

**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. Section 1251 et seq.; the "CWA"),

**The Town of Derry, New Hampshire**

is authorized to discharge from the wastewater treatment plant located at

**50 Transfer Lane  
Derry, New Hampshire 03038**

to receiving water named

**Merrimack River**

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

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

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

This permit supersedes the permit issued on August 11, 2004.

This permit consists of 17 pages in Part I including effluent limitations and monitoring requirements, Part II including General Conditions and Definitions, Attachment A (Toxicity Protocol), Attachment B (Pretreatment Annual Report), Attachment C (Reassessment of Industrial Discharge Limits) and Attachment D (Summary of Report Submittals).

Signed this 28<sup>th</sup> day of December, 2010

**/S/SIGNATURE ON FILE**

---

Director  
Office of Ecosystem Protection  
Environmental Protection Agency  
Boston, MA

**PART I**

A.1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from outfall serial number **001** to the Merrimack River. Such discharges shall be limited and monitored as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

EFFLUENT CHARACTERISTIC		DISCHARGE LIMITATION		MONITORING REQUIREMENT	
PARAMETER	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE
FLOW <sup>2</sup>	Report MGD	*****	Report MGD	CONTINUOUS	RECORDER
CBOD <sub>5</sub> <sup>3</sup>	25 mg/l 853 lbs/Day	40 mg/l 1365 lbs/Day	45 mg/l 1536 lbs/Day	1/WEEK	GRAB
TSS <sup>3</sup>	30 mg/l 1024 lbs/Day	45 mg/l 1536 lbs/Day	50 mg/l 1707 lbs/Day	1/WEEK	GRAB
pH RANGE <sup>1</sup>	6.5 - 8.0 SU (Also see Section F.2 and H.1.d)			1/DAY	GRAB
TOTAL CHLORINE RESIDUAL <sup>5</sup>	1.0 mg/l	*****	1.0 mg/l	1/DAY	GRAB
ESCHERICHIA COLI <sup>4</sup>	126 cfu/100 ml	*****	406 cfu/100 ml	3/WEEK	GRAB
TOTAL PHOSPHORUS	*****	*****	Report mg/l	1/MONTH	GRAB
TOTAL REC. ARSENIC <sup>11</sup>	Report ug/l	*****	Report ug/l	2/MONTH	GRAB
WHOLE EFFLUENT TOXICITY <sup>6, 7, 8, 9, 10</sup>	Acute LC <sub>50</sub> ≥ 100%			2/YEAR	GRAB

**Part I.A.1. (Continued)**

EFFLUENT CHARACTERISTIC		DISCHARGE LIMITATION			MONITORING REQUIREMENT	
PARAMETER		AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE
HARDNESS <sup>10</sup>		*****	*****	Report mg/l	2/YEAR	GRAB
AMMONIA NITROGEN AS NITROGEN <sup>10</sup>		*****	*****	Report mg/l	2/YEAR	GRAB
TOTAL RECOVERABLE ALUMINUM <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB
TOTAL RECOVERABLE CADMIUM <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB
TOTAL RECOVERABLE CHROMIUM <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB
TOTAL RECOVERABLE COPPER <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB
TOTAL RECOVERABLE NICKEL <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB
TOTAL RECOVERABLE LEAD <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB
TOTAL RECOVERABLE ZINC <sup>10</sup>		*****	*****	Report ug/l	2/YEAR	GRAB

See pages 4 and 5 for footnotes.



Footnotes:

1. Required for State Certification.
2. The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.
3. To monitor for compliance with the "85 percent removal" requirement for CBOD and TSS found in Part I.A.4 of this permit, the influent CBOD and TSS concentrations shall be monitored twice per month and the results reported as average monthly values.
4. The monthly average limit for *Escherichia coli* is expressed as a geometric mean. *Escherichia coli* monitoring shall be conducted concurrently with total residual chlorine monitoring.
5. Total residual chlorine shall be measured using any one of the methods listed in 40 Code of Federal Regulations (CFR) Part 136.
6. The permittee shall conduct 48-hour static acute toxicity tests on effluent samples following the protocol in **Attachment A** (dated December 1995). The two species for these tests are the Daphnids (*Ceriodaphnia dubia*) and the Fathead Minnow (*Pimephales promelas*). Toxicity test samples shall be collected and tests completed twice per year during the calendar quarters ending March 31<sup>st</sup> and September 30<sup>th</sup>. Toxicity test results are to be postmarked by the end of the month following the end of the quarter sampled. (See Section F 1. for procedures for obtaining a reduction of whole effluent toxicity testing.)
7. The LC<sub>50</sub> 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.
8. This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits such as for metals, if the results of the toxicity tests indicate the discharge causes an exceedance of any state water quality criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 CFR Section 122.62(a)(2).
9. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A** (Toxicity Test Procedure and Protocol) Section IV, DILUTION WATER in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the *Self-Implementing Alternative Dilution Water Guidance* which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species

for use with that water. This guidance is found in Attachment G of *NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs)* which may be found on the EPA, Region I web site at

<http://www.epa.gov/Region1/enforcementandassistance/dmr.html>. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittee 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**.

