		
LC50	___ Menidia		TRC conc. ____mg/L
Values)	___ Sea Urchin		
___ 24-Hour	___ Selenastrum		
Screening	___ Other _____		

Dilution Water

____ Receiving water collected at a point immediately upstream of or away from the discharge;
(Receiving water name and sampling location: _____)

____ Alternate Surface Water of known quality and a hardness to generally reflect the characteristics of the receiving water;
(Surface water name: _____)

Synthetic water prepared using either Millipore Mill-Q or equivalent de-ionized water

____ and reagent grade chemicals; or deionized water combined with mineral water;

____ Artificial sea salts mixed with deionized water;

____ Other _____

Effluent Sampling Date(s): _____, _____, _____.

Effluent Concentrations Tested (in %): _____, _____, _____, _____, _____, _____

*(Permit Limit Concentration): _____

Was the effluent salinity adjusted? _____

If yes, to what value? _____PPT

Reference Toxicant test date: _____ Reference Toxicant Test Acceptable Y___N___

Age and Age Range of Test Organisms _____ Source of Organisms _____

ATTACHMENT F (Cont.)
TEST RESULTS & PERMIT LIMITS

Test Acceptability Criteria

A. Dilution water control
Mean Control Survival: _____ Mean Control Reproduction: _____
Mean Control Weight: _____ Mean Control % Fertilization: _____

B. Receiving Water Control
Mean Control Survival: _____ Mean Control Reproduction: _____
Mean Control Weight: _____ Mean Control % Fertilization: _____

C. Lab Culture Control Y____ N____

D. Thiosulfate Control Y_____ N_____

Test Variability

Test PMSD (growth) _____
Test PMSD (reproduction) _____

Permit Limits and Test Results

Limits:		Results:	
LC50	_____	LC50	_____
		Upper Value	_____
		Lower Value	_____
		Data Analysis	_____
		Method Used	_____
A-NOEC	_____	A-NOEC	_____
C-NOEC	_____	C-NOEC	_____
		LOEC	_____
IC25	_____	IC25	_____
IC50	_____	IC50	_____

Reported Test Results Justification, PMSD Comparison Discussion and Concentration-Response Evaluation:

_____
_____
_____
_____
_____
_____
_____

ATTACHMENT G

NPDES Whole Effluent Toxicity Testing, Monitoring and Reporting

This guidance is intended to promote compliance and enhance program efficiency and effectiveness. This is not intended to, nor does it, constitute rulemaking by EPA and may not be relied upon to create a right or a benefit, substantive or procedural, enforceable at law or in equity, by any person. This document was prepared for NPDES Permittees to: (1) clarify Whole Effluent Toxicity (WET) testing, monitoring and reporting requirements; (2) provide guidance; and (3) provide a list of EPA contacts available to answer questions.

TIPS:

1. **NPDES Permit Requirements**
   The sampling location, sample type, test frequency, test species, monitoring period, and reporting requirements are specified in Part I (and ATTACHMENTS) of the NPDES Permit. Read the NPDES Permit carefully. Permittees and analytical laboratories must adhere to Permit requirements and test protocols. The Permittee is responsible for data quality, data integrity and NPDES reporting. EPA recommends that the Permittee provide its testing laboratory with a copy of the entire NPDES Permit (i.e., Part I and ATTACHMENTS, and Part II "General Conditions") and any subsequent modifications together with any alternate dilution water authorization letters. Mistakes have been made in the past that could have been avoided if the bioassay laboratory had a copy of these documents.

2. **WET Tests Data Quality and Reporting**
   Carefully review bioassay test results and be sure that the data are valid (i.e., the minimum test requirements, test review requirements and test acceptability criteria (TAC) are met for EPA's standard and EPA-New England protocol) and are correctly reported on the DMR.

3. **WET Test Scheduling**
   Laboratories have scheduled WET tests using test organisms that are at or near the oldest acceptable age at test start. If this is done and there is a delay in sample delivery, the test organisms may be too old for use in the bioassay test when the sample arrives. This could create some scheduling difficulties or could require a contingency plan that includes a secondary emergency source of test organisms. It is suggested that Permittees ask whether laboratories have contingency plans for such situations.

