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"),

Public Service of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, NH 03105

is authorized to discharge from the facility located at

PSNH-Newington Station
Gosling Road
Newington, NH 03801

to receiving waters named: Piscataqua River

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

This permit shall become effective (30) days from the date of issuance.

This permit and the authorization to discharge expires (5) five years from the effective date.

This permit supersedes the permit issued on September 27, 1988.

This permit consists of 16 pages in Part I including effluent limitations, monitoring requirements, etc., 15 pages in Attachment A including the basis for a storm water pollution prevention plan, and 22 pages in Part II including General Conditions and Definitions.

Signed this 30th day of September, 1993

David A. Fierra
Director
Water Management Division
Environmental Protection Agency
Region I
Boston, MA

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Except as specified in paragraphs 1 through 8 herein, the permittee shall not discharge to the Piscataqua River, a final effluent to which it has added any pollutants.

   a. The term "Director" normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representative. Conversely, it could also mean the Regional Administrator of EPA Region-I or the Director of the Water Supply and Pollution Control Division of the New Hampshire Department of Environmental Services (NHDES) as the context requires.

   b. Chlorine and bromine may be used as a biocide. No other biocide shall be used without written approval from the Regional Administrator and the Director. The term chlorination will include bromination, if bromine is used as the biocide. For this permit total residual oxidants (TRO) is synonymous with total residual chlorine (TRC). TRC or TRO, unless otherwise specified, shall be measured downstream of the unit being chlorinated before this stream commingles with any other waste stream. The chlorination cycle shall not exceed two hours in any one day for any one unit, unless the discharger demonstrates to the permitting authorities that chlorination for more than two hours per day is necessary for macroinvertebrate control. The TRC or TRO concentration shall not exceed 0.20 mg/l in the unit discharge prior to mixing with any other waste stream(s).

   c. The discharges shall not jeopardize any Class B use of the Piscataqua River and shall not violate applicable water quality standards for Class B water as defined by the State of New Hampshire. Pollutants which are not limited by this permit, but which have been specifically disclosed in the permit application, may be discharged at the frequency and level disclosed in the application, provided that such discharge does not violate Section 307 or 311 of the Clean Water Act or applicable State water quality standards.

   d. All live fish, shellfish, and other aquatic organisms collected or trapped on the intake screens shall be returned to their natural habitat. All solid materials except for naturally

occurring materials such as leaves, branches, grass, and so forth, will be removed from the screens and have land disposal.

e. This permit shall be modified, revoked or reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act (CWA), if the effluent standard or limitation so issued or approved:

(1) contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or

(2) controls any pollutant not limited by this permit.

If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the CWA.

f. The mixing zone temperature criteria for the thermal plume are such that at no time shall the temperature of a surface area of more than 25 acres of the receiving water body be raised more than $2.2^{0}C/(4.0^{0}F)$, and at no time shall the temperature of a surface area of more than 60 acres of the receiving water body be raised more than $0.83^{0}C/ (1.5^{0}F)$. The increase in temperature of the receiving water body shall be determined by comparing the temperature at Outfall 001 with the water immediately outside the intake structure, unless a more appropriate method is agreed upon by the permittee, the EPA, and the NHDES.

g. It has been determined, based on engineering judgement, that the circulating water intake structure presently employs the best technology available for minimizing adverse environmental impact. Any change in the location, design or capacity of the present structure shall be approved by the Regional Administrator and the Director. The present design shall be reviewed for conformity to regulations pursuant to Section 316(b) of the CWA when such are promulgated.

h. The thermal plume from the station shall; (a) not block zone of fish passage, (b) not interfere with spawning of indigenous populations, (c) not change the balanced indigenous population of the

receiving water, and (d) have minimal contact with the surrounding shorelines.

i. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

j. The effluent shall not contain materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

k. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the uses designated by the classification of the receiving waters.

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

(1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(a) One hundred micrograms per liter (100 ug/l);

(b) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(c) 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

(d) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and New Hampshire regulations.

(2) 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:"

(a) Five hundred micrograms per liter (500 ug/l);

(b) One milligram per liter (1 mg/l) for antimony;

(c) 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

(d) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and New Hampshire regulations.

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

m. Biological Monitoring

(1) The permittee shall submit an annual report summarizing the results of temperature monitoring at the facility to EPA, the NHDES, and the New Hampshire Fish and Game Department (NHFGD). This temperature monitoring report shall be submitted by April 1st of the following year, and yearly thereafter. Upon review of this report, and any other pertinent information, NHDES and NHFGD shall determine whether or not monitoring studies of the benthic community shall be reinstated at the facility. NHDES and NHFGD shall notify the permittee and EPA of their determination in writing. If it is determined that the benthic community monitoring program is to be reinstated, then the requirements of the approved monitoring program shall become enforceable provisions of this permit.

(2) Any incidence of fish mortality associated with the thermal plume or of unusual numbers of fish impinged on the intake shall be

reported to the EPA, the New Hampshire Fish and Game Department (NHFGD), and the NHDES within 24 hours by telephone report as required in Part II.D.1.e. of this permit. A written- confirmation report should include the following information:

(a) The kinds, sizes, and approximate number of fish involved in the incident.

(b) The time and date of the occurrence.

(c) The operating mode of the plant.

