AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

Pease Development Authority

is authorized to discharge from a facility located at

135 Corporate Drive
Portsmouth, NH

to receiving waters named: Piscataqua River, Hodgkins Brook, Flagstone Creek, McIntyre Brook, and Harvey's Creek, (Hydrologic Unit code 01060003), all class B waters,

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

This permit shall become effective on 30 days from the date of signature.

This permit and the authorization to discharge expire at midnight, 5 years from the date of issuance.

This permit supersedes the permit issued on September 30, 1992.

This permit consists of 18 pages in Part I including effluent limitations, monitoring requirements, etc., Attachments A and B, (8 pages and 1 page, respectively); Sludge Compliance Guidance (72 pages) and 35 pages in Part II including General Conditions and Definitions.

Signed this 8 day of August, 2000

Linda M. Murphy

Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall 005 (treated wastewater) to the Piscataqua River. This discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations					Monitoring Requirements		
	Average Monthly	Average Weekly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)				Report		Report	Continuous	Recorder$_1$
BOD	300 lbs/day	450 lbs/day	500 lbs/day	30 mg/l	45 mg/l	50 mg/l	2/week	24-hour composite
TSS	300 lbs/day	450 lbs/day	500 lbs/day	30 mg/l	45 mg/l	50 mg/l	2/week	24-hour composite
pH$_2$		Range of 6.5 - 8.0 standard units (see I.E.1.a)					1/day	Grab
Fecal Coliform$_{2,3}$	----	----	----	14/100 ml	14/100 ml	14/100 ml	1/day	Grab
Total Chlorine Residual$_4$	----	----	-----	0.75 mg/l	----	1.0 mg/l	2/day	Grab
Whole Effluent Toxicity								
LC50$_{5,6}$	----	----	----	----	----	≥ 50 %	2/year	24-hour composite
Ammonia Nitrogen as Nitrogen (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Aluminum (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Cadmium (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Chromium (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Copper (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Nickel (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Lead (mg/l)$_7$						Report	2/year	24-hour composite
Total Recoverable Zinc (mg/l)$_7$						Report	2/year	24-hour composite
Trichloroethylene	----	----	----	----	----	Report	2/year	Grab

Samples shall be taken after treatment, but prior to discharge combining with other streams.

See Page 3 for explanation of subscripts.

Explanation of subscripts on page 2

(1) - The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

(2) - State certification requirement.

(3) - Fecal Coliform shall be tested using test method 9222 D or 9221 C E found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent Edition(s), as approved in 40 CFR part 136. The permittee may use membrane filtration, 9222 D, in lieu of , the Most Probable Number, 9221 C E, after it has been demonstrated to the satisfaction of the NHDES-WD that method 9222 D generates comparable results, as per detailed in Standard Methods 9222 D.

The average monthly and average weekly values for fecal coliform shall be determined by calculating the geometric mean and the results reported. Not more than 10 percent of the collected samples (over a monthly period) shall exceed a Most Probable Number (MPN) of 43 per 100 ml for a 5-tube decimal dilution test. Furthermore, all fecal coliform data collected must be submitted with the monthly Discharge Monitoring Reports (DMRs).

(4) Total Chlorine Residual shall be measured using any one of the following three methods listed below:

(a) DPD spectrophotometric (colorimetric). EPA no 330.5 or Standard Methods [18th or subsequent edition(s), as approved in 40 Code of Federal Regulations (CFR) part 136], no 4500-Cl G.

(b) DPD titrimetric (ferrous titrimetric) EPA no. 330.4 or Standard Methods [18th or subsequent edition(s), as approved in 40 CFR part 136], no 4500-Cl F.

(c) Amperometric titration. EPA no. 330.1 or Standard Methods [18th or subsequent edition(s), as approved in 40 CFR part 136], no 4500-Cl D, or ASTM no. D1253-86(92).

(5) The whole effluent toxicity (WET) sample shall be taken prior to mixing with the effluent from any other source (the Town of Newington). The permitttee shall conduct 48-hour static acute toxicity test on effluent samples using two species, Mysisopsis bahia and Menidia beryllina following the protocol in Attachment A. Toxicity test samples shall be collected and test completed during the 3 month periods ending June 30th and September 30th, respectively, each year. Toxicity test results are to be submitted by the 15th day of the month following the end of the quarter sampled.

This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limitations, if the results of these 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 §122.62(a)(2).

(6) LC50 is defined as the concentration of wastewater (effluent) that cause mortality to 50 percent of the test organisms. The "50 percent or greater" limitation is defined as a sample which is composed 50% or greater effluent. A sample composed of 50% or greater effluent shall cause no greater than a 50% mortality rate in the effluent sample. This is a maximum daily limit.

(7) For each whole effluent toxicity test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the concentrations of the following pollutants: Ammonia Nitrogen as Nitrogen; total recoverable aluminum, cadmium, chromium, copper, lead, nickel, and zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to have 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.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CON'T.)

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 waters 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 BOD_5 and TSS. The percent removal shall be based on a comparison of average monthly influent versus effluent concentrations.

5. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the 1.2 MGD design flow (0.96 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 and 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 industrial category(see 40 CFR §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 treatment works at the time of issuance of the permit.

   c. For purposes of this paragraph, adequate notice shall include information on:
      i. The quality and quantity of effluent introduced into the facility; and
      ii any anticipated impact of the change on the quantity or quality of effluent to be discharge from the facility.

7. A user may not introduce into any POTW any pollutant(s) which cause pass through or interference. The terms "user", "pass through" and "interference" are defined in 40 CFR § 403.3.

8. Within 90 days of the effective date of this permit, the permittee shall submit to EPA and NHDES-WD a current list of all industries discharging industrial waste to the municipal wastewater treatment plant. At a minimum, the list shall indicate the name and address of each industry, along with the following information: telephone number; contact person; facility description; production quantity; products manufactured; industrial processes used; chemicals used in processes; existing level of pretreatment; and list of existing discharge permits.

9. Within 90 days of the effective date of this permit, the permittee shall submit to EPA and NHDES-WD a copy of discharge permit(s) issued to each industry discharging industrial waste to the municipal wastewater treatment plant. At a minimum, each permit shall contain the following: effective dates; flow and applicable pollutant limits; self monitoring, reporting, compliance monitoring and inspection provisions; and enforcement criteria. In addition, the permittee shall submit to EPA and NHDES-WD a copy of its current sewer use ordinance and a copy of any other document granting legal authority to issue permits to industries discharging industrial waste to the municipal wastewater treatment plant. If industrial permitting authority does not exist as of the effective date of this permit, the permittee is requested to submit to the NHDES-WD a proposed plan and implementation schedule for adopting such authority and implementing an industrial permitting system. The permittee shall also submit to NHDES and EPA a copy of any agreement between PDA and the City of Portsmouth regarding the responsibility for the operation of the Industrial Pretreatment Program

10. The permittee shall submit to EPA and NHDES-WD the name of any Industrial User (IU) subject to Categorical Pretreatment Standards pursuant to 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N (Parts 405-415; 417-436; 439-440; 443; 446-447; 454-455; 457-461; 463-469; and 471, as amended) **who commences discharge to the POTW after the effective date of this permit**. This reporting requirement also applies to any other IU that discharges an average of 25,000 gallons per day or more of process wastewater in the POTW (excluding sanitary; noncontact cooling; and boiler blowdown wastewater) or contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW; or is designated as such by the control authority as defined in 40 CFR §403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR §403.8(f)(6)).

11. In the event that the permittee receives reports (baseline monitoring reports; 90-day compliance reports; periodic reports on continued compliance, etc.) From users subject to Categorical Pretreatment Standards, the permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA and NHDES-WD.

12. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

13. The permittee shall provide a copy of the available reports on the effluent concentration from all Groundwater Treatment Systems to the sanitary sewer. If the concentrations of the pollutants in these discharges to the sanitary sewer are less than the Maximum Contaminant Levels required by the Drinking Water regulations, the permittee may certify this condition in writing in lieu of reporting analytical results.

    a. Quarterly reporting shall begin within 90 days following the effective date of this permit and provide the most current results available.

    b. Estimates of the average monthly flow and the maximum daily flow at each groundwater treatment system shall be reported for each month.