10. For each Whole Effluent Toxicity test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the concentrations of the Hardness, Ammonia Nitrogen as Nitrogen, Total Recoverable Cadmium, Chromium, Copper, Lead, Aluminum, Nickel and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the Minimum Quantification Level shown in **Attachment A** on page A-7, or as amended. Also the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report.
11. For purposes of analysis and reporting, the permittee shall use the minimum quantification level (ML). In general, the ML is defined as "the level at which the entire analytical system shall give recognizable signal and acceptable calibration points." Specifically, it is defined as the concentration in a sample equivalent to the concentration of the lowest calibration standard analyzed in a specific analytical procedure assuming that all the method-specific sample weights, volumes, and processing steps have been followed. These ML values may be reduced by permit modification as more sensitive test methods are approved by EPA-New England. The permittee must conduct analyses in accordance with the method specified below and must utilize the specified standard equivalent to the concentration of the ML specified below:

Parameter	Analytical Method	ML (ug/l)
Arsenic	Method 200.9 (GFAA)	2.0

Any value below the ML shall be reported as zero until written notice is received by certified mail from EPA-New England indicating some value other than zero is to be reported for specified ML (i.e., between zero and the ML).

#### **A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

2. The discharge shall not cause a violation of the water quality standards of the receiving water.
3. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits,



float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

4. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both CBOD<sub>5</sub> and TSS. The percent removal shall be calculated using the average monthly influent concentration and average monthly effluent concentration.
5. When the effluent discharge, for a period of 3 consecutive months, exceeds 80 percent of the 4.09 MGD design flow (3.27 MGD), the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.
6. All POTWs must provide adequate notice to both EPA-New England and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) of the following:
  - a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category (see 40 CFR Section 122 Appendix A as amended) discharging process water; and
  - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - c. For purposes of this paragraph, adequate notice shall include information on:
    - (1) the quantity and quality of effluent introduced into the facility; and
    - (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the facility.
7. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.
8. Limitations for Industrial Users:
  - a. Pollutants introduced into POTW's by a non-domestic source (user) shall not Pass Through the POTW or Interfere with the operation or performance of the works.

The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond. Within 90 days of the effective date of this permit, the permittee shall prepare and submit a written technical evaluation to the EPA analyzing the need to revise local limits. As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, biological process inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee shall complete and submit the attached form (**Attachment C**) with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by EPA and submit the revisions to EPA for approval. The Permittee shall carry out the local limits revisions in accordance with EPA's Local Limits Development Guidance (June 2004).

## **B. INDUSTRIAL PRETREATMENT PROGRAM CONDITIONS**

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 that 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-New England and the NHDES-WD 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 40 CFR 403.12(i). The annual report shall be consistent with the format described in **Attachment B** of this permit and shall be submitted no later than **November 1st** of each year.
3. The permittee must obtain approval from EPA-New England 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-New England, 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) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The permittee will implement these proposed changes pending EPA-New England's approval under 40 CFR 403.18.

### C. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal & 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 (Env-Wq 800) 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 that place sludge within a municipal solid waste landfill (MSWLF). 40 CFR Part 503 relies on 40 CFR Part 258 criteria, which regulates landfill disposal, for sewage sludge disposed of in a MSWLF. 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 (lagoon, reed beds), or are otherwise excluded under 40 CFR Part 503.6.

5. The 40 CFR Part 503 requirements including the following elements:

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

Which of the 40 CFR Part 503 requirements apply to the permittee will depend upon the use or disposal practice followed and upon the quality of material produced by a facility. The EPA Region 1 Guidance document, "EPA Region 1 - NPDES Permit Sludge Compliance Guidance" (November 4, 1999), may be used by the permittee to assist it in determining the applicable requirements. This guidance document is available upon request from EPA Region 1 and may also be found at:

<http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf>

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

less than 290	1/Year
290 to less than 1,500	1/Quarter
1,500 to less than 15,000	6/Year
15,000 plus	1/Month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR Part 503.8.

8. The permittee shall submit an annual report containing the information specified in the Sludge Compliance Guidance document. Reports are **due annually by February 19<sup>th</sup>**. Reports shall be submitted to both addresses (EPA-New England and NHDES-WD) contained in the reporting section of the permit.

#### **D. UNAUTHORIZED DISCHARGES**

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs), are not authorized by this permit and shall be reported to EPA and NHDES 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 sewer system shall be in compliance with the General Requirements of Part II of this permit and the following terms and conditions. The permittee is required to complete the following activities for the collection system which it owns:

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. This requirement shall be described in the Collection System O & M Plan required pursuant to Section E.5. below.