(d) The opinion of the permittee as to the reason the incident occurred.

(e) The remedial action the permittee will take to prevent a reoccurrence of the incident.

A. EFFLUENT 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 serial number 001: combined plant discharge to the discharge canal; thence to the Piscataqua River.

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	325.4	326.0	Continuous	Calculate[b]
Maximum Temperature, T_{max}	----	$95^0F/(35^0C)$	Hourly, when on-line	Recorder
Temperature Rise, ΔT	----	$25^0F/(13.9^0C)$	Hourly, when on-line	Recorder

b. Based on pump capacity-curves, hours of pump operation, flow volume from the wastewater treatment plant (Outfalls 01A and 01C), and effluent from the defoamer spray system.

c. The pH shall not be less than 6.5 standard units (s.u.) nor greater than 8.0 s.u., or shall be as naturally occurs in the receiving water (see Part I.C.1.a.).

d. Required for State certification.

e. There shall be no discharge of floating solids, oil sheen, or visible foam.

f. Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point: prior to discharge into the Piscataqua River.

A. EFFLUENT 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 serial number 01A: settling basin effluent during routine operation of the wastewater treatment system.

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	0.200	0.350	Each Batch	Calculate[b]
Total Suspended Solids (mg/l)	30.0	100.0	Monthly	Composite
Oil and Grease (mg/l)	15.0	20.0	Monthly	Grab
Total Copper (mg/l)	1.0	1.0	Monthly	Composite
Total Iron (mg/l)	1.0	1.0	Monthly	Composite
pH (range, in s.u.)	6.5 - 8.0		Continuous, when-in-use	Recorder

b. Based on treated wastewater differential level in the settling basin during batchwise operation.

c. There shall be no discharge of floating solids or visible foam.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: point of discharge prior to dilution with the circulating cooling water.

A. EFFLUENT 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 serial number 01B: once-through condenser cooling water.

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	324.6	324.8	Continuous	Calculate[b]
Total Residual Oxidants (mg/l)	----	0.20	Daily, when chlorinatation occurs.	Grab

b. Based on pump capacity-curves and hours of pump operation.

c. There shall be no discharge of floating solids or visible foam.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: condenser cooling water effluent prior to commingling with any other effluent.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 01C: settling basin effluent during the discharge of the treated metal cleaning effluent in the wastewater treatment system.

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow (MGD)	0.200	0.350	Daily, when in-use	Calculate[b]
Total Suspended Solids (mg/l)	30.0	100.0	Daily	Composite
Oil and Grease (mg/l)	15.0	20.0	Daily	Grab
Total Copper (mg/l)	1.0	1.0	Daily	Composite
Total Iron (mg/l)	1.0	1.0	Daily	Composite
pH (range, in s.u.)	6.5 - 8.0		Continuous, when-in-use	Recorder

b. Based on treated wastewater differential level in the settling basin during batchwise operation.

c. There shall be no discharge of floating solids or visible foam.

d. The analytical results for each metal cleaning operation shall be reported on a separate discharge monitoring report form.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: point of discharge prior to dilution with the circulating cooling water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

6. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 002: screenhouse floor drains; screenhouse roof drains; and intake pump bay effluent (designated as 3 separate discharges in Form 2C of Application), subject to the following BEST MANAGEMENT PRACTICES CONDITIONS:

a. BMP Plan

The permittee shall develop and implement a best management practices (BMP) plan which prevents, or minimizes the potential for the release of pollutants from screenhouse activities: including material storage areas in the screenhouse; site runoff; loading and unloading operations in the screenhouse; and waste disposal, to the Piscataqua River by way of the screenhouse floor drains; through spillage or leaks; or waste disposal; or drainage from any raw material storage. For purposes of this part, the term "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act (CWA), oil, as defined in Section 311(a)(1) of the CWA, and any substance listed as hazardous under Section 311 of the CWA.

b. Implementation

The plan shall be developed within three (3) months after the effective date of this permit and shall be implemented as soon as practicable but not later than six (6) months after the effective date of this permit condition unless a later date is specified by the Regional Administrator or the Director.

c. General Requirements

The BMP plan shall:

(1) Be documented in narrative form, and shall include any necessary plot plans, drawings or maps.

(2) Establish specific objectives for the control of pollutants.

(i) Each screenhouse component and/or system shall be examined for its potential for causing a release of pollutants to the Piscataqua River due to equipment failure, improper operation, and/or natural phenomena such as rain, snowfall, etc.

(ii) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which result in pollutants reaching the Piscataqua River, the plan should include a prediction of the direction of flow, rate of flow, and total quantity of pollutants which could be discharged from the screenhouse as a result of each condition or circumstance.

(3) Establish specific best management practices to meet the objectives identified under paragraph "2" of this section, addressing each component or system capable of causing a release of pollutants to the Piscataqua River, and identifying specific preventative or remedial measures to be implemented.

(4) At the end of the intake pump and traveling screens maintenance shut down period, oil and grease spills shall be removed from the bay floor prior to the removal of the stop logs.