14. All existing manufacturing, commercial, mining, and silvercultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR§122.42):

    a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
        i. One hundred micrograms per liter (100 μg/l);
        ii. Two hundred micrograms per liter (200 μg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1mg/l) for antimony;
        iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
        iv. Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and New Hampshire regulations.

    b. That any activity has occurred or will occur which would result in the discharge, on a non routine or infrequent basis of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
        i. Five hundred micrograms per liter (500 μg/l);
        ii. One milligram per liter (1 mg/l) for antimony;
        iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
        iv. Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and New Hampshire regulations.

    c. That they have begun or expect to begin to use or manufacture as an intermediate of final product or byproduct any toxic pollutant which was not reported in the permit application.

15. This permit shall be modified, or alternatively, revoked and reissued to include effluent standards or limitation on any pollutants not limited in the permit if the results of an ongoing or future investigation indicates the presence of any toxic pollutant with the reasonable potential to cause water quality violations.

PART I

B. STORM WATER LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall 001 (storm water runoff from industrial activity) to Hodgkins Brook. Samples shall be collected down stream from the confluence of the two streams near the intersection of Rye Street and Rockingham Drive. This discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	-----	-------	Report	Monthly$_1$	Estimate
BOD (mg/l)	----	-----	Report	Monthly$_1$	Grab$_2$
Volatile Organics Scan (mg/l)$_3$	----	----	Report	2/year$_1$	Grab$_2$
Polynuclear Aromatic Hydrocarbons (PAHs) (μg/l)$_4$	----	----	Report	2/year$_1$	Grab$_2$
pH	Range of 6.5 - 8.0 standard units			Monthly$_1$	Grab$_2$
Oil & Grease (mg/l)$_5$	----	----	10	Monthly$_1$	Grab$_2$
Surfactants (mg/l)	0.2	----	----	Monthly$_1$	Grab$_2$
Total Recoverable Iron (mg/l)	----	----	Report	Monthly$_1$	Grab$_2$
Total Recoverable Lead (mg/l)	----	----	Report	Monthly$_1$	Grab$_2$
Trichloroethylene (mg/l)$_6$	----	----	Report	1/quarter	Grab$_2$

There shall be no discharge of floating solids or visible foam.
See page 11 for explanation of subscripts

PART I

B. STORM WATER LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall 002 (storm water runoff from industrial activity) to Flagstone Creek. Samples shall be taken at the culvert outlet at the end of the aircraft apron. This discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	----	----	Report	Monthly$_{1,7}$	Estimate
BOD (mg/l)	----	----	Report	Monthly$_{1,7}$	Grab$_2$
Volatile Organics Scan (mg/l)$_3$	----	----	Report	2/year$_1$	Grab$_2$
Polynuclear Aromatic Hydrocarbons (PAHs) (μg/l)$_4$	----	----	Report	2/year$_1$	Grab$_2$
pH	Range of 6.5 - 8.0 standard units			Monthly$_{1,7}$	Grab$_2$
Oil & Grease (mg/l)$_5$	----	----	10	Monthly$_{1,7}$	Grab$_2$
Surfactants (mg/l)	0.2	----	----	Monthly$_{1,7}$	Grab$_2$
Trichloroethylene (mg/l)$_6$	----	----	Report	1/quarter	Grab$_2$
TSS (mg/l)	----	----	Report	Monthly$_{1,7}$	Grab$_2$
COD (mg/l)	----	----	Report	Monthly$_{1,7}$	Grab$_2$
Primary Deicing Chemical (mg/l)$_8$	----	----	Report	Monthly$_{1,7}$	Grab$_2$
Total Recoverable Arsenic, Iron, and Zinc	----	----	Report	Monthly$_{1,7}$	Grab$_2$

There shall be no discharge of floating solids or visible foam.
See Page 11 for explanation of subscripts

PART I

B. STORM WATER LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall 003 (storm water runoff from industrial activity) to McIntyre Brook. Samples shall be taken at the overflow from the oil water separator and when flow occurs in the bypass channel, collect an additional representative sample downstream for the confluence of both channels. This discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	----	----	Report	Monthly$_{1,7}$	Estimate
BOD (mg/l)	----	----	Report	Monthly$_{1,7}$	Grab$_2$
Volatile Organics Scan (mg/l)$_3$	----	----	Report	2/year$_1$	Grab$_2$
Polynuclear Aromatic Hydrocarbons (PAHs) (μg/l)$_4$	----	----	Report	2/year$_1$	Grab$_2$
pH	Range of 6.5 - 8.0 standard units			Monthly$_{1,7}$	Grab$_2$
Oil & Grease (mg/l)$_5$	----	----	10	Monthly$_{1,7}$	Grab$_2$
Surfactants (mg/l)	0.2	----	----	Monthly$_{1,7}$	Grab$_2$
Trichloroethylene (mg/l)$_6$	----	----	Report	1/quarter	Grab$_2$
COD and TSS (mg/l)	----	----	Report	Monthly$_{1,7}$	Grab$_2$
Primary Deicing Chemical (mg/l)$_8$	----	----	Report	Monthly$_{1,7}$	Grab$_2$
Total Recoverable Iron and Zinc (mg/l)	----	----	Report	Monthly$_{1,7}$	Grab$_2$

There shall be no discharge of floating solids or visible foam.
See page 11 for explanation of subscripts

PART I

B. STORM WATER LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall 004 (storm water runoff from industrial activity) to Harveys Creek. This discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	----	----	Report	Monthly$_1$	Estimate
BOD (mg/l)	----	----	Report	Monthly$_1$	Grab$_2$
Volatile Organics Scan (mg/l)$_3$	----	----	Report	2/year$_1$	Grab$_2$
Polynuclear Aromatic Hydrocarbons (PAHs) (μg/l)$_4$	----	----	Report	2/year$_1$	Grab$_2$
pH	Range of 6.5 - 8.0 standard units			Monthly$_1$	Grab$_2$
Oil & Grease (mg/l)$_5$	----	----	10	Monthly$_1$	Grab$_2$
Surfactants (mg/l)	0.2	----	----	Monthly$_1$	Grab$_2$
Trichloroethylene (mg/l)$_6$	----	----	Report	1/quarter	Grab$_2$
Total Recoverable Cyanide, Iron, Lead, Nickel and Zinc (mg/l)	----	----	Report	Monthly$_1$	Grab$_2$

There shall be no discharge of floating solids or visible foam.
See page 11 for explanation of subscripts

Explanation of subscripts on pages 7 - 10

(1) If a sample cannot be collected due to adverse weather conditions, the permittee shall submit with the monthly DMR an explanation of why the sample could not be collected. Adverse conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as high winds, blizzard conditions, ice storms etc) or otherwise make the collection of a sample impractical.

(2) Grab samples shall be collected from a discharge resulting from a precipitation event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. The grab sample should be taken when pollutant concentrations in the storm water are expected to be at a maximum.

(3) Samples for the Volatile Organics Scan shall be taken during April and September. Volatile Organics are listed in 40 CFR §122, Appendix D, Table II.

(4) The sample for the Polynuclear Aromatic Hydrocarbons (PAHs) shall be taken concurrently with that for the Volatile Organics Scan. Attachment B contains a list of PAHs for analysis.

(5) Oil and Grease shall be tested using EPA Method 1664, Revision A. This method was newly approved by EPA on May 14, 1999, and became effective on June 14, 1999, for inclusion in 40 CFR part 136.

(6) Results from the Volatile Organics Scan for trichloroethylene may be used to satisfy the trichloroethylene sampling for two of the four required sampling events.

(7) At least two of the sampling events each year shall be designed to occur during the application of deicing materials. These events shall attempt to collect a sample containing the maximum concentrations of deicing agents in the storm water.

(8) The permittee shall report the primary deicing chemical on the DMR and shall monitor for that chemical when deicing occurs at the facility. The permittee shall also report when the deicing materials are not used.

B. STORM WATER REQUIREMENTS - continued

5. The permittee shall maintain the oil/water separators to ensure proper operation. This shall include controlling the storm water flow rate through each oil/water separator to its maximum design flow rate by installing a continuous recording flow meter and manually controlling the flow through the separator within 180 days after the permit's effective date. Alternately, the permittee may request in writing that the Regional Administrator accept substitution of an alternative method of control for the continuous recording device within 180 days after the permit's effective date.

   a. By installing a flow reduction or constriction device to prevent the flow through the separator from ever exceeding its maximum design flow rate or,
   b. By demonstrating to EPA-New England that the operation procedures are sufficiently clear and rigid such that the operators will not exceed the separator's maximum design flow rate by concurrently draining more area(s) into the separator than prescribed in the procedures or;
   c. By any other means of control that prevents the flow rate from exceeding the maximum design flow rater.