2. Preventative Maintenance Program

The permittee shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges. Unauthorized discharge, and preventive maintenance and monitoring program requirements are also applicable to the effluent pipeline. This requirement shall be described in the Collection System O & M Plan required pursuant to Section E.5. below.

3. Infiltration/Inflow

The permittee shall control infiltration and inflow (I/I) into the sewer system as necessary to prevent high flow related unauthorized discharges from its collection system and high flow related violations of the wastewater treatment plant's effluent limitations. Plans and programs to control I/I shall be described in the Collection System O & M Plan required pursuant to Section E.5. below.

4. Collection System Mapping

**Within 30 months of the effective date of the permit (see page 1 of this permit for the effective date),** the permittee shall prepare a map of the sewer collection system it owns. The map shall be on a street map of the community, with sufficient detail and



at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up to date and available for review by federal, state, or local agencies. Such map(s) shall include, but not be limited to the following:

- a. All sanitary sewer lines and related manholes;
- b. All combined sewer lines, related manholes, and catch basins;
- c. All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain system (e.g. combined manholes);
- d. All outfalls, including the treatment plant outfall(s), CSOs, combined manholes, and any known or suspected SSOs;
- e. All pump stations and force mains;
- f. The wastewater treatment facility(ies);
- g. All surface waters (labeled);
- h. Other major appurtenances such as inverted siphons and air release valves;
- i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
- j. The scale and a north arrow; and
- k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

5. Collection System Operation and Maintenance (O & M) Plan

The permittee shall develop and implement a collection system operation and maintenance plan as follows:

- a. **Within six (6) months of the effective date of the permit**, the permittee shall submit to EPA and NHDES:
  1. A description of the collection system management goals, staffing, information management, and legal authorities; and
  2. A description of the overall condition of the collection system including a list of recent studies and construction activities; and
  3. A schedule for the development and implementation of the full Collection System O & M Plan including the elements in paragraphs b.1. through b.7. below.
- b. The full Collection System O & M Plan shall be submitted and implemented to EPA and NHDES **within twenty four (24) months from the effective date of this permit**. The plan shall include:
  1. The required submittal from paragraph 5.a. above, updated to reflect current information;

2. A preventative maintenance and monitoring program for the collection system;
3. Sufficient staffing to properly operate and maintain the sanitary sewer collection system;
4. Sufficient funding and the source(s) of funding for implementing the plan;
5. Identification of known and suspected overflows and back-ups, including combined manholes. A description of the cause of the identified overflows and back-ups consistent with the requirements of the permit;
6. A description of the permittee's programs for preventing I/I related effluent violations and all unauthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts; and
7. An educational public outreach program for all aspects of I/I control, particularly private inflow.

6. Annual Reporting Requirement

The permittee shall submit a summary report of activities related to the implementation of its Collection System O & M Plan during the previous calendar year. The report shall be submitted to EPA and NHDES **annually by March 31**. The first annual report is due the first March 31<sup>st</sup> following submittal of the collection system O&M Plan required by Part I.E.5.b of this permit. The summary report shall, at a minimum, include:

- a. A description of the staffing levels maintained during the year.
- b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year.
- d. A map with areas identified for investigation/action in the coming year.
- e. If treatment plant flow has reached 80% of the 4.09 mgd design flow (3.27 mgd) or there have been capacity related overflows, submit a calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year.
- f. A summary of unauthorized discharges during the past year and their causes and a report of any corrective actions taken as a result of the unauthorized discharges reported pursuant to the Unauthorized Discharges section of this permit.

**F. SPECIAL CONDITIONS**

1. WET Test Frequency Adjustment

The permittee may submit a written request to the EPA-New England requesting a



reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of the most recent four (4) successive toxicity tests of effluent, all of which must be valid tests and demonstrate compliance with the permit limits for whole effluent toxicity. Until written notice is received by certified mail from the EPA-New England indicating that the WET testing requirement has been changed, the permittee is required to continue testing at the frequency specified in the permit.

2. pH Limit Adjustment

The permittee may submit a written request to the EPA-New England requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 CFR Part 133) for this facility. The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA-New England indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the permit.

3. Notification Requirements to Public and Private Water Systems Drawing Water From the Merrimack River in the Event of a Bypass or Upset at the Treatment Works

The notification requirement shown below in italics was taken verbatim from the New Hampshire Statutes RSA Title 50 Chapter 485-A:13,I.(c) and interpreted as described below.

*"Any person responsible for a bypass or upset at a wastewater facility shall give immediate notice of the bypass or upset to all public or privately owned water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge. The permittee shall maintain a list of persons, and their telephone numbers, who are to be notified immediately by telephone. In addition, written notification, which shall be postmarked within 3 days of the bypass or upset, shall be sent to such persons."*

*Wastewater facility* is defined at RSA 485-A:2XIX as the structures, equipment, and processes required to collect, convey, and treat domestic and industrial wastes, and dispose of the effluent and sludge.