GUIDANCE:

4. **WET Guidelines and Methods Manuals**

Guidelines Establishing Test Procedures for the Analysis of Pollutants; Whole Effluent Toxicity Test Methods; Final Rule (Federal Register: November 19, 2002, Volume 67, Number 223, Rules and Regulations pp. 69951-69972)

The most current methods manuals, posted at Web address www.epa.gov/waterscience/WET/, are as follows:

a. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012;
b. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002, EPA-821-R-02-013;
c. Short-Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition, October 2002, EPA-821-R-02-014; and
d. Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005.

5. **WET Monitoring and Reporting**

EPA rejects WET test reports that do not follow Permit requirements, applicable protocols, and meet all minimum criteria for acceptability and variability of test results, and requires tests to be repeated until valid results are obtained. Results, valid or otherwise, must be submitted by the date specified in Part I of the NPDES Permit even if the test has to be repeated. Therefore, EPA recommends that sampling and testing be initiated early in the monitoring period prescribed by the Permit.

If a valid WET test is not completed by the reporting deadline, the Permittee must report the invalid test using the proper code on the DMR; the code is "H." The cover letter must explain the monitoring and reporting violation and indicate when the test will be repeated. A corrected DMR must be resubmitted once valid data are available, and the entire report submitted as required by the Permit. The report shall include, among other things, bench sheets to document that there was an invalid test and that the test was repeated.

6. **Sample Dechlorination**

The total residual chlorine concentration of the discharge sample shall be measured and, if detected, the sample shall be dechlorinated in the laboratory prior to WET testing in accordance with Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005 (see also Section VI, Region I Protocol). The total residual chlorine concentration of the discharge sample

must be reported and the dechlorination method described. When the sample is dechlorinated in the laboratory, an additional thiosulfate control (with the maximum amount of thiosulfate in the lab control or the receiving water control) must also be run. This information must also be included in the report.

7. **Sample Hold Time**
   Sample hold time must be consistent with that specified by test protocol. The holding times for the initial use of original or renewal sample is less than **24 hours** for on-site tests and less than **36 hours** for off-site tests as specified in the protocols unless a waiver is obtained in writing from EPA. In isolated cases where the test cannot be started within 36 hours of sample collection, data must be submitted to EPA and the State to demonstrate that the effluent toxicity of a sample is not reduced by extending the holding time beyond 36 hours. Subsequent to initial use of the original or renewal sample, samples may be used for test renewal at 24, 48 and 72 hours.

8. **Salinity Adjustment of the Effluent Sample**
   The Region's test protocols require the use of sea salts for salinity adjustment in every case.

9. **Age of the Test Organisms**
   The protocols specify what the age of the test organism must be at test initiation. Evidence to verify test organism age must be included in each report.

10. **Raw Data and Bench Sheets**
    Raw data and bench sheets must be included in the full report.

11. **Report Integrity and DMR Accuracy**
    WET test data summary tables must be consistent with the report text, data analyses, bench sheets; and DMRs. Report integrity and DMR accuracy are crucial, and are the responsibility of the Permittee.

12. **Data Analyses**
    Flow charts in the EPA acute and chronic WET test manuals must be followed so that the correct analyses are performed. Statistical program printouts and graphical displays (e.g. NOEC and LC50 calculations, etc.) must be submitted.

13. **Chronic Ceriodaphnia dubia Survival and Reproduction Test**
    The duration of the chronic Ceriodaphnia dubia survival and reproduction test must not exceed **eight** days. The minimum acceptability criteria for each test is measured and documented for all test controls. Offspring from the fourth or higher broods must not be included with test results. (See EPA-821-R-02-013, October 2002, p. 161.)

14. **Document Ongoing Laboratory Performance**
    As part of an in-house Quality Assurance program, each laboratory must perform reference toxicant tests on the test organisms it uses and must analyze the data

for the reported test endpoints. Reference toxicant testing must be performed monthly, or concurrently depending on test frequency, for each test endpoint, in accordance with the EPA Methods Manual. Reference toxicity tests are to be performed and interpreted according to the referenced EPA Method Manuals. (See EPA-821-R-02-013, Section 4.16.1, p. 15.) Reference toxicity test results and applicable control charts must be included in every report.

In the case where a reference toxicity test is performed concurrently with an effluent or receiving water test and the reference toxicity test results fall slightly outside the control limits established by the laboratory for the test endpoint and the primary test meets the test acceptability criteria, the primary test will be considered "conditionally" acceptable. However, if the results of a concurrently run reference toxicity test fall well outside the established upper control limits, the primary test will be considered unacceptable and must be repeated immediately. (See EPA-821-R-02-013, Section 4.16).