(5) Be reviewed by plant engineering staff and the plant manager.

d. Documentation

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the regulatory authorities upon request.

e. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the screenhouse or change in the operation of the screenhouse which materially increases the potential for ancillary activities to result in a discharge of pollutants.

f. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of pollutants to surface waters and the specific objectives and requirements under Paragraphs (2), (3), and (4) of Section c, the permit shall be subject to modification pursuant to 40 CFR §122.62 or §122.63 to incorporate revised BMP requirements. Any such permit modification shall be subject to review in accordance with the procedures for evidentiary hearings set forth in 40 CFR Part 124.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 003(NB): intake screen backwash subject to the following conditions:

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Daily Maximum	Measurement Frequency	Sample Type
Flow (GPD)	----	Report	Annual	Estimate, total
Oil & Grease[b] (mg/l)	Report		Annual[c]	Grab[b]
pH[b,d] (range, in s.u.)	6.5 - 8.0		Annual	Grab[b]

NB Designated as Screen Wash-water in Form 2C of Application (1 separate discharge).

b. Required for State Certification.
c. Annual Sample only required if an oil sheen is observed; otherwise report the results of daily observation.
d. The pH shall not be less than 6.5 standard units (s.u.) nor greater than 8.0 s.u., or as naturally occurs in the receiving water (see Part I.C.1.a.).
e. All live fish, shellfish, and other organisms collected or trapped on the intake screens should be returned to their habitat, sufficiently distant from the intake structure to prevent reimpingement. All solid materials except for naturally occurring materials such as leaves, branches, grass, and so forth will be removed from the screens and have land disposal.
f. There shall be no discharge of floating solids or visible foam.
g. Samples taken in compliance with the monitoring requirements specified above shall be taken at some representative point prior to discharge to the receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

8. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number SW-1(NB): storm water discharge.

a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Daily Maximum	Measurement Frequency	Sample Type
Flow (GPD)	----	Report[b]	Annual	Estimate
Oil and Grease (mg/l)	----	Report	Annual[c]	Grab
TSS (mg/l)	----	Report	Annual	Grab
pH (range, in s.u.)	Report Range		Annual	4 Grabs

NB Designated as Outfall A in Form 2F of the Storm Water Discharge Application.

b. Report actual flow based on annual precipitation data or estimated flow derived from a 10 year, 24 hour rainfall event.

c. Required only when an oil sheen is observed; otherwise report results of observations during rain events.

d. There shall be no discharge of floating solids or visible foam.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at some representative point prior to discharge to the receiving water.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

8. Outfall SW-1 - continued

f. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

The permittee shall develop and implement a storm water pollution prevention plan (SWPPP) for this facility. Except as provided elsewhere in this permit, the SWPPP shall comply with the terms of the permit no later than 90 days after the effective date of the permit. The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Attachment A provides the minimum requirements of a storm water pollution prevention plan for this facility. Attachment A also identifies additional permit requirements for storm water discharges through Municipal Separate Storm Sewer Systems serving a population of 100,000 or more, storm water discharges from facilities subject to EPCRA Section 313, and storm water discharges from salt storage areas.

B. MONITORING AND REPORTING

1. Reporting

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

Duplicate signed copies of these, and all other reports required herein, shall be submitted to the EPA and the State at the following addresses:

Environmental Protection Agency
NPDES Program Operations Section
P.O. Box 8127
Boston, MA 02114

The State agency is:

Department of Environmental Services
Water Supply & Pollution Control Division
Permits and Compliance Section
6 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

C. STATE PERMIT CONDITIONS

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

   a. The pH for class B waters is 6.5-8.0 S.U. or as naturally occurs in the receiving water. The 6.5-8.0 S.U. range must be achieved in the final effluent unless the permittee can demonstrate to the Division: 1) that the range should be widened due to naturally occurring conditions in the receiving water or 2) that the naturally occurring source water pH is unaltered by the permittee's operations. The scope of any demonstration project must receive prior approval from the Division. In no case shall the above procedure result in pH limits less restrictive than any applicable federal effluent limitation guidelines.

2. This NPDES Discharge Permit is issued by the U.S. Environmental Protection Agency (EPA) under Federal and State law. Upon final issuance by the federal EPA, the New Hampshire Department of Environmental Services, Water Supply and Pollution Control Division may adopt this permit, including all terms and conditions, as a state discharge permit pursuant to RSA 485-A:13. Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of State law, such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit, if adopted as a state permit, shall remain in full force and effect under State law as a permit issued by the State of New Hampshire.

CONTENTS - Attachment A
(March 1993)

Attachment A Storm Water Pollution Prevention Plans

A storm water pollution prevention plan (SWPPP) shall be developed for this facility. The storm water pollution prevention plan shall be prepared in accordance with good engineering practices and in accordance with the factors outlined in 40 CFR 125.3(d)(2) or (3) as appropriate. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. Deadlines for Plan Preparation and Compliance

1. The SWPPP for this facility shall be prepared, and except as provided elsewhere in this permit, shall provide for compliance with the terms of the permit and the plan, no later than the date specified in the permit.

2. Upon a showing of good cause, the Director may establish, in writing, a later date for preparing and compliance with a plan for a storm water discharge associated with industrial activity.

B. Signature and Plan Review

1. The plan shall be signed in accordance with Part II D.3.(Signatory Requirement) and be retained on-site at the facility in accordance with Part II.C.1.b. (Monitoring and Records) of this permit.