For the purpose of this permit, EPA-New England is interpreting the italicized phrase "*water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge*" to mean "located within 20 river miles downstream of the point of discharge regardless of whether or not it is on the same receiving water or on

the stream to which the receiving water discharges” which for Derry’s POTW means any intake structure on the Merrimack River downstream of the POTW’s discharge.

## **G. MONITORING AND REPORTING**

**For a period of one year from the effective date of the permit**, the permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting all DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

### **1. Submittal of Reports Using NetDMR**

NetDMR is accessed from: <http://www.epa.gov/netdmr>. Within one year of the effective date of the Permit, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports (“opt out request”).

DMRs shall be submitted electronically to EPA no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA, including the NHDES Monthly Operations Reports, as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and NHDES.

### **2. Submittal of NetDMR Opt Out Requests**

Opt out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under the Permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt out request and such request is approved by EPA. All opt out requests should be sent to the following addresses:

**Attn: NetDMR Coordinator**

**U.S. Environmental Protection Agency, Water Technical Unit  
5 Post Office Square, Suite 100 (OES04-4)  
Boston, MA 02109-3912**



And

**Attn: Tracy L. Wood, P.E.**

**New Hampshire Department of Environmental Services**

**Water Division**

**Wastewater Engineering Bureau**

**29 Hazen Drive, P.O. Box 95**

**Concord, New Hampshire 03302-0095**

3. Submittal of Reports in Hard Copy Form

Hard copy DMR submittals shall be completed and postmarked no later than the 15<sup>th</sup> day of the month following the completed reporting period. NHDES Monthly Operations Reports shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports required herein, shall be submitted to the appropriate State addresses and to the EPA address listed below:

**U.S. Environmental Protection Agency**

**Water Technical Unit**

**5 Post Office Square, Suite 100 (OES04-SMR)**

**Boston, MA 02109-3912**

The State Agency address is:

**New Hampshire Department of Environmental Services**

**Water Division**

**Wastewater Engineering Bureau**

**29 Hazen Drive, P.O. Box 95**

**Concord, New Hampshire 03302-0095**

Signed and dated Industrial Pretreatment Program Reports should be sent to:

**U.S. Environmental Protection Agency**

**Office of Ecosystem Protection**

**5 Post Office Square, Suite 100 (OEP06-03)**

**Boston, MA 02109-3912**

**Attn: Justine Pimpare**

**H. STATE PERMIT CONDITIONS**

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

- a. The permittee shall not at any time, either alone or in conjunction with any person

or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).

- b. This NPDES discharge permit is issued by EPA under federal and state law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a state permit pursuant to RSA 485-A:13
- c. EPA shall have the right to enforce the terms and conditions of this permit pursuant to federal law and NHDES-WD shall have the right to enforce the permit pursuant to state law, if the permit is adopted. 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 the permit as issued by the other agency.
- d. The pH range of 6.0 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR §133.102(c).
- e. Pursuant to New Hampshire Code of Administrative Rules, Env-Wq 703.07(a):
  - 1. Any person proposing to construct or modify any of the following shall submit an application for a sewer connection permit to the department:
    - (a) Any extension of a collector or interceptor, whether public or private, regardless of flow;
    - (b) Any wastewater connection or other discharge in excess of 5,000 gpd;
    - (c) Any wastewater connection or other discharge to a WWTP operating in excess of 80 percent design flow capacity based on actual average flow for 3 consecutive months;
    - (d) Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity; and



- (e) Any sewage pumping station greater than 50 gpm or serving more than one building.
- f. For each new or increased discharge of industrial waste to the POTW, the permittee shall submit, in accordance with Env-Ws 904.14(e) an "Industrial Wastewater Discharge Request Application" approved by the permittee in accordance with 904.13(a). The "Industrial Wastewater Discharge Request Application" shall be prepared in accordance with Env-Ws 904.10.
- g. Pursuant to Env-Ws 904.17, at a frequency no less than every five years, the permittee shall submit to NHDES:
1. A copy of its current sewer use ordinance. The sewer use ordinance shall include local limits pursuant to Env-Ws 904.04 (a).
  2. A current list of all significant indirect dischargers to the POTW. At a minimum, the list shall include for each significant indirect discharger, its name and address, the name and daytime telephone number of a contact person, products manufactured, industrial processes used, existing pretreatment processes, and discharge permit status.
  3. A list of all permitted indirect dischargers; and
  4. A certification that the municipality is strictly enforcing its sewer use ordinance and all discharge permits it has issued.
- h. In addition to submitting DMRs, monitoring results shall also be summarized for each calendar month and reported on separate Monthly Operating Report Form(s) (MORs) postmarked or submitted electronically using NetDMR no later than the 15<sup>th</sup> day of the month following the completed reporting period. Signed and dated MORs, which are not submitted electronically using NetDMR shall be submitted to:

New Hampshire Department of Environmental Services (NHDES)

Water Division

Wastewater Engineering Bureau

29 Hazen Drive, P.O. Box 95

Concord, New Hampshire 03302-0095

**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 CFR §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 CFR §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 Derry's Wastewater Treatment Facility 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.