15. **Sampling Methods, Holding Times, and Preservation Techniques**
All sampling methods, holding times and preservation techniques must be consistent with 40 C.F.R. Parts 122 and 136. Note that EPA-approved test methods require that samples collected for metals analyses be preserved immediately after collection.

16. **Dilution Water**
The objective of the WET test is to estimate the toxicity of the effluent in uncontaminated receiving water. Ideally, a grab sample of receiving water must be collected immediately upstream and outside of the influence of the outfall for use as dilution water in the tests.

17. **Alternate Dilution Water**
EPA-New England has adopted a **species-specific, self-implementing policy** for switching to alternate dilution water use in WET tests where the receiving water is documented to be toxic or unreliable. The policy authorizes alternate dilution water use in the following two cases:
(1) when a WET test is repeated due to site water toxicity; and
(2) in future WET tests where there are two recent documented incidents of site water toxicity associated with a particular test species. The details of EPA-New England's species-specific, self-implementing policy is provided below.

Case (1): EPA-New England authorizes the use of an alternate dilution water for any WET test repeated due to site water toxicity. Additionally:

- The test must be repeated during the monitoring period specified by the Permit.
- The selected alternate dilution water must have characteristics such as hardness similar to those of the receiving water, and not produce a toxic response.
- A receiving water control must be run in alternate dilution water tests.
- A complete WET test report must be submitted as required by the Permit.

- If the retest documents that the receiving water controls met the TAC, receiving water must be used as diluent in future WET tests.
- If the receiving water controls of the retest failed to meet the TAC, an alternate dilution water may be used in future WET tests using that test organism only after the Permittee submits a written request to EPA and receives written authorization from EPA. (See Case (2) below.)

Case (2): Before an alternate dilution water is used in future WET tests, the Permittee must submit a notification letter to EPA of species-specific, site water toxicity. The notification letter shall be sent to the following EPA addresses:

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

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Boston, MA 02114-2023

The letter must include:

1. WET data documenting the two recent incidents of site water toxicity to a test species;
2. Information on the alternate dilution water selected for future WET tests including hardness data and a comparison to the receiving water chemistry; and
3. A list of the controls (e.g., site water control, alternate dilution water control, laboratory culture water control, thiosulfate control) that will be run in future WET tests.

Then, EPA-New England will respond in writing to authorize or to deny the use of alternate dilution water in future WET tests. When EPA-New England authorizes the use of an alternate dilution water in future WET tests, it is for the duration of the life of the Permit. At a minimum, EPA will review alternate dilution water authorizations during Permit reissuance.

EPA reserves the right to revoke this guidance at any time and may immediately require the Permittee to use site water as diluent as EPA deems necessary. Such a determination will be provided in writing to the Permittee.

18. **Site Water Controls in Alternate Dilution Water Tests**
Alternate dilution water WET tests shall be run with a minimum of two controls; a site water control and a toxic free alternate dilution water control. Additional controls such as a laboratory culture control or a thiosulfate control must also be run, if necessary. Chemical data of the receiving water and dilution water samples must be included in the report.

19. **Use of Control Data**
When performing statistical analyses, the dilution water control, whether synthetic alternate dilution water or receiving water, must be used for data comparison.

In alternate dilution water tests, the receiving water control results are "report only" data.

If an alternate dilution water control, the thiosulfate control or the lab culture water control fail to meet the minimum TAC, the toxicity test must be repeated using a fresh sample.

20. **Test Results Review**
Toxicity test controls must meet the minimum test acceptability criteria. Additionally, WET test results are reviewed as follows:

a. Concentration-Response Relationship
The WET data concentration-response relationship is reviewed, and Hypothesis Testing and Point Estimate techniques are used to determine test endpoints. A dose-response review must be performed according to Section 10.2.6 of EPA-821-R-02-013 (for freshwater tests) or Section 10.2.6. of EPA-821-R-02-014 (for marine tests) to support the reported test endpoint values and to evaluate the reliability of the WET test results. In most cases, the review will draw in one of the following three conclusions: (1) Results are reliable and reportable; (2) Results are anomalous and require explanation; or (3) Results are inconclusive and a retest with a fresh sample is required.

b. Test Variability
The within-test variability must be evaluated to determine test sensitivity which is a required part of the chronic WET test review. This review is only applicable to the sub-lethal test endpoints such as growth and reproduction that were determined using hypothesis testing. The test sensitivity evaluation is done by examining the calculated Percent Minimum Significant Difference (PMSD).