2. The permittee shall make plans available upon request to the Director, or authorized representative, and in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system, to the operator of the municipal system.

3. 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 of this Part. Such notification shall identify those provisions of the permit which are not being met by the plan, and identify which provisions of the plan require

modifications in order to meet the minimum requirements of this Part. Within 30 days of such notification from the Director, (or as otherwise provided by the Director), or authorized representative, the permittee shall make the required changes to the plan and shall submit to the Director a written certification that the requested changes have been made.

C. Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Section D.2.(Description of Potential Pollutant Sources), below, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Amendments to the plan may be reviewed by EPA in the same manner as Section B., (above).

D. Contents of Plan

The plan shall include, at a minimum, the following items:

1. Pollution Prevention Team Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

2. Description of Potential Pollutant Sources The plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during any dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials which may be potentially significant pollutant sources. Each plan shall include, at a minimum:

a. Drainage

(1) A site map indicating an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under Section D.2.c. (Spills and Leaks) have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, liquid storage tanks, processing areas and storage areas.

(2) For each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants which are likely to be present in storm water discharges associated with industrial activity. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

b. Inventory of Exposed Materials The plan shall include an inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of, three years prior to the date of the issuance of this permit and the present; method and location of on-site storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of, three years prior to the date of the issuance of this permit and the present; the location and description of existing structural and non-structural control measures to

reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

c. Spills and Leaks A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of three years prior to the effective date of this permit. Such a list shall be updated as appropriate during the term of the permit.

d. Sampling Data A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.

e. Risk Identification and Summary of Potential Pollutant Sources A narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and on-site waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g. biochemical oxygen demand, etc.) of concern shall be identified.

3. Measures and Controls The permittee shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:

a. Good Housekeeping Good housekeeping requires the maintenance of areas, which may contribute pollutants to storm waters discharges, in a clean, orderly manner.

b. Preventive Maintenance A preventive maintenance program shall involve timely inspection and

maintenance of storm water management devices (e.g. cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

c. Spill Prevention and Response Procedures Areas where potential spills, which can contribute pollutants to storm water discharges, can occur and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

d. Inspections In addition to or as part of the comprehensive site evaluation required under Section D.4., qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the plan. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspection shall be maintained.

e. Employee Training Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management, at all levels of responsibility, of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. A pollution prevention plan shall identify periodic dates for such training.

f. Record-keeping and Internal Reporting Procedures A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water

discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

g. Non-Storm Water Discharges

(1) The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Certifications shall be signed in accordance with Part II.D.3. of this permit. Such certification may not be feasible if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the storm water pollution plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant source of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify the Director in writing.

(2) Except for flows from fire fighting activities, sources of non-storm water that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

h. Sediment and Erosion Control The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

i. Management of Runoff The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide measures that the permittee determines to be reasonable and appropriate and these measures shall be implemented and maintained. The potential of various sources at the facility which contribute pollutants to storm water discharges, associated with industrial activity [see Section D.2. (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices.

4. Comprehensive Site Compliance Evaluation Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but, except as provided in Section D.4.d.(below), in no case less than once a year. Such evaluations shall provide:

a. Visual Inspection Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

b. Plan Revision Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with Section D.2.(Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the plan in accordance with Section D.3.(Measures and Controls) shall be revised as appropriate within two weeks of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than twelve weeks after the inspection.

c. Inspection Report A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with Section D.4.b. (above) shall be made and retained as part of the storm water pollution prevention plan for at least one year after coverage under this permit terminates. The report shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with Part II.D.3.(signatory requirements) of this permit.

5. Consistency with Other Plans Storm water pollution prevention plans may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans developed for the facility under section 311 of the CWA or Best Management Practices (BMP) Programs otherwise required by an NPDES permit for the facility as long as such requirement is incorporated into the storm water pollution prevention plan.

6. Additional Requirements for Storm Water Discharges Associated with Industrial Activity through Municipal Separate Storm Sewer Systems serving a Population of 100,000 or more

a. In addition to the applicable requirements of this permit, the permittee must comply with applicable requirements in municipal storm water management programs developed under NPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the discharger has been notified of such conditions.

b. The permittee shall make plans available to the municipal operator of the system upon request.

7. Additional Requirements for Storm Water Discharges Associated with Industrial Activity from Facilities subject to EPCRA Section 313 Requirements In addition to the requirements of Sections D.1. through D.4. and other applicable conditions of this permit, storm water pollution prevention plans for facilities subject to reporting requirements under EPCRA Section 313 for chemicals which are classified as 'Section 313 water priority chemicals' shall describe and ensure the implementation of practices which are necessary to provide for conformance with the following guidelines:

a. Minimum controls In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided. At a minimum, one of the following preventive systems or its equivalent shall be used:

(1) Curbing, culverting, gutters, sewers or other forms of drainage control to prevent or minimize the potential for storm water run-on to come into contact with significant sources of pollutants; or

(2) Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water, and wind.

b. Additional Considerations In addition to the minimum standards listed above, the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with the following applicable guidelines, other effective

storm water pollution prevention procedures, and applicable State rules, regulations and guidelines:

(1) Liquid storage areas where storm water comes into contact with any equipment, tank, container, or other vessel used for Section 313 water priority chemicals.