   In addition, the permittee shall periodically clean, at a minimum annually, both the sediment/residuals (on the bottom of the separator) and the oil layers (on the top of the water within the separator) to prevent carryover of either layer in the effluent discharged from the oil/water separator. More frequent cleaning as necessary to ensure proper operation

The permittee shall continue to implement the Storm Water Pollution Prevention Plan (SWPPP) at the facility. The permittee shall maintain a SWPPP which includes Best Management Practices. The following minimum components shall be addressed in the plan.

6. The SWPPP shall be prepared in accordance with good engineering practice and shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges authorized by this permit.

7. The discharges from outfalls 001-004 shall be composed entirely of storm water. The following non-storm water discharges are authorized by this permit provided they are addressed in the SWPPP: fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water, uncontaminated compressor condensate; irrigation drainage; lawn watering; routine external building washdown that does not use detergents or other compounds; pavement washwaters where spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensates; compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

6. The SWPPP shall be signed in accordance with the requirements of Part II and be retained on site.

9. The Director, or authorized representative, may notify the permittee at any time that the plan does not meet one or more of the minimum requirements detailed below. Any notification shall identify those provisions of the permit that are not being met by the plan, and identify which provisions of the plan requires modification in order to meet the minimum requirements of this permit. The permittee shall make the required changes within 30 days of a notification and submit to EPA and NHDES a written certification that the required changes have been made.

10. The permittee shall amend the plan whenever there is a change in design construction, operation or maintenance, that has a significant effect on the potential for the discharge of pollutants or if the SWPPP is ineffective in eliminating or significantly minimizing pollutants from the sources identified in the SWPPP.

11. The SWPPP shall consider the following components as a minimum. The permittee may use the EPA's Storm Water Multi-Sector General Permit for Industrial Activities, Federal Register vol. 60, no.189, Friday September 29, 1995, pgs 51215-51219 as guidance. The SWPPP shall contain the following minimum elements:

    a. Pollution Prevention Team
    b. Description of potential pollutant sources including information on:
        i. Drainage
        ii. Inventory of exposed materials
        iii. Spills and leaks
        iv. Sampling data
        v. Risk identification and summary of potential pollutant sources

    c. Description of storm water measures and controls including:
        i. Good house keeping
        ii. Preventive maintenance
        iii. Spill prevention and response procedures
        iv. Source reduction
        v. Management of runoff
        vi. Inspections
        vii. Pollution prevention training
        viii. Record keeping and internal reporting procedures
        ix. Identification of non-storm water discharges
        x. Sediment and erosion control

12. Comprehensive site compliance evaluation shall be performed annually. The evaluation shall include the following:
    a. Areas contributing to storm water discharges shall be inspected visually for evidence of, or the potential for, pollutants to enter the drainage system. Structural storm water management measures etc. shall be evaluated to ensure proper operation.
    b. Based on the results of the evaluation, the SWPPP shall be revised, if appropriate, within 2 weeks of the evaluation and shall provide a schedule for timely implementation of any changes to the plan.
    c. A report of the results of the evaluation shall be made and retained as part of the SWPPP.

C. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal (40 CFR part 503) and state (Env-Ws 800) laws and regulations that apply to sewage sludge use and disposal practices and with the Clean Water Act Section 405(d) technical standards.

   If an applicable management practice or numerical limitation for pollutants in sewage sludge more stringent than existing federal and state regulations is promulgated under section 405(d) of the CWA, this permit shall be modified or revoked and reissued to conform to the promulgated regulations.

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

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

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

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

   c. Placement of sludge in a municipal solid waste landfill (see 40 CFR §503.4).

   d. Sewage sludge incineration in a sludge incinerator.

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

5. The permittee shall use and comply with the attached Sludge Compliance Guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:

   General requirements
   Pollutant limitations
   Operation standards (pathogen reduction requirements and vector attraction reduction requirements)
   Management practices
   Record keeping
   Monitoring
   Reporting

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

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

less than 290	1/year
290 to less than 1,500	1/quarter
1,500 to less than 15,000	6/year
15,000 or more	1/month

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

8. The permittee shall submit an annual report containing the information specified in the Sludge Compliance Guidance document. Reports are due annually by February 19th. Reports shall be submitted to the addresses contained in Section D of the permit.

D. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed period.

A signed and dated original DMRs and all other reports required herein, shall be submitted to the Director at the following address:

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

Duplicate signed copies of all reports and information required herein shall be submitted to the State of New Hampshire at:

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

E. STATE PERMIT CONDITIONS

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

   a. The pH range of 6.5-8.0 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).

   b. Pursuant to State Law NH RSA 485-A:13 and the New Hampshire Code of Administrative Rules, Env-Ws 706.08(b) and Env-Ws 904.08 the following submissions shall be made to the NHDES-WD by a municipality proposing to accept into its POTW (including sewers and interceptors):

      (1) A 'Sewer Connection Permit' request form for:
         i. Any proposed sewerage, whether public or private;
         ii. Any proposed wastewater connection or other discharge in excess of 5,000 gallons per day;
         iii. Any proposed wastewater connection or other discharge to a wastewater treatment facility operating in excess of 80% of design flow capacity; and
         iv. Any proposed connection or other discharge of industrial wastewater, regardless of quality or quantity.

      (2) An 'Industrial Discharge Permit Request Application' for any new or increased loadings of industrial waste, as defined in RSA 485-A:2, VI.

   c. 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).

   d. Any modifications of the Permittee's Sewer-Use Ordinance, including local limitations on pollutant concentrations, shall be submitted to the NHDES-WD for approval prior to adoption by the permittee.

   e. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer-use ordinance and a copy of any other document granting legal authority to issue permits to industries discharging industrial waste to the municipal wastewater treatment plant.

F. SPECIAL CONDITIONS

1. Whole Effluent Toxicity Test Frequency Adjustment

The permittee may submit a written request to the EPA requesting a reduction in the frequency (to not less than once per year) of the required toxicity testing. This request may be made after completion of a minimum of four successive (4) toxicity tests on the effluent. All of the tests must be valid tests and must demonstrate compliance with the permit limits for whole effluent toxicity. The permittee must continue to perform the testing at the frequency specified in the permit until written notification is received by certified mail from the EPA which indicates that the whole effluent toxicity testing requirement has been changed.

2. pH Limit Adjustment

The permittee may submit a written request to EPA requesting a change in the permitted pH range. The permittee may not request a change which is less restrictive than 6.0 to 9.0 standard units range found in the National Effluent Limitation Guideline for this facility (secondary treatment regulations at 40 CFR part 133). The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall assert 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. The letter must specify for each outfall the associated numeric pH limit range. The permittee must continue to meet the pH limit contained in the permit until written notification is received by certified mail from the EPA indicating the pH limit has been changed.

ATTACHMENT B

Polynuclear Aromatic Hydrocarbons (PAH)

The following is a list of Polynuclear aromatic hydrocarbons to be considered in this permit:

1. Acenaphthene
2. Acenaphthylene
3. Anthracene
4. Benzo(a)anthracene
5. Benzo(a)pyrene
6. Benzo(b)fluoranthene
7. Benzo(ghi)perylene
8. Benzo(k)fluoranthene
9. Chrysene
10. Dibenzo(a,h)anthracene
11. Fluoranthene
12. Fluorene
13. Indeno(1,2,3-cd)pyrene
14. Naphthalene
15. Phenanthrene
16. Pyrene

The following is a listing of the volatile compounds from Table II of 40 CFR Part 122, Appendix D

Volatiles

1. Acrolein
2. Acrylonitrile
3. Benzene
4. Bromoform
5. Carbon tetrachloride
6. Chlorobenzene
7. Chlorodibromomethane
8. Chloroethane
9. 2-chloroethylvinyl ether
10. Chloroform
11. Dichlorobromomethane
12. 1,1-dichloroethane
13. 1,2-dichloroethane
14. 1,1-dichloropropane
15. 1,3-dichloropropylene
16. Ethylbenzene
17. Methyl bromide
18. Methyl chloride
19. Methylene chloride
20. 1,1,2,2-tetrachloroethane
21. Tetrachloroethylene
22. Toluene
23. 1,2-trans-dichloroethylene
24. 1,1,1-trichloroethane
25. 1,1,2-ttrichloroethane
26. Trichloroethylene
27. Vinyl chloride