The PMSD is calculated for test endpoints which was determined using parametric statistical analysis techniques. For cases where a NOEC was determined using non-parametric technique, the PMSD is only calculated to determine test variability and is calculated using a comparable,

parametric statistical analysis technique. As a final step in the evaluation, the calculated PMSD is compared to the upper and lower PMSD bounds shown for freshwater tests in Table 6 of EPA-821-R-02-013, Section 10.2.8.3, p. 52, and for marine tests in Table 6 of EPA-821-R-02-014, Section 10.2.8.3., p. 54.

1.) If the PMSD exceeds the upper bound test variability criterion of Table 6, the test results are considered too highly variable to determine the WET of the discharge at the permitted receiving water concentration (RWC). If the test results indicate that the discharge is not toxic at the RWC, then the test is considered insufficiently sensitive and must be repeated using fresh samples. If the test results indicate that the discharge is toxic at the RWC, the results are considered acceptable and the test does not have to be repeated.

2.) If the PMSD falls below the lower bound test variability criterion of Table 6, the test is highly sensitive, and the percent relative difference (PRD) between the control and each concentration must be calculated and compared to the lower PMSD boundary. If the PRD for the concentration falls below the lower bound, the difference is considered statistically insignificant. If the PRD for the concentration is above the lower bound, then the concentration is considered statistically significant. (See Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program, EPA 833-R-00-003, June 2002, Section 6.4.2.)

3.) When PMSDs fall within the upper and lower bounds of Table 6, the sub-lethal test endpoint determinations shall be reported.

21. **Sign and Certify Each WET Report**

Under 40 C.F.R. §122.41(k), each WET test report submitted to the EPA shall be signed and certified by a person described below or by a duly authorized representative of that person in accordance with 40 C.F.R. §122.22(b)-(d):

(1) for a corporation, by a responsible corporate officer;
(2) for a partnership or sole proprietorship, by a general partner or the proprietor, respectively; and
(3) for a municipality, State, Federal or other public agency, the principal executive officer or ranking elected official.

The Permittee is responsible for the data quality that it reports to EPA. When a report is signed and certified, it documents that the NPDES Permittee is certain that the WET test data submitted meet the Permit requirements for testing and reporting. Please include the following certification statement of 40 C.F.R. §122.22(d) in every report:

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION (Permittee)

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 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.

Executed on _____ _____
[Date] [Authorized Signature]

_____
[Print or Type Name and Title]

_____
[Print or Type the Permittee's Name]

_____
[Print or Type the NPDES Permit No.]

Since the WET test and report check is complicated, you may wish to have your WET laboratory certify the validity of the WET test data and report accuracy to you. Suggested language is given below. Please note that this does not relieve the Permittee from its responsibility to sign and certify the report under 40 C.F.R. §122.41(k).

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION (Bioassay Laboratory)

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 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.

Executed on _____ _____
[Date] [Authorized Signature]

_____
[Print or Type Name and Title]

_____
[Print or Type Name of Bioassay Laboratory]

22. **Telephone Contacts**
If you have questions, please contact Joy Hilton, Water Technical Unit, at (617) 918-1877 or David McDonald, Ecosystem Assessment Unit, at (617) 918-8609.

ATTACHMENT H

BYPASS OR SEWER OVERFLOW REPORT

DATE OF REPORT: _____ TIME: _____

DATE OF INCIDENT: _____ TIME: _____

NAME OF SYSTEM: _____

FACILITY NAME: _____

NPDES PERMIT No: _____

NAME and TITLE of PERSON REPORTING INCIDENT: _____

_____

TELEPHONE No: _____ ext: _____

LOCATION OF OVERFLOW: _____

_____

RECEIVING WATER: _____

INCIDENT DURATION: FROM (date) _____ TIME: _____

TO: (date) _____ TIME: _____

ESTIMATED TOTAL FLOW: _____

TREATMENT PROVIDED: _____

_____

CAUSE OF INCIDENT: _____

_____

_____

MITIGATION MEASURES TAKEN: _____

_____

ADDITIONAL INFORMATION / COMMENTS: _____

_____

AGENCY / PERSON REPORTED TO:

US EPA: _____

STATE: _____

LAST PAGE OF **FINAL: MARCH 2007**

LAST PAGE - END OF 2007 Instructions