(a) No tank or container shall be used for the storage of a Section 313 water priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(b) Liquid storage areas for Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures.

(2) Material storage areas for Section 313 water priority chemicals other than liquids - Material storage areas for Section 313 water priority chemicals other than liquids which are subject to runoff, leaching, or wind shall incorporate drainage or other control features which will minimize the discharge of Section 313 water priority chemicals by reducing storm water contact with Section 313 water priority chemicals.

(3) Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals - Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 water priority chemicals. Protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. Appropriate measures to minimize discharges of Section 313 chemicals may include: the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking

hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

(4) Areas where Section 313 water priority chemicals are transferred, processed or otherwise handled - Processing equipment and materials handling equipment shall be operated so as to minimize discharges of Section 313 water priority chemicals. Materials used in piping and equipment shall be compatible with the substances handled. Drainage from process and materials handling areas shall minimize storm water contact with Section 313 water priority chemicals. Additional protection such as covers or guards to prevent exposure to wind, spraying or releases from pressure relief vents from causing a discharge of Section 313 water priority chemicals to the drainage system shall be provided as appropriate. Visual inspections or leak tests shall be provided for overhead piping conveying Section 313 water priority chemicals without secondary containment.

(5) Discharges from areas covered by paragraphs 7.b.(1) - (4).

(a) Drainage from areas covered by paragraphs 7.b.(1) - (4) of this part should be restrained by values or other positive means, to prevent the discharge of a spill or other excessive leakage of Section 313 water priority chemicals. Where containment units are employed, such units may be emptied by pumps or ejectors; however, these shall be manually activated.

(b) Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design.

(c) If facility drainage is not engineered as above, the final discharge of all in-facility storm sewers shall be equipped to be equivalent with a diversion system that could, in the event of an uncontrolled spill of Section 313 water priority chemicals, return the spilled material to the facility.

(d) Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

(6) Facility site runoff other than from areas covered by 7.b.(1) - (4) - Other areas of the facility [not addressed in paragraphs 7.b.(1) - (4)], from which runoff which may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

(7) Preventive maintenance and housekeeping - All areas of the facility shall be inspected at specific intervals identified in the plan for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas shall be examined for any conditions or failures which could cause a discharge. Inspection shall include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or non-containment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered which may result in significant releases of Section 313 water priority chemicals to waters of the United States, action to stop the leak or otherwise prevent the significant release of section 313 water priority chemicals to waters of the United States shall be immediately taken or the unit or process shut down until such action can be taken. When a leak or non-containment of a Section 313 water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.

(8) Facility security - Facilities shall have the necessary security systems to prevent accidental or intentional entry which could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(9) Training - Facility employees and contractor personnel that work in areas where Section 313 water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the plan, but not less than once per year, in matters of pollution control laws and regulations, and in the storm water pollution prevention plan and the particular features of the facility and its operation which are designed to minimize discharges of Section 313 water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of a Section 313 water priority chemical can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

(10) Engineering certification - The storm water pollution prevention plan for a facility subject to EPCRA Section 313 requirements for chemicals which are classified as 'Section 313 water priority chemicals' shall be reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. A Registered Professional Engineer shall recertify the plan every three years thereafter or as soon as practicable after significant modification are made to the facility. By means of these certifications, the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the storm water pollution prevention plan has been prepared in accordance with good engineering practices. Such certifications shall in no way relieve the owner or operator of a facility covered by the plan of their duty to prepare and fully implement such plan.

8. <u>Additional Requirements for Salt Storage</u> Storage piles of salt used for deicing or other commercial or industrial purposes and which generate a storm water discharge associated with industrial activity which is discharged to a waters of the United States shall be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. Dischargers

shall demonstrate compliance with this provision as expeditiously as practicable, but in no event later than October 1, 1995. Piles do not need to be enclosed or covered where storm water from the pile is not discharged to waters of the United States.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

FACT SHEET

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

NPDES PERMIT NO.: NH0001601

NAME AND ADDRESS OF APPLICANT:

Public Service of New Hampshire
1000 Elm Street, P.O. Box 330
Manchester, NH 03105

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Newington Station
Gosling Road
Newington, New Hampshire 03801

RECEIVING WATER: Piscataqua River

CLASSIFICATION: 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 water. The facility is engaged in the generation and distribution of electric power. Newington Station employs a single unit, 420 mega-watts (MW), steam-driven, electric-generation system, which is fired with #6 fuel oil and/or natural gas. The effluent discharge consists of chlorinated, once-through condenser cooling water, treated process wastewater from metal cleaning operations, demineralizer regeneration wastes, chemical-area sink and floor drains, fuel-oil heater drains, boiler blowdown, boiler drains, and yard drains. Also authorized are discharges associated with screenhouse operations and storm water.

II. Description of Discharge.

A quantitative description of the discharge in terms of significant effluent parameters based on data presented in the application and/or discharge monitoring reports is shown on Attachment A. The location of the discharge outfalls are shown on Attachment B. A schematic drawing of the flow of water at the plant and the various discharges from the facility is presented on Attachment C. A site plan indicating storm water drainage is presented on Attachment D.

III. Limitations and Conditions.

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required) may be found in Part I (Effluent Limitations and Monitoring Requirements) of the draft NPDES permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation.