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ONE CONGRESS STREET - SUITE 1100
BOSTON, MASSACHUSETTS 02114

FACT SHEET

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

PUBLIC NOTICE START DATE: April 25, 2000
PUBLIC NOTICE END DATE: May 24, 2000
PUBLIC NOTICE NUMBER: NH-008-00

NPDES PERMIT NO.: NH0090000

NAME AND ADDRESS OF APPLICANT:

Pease Development Authority
Portsmouth, NH

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Pease Development Authority
135 Corporate Drive
Portsmouth, NH

RECEIVING WATERS: Piscataqua River, Hodgkins Brook, Flagstone Creek, McIntyre Brook, and Harvey's Creek (Hydrologic Unit Code: 01060003)

RECEIVING WATER CLASSIFICATION: All receiving waters - Class B

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

The above named applicant has applied to the U.S. Environmental Protection Agency for the reissuance of its NPDES permit to discharge into the designated receiving waters. The facility is engaged in the collection and treatment of wastewater. Discharges are from a 1.2 MGD secondary treatment plant and from four areas with various industrial and commercial activities. The discharge from the treatment plant is treated sanitary, commercial and industrial wastewaters. The discharges from the remaining outfalls are storm water runoff. A map of the outfall for the treatment plant is shown on Attachment A.

II Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters, based on recent

monitoring reports, is shown on Attachment B.

III. Limitations and Conditions

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

IV Statutory and Regulatory Authority

The Clean Water Act (CWA or The Act) prohibits the discharge of pollutants to waters of the United States without an NPDES permit unless such a discharge is otherwise authorized by the Act. An NPDES permit is used to implement technology based and water quality based effluent limitations as well as other requirements including monitoring and reporting. The draft NPDES permit was developed in accordance with statutory and regulatory authorities established pursuant to the Act. The regulations governing the NPDES program are found in 40 CFR parts 122, 124, and 125.

EPA is required to consider both technology and water quality requirements when developing permit limits. Technology based treatment requirements represent the minimum level of control that must be imposed under Sections 402 and 301(b) of the Act. This level of control is either Best Practicable Control Technology (BPT) or Best Conventional Control Technology (BCT) for control of conventional pollutants such as biochemical oxygen demand (BOD) or total suspended solids (TSS) or Best Available Technology Economically Achievable (BAT) for control of non-conventional and toxic pollutants. In the absence of published technology guidelines, a permit writer is authorized under Section 402(a)(1)(B) of the Act to establish effluent limitations on a case by case basis using best professional judgement (BPJ).

EPA regulations require NPDES permits to contain effluent limits more stringent than technology based limits where more stringent limits are necessary to maintain or achieve state or federal water quality standards. A water quality standard consists of three parts: (1) numeric or narrative water quality criteria; (2) designated uses; and (3) anti-degradation requirements. The permit must limit any pollutant or pollutant parameter that is or may be discharged at a level that causes or has the reasonable potential to cause or contribute to an excursion above any water quality criteria. An excursion is when the projected or actual instream concentrations of a particular pollutant exceed the applicable criteria. When determining reasonable potential, EPA considers existing controls on point and non-point sources of pollution; variability of the pollutant in the effluent; sensitivity of test species to toxicity; and where appropriate, the available dilution in the receiving water.

A permit may not be renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit, unless the less stringent condition is in compliance with the anti-backsliding requirements of the Act. Additionally, the permit must conform to the conditions established pursuant to a State Certification. The State Certification is made under the authority of Section 401 of the Act. A more detailed discussion of the State Certification is found in Section VII of this fact sheet.

V. Permit Basis and Explanation of Effluent Limitation Derivation

Pease Development Authority, formerly Pease Air Force Base, supports several industrial activities including those associated with aircraft maintenance; material loading/unloading; chemical and fuel storage; manufacturing and warehousing. All the receiving waters described in the draft permit have been classified by the New Hampshire Department of Environmental Services (NHDES) as Class B waterways. A Class B water is the second highest water quality designation. A Class B water shall not have objectionable physical characteristics and shall contain a dissolved oxygen content of at least 75 percent. The designated uses of a Class B water are the protection and propagation of aquatic life and wildlife, swimming and other recreation purposes, and after treatment, for water supplies.

The draft permit authorizes discharges from five (5) outfalls. There are four storm water outfalls and one outfall from the wastewater treatment plant.

Wastewater Treatment Plant - Outfall 005

The treatment plant is operated by the City of Portsmouth. In addition to the sanitary waste water, the treatment plant also receives industrial wastewater from a brewery, a biochemical firm, and aviation related activity. The facility is not currently required to have a pretreatment program. However, the permit does require that any industrial waste which is discharged to the treatment plant not pass through or interfere with the operation of the treatment plant. PDA shares a common outfall with the Newington Waste Water Treatment Facility (NH0101141). Effluent from the WWTP discharges to the Piscatqua River. Consultants for PDA completed a study and modeling effort to determine an optimal location for a new outfall. Two models, CORMIX 1 and CORMIX 2, were used in this effort. The new outfall is a four port diffuser located at 26.6' MSL. It is positioned perpendicular to the river. It is expected that this configuration will produce a dilution greater that 100:1 during critical tidal conditions. Construction of the new outfall was completed in February 2000.

The PDA requested that its BOD_5 and TSS concentrations be set equal to secondary standards, 40 CFR part 133. The regulations at 40 CFR §122.44(l)(2)(A) & (B)(1) allows a permit to be reissued with less stringent effluent limitations if certain conditions are met. The conditions which must be met are that material and substantial alterations have occurred after permit issuance which justify less stringent limitations and new information is available which was not available at the time of permit issuance which would justify less stringent effluent limitations. In this instance, PDA has upgraded its original wastewater treatment facility. The treatment process consists of primary clarifiers followed by Sequencing Batch Reactors (SBR) to equalization tanks then to chlorine contact tanks. The PDA also completed construction of a new outfall which enhances the level of dilution. Based on these changes, EPA has made the determination that the limitations for BOD_5 and TSS should be set equal to secondary standards. Therefore, the limitations in the draft permit are based on the requirements for secondary treatment found at 40 CFR §133.102.

The pH limits in the draft permit remain unchanged from the existing permit, however, language has been added to the allow for a change in the pH limits under certain conditions. A change would be considered if the permittee can demonstrate to the satisfaction to NHDES-WD that the in stream pH standard will be protected when the permittee's discharge is outside the permitted range of 6.5 to 8.0

standard units (s.u.), then the permittee or NHDES-WD may request in writing that the pH limits be modified by EPA to incorporate the results of the demonstrations. Anticipating the situation where the NHDES-WD grants a formal approval changing the pH limits, EPA has added a provision to this draft permit. This provision will allow EPA to modify the pH limits using a certified letter. This change will be allowed as long as it can be demonstrated that the revised pH limit range does not alter the naturally occurring receiving water pH. However, the pH range cannot be less restrictive than the limits of 6.0 to 9.0 s.u. found in the secondary treatment regulations in 40 CFR §133.102.

If the state approves the results from a pH demonstration study, this permit's pH limit range can be relaxed in accordance with 40 CFR §122.44(l)(2)(i)(B) because it will be based on new information not available at the time of the permit's issuance. The new information would include results from the pH demonstration study that justifies the application of a less stringent effluent limitation. EPA anticipates that the limit determined from the demonstration study as approved by the NHDES-WD will satisfy all effluent requirements for this discharge category and will comply with New Hampshire's surface water quality regulations amended on September 30, 1996.

The permittee has been able to achieve consistent compliance with the pH and total coliform limitations contained in the existing permit. The limitations for these parameters are unchanged from those in the existing permit. This is in accordance with the antibacksliding requirements found in 40 CFR §122.44(l). The original basis for these limitations is found in New Hampshire's state statutes (N.H. RSA 485-A:8). Historically, the NHDES-WD has required bacteria and pH limits to be satisfied at the end of the pipe with no allowance for dilution. Therefore, in addition to the antibacksliding requirements, the limitations are based on state certification requirements for POTWs under section 401(d) of the CWA, 40 CFR §124.53 and §124.55.