**B-1**

At a minimum, annual sampling and analysis of the influent and effluent of Derry's



Wastewater Treatment Plant shall be conducted for the following pollutants:

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

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 Derry's Wastewater Treatment Facility is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

## **Permit Attachment C**

### **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), for each pollutant the Maximum Allowable Headwork Loading (MAHL) values derived from an applicable environmental criteria or standard, e.g. water quality, sludge, NPDES, inhibition, etc. 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.  
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)		
Dilution Ratio or 7Q10 (from NPDES Permit)		
SIU Flow (MGD)		
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		Column (2)	Criteria
	Maximum (lb/day)	Average (lb/day)	MAIHL Values (lb/day)	
Arsenic				
Cadmium				
Chromium				
Copper				
Cyanide				
Lead				
Mercury				
Nickel				
Silver				
Zinc				
Other (List)				



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

\*Hardness Dependent (mg/l - CaCO<sub>3</sub>)

**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.

[illegible]

### ITEM VIII.

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

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



## Attachment D

### Summary of Required Report Submittals\*

Required Report	Date Due	Submitted By:	Submitted To: (see next page for key)
Discharge Monitoring Report (DMR)	Monthly, postmarked or submitted electronically by the 15 <sup>th</sup> of the month following the monitoring month (e.g. the March DMR is due by April 15 <sup>th</sup> ).	Town of Derry	1, 2
Whole Effluent Toxicity (WET) Test Report (Part I.A.1.)	June 30 and December 31 of each year	Town of Derry	1, 2
Pretreatment Technical Evaluation (Part I.A.8.b.)	Within 90 days of permit effective date	Town of Derry	
Pretreatment Annual Report (Part I.B.2.)	November 1 <sup>st</sup> of each year	Town of Derry	1,2,3
Collection System Map (Part I.E.4)	Within 30 months of permit effective date	Town of Derry	1,2
Collection System O/M Plan (6 month submittal) (Part I.E.5.a)	Within 6 months of permit effective date	Town of Derry	1,2
Collection System O/M Plan (full submittal) (Part I.E.5.a)	Within 24 months of permit effective date	Town of Derry	1,2
Annual Sludge Report (Part I.C.8.)	February 19 each year	Town of Derry	1,2

\*This Table is a summary of reports required to be submitted under this NPDES permit as an aid to the permittee. If there are any discrepancies between the permit and this summary, the permittee shall follow the permit requirements.

\*\*The addresses are for the submittal of hard copies. When the permittee begins reporting using NetDMR, submittal of hard copies of many of the required reports will not be necessary. See permit conditions for details.

1. Environmental Protection Agency  
Water Technical Unit  
5 Post Office Square, Suite 100 (OES04-4)  
Boston, Massachusetts 02109-3912
2. NH Department of Environmental Services  
Water Division  
Wastewater Engineering Bureau  
6 Hazen Drive  
Concord, NH 03302
3. EPA New England  
Attn: Justin Pimpare  
5 Post Office Square, Suite 100 (OEP6-3)  
Boston, Massachusetts 02109-3912

RESPONSE TO PUBLIC COMMENTS FOR  
DRAFT NPDES PERMIT NH0100056  
TOWN OF DERRY  
DERRY WASTEWATER TREATMENT FACILITY  
50 TRANSFER LANE  
DERRY, NH 03038

On August 31, 2010, the U.S. Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services (NHDES) released a draft National Pollutant Discharge Elimination System (NPDES) permit for the Derry wastewater treatment facility for public notice and comment. The public comment period for this draft permit ended on September 29, 2010. Comments are reproduced below as received and have not been edited.

The following comments were received from the **New Hampshire Department of Environmental Services (NHDES)**:

**Comment 1**

Effluent Sample Type

The Derry facility is a lagoon system, and in accordance with the joint EPA/NHDES effluent monitoring guidance, the effluent sample type required in Part I.A.1. of the permit should be a grab sample not a composite sample.

**Response**

EPA agrees that grab samples are adequate for characterizing the effluent from lagoon systems because the lengthy hydraulic residence time equalizes effluent flow and pollutant characteristics. This change is consistent with the **EPA/NHDES-WD Effluent Monitoring Guidance**. The permit has been changed accordingly.

**Comment 2**

Total Residual Chlorine

Footnote 6 in Part I.A.1 of the permit appears to be incorrect. The Derry average monthly and maximum daily chlorine limits are 1 mg/l, and therefore footnote 6 should be replaced in its entirety with the following:

*“Total Residual Chlorine shall be measured using any one of the following three methods listed in 40 Code of Federal Regulations (CFR) Part 136:*

- a. Amperometric direct.*
- b. DPD–FAS.*
- c. Spectrophotometric, DPD.”*



## **Response**

EPA agrees that there is no reason to require use of TRC methods having a minimum quantification level (ML) of 20 ug/l given that the effluent limit for the facility is 1 mg/l. Since any of the TRC methods included in 40 CFR Part 136 achieve an ML of 1 mg/l, the language in footnote 5 (formerly footnote 6) in Part I.A.1 of the permit has been changed to allow testing using any TRC method approved under 40 Part 136.