Public Service of New Hampshire (PSNH) - Newington Station is engaged in the operation of a fossil-fueled, steam-power plant (SIC 4911) to generate and transmit electrical energy. Newington Station is a 420 mega-watts, single-unit, oil and/or natural gas-fired generating station located on the southern bank of the lower Piscataqua River in Newington, New Hampshire (see Attachment B).

The single unit has a once-through cooling condenser which utilizes cooling water from the Piscataqua River. Low volume wastes are treated within the station's wastewater treatment system. The treated wastewater is then commingled with the cooling condenser (circulating water) effluent, prior to discharge into the Piscataqua River.

To avoid confusion with outfall designations in the text of this fact sheet and the draft permit, the reader is referred to the following Table and Attachment C for the appropriate outfall descriptions and designations:

Outfall Number	Description in Current Permit	Description in Draft Permit
001	Direct Discharge to Receiving Water Body	Direct Discharge to Receiving Water Body
01A	Treated Wastewater Discharge	Treated Wastewater Discharge - During Normal Operation
01B	Condenser Cooling Water - Effluent	Condenser Cooling Water - Effluent
01C	Not Identified	Treated Wastewater Discharge - During Metal Cleaning Operations
002	Not Identified	Discharge of 3 Sources: Intake-Pump Bay Discharge; Screenhouse Floor Drains; and Screenhouse Roof Drains.

Outfall Number	Description in Current Permit	Description in Draft Permit
003	Not Identified	Intake Screen Backwash
SW-1	Not Identified	Storm Water Discharge

The existing/current permit lists three (3) regulated outfalls. These same outfalls are also regulated in the draft permit. Flow effluent limits at these three outfalls are established at levels requested by the permittee and remain unchanged from the previous/current permit. Total permitted average monthly flow for the entire facility's operational effluents is 325.4 MGD. The permitted average monthly flows for Outfalls 01A and 01B are 0.2 MGD and 324.6 MGD, respectively.

Notwithstanding Outfalls 01A and 01C being physically identical, two designations are used in the draft permit to highlight the different monitoring frequencies between normal operation of the wastewater treatment system and operation during the time when chemical waste from the metal cleaning process of the boiler tubes enters the wastewater treatment system. Whereas this differentiation was not made in the current permit, it is included in the draft permit to more carefully control the amount of heavy metals being discharged during the time of the metal cleaning process. It is anticipated that the metal cleaning operation occurs approximately once every five years.

In the permittee's application for permit reissuance, Outfall 002 collectively represents the discharge of river water from the screenhouse floor-drains, river water from the intake-pump bay, and roof drains from the screenhouse. The floor-drain and roof-drain discharges are relatively small in volume, when compared to the volume of intake condenser cooling water, and were overlooked in previous permits. River water in the intake-pump bay is discharged to the river to permit biennial maintenance of the intake pumps. The permittee estimates the discharge, expressed on a daily basis, to be approximately 550,700 GPD. With the exception of screenhouse roof drain, the effluents are primarily non-process river water being returned to the Piscataqua River. The discharges represent essentially "zero"-pollutant loadings to the receiving water body.

In the permittee's application, Outfall 003 represents intake screen backwash from the traveling screens. The permittee estimates this flow to be approximately 100,000 GPD. The backwash water is used to remove debris from the traveling screens which remove river debris from the cooling water. The screens require regular cleaning to assure unrestricted water passage to the condenser. The washing operation is performed by spraying river water across the screens and sluicing the leaves,

branches, etc. back to the river.

The Clean Water Act (CWA) establishes a permit program for regulating discharges to surface waters. The CWA requires that at a minimum the limits of each discharge must (1) meet EPA national industrial treatment-technology standards and (2) be adequate to ensure that the discharge will not cause a violation of the water quality standards applicable to the receiving waters. The CWA further provides in Section 301(b), that industry must meet limitations based on best practicable treatment (BPT), best available technology economically achievable (BAT) for toxic pollutants and best conventional pollutant control technology (BCT) for conventional pollutants. The NPDES permit program regulations at 40 CFR §122.44(l)(1) {see also Sections 402(o) and 303 (d)(4) of the CWA} also require that the effluent limitations of a renewed permit be at least as stringent as the expired permit unless conditions of 40 CFR §122.44(l)(2) are met.

The effluent limitations presented in the draft permit are based on the most stringent of the following limits: (1) effluent limitations and standards, (effluent guidelines [EGs]), for the Steam Electric Power Generating Category, promulgated at 47 FR 52290, November 19, 1982, as amended at 48 FR 31404, July 8, 1983 (see 40 CFR 423); (2) New Hampshire water quality-based requirements, in accordance with Section 401 (a)(1) of the CWA; (3) limitations set forth in the current NPDES permit for this facility, in accordance with 40 CFR § 122.44(l); and (4) best professional judgement (BPJ), in accordance with Section 402(a)(1) of the CWA.