Water quality based limits for specific toxic pollutants such as chlorine, ammonia, etc. are determined from numeric chemical specific criteria derived from extensive scientific studies. The specific toxic pollutants and their associated toxicity criteria a popularly know as the federal "Gold Book" criteria which EPA summarized and published in Quality Criteria for Water, 1986, EPA 440/5-86-001, as amended. Each criteria consists of two values, an acute aquatic life criteria designed to protect against short term effects, such as death, and a chronic aquatic life criteria designed to protect against long term effects such as poor reproduction or impaired growth. New Hampshire adopted these "Gold Book" criteria with certain exceptions and included them as part of the NH standards. EPA uses these pollutant specific criteria along with available dilution in the receiving water to determine a specific pollutant's draft permit limit.

The total residual chlorine (TRC) average monthly and maximum daily limitations are based on the chronic and acute aquatic life criteria, respectively, found in the NH standards and using the available dilution of the receiving water. EPA-New England has established a maximum TRC limitation of 1.0 mg/l for average monthly and maximum daily limitations. The TRC's chronic criterion is 0.0075 mg/l, whereas, the acute criterion is 0.013 mg/l. Recently, EPA New England changed its chlorine policy to no longer allow the chronic derived value to be shown as a "maximum daily" limit as in the existing permit, but instead it is an appropriate "average monthly" limit. Consequently, in this draft permit the chronic derived value of 0.75 mg/l is established a new "average monthly" limit, and the acute derived value of 1.0 mg/l, shown as a maximum daily limitation is continued form the existing permit. See Attachment C

for calculations of the TRC limitations.

Section 101(a)(3) of the Act declares its national policy to prohibit the discharge of toxic pollutants in toxic amounts. In addition, New Hampshire's water quality standards include a narrative statement to protect all classes of water from toxic pollutants in concentrations or combinations that injure aquatic life. Whole effluent toxicity (WET) limits are proposed in draft permit according to the requirements for WET limits in 40 CFR 122.44. The WET limits allow for demonstration of compliance with the no toxics provision of the New Hampshire Water Quality Standard. This regulation implements an integrated approach for the control of water quality based toxics. This approach includes both whole effluent and chemical specific approaches to protect aquatic life and human health. The combined approach is used because chemical analysis alone does not provide the data needed to accurately determine toxicity. The summation of the toxic effects of each chemical is difficult to interpret. Acute WET test are biological tests and aid in the identification and quantification of toxic material which might be present.

The Region's current policy is to require toxicity testing in all municipal permits. The type of whole effluent toxicity (WET) test (acute and/or chronic and effluent limitations (LC50 and/or C-NOEC) is based on available dilution - see Attachment D. New Hampshire's state law, NH RSA-485-A:8, VI and the NH Code of Administrative Rules, Part Env-WS1703.21(a) states "all surface waters shall be free from toxicsubstances or chemical constituents in concentrations or combinations that injure or are inimical to plants, animals, humans or aquatic life." The federal NPDES permit regulations , 40 CFR §122.44(d)(1)(v), require WET limits in a permit when a discharge has a "reasonable potential" to cause or contribute to an excursion above the state's narrative criterion for toxicity. Accordingly, effluent limitations for WET are maintained in the draft permit. The WET limitations in the draft permit are based on an available dilution of 100. In accordance with regional policy, the frequency of WET testing has been decreased from four times per year to twice per year.

Results of these toxicity tests will demonstrate compliance with the toxic provision of the NH standards. The draft permit requires the permittee to perform two acute toxicity tests each year with two species. The draft permit contains an LC50 limitation of greater than or equal to 50 percent effluent concentration. An LC50 is defined as the concentration of toxicant, in this case the percentage of effluent, that would be lethal to 50 percent of the test organisms during a specific time period. The acute tests are to be performed using Mysidopsis bahia and Menidia beryllina.

If the results of these tests are consistently negative during the four most recent sampling events, the monitoring frequency and testing requirements may be reduced. Alternatively, if toxicity is found, the monitoring frequency and testing requirements may be increased. A special condition of this draft permit allows the frequency of testing to be reduced by a certified letter from EPA if the previously mentioned conditions are met. This permit provision anticipates that the permittee may wish to request a reduction in WET testing. After completion of a minimum of four consecutive WET tests, all of which must be valid tests and must demonstrate compliance with the permitted limits for whole effluent toxicity, the permittee may submit a written request to the EPA seeking a review of the toxicity test results. The EPA will review the test results and other pertinent information to make a determination. The frequency of toxicity testing may be reduced to as little as once per year. The permittee is required to continue testing at the frequency specified in the permit until the permit is either formally modified or

until the permittee receives a certified letter from the EPA indicating a change in the permit conditions. This special condition does not negate the permittee's right to request a permit modification at any time prior to the permit expiration.

This draft permit also requires reporting of selected parameters determined from the chemical analysis of the WET tests sample with 100 percent effluent.

Storm Water Discharges - Outfalls 001-004

In addition to the discharge from the waste water treatment plant, there are four outfalls with discharges composed of only storm water. Storm water includes runoff; snow melt runoff; and surface runoff and drainage. EPA is required to permit certain types of storm water discharges when they are associated with specific types of industrial activities. Activities at PDA include the following: aircraft maintenance; materials handling; chemical fuel storage; manufacturing and warehousing. All such activities are subject to storm water permitting requirements. PDA has developed and implemented a storm water pollution prevention plan (SWPPP). The draft permit requires the permittee to continue to implement the existing SWPPP. The draft permit contains minimum elements of a SWPPP including formation of a pollution prevention team; description of potential sources of pollution; description of storm water measures and controls; a comprehensive site evaluation.

In addition to the requirement to develop and implement a plan, the draft permit also contains monitoring requirements for the storm water discharges. All outfalls have monitoring for flow, BOD, pH, oil & grease, surfactants, volatile organics and polynuclear aromatic hydrocarbons. Outfalls which drain areas that could potentially contain deicing materials are required to monitor for the deicing material when it is used. Typical deicing substances contain glycol which depletes the dissolved oxygen levels of the receiving water.

Industrial Users

The permittee is presently not required to administer a pretreatment program based on the authority granted under 40 CFR §122.44(j), 40 CFR §403 and Section 307 of the Act. However, the draft permit contains condition that are necessary to allow EPA and NHDES-WD to ensure that pollutants from industrial user will not pass through the facility and cause water quality standards violations and/or sludge use and disposal difficulties or cause interference with the operation of the treatment facility. The permittee is required to notify EPA and NHDES-WD whenever a process wastewater discharge to the facility from a primary industrial category (see 40 CFR§122 Appendix A for list) is planned or if there is any substantial change in the volume or character of pollutants being discharged into the facility by a source that was discharging at the time of issuance of the permit. The permit also contains the requirements to: (1) report to EPA and NHDES-WD the name(s) of all industrial users subject to Categorical Pretreatment Standards under 40 CFR§403.6 and 40 CFR Chapter I, subchapter N (Parts 405-415; 417-436; 439-440; 443; 446-447; 454-455; 457-461; 463-469; and 471, as amended) and/or New Hampshire Pretreatment Standards (Env-Ws 904) who commence discharge to the POTW after the effective date of the finally issued permit and (2) submit to EPA and NHDES-WD copies of Baseline Monitoring Reports and other pretreatment reports submitted by industrial users.

Sludge Conditions

Section 405(d) of the Act requires that EPA develop technical regulations regarding the use and disposal of sewage sludge. These regulations are found at 40 CFR part 503 and apply to any facility engaged in the treatment of domestic sewage. The Act further requires that these conditions be implemented through permits. The sludge conditions in the draft permit are intended to implement these regulations. The facility disposes of the sewage sludge at the Turnkey Landfill in Rochester.

Additional Requirements and Conditions

The effluent monitoring requirements have been established to yield data representative of the discharge under the authority of Section 308(a) of the CWA in accordance with 40 CFR § 122.41(j), 122.44(I) and 122.48. Compliance monitoring frequencies at Outfall 005 (treated wastewater) for Flow, BOD_5, TSS, pH, TRC, and Total Coliform have been established in accordance with the EPA/NHDES-WD Effluent Monitoring Guidance mutually agreed upon and first implemented in March 1993 and revised on July 19, 1999. WET test monitoring requirements have been set according to EPA - New England's Municipal Toxicity Policy. It's the intent of EPA and NHDES-WD to establish minimum monitoring frequencies in all NPDES permits at permit modification and/or reissuances in accordance with this Effluent Monitoring Guidance.