## **Comment 3**

### **Monitoring and Reporting**

All instances of “Monthly Operations and Maintenance Reports” in Part I.G of the permit should be changed to “Monthly Operations Reports”.

## **Response**

EPA agrees, and Part I.G of the permit has been changed accordingly.

The following comments were received from the **Merrimack River Watershed Council (MRWC)**:

## **Comment 1**

### **Limit Total Phosphorus Discharge**

“The draft Permit for the Derry Wastewater Treatment Plant (WWTP) does not contain effluent limits for total phosphorus (TP). The reasoning for this is explained in the accompanying Fact Sheet based on measured phosphorus levels in the effluent, ambient phosphorus levels in the Merrimack River and the calculated 7Q10 dilution factor. However, while the data provided in the Fact Sheet includes minimum, maximum and average values for measured effluent TP, it does not include the actual phosphorus data over time. Thus, it is impossible to determine if there is any increasing trend in effluent phosphorus levels over time. In addition, data listed in the Fact Sheet for ambient phosphorus levels in the receiving waters do include actual measurements over time, but the most recent data is three years old, and the values suggest that phosphorus levels in the river may be increasing to levels above the Gold Book- recommended total phosphorus criteria of 0.1 mg/l, and especially the Ecoregion value of 0.024 mg/l.”

“MRWC feels that while this reasoning for not limiting phosphorus levels in the Derry WWTP effluent might be reasonable with more recent receiving water data and with evidence that phosphorus levels in the effluent are not increasing, it is insufficient given the evidence provided. MRWC requests that either phosphorus limits be included in the permit or that more recent and detailed data be used to justify their being left out. If

phosphorus limits are included, we suggest a daily maximum of 5.5 mg/l to avoid backsliding.”

### **Response**

The following recent data were obtained from the NHDES Ambient River Monitoring Program (ARMP) Data Base:

Date	Station	Total Phosphorus (mg/l)
------	---------	-------------------------

Station 08 MER, located 3 miles upstream of WWTF

06/21/2007	08MER	0.03
07/2007	08 MER	0.034
08/23/2007	08MER	0.023
06/19/2008	08MER	0.079
07/2008	08 MER	0.031
08/25/08	08MER	0.038
06/2009	08 MER	0.036
07/2009	08 MER	0.032
08/2009	08 MER	0.032
06/2010	08 MER	0.033

Station 01 MER, located 17 miles downstream of WWTF

06/21/2007	01MER	0.048
07/19/2007	01MER	0.063
08/23/2007	01MER	0.091
10/2007	01 MER	0.12
06/2008	01 MER	0.064
07/17/2008	01MER	0.067
08/25/2008	01 MER	0.037
06/2009	01 MER	0.051
07/2009	01 MER	0.035
06/2010	01 MER	0.057

No data after the 10/2007 data presented in the fact sheet are available for Station 03 MER, which is located 10 miles downstream of the WWTF.

The following phosphorus effluent data are provided from the discharge monitoring reports (DMRs):

Date	Total Phosphorus (mg/l)
------	-------------------------

03/31/2008	4.67
------------	------

06/30/2008	3.18
09/30/2008	5.70
12/31/2008	5.28
03/31/2009	6.90
06/30/2009	10.00
09/30/2009	11.20
12/31/2009	6.4
03/31/2010	4.97
06/30/2010	6.1
09/30/2010	3.1

A review of the above data indicates that the concentration of total phosphorus in the river upstream and downstream of the WWTF has not changed significantly over time, and that the concentration of total phosphorus in the effluent has not changed significantly over time with the exception of two high values during June and September of 2009. However, the trend in the effluent measurements is downward again during the end of 2009 and beginning of 2010.

Accordingly, no limit has been included in the final permit. EPA and NHDES will continue to monitor and review any future data for phosphorus in the receiving water and in the treatment plant effluent. The final permit continues an effluent monitoring requirement for total phosphorus, but at an increased frequency of once per month. EPA would encourage the Town to ensure that any future upgrades or modifications to the treatment facility be consistent with providing phosphorus removal in the future.

## **Comment 2**

### **Clarify Arsenic Monitoring Precision Requirements**

“An inconsistency exists between the Fact Sheet and the draft Permit on detection limits for arsenic. The fact sheet presents results in which the detection limit for arsenic is 4 µg/l (0.004 mg/l), whereas the permit refers to Method 200.9 with a minimum quantification level (ML) of 2.0 µg/l (0.002 mg/l). MRWC requests clarification as to whether the 2.0 µg/l detection limit required in the draft permit is more rigorous than the limit in the previous permit, as prior monitoring was apparently valid only to a detection limit of 4 µg/l, despite reported results of 1 µg/l.”