Limitations and monitoring are required for internal waste streams (Outfalls 01A and 01C) because compliance with guideline limitations can not be demonstrated after dilution with the once-through cooling water (Outfall 01B). The effluent limits for Outfall 01A presented in the draft permit remain unchanged from those presented in the previous/current permit. The effluent limits for Outfall 01C are identical with those for 01A; however, the monitoring frequencies differ. For Outfall 01A the monitoring frequency in the current permit is weekly. A review of past permitting-period monitoring data, during normal operation of the wastewater treatment system; indicates treated-wastewater loading levels consistent with an efficient operation of the wastewater treatment facility. Consequently, the sampling frequency for Outfall 01A is being reduced from weekly to monthly in the draft permit. However, as stated previously, to more carefully control the amount of heavy metals being discharged via Outfall 01C during metal cleaning operations, the monitoring frequency is being increased from weekly to daily in the draft permit.

For the treated wastewater discharge (Outfalls 01A & 01C), effluent limits for total suspended solids (TSS), total copper, total iron, and oil and grease are technology-based (see 40 CFR 423). There is a "report" requirement for total lead in the existing permit with a conditional, elimination provision. That is, if the permittee can demonstrate to the regulatory agencies that total lead is not present in significant amounts in the discharge, the "report" requirement will be withdrawn. Based upon a review of discharge monitoring data for total lead, in particular for the time period from January, 1992 to January, 1993, the average arithmetic concentration level of lead is calculated as 0.03 mg/l; with maximum and minimum observed concentration levels of 0.05 mg/l and <0.015 mg/l, respectively. With the available dilution in the lower Piscataqua River, the lead concentrations are well below the in-stream water quality criteria for the protection of aquatic life. Consequently, the "report" requirement for lead has been eliminated in the draft permit.

The effluent limits for Outfall 01B presented in the draft permit remain unchanged from those in the previous/current permit. It is known that small concentrations of ferrous sulfate in the cooling water significantly reduces the attack of hydrogen sulfide on the copper condenser tubes. Based on this observation, the permittee requested a provision be added in previous permits to permit a maximum daily level (0.5 mg/l) of ferrous sulfate in the condenser cooling water. To date, the permittee has not used ferrous sulfate in the cooling water and does not foresee its use in the immediate future. Consequently, this parameter has been eliminated in the draft permit.

For this permit, chlorine and bromine may be used as a biocide. No other biocide shall be used without written approval from the Regional Administrator and the Director. In the permit, the term chlorination will include bromination, if bromine is used as the biocide. Also for this permit, total residual oxidants (TRO) is synonymous with total residual chlorine (TRC). TRC or TRO, unless otherwise specified, shall be measured downstream of the unit being chlorinated before that stream mixes with any other discharge. The permitted maximum daily limit for total residual oxidant (TRO) is 0.20 mg/l. The EGs also state that total residual oxidant (TRO) may not be discharged from any single generating unit for more than two hours per day.

For steam electric power plants, the terms "maximum concentration" and "instantaneous maximum" are intended to mean the maximum TRO concentration in the short term (2 hours or less) as defined in the EGs (40 CFR 423). This interpretation differs from the NPDES permit requirement at 40 CFR 122.2 and Part II of this permit, where the two terms: "maximum daily discharge" and "average daily discharge" concentrations are limited to the 24-hour duration values. Therefore the "maximum concentration" and

"instantaneous maximum" TRO concentrations shall always mean the "value that shall not be exceeded" from the EG value of 0.2 mg/l (at 40 CFR 423).

As stated earlier, the discharge flow limits for Outfall 001 remain the same as in the previous/current permit. The thermal effluent conditions/limitations for maximum discharge temperature (T_{max}) and maximum temperature rise over the intake water temperature (delta T, or ΔT), are identical to the respective effluent limitations in the existing permit. The permitted maximum discharge temperature is 95°F, and the maximum temperature rise over the intake water temperature (ΔT) is 25°F. When permitted [see the Section 316(a) and (b) of the Clean Water Act segment of this fact sheet for further discussion on this subject] these thermal effluent limitations were contingent upon the results of a study on the temperature effects on the benthic community, conducted in 1983. The results of this study were inconclusive, however, because the effluent temperature and in particular the maximum temperature rise did not approach the modified elevated thermal limits.

With the concurrence of EPA, the New Hampshire Department of Environmental Services (NHDES) and the New Hampshire Fish & Game Department (NHFGD) deferred the requirements for the benthic monitoring studies until such time when the discharge temperatures approached the elevated thermal conditions specified in the 1983 permit, more frequently. PSNH has submitted annual temperature monitoring reports for review by NHDES and NHFGD. The benthic monitoring study has yet to be reinstated, since thermal conditions have not approached the elevated effluent limits.

As in the existing permit, a provision is included in the draft permit which requires the permittee to continue to submit annual reports summarizing the results of temperature monitoring to EPA, NHDES, and NHFGD. After reviewing these reports, NHDES and NHFGD shall make a determination whether benthic monitoring studies shall be reinstated. NHDES and NHFGD shall notify the permittee and EPA of their determination, in writing, and any required monitoring program will be included as a provision of the permit.

The three discharges associated with Outfall 002 result from routine operation and maintenance of the screenhouse. The three newly identified discharges are:

i. Storm water from the screenhouse roof which is hard-piped directly into the intake-pump bay. This runoff, estimated at 378 GPD, is considered to be insignificant compared to the condenser-cooling water flow rate of 320 MGD (which is drawn from the intake-pump bay).

ii. Floor drains carry river water leakage from the intake pumps and associated piping, through hard piping directly into the intake-pump bay. This flow is estimated as 10,000 GPD.

iii. River water which is removed from the intake-pump bay, when isolated for biennial inspection and maintenance of the intake traveling screens and the intake pumps. The permittee estimates the discharge, expressed on a daily basis, to be approximately 550,700 GPD.