The permittee will note the sampling frequencies for certain parameters in the draft permit for Outfall 005 have been increased from those in the existing permit in order to bring the monitoring requirements into conformance with the Monitoring Guidance and the Municipal Toxicity Policy. Thus, the sampling for BOD_5 and TSS increases to 2/Week from 1/Week and Total Coliform to Daily from 1/Week, WET decreases to 2/Year from 4/Year while the other parameters of Flow, pH, TRC and Trichloroethylene remain the same at Continuous, 1/Day, 2/Day and 1/Quarter, respectively. The "Sample Type" for various constituents in the draft permit remains at "24-Hour Composite" as in the existing permit.

Also, the permittee should note that all the sampling frequencies and sample type for those parameters monitored in the draft permit for Outfalls 001-004 (Storm Water) have not changed from those in the existing permit. Thus sampling for Flow, BOD_5, COD, TSS, pH, Oil & Grease, Surfactants, Primary Deicing Chemical, and Total Recoverable Arsenic, Cyanide, Iron, Lead, Nickel and Zinc remain at Monthly, Trichloroethylene remains at Quarterly, and Volatile Organics Scan and Polynuclear Aromatic Hydrocarbons remain at 2/Year. Sample type remains at "Grab" for all the parameters except flow which remains at "estimate".

The remaining conditions of the permit are based on the NPDES regulations 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits.

VI. Antidegradation Review

This draft permit is being reissued with an increase in the allowable discharge for both loads and concentrations of BOD_5 and TSS. The average long-term design flow of 1.2 MGD has not changed from that in the existing permit. In the existing permit, BOD_5 was set at average monthly, average weekly and maximum daily concentrations of 25, 40 and 45 mg/l, respectively, with an average monthly load of 250

lbs/day; whereas, TSS was set at average monthly, average weekly and maximum daily concentrations of 15, 25 and 30 mg/l, respectively, with an average monthly load of 150 lbs/day. In the draft permit, each parameter, BOD_5 and TSS, is set at average monthly, average weekly and maximum daily concentrations (mg/l)/loads (lbs/day) of 30/300, 45/450 and 50/500, respectively. The State of New Hampshire, following its antidegradation provisions (Part Env-Ws 1708 in the NH Standards adopted on December 3, 1999), has made a "preliminary antidegradation finding" that these increases in allowable loads of BOD_5 and TSS will result in an insignificant lowering of the water quality in the Piscataqua River. Furthermore, the State has determined that all existing water uses in that receiving water will be fully protected. A letter memorandum from the State of New Hampshire and contained in the permit file located in EPA-New England's Regional Office in Boston, Massachusetts provides supporting evidence for the State's position. The State's "preliminary antidegradation finding" is subject to public notice and review before becoming final. The Public Notice is written to serve as the public notice of both the permit and the State's "preliminary antidegradation finding". Public comments received on the State's "tentative antidegradation finding" will be responded to by the NHDES-WD and EPA in the Response to Public Comments Document that will accompany the finally issued permit if any comments are received. The NPDES permit, when issued, will, therefore, finalize the tentative antidegradation finding.

VII Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998), EPA is required to consult with NMFS if EPA's action or proposed actions that it funds, permits or undertakes, "may adversely impact any essential fish habitat." 16 U.S.C. §1855(b). The Amendments broadly define "essential fish habitat" as: "waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." 16 U.S.C. §1802(10). Adversely impact means any impact which reduces the quality and/or quantity of an EFH. 50 CFR §600.910(a). Adverse effects may include direct (e.g contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site specific or habitat wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

Essential fish habitat is only designated for fish species for which federal Fisheries Management Plans exist. 16 U.S.C. §1855(b)(1)(A). EFH designations for New England were approved b the United States Department of Commerce on March 3, 1999.

The following managed species are believed to be present during at least one life stage within EFH Area 1 (Volume 1), which encompasses the existing and proposed discharge site:

American plaice (*Hippoglossoides platessoides)*
Atlantic cod (*Gadus morhua)*
Atlantic halibut (*Hippoglossus hippoglossus)*
Atlantic sea herring *(Clupea harengus)*
Atlantic salmon *(Salmo salar)*
Atlantic sea scallop *(Placopecten magellanicus)*
Pollack *(Pollachius virens)*
Haddock *(Melanogrammus aeglefinus)*
Red hake *(Urophycis chuss)*
White hake (*Urophycis tenuis)*
Whiting (*Merluccius billinearis)*
Window pane flounder *(Scophthalmus aquosus)*
Winter flounder *(Pleuronectes americanus)*
Yellowtail flounder *(Pleuronectes americanus)*
Bluefish *(Potatomus saltarix)*
Atlantic mackerel *(Scomber scombrus)*
Bluefin tuna (*Thunnus thynnus)*

Based on the permit requirements identified in this fact sheet that are designed to be protective of all

marine species, EPA has determined that a formal EFH consultation with NMFS is not required because the proposed discharges will not adversely effect EFH. However, if adverse effects to EFH do occur as a result of this permit action, NMFS will be notified and consultation will be promptly initiated.

VIII State Certification

EPA may not issue a permit unless the state water pollution control agency with jurisdiction over the receiving waters certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violate State Surface Water Quality Regulations or wives its right to certify as set forth in 40 CFR §124.53.

Upon public noticing of the draft permit, EPA is formally requesting that the State's certifying authority make a written determination concerning certification. The State will be deemed to have waived its right to certify unless certification is received with in 60 days of receipt of this request.

The NHDES-WD, Wastewater Engineering Bureau, is the certifying authority. EPA has discussed this draft permit with the staff of the bureau and expects that the draft permit will be certified. Regulations governing state certification are set forth in 40 CFR §124.53 and §124.55.

The state's certification should include the specific conditions necessary to assure compliance with applicable provisions of the Clean Water Act, Sections 208(e), 301, 302, 303, 306 and 307 and with appropriate requirements of state law. In addition, the state should provide a statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of state law. Since certification is provide prior to permit issuance, failure to provide this statement for any condition waives the right to certify or object to any less stringent condition which may be established by EPA during the permit issuance process following public noticing as a result of information received during that noticing. If the state believes that any conditions more stringent that those contained in the draft permit are necessary to meet the requirements of either the CWA or state law, the state should include such conditions and, in each case, cite the CWA or state law reference upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. The sludge conditions implementing section 405(d) of the CWA are not subject to the 401 certification requirements.

Reviews and appeals of limitations and conditions attributable to state certification shall be made through the applicable procedures of the state and may not be made through the applicable procedures of 40 CFR part 124.

IX Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period. Comments to be submitted to John Hackler, Chief, Maine-New Hampshire NPDES Permit Unit, US EPA, Office of Ecosystem Protection, One Congress Street - Suite 1100 (CPE), Boston, MA 02114-2033. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issued proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision, any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of 40 CFR §124.74, 78 Fed. Reg 14279-14280 (April 1, 1983).