## **Response**

The previous permit allowed methods with a range of minimum quantification levels (MLs) from 2 ug/l to 5 ug/l. In the draft and final permit, EPA and NHDES have specified a single method with an ML of 2 ug/l. The method specified in the final permit, Method 200.9, has the lowest ML of any method specified in the previous permit, and so is the most rigorous.



Since the ML is the minimum quantification limit, any value below the ML is not considered to be an accurate value, and in accordance with the permit requirements should have been reported as zero.

### **Comment 3**

#### **Require WET Test on Addition of New Industrial User**

“The draft permit states on page 2, Table A.1. that Whole Effluent Toxicity (WET) testing is completed twice per year, yet Section F. Special Conditions on page 13 suggests that Derry WWTP is conducting four WET tests per year. MRWC requests that Section F be updated to reflect the actual number of WET tests currently being completed each year. MRWC would also like to recommend that an additional WET test be conducted within 3 months of initial industrial discharge to the treatment facility or that the required WET testing frequency be reset to 4 times per year if a new industrial user begins discharging to the treatment facility.”

### **Response**

Section F.1, Special Condition, has a provision that allows a reduction in the frequency of toxicity tests. For that purpose, the permittee must submit four (4) recent consecutive tests that demonstrate compliance with the permit limits. This requirement is not related to the sampling frequency required by the permit.

EPA does not believe that tying sampling frequency to changes in the number of industrial users is necessary. Industrial discharges to the treatment plant must meet any national pretreatment standards applicable to its discharge as well as local sewer use ordinances. Also, the permittee is required, pursuant to 40 CFR 122.41(b) to provide adequate notice to EPA of “Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants.”

EPA believes that the existing requirements described above are sufficient to prevent or minimize any changes to whole effluent toxicity. The more frequent testing required for other pollutants, such as BOD, will also provide an indication of any biological disruption at the facility. Furthermore, EPA can require the permittee to perform additional WET testing at any time based on its authority under Section 308 of the Clean Water Act.

### **Comment 4**

#### **pH Permit Limit**

“MRWC would like to be notified if the request to relax the pH range from 6.5-8.0 to 6.5-9.0 as described in the draft permit is made and approved. MRWC would also like to know if a cause has been determined for the reported pH of 8.3 in Table 1 of the Fact

Sheet and if any corrective measures have been implemented to prevent the Derry WWTP from discharging effluent outside the newly permitted range of 6.5 to 8.0.”

### **Response**

The requested notifications to MRWC have not been included in the final permit. However, EPA and/or NHDES will try to make sure that MRWC is copied on any correspondence regarding pH issues. MRWC should also be aware that virtually all correspondence between the permittee, EPA and NHDES must be made available to the public and that MRWC may contact and request such information from NHDES or EPA at any time.

### **Comment 5**

#### **Infiltration & Inflow**

“MRWC would like to point out that no management or maintenance information is included in either the draft Permit or the Fact Sheet regarding the unusually long 9-mile pipeline that transports treated effluent to the Merrimack River. No mention is made as to whether outfall monitoring takes place at the treatment plant end of the pipe or adjacent to the river. MRWC would like ensure that Derry’s Collection System O & M Plan includes testing and maintenance of the discharge pipe. If not, at a minimum MRWC suggests that flow monitoring take place at least twice a year at both ends of the discharge pipe: once during high ground water levels and a second time during low ground water levels, in order to determine if there are any significant leaks or other concerns associated with the pipeline. This is important because effluent contaminant levels acceptable in the Merrimack due to its high dilution factor would not be acceptable in smaller streams or tributaries with more limited flow should a leak be present.”

### **Response**

The Town of Derry Wastewater Treatment Plant discharges treated effluent to the Merrimack River via an approximately 8 mile long pipeline (ductile iron, HDPE and some PVC) that starts in Derry and goes through the Towns of Londonderry and Litchfield. This pipeline consists of approximately 7 miles of pressure sewer, transitioning into gravity for the last mile. The pipeline was originally constructed in 1985 under inter-municipal agreements with the Towns of Londonderry and Litchfield. These agreements require annual testing of private residential water supply wells within 100 feet of this pipeline. This testing is to ensure that the pipeline is not contaminating these wells. Samples are taken and analyzed by the Town of Derry for coliform, chlorides and nitrates. Results are sent to the property owners and the Town’s respective health officers. To date, there has been no evidence of groundwater contamination due to the pipeline.

In addition, the Town conducts annual maintenance and inspection of the cleanouts and air release valves along the pipeline to ensure the proper operation of the pressure main. The Town also conducts visual inspections of the outfall pipe.

In 2007, the Town replaced and upgraded 1000 feet of pipeline in Londonderry. The Town also installed an intermediate booster pump station in Londonderry to decrease pressures in the pipeline during high flow periods.