EPA has determined that a best management practices (BMP) plan to prevent pollution of these three discharges is a more effective control rather than attempting to establish numeric effluent limits on such non-simultaneous, infrequent, and minor sources of potential pollution. The expected sources of pollution would be spillage or leakage of lubricating oils, solvents or similar materials on the pump-motor floor, and/or on the floor of the intake-pump bay during maintenance.

Pursuant to Section 304(e) of the CWA and 40 CFR 125.103(b), best management practices (BMP) may be expressly incorporated into a permit on a case-by-case basis where it is deemed necessary to carry out Section 402(a)(1) of the CWA. These conditions apply to the permittee because the facility stores and manages pollutants listed as toxic under Section 307(a)(1) of the CWA or pollutants listed as hazardous under Section 311 of the CWA and has ancillary operations which could result in these pollutants reaching the Piscataqua River via the screenhouse. These operations include: material storage areas; materials handling; and loading/unloading.

In essence, the BMP plan directs the permittee to totally review the physical equipment, the operational procedures, and the operator training for the screenhouse. The objective of this review is to protect the receiving waters by minimizing the potential of any hazardous or toxic materials being discharged through inappropriate facility design, human error, and/or equipment malfunction.

The draft permit requires the permittee to develop and implement a BMP plan for the screenhouse no later than 90 days after the permit's effective date. The BMP plan, when implemented, becomes a supporting element to any numeric effluent limits by minimizing the discharge of any pollutants through the proper operation of the screenhouse. Consequently, the BMP plan is as equally enforceable as numeric limits on an effluent discharge.

Since the discharge from Outfall 003 represents river water which is sluiced back into the river with essentially "zero-additional pollutant loadings, there are no effluent limits. The State, however, has certified that Outfall 003 be monitored for oil and

grease and pH.

Effluent limitations for pH for the three (3) outfalls (01A, 01C, and 001) are based on either New Hampshire water quality standards (WQS) or EGs (at 40 CFR 423).

Section 316(a) and (b) of the Clean Water Act

Section 316(a) of the Clean Water Act (CWA) addresses the thermal component of any effluent discharge. EPA has not developed best practicable control technology currently available (BPT) for thermal discharge from point sources. However, EPA assumes that if thermal limits satisfying BPT were developed in accordance with Section 301(b)(1)(A) of the CWA, they would be more stringent than what would be proposed by the NPDES Permit applicant. This is based upon the premise that water quality criteria developed by States would be the limiting factor in the development of the NPDES Permit. It should also be noted that thermal discharges (heat) are not subject to the technology standards required by best conventional pollutant control technology economically achievable (BCT) since heat is not considered to be a toxic pollutant or a conventional pollutant as defined by the CWA and outlined in 40 CFR §401.15 and §401.16. Rather, thermal discharges (heat) are treated as a separate type of pollutant under §316 of the CWA.

Section 316(a) of the CWA gives the Administrator of the EPA the authority to impose alternative effluent limitations for the control of the thermal component of any discharge. However, the owner or operator of the point source must demonstrate to the satisfaction of the Administrator that existing effluent limitations are more stringent than necessary to assure the protection and propagation of a balanced indigenous community of shellfish, fish, and wildlife in and on the receiving water.

Similarly, Section 316(b) of the CWA gives the Administrator of the EPA the authority to determine if the location, design, construction, and capacity of the cooling water intake structures reflect the BPT for minimizing adverse environment impact.

Authority of these two sections of the CWA has been delegated to the Regional Administrator or their designees in accordance with the regulatory procedures outlined under 40 CFR §125.

PSNH-Newington Station went operational on June, 1974. Pre-operational environmental impact studies were conducted from the year 1970 through May, 1974. During the period of time from June, 1974 through 1979, operational environmental impact studies were conducted. These studies were designed with the guidance of EPA, the U.S. Army Corps of Engineers, the New Hampshire Fish and Game Department (NHFGD) and the New Hampshire Water Supply and Pollution Control Commission (NHWSPCC).

PSNH has provided 316(a)- and 316(b)-Demonstration documents (NEWINGTON GENERATING STATION 316 DEMONSTRATION, Vol I-October, 1979; and Vol II-December, 1979) which summarize the results of these studies.

Summarily, 316(a)-demonstration studies of the physical, chemical, and biological parameters in the lower Piscataqua River and the Great Bay Estuarine System have established that a balanced indigenous aquatic community exists in the vicinity of Newington Station and that the overall effect of the thermal discharge upon this community has been negligible. And the protection and propagation of the balanced indigenous aquatic community within the Piscataqua River and the Great Bay Estuarine System is assured.

Similarly, relevant 316(b)-entrainment studies conducted at the Newington Generating Station have demonstrated that any impacts, as a result of the cooling water-intake-structure, upon the balanced indigenous aquatic community existing in the vicinity of the station have been negligible. And the protection and propagation of the balanced population of shellfish and fish in and on the lower Piscataqua River from which cooling water is withdrawn is assured. The present design shall be reviewed for conformity to regulations pursuant to Section 316