X EPA Contact

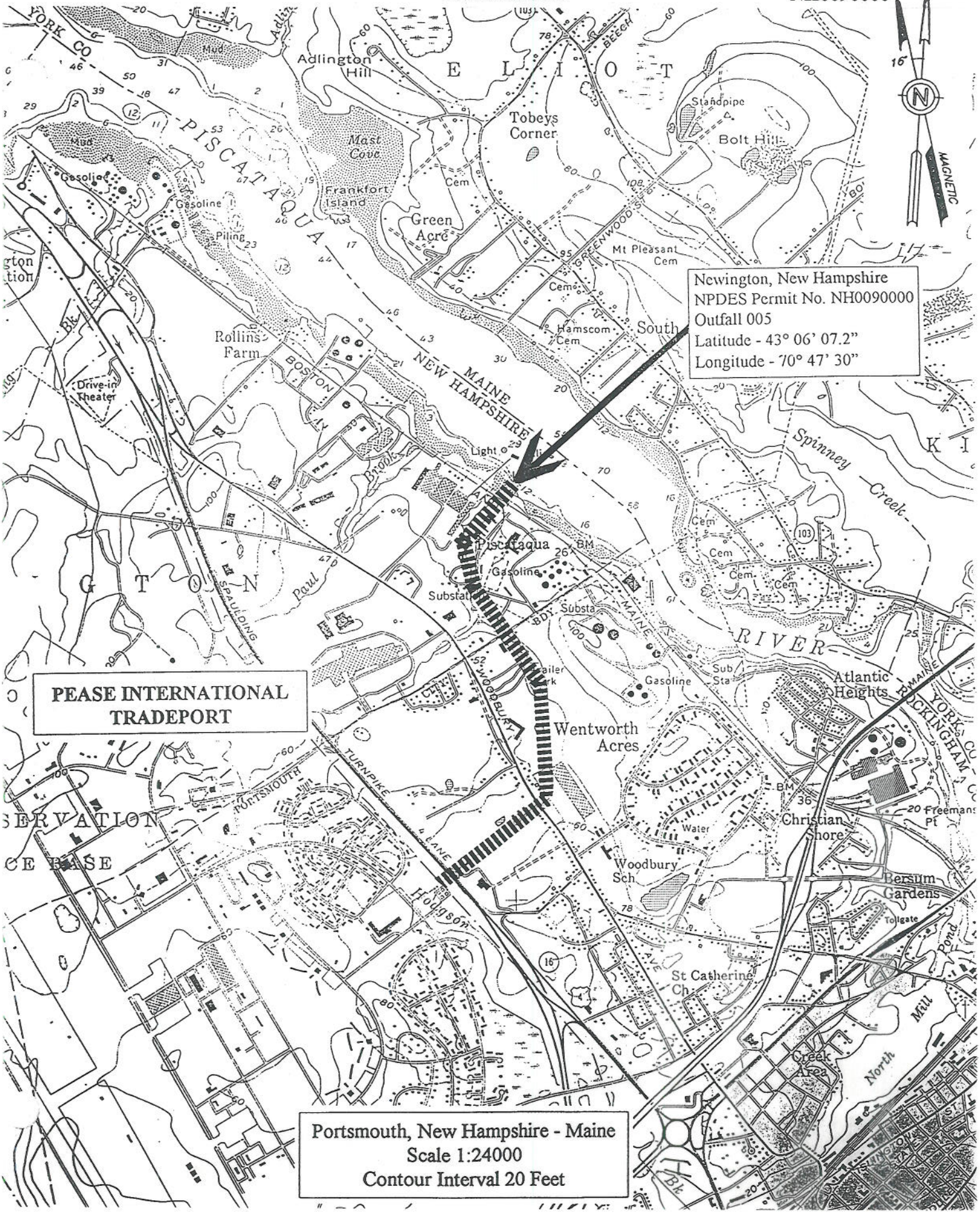
Additional information concerning the draft permit may be obtained between the hours of 9:00 am and 5:00 p.m., Monday through Friday, excluding holidays from:

Thelma Murphy
US Environmental Protection Agency
Office of Ecosystem Protection
One Congress Street - Suite 1100(CMU)
Boston, Massachusetts 02114-2033
Telephone: (617) 918-1615

4/25/00
Date

Linda M. Murphy, Director
Office of Ecosystem Protection
US Environmental Protection Agency

Attachment A **NH0090000**



NH0090000

Attachment B

Summary of Effluent Parameters
Storm Water Outfalls
(January 1998 - November 1998)

	OUTFALL 001A	OUTFALL 002A	OUTFALL 003A	OUTFALL 004A
BOD - mg/l	7.2	6.6	9.09	9.78
TSS - mg/l	--	8.36	4.83	--
COD - mg/l	--	20.27	16.45	--
FLOW - MGD	5.23	1.8	5.62	2.13
pH - standard units	7.15	6.84	7.53	7.29
OIL & GREASE - mg/l	5.6	5.45	5.32	5.75
SURFACTANTS - mg/l	0.092	0.0839	0.062	0.110
IRON - mg/l	1.63	1.82	1.19	5.88
ZINC - mg/l	--	0.082	0.035	0.105
NICKEL - mg/l	--	--	--	0.077
ARSENIC -mg/l	--	0.0097	--	--
LEAD - mg/l	0.006	--	--	0.0208
PAH - μg/l	9	9.5	9.5	9.5
TCE - mg/l	6.6	6.6	6.6	6.6
VOLATILES -mg/l	10	10	10	10
CYANIDE - μg/l	--	--	--	15.46
DEICING	--	--	4.1 - March	--

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Summary of Effluent Parameters

Wastewater Treatment Plant Outfall
(January 1998 - November 1998)

	OUTFALL 005A
BOD - monthly average	22.95 lbs/day / 5.126 mg/l
TSS - monthly average	20.25 lbs/day / 4.04 mg/l
FLOW - monthly average	0.496 MGD
pH - daily max/min average	7.11 std units/7.54 std units
CHLORINE RESIDUAL - average	0.484 mg/l
TOTAL COLIFORM - average	29.0/100 ml

ATTACHMENT C

Calculation of Allowable Pollutant Loads and Total Residual Chlorine

Allowable Pollutant Loads

$L = Q \times C \times 8.345$

where:

- L = allowable pollutant load - lbs/day
- Q = design flow rate of the facility - MGD
- C = concentration of pollutant - mg/l
- 8.345 = conversion factor

Example for calculation of monthly average BOD_5 limitation

$L = (1.2) \times (30) \times 8.345$	$Q = 1.2$ MGD
$L = 300$ lbs/day	$C = 30$ mg/l

Other calculations performed in similar manner.

Total Residual Chlorine

STP = DF x criteria

where:

- STP = specific toxic pollutant (mg/l)
- DF = dilution factor - available dilution in receiving water - 100
- Criteria = water quality criteria for specific pollutant from NH standards
  - acute criteria used to calculate maximum daily limitations
  - chronic criteria used to calculate average monthly limitations

Chlorine Criteria:

- acute: 7.5 μg/l → 0.0075 mg/l
- chronic: 13 μg/l → 0.013 mg/l

STP = 100 x (0.0075)
STP = 0.75 mg/l

Calculation for chronic criteria similar.

ATTACHMENT D **NH0090000**

Toxicity Strategy for Municipal Permits

	HIGH RISK	MED-HIGH RISK	MED-LOW RISK	LOW RISK
DILUTION FACTOR	<10:1	10.1-20:1	20.1-100:1	>100:1
SAMPLING EVENTS PER YEAR	4 (1/3 MONTHS)	4 (1/3 MONTHS)	4 (1/3 MONTHS)	2 (1/6 MONTHS)
TOXICITY TESTS: FRESH WATER MARINE WATER	 CHRONIC[1] CHRONIC & ACUTE	 CHRONIC[1] CHRONIC & ACUTE	 ACUTE ACUTE	 ACUTE ACUTE
NUMBER OF SPECIES: FRESH WATER MARINE WATER	 2 3	 2 3	 2 2	 2 2
PERMIT LIMITS	LC50=100% C-NOEC[2]>=RWC[3]	LC50=100%	LC50=100%	LC50>=50%
TEST SPECIES: FRESH WATER MARINE WATER	 DAPHNID[1] (*Ceriodaphnia dubia* or *Daphnia pulex*) FATHEAD MINNOW[1] (*Pimephales promelas*) INLAND SILVERSIDE[1] (*Menidia beryllina*) MYSID SHRIMP (*Mysidopsis bahia*) SEA URCHIN (*Arbacia punctulata*)		 DAPHNID (*Ceriodaphnia dubia* or *Daphnia pulex*) FATHEAD MINNOW (*Pimephales promelas*) INLAND SILVERSIDE (*Menidia beryllina*) MYSID SHRIMP (*Mysidopsis bahia*)	

[1] 7-DAY CHRONIC/MODIFIED ACUTE.

[2] C-NOEC IS CHRONIC NO OBSERVED EFFECT CONCENTRATION.

[3] RWC IS RECEIVING WATER CONCENTRATION, IN PERCENT, AS DETERMINED FROM DIVIDING ONE BY THE DILUTION FACTOR ALL TIMES 100.

RESPONSE TO COMMENTS
PEASE DEVELOPMENT AUTHORITY
NH0090000

The draft permit for the Pease Development Authority (PDA) was on public notice from April 25, 2000, to May 24, 2000. Comments were received from the City of Portsmouth, New Hampshire, (the City); Pease Development Authority, and a citizen, Paul Adams from the Technical Assistance for Pollution Prevention, Inc. This document contains EPA's responses to the significant comments raised by these three parties. Any changes between the draft permit and the final permit include those noted in this document as well as corrections for typographical errors and for clarifications.

Comment #1:
Both the City and PDA requested that the permit conditions be separated into separate NPDES permits, one for PDA and one for the City. PDA would be responsible for the storm water outfalls and the City would be responsible for the treatment plant outfall.