The effluent discharge pipeline is fed through the Derry Effluent Pump Station, located at the Derry WWTP adjacent to I-93 on the Derry/Londonderry town line. Effluent flow is monitored at this pump station continuously in accordance with the NPDES permit. The Town does not have any flow monitoring capability at the discharge end of the outfall. The installation of such equipment at this location, because it is a gravity line, would not produce the level of precision necessary to determine if a small leak is present on the force main. Locating a flow meter along the pressure part of the discharge line would require construction of a new facility or vault including the acquisition of property at significant cost to the Town of Derry.

While it appears that sufficient controls are already in place to ensure that leakage from the outfall is detected, the following language has been added to Section E.2 of the permit, to ensure that it is clear that outfall preventative maintenance is part of the permittee's routine preventative maintenance program:

“Unauthorized discharge and preventive maintenance program requirements are also applicable to the effluent pipeline.”

#### **Comment 6**

##### **Notify All Downstream Drinking Water Suppliers of Polluted Discharge**

“The Fact Sheet states that drinking water is withdrawn from the Merrimack River downstream of the Derry WWTP outfall by Pennichuck Water Works in New Hampshire and the City of Lawrence, Massachusetts. MRWC requests that this list of water suppliers be updated to include the intermediate water suppliers utilizing the Merrimack including the City of Lowell, the Town of Tewksbury, and the City of Methuen. MRWC also requests in the interest of public health that all five of these drinking water suppliers be notified in the event of a bypass or upset at the treatment works that might affect the quality of their intake water, even though most of these suppliers are more than 20 river miles downstream of Outfall 001.”

“Finally, MRWC would like to note that the Public Notice associated with Draft permit No. NH0100056 states that *Enterococci* Bacteria is one of the parameters specified in the effluent limitations, but all additional documents refer to *Escherichia coli* bacteria. This appears to be a simple typographical error and should be corrected in the final documentation.”

## **Response**

Part F.3 of the permit requires that the notification within 20 miles of downstream water suppliers be given in the event of an upset or bypass. EPA does not believe that notification to the communities beyond 20 miles of downstream is necessary.

Regarding the discrepancy between the bacteria referenced in the public notice and in the permitting documents, the public notice was incorrect, as supposed by the commenter. The limitations in the permit are for *Escherichia coli*

The following comments were received from the **Lower Merrimack River Local Advisory Committee (LMRLAC)**:

### **Comment 1**

“The Lower Merrimack River Local Advisory Committee voted at its meeting of September 23 to recommend numeric effluent limits for phosphorus be issued as part of the permit for the Derry, NH Wastewater Treatment Facility. While we recognize that a TMDL is being undertaken, we believe that the Derry plant could use upgrades to better treat its effluent, especially phosphorous. We suggest the planning and budgeting process for these upgrades start immediately, not wait for the TMDL completion.”

## **Response**

The final permit does not include a numeric effluent limit for phosphorus, but it continues the effluent phosphorus monitoring requirement at an increased frequency of once per month. See response to MRWC comment 1.

EPA encourages the Town to ensure that any future upgrades or modifications to the treatment facility be consistent with providing phosphorus removal in the future.

The following comments were received from the **Town of Derry**:

### **Comment 1**

“Sample types for CBOD, TSS, Total Phosphorus, and Total recoverable arsenic are noted as composite samples. Our current permit requires grab samples. The Town requests to revise the draft permit requirement for composite samples to be grab samples. The Derry WWTP is a facultative lagoon facility with no significant industry and therefore not subject to significant effluent quality variations. Present detention times average over 50 days. Grab samples have shown to be representative of aforementioned permit parameters.”



## **Response**

See response to NHDES comment 1.

## **Comment 2**

“pH Range is 6.5 to 8.0 SU. Pursuant to our current permit the Town conducted a pH study and received approval from NHDES for an adjustment to our pH range to 6.0 to 9.0. Derry’s discharge flow has increased by only 100,000 gpd from 1.6 to 1.7 MGD. We have demonstrated that our Lagoons experience periodic the natural process of nitrification which, while reducing ammonia discharge levels, decreases our pH below 6.5. This requires the Town to notify EPA and NHDES each day in accordance with our NPDES permit. Since these pH violations are attributed to natural treatment processes and we demonstrated in our current permit that our pH did not alter the Merrimack River pH and conducting a subsequent pH study under essentially equal conditions to our last study is not expected to produce any different results, we request our permit reflect the pH range of 6.0 to 9.0.”

## **Response**

The minimum pH limit of 6.0 in the 2004 permit was based on a study that demonstrated that an effluent limit of 6.0 would not cause the pH of the Merrimack River to fall below a pH of 6.5. That study was completed over eight years ago, and was valid for the term of the 2004 permit. Another demonstration study is needed before EPA and NHDES will consider adjusting the pH limit range in the new permit. The permit limits may be adjusted if the new study shows that adjusting the effluent pH limit from 6.5 down to 6.0 will not result in a violation of state water quality standards.