Response #1:
Although the City will be operating the waste water treatment plant (WWTP), the City did not submit a permit application. The permit application was submitted by PDA and contained information regarding all five outfalls. In order for the City to have a separate permit, they would need to submit a separate permit application. The permitting process which includes review of the permit application, development of a draft permit, public notice of a draft permit, responding to significant comments and issuance is a very time consuming process. At this stage of the process, neither EPA nor the New Hampshire Department of Environmental Services (NHDES) believe that issuing a second permit is an efficient use of resources. EPA and NHDES recommend that PDA and the City develop an agreement between one another. This agreement should clearly detail who is responsible for what aspects of the permit. EPA will not at this time develop a separate permit for the City.

Comment #2:
Both PDA and the City requested that EPA "revise the language to reflect a municipal domestic WWTP."

Response #2:
Neither party discussed what specific part of the permit needed to be revised nor did either party provide for alternative language. Therefore, other than areas of clarification or corrections of typographical errors, the permit language has not been changed.

Comment #3:
Both PDA and The City requested that the bacteria limitation for total coliform be changed to

fecal coliform.

Response #3:
The effluent limitations and corresponding footnotes in the permit have been changed. The fecal coliform limitation is protective of shellfish consumption.

Comment #4:
The City requested that the frequency of the toxicity testing be reduced to once per year.

Response #4:
The whole effluent toxicity (WET) testing requirements were reduced from four times per year in the previous permit, to twice per year in the draft permit. The current policy is to require testing at the frequency specified in the permit, then potentially reduce the frequency after four consecutive negative test results. Any further reduction will not occur until after the permittee has conducted testing at the frequency in the permit and demonstrated compliance with the permit limitation.

Comment #5:
Both the City and PDA requested that the frequency for monitoring trichloroethylene be reduced from once per quarter (four times a year) to twice per year in order to be consistent with the WET testing and because eight years of monitoring have not shown any violations.

Response #5:
The frequency for testing TCE at outfall 005 has been reduced to be consistent with the WET testing requirements. The frequency for testing the remaining outfalls, the storm water discharges, remains at once per quarter. The previous permit contained a requirement to monitor only for trichloroethylene, it did not contain a limit therefore it is not practical to assess whether any violations occurred. The benchmark standard for storm water discharges in the multi-sector general permit for storm water discharges for trichloroethylene is 0.0027 mg/l. Since TCE is a human carcinogen, this number is based on EPA's recommended Ambient Water Quality Criteria, human health criteria for consumption of water and organisms. Data submitted for the storm water outfalls are well above this benchmark. EPA is not satisfied that TCE is not a concern. At this time, the neither the parameter nor the frequency for testing will be changed. If subsequent monitoring continues to exceed the benchmark, EPA may consider adding limitations for this pollutant.

Comment #6:
Both PDA and the City requested clarification on the conditions regarding industrial discharges to the treatment system, page 5 of 18 in the draft permit. The question was whether the term "all industries discharging industrial wastewater..." applied to only categorical industries and Significant Industrial Users (SIU).

Response #6:
The term applies to all industries not just categorical industries or SIUs. Significant Industrial Users are defined at 40 CFR 403.4(t) and Categorical Industries are defined at 40 CFR 403.6. The purpose of this requirement is to insure that the City has a firm handle on what nondomestic waste waters are entering the treatment system.

Comment #7:
The City requested that the requirement to report on the ground water treatment system be removed from the permit, page 6 of 18 in the draft permit.

Response #7:
The requirement in the permit is that the permittee provide copies of available reports on the effluent concentrations to the sanitary sewer from the ground water treatment systems. The City needs to be aware of what is entering the sewer system from these treatment systems. Despite the City's statement that the Air Force is responsible for these ground water treatment systems, the systems discharge to the sanitary sewer and the outfall from the sewer system is ultimately the responsibility of the City. The City may have or may develop an agreement with the Air Force to provide this information. The requirement has not been removed from the permit.

Comment #8:
PDA requested that the 180 days to comply with modifying the oil/water separators be extended to one year from the effective date of the permit. The proposed time frame for design, bids, and construction is not adequate.

Response #8:
EPA believes that the request is reasonable. The time frame has been changed.

Comment #9:
Both the City and PDA requested clarification on the sludge conditions. Specifically, does the reporting requirement apply to sludges which are disposed in a municipal solid waste landfill, and whether TCLP and paint filter testing meets the reporting requirements.

Response #9:
The reporting requirements do apply to sludge disposed in a MSWLF. The sludge must meet the quality criteria of the landfill. The current tests which are performed, TCLP and paint filter, meet the conditions of the permits. Results of these tests should be submitted to EPA annually on February 19.

Comment #10:
Mr. Paul Adams requested that the following parameters be added to the WET testing parameters: total recoverable arsenic; total recoverable mercury; total recoverable selenium; and total recoverable molybdenum; change appropriate footnotes regarding WET testing to reflect the addition of these parameters; and add minimum quantification levels of these parameter to Attachment A. His reason is because 40 CFR part 403; 40 CFR part 503; NH-Env-Ws 800 and NH Env-Ws 1700 dictate that these parameters be measured.

Response #10:
The parameters listed under the reporting requirements for the WET testing on page 2 of the permit were selected from those listed on page A-7 of the WET testing protocol. In the WET protocol, these constituents are required in case the permittee fails the test. At that point these constituents are used as a screening device to determine if their presence, particularly at high levels, could have caused or contributed to that test's failure. These constituents were included in the toxicity test protocols developed by the Region for the NPDES program.

The parameters listed by Mr. Adams are applicable under 40 CFR part 503 to sewage sludge which is land applied. The material generated at PDA is not land applied, therefore, monitoring of these parameters is not applicable to the sewage sludge generated at this facility. Accordingly, these parameters have not been added to the WET testing requirements and no changes have been made to the footnotes or Attachment A.

Comment #11:
Mr. Adams requested that a new part D be added to the permit entitled "Industrial Pretreatment Program". The reason: "Now is the time to identify a POTW-based industrial pretreatment program under the appropriate sections of 40 CFR 403 rather than be overtaken by growth and overlooked in the next five years."

Response #11:
In accordance with 40 CFR 403.8, "any POTW with a total design flow greater than 5 million gallons per day (MGD) and receiving from Industrial User pollutants which Pass Through or Interfere with operation of the POTW will be required to establish a POTW pretreatment program. The Regional Administrator may also require a POTW with a design flow of less than 5 mgd develop a pretreatment program. PDA does not have a design flow of greater that 5 mgd and the Regional Administrator has not required the development of a pretreatment program. The draft permit requires PDA to evaluate their system with regards to industrial discharges and submit this information to EPA and NHDES. At this time, there is no justification to require development of an industrial pretreatment program in accordance with 40 CFR part 403.

Comment #12:
Mr. Adams requested various changes to the fact sheet.

Response #12:
The fact sheet describes the development of the draft permit. Any differences between a draft permit and a final permit are discussed in the response to comments document. No changes are made to the fact sheet because the method of development for the draft permit has not changed and any changes to the fact sheet would not be reflective of the development of the draft permit.

Comment #13
The New Hampshire Department of Environmental Services requested that EPA consider the inclusion of effluent limitations for the storm water discharges, outfalls 001A-004A.

Response #13:
EPA has considered this request, but at this time is not including effluent limitations for storm water. The previous permit required the permittee to monitor for various metals, such as nickel, lead, iron and zinc. EPA has not developed water quality standards for wet weather situations, therefore development of limitations is difficult. Although EPA does not have wet weather standard, EPA does have the benchmark values from the Multi-Sector General Permit. These benchmarks are not effluent limitations and EPA does not believe that they should be adopted as such. EPA does believe that storm water discharges with pollutant levels below the benchmark values should not cause violations of water quality. Data submitted by PDA indicates that the benchmark for iron was exceeded at all outfalls. EPA does not believe there is suffienct data to develop a defensible effluent limit for this parameter, however EPA recommends that PDA review their existing Storm Water Pollution Prevent Plan (SWPPP) and attempt to determine the source of the iron and remove or minimize its effect.

Comment #14:
The NHDES requested that a condition be included in the permit regarding submission of a copy of any agreement between the City and PDA regarding the operation of the Industrial Pretreatment Program.

Response #14:
A condition has been added to Part I.A.9 (page 5 of 18) regarding this request. PDA is required to submit any agreement between PDA and the City regarding the operation of the Industrial Pretreatment Program within 90 days of the effective date of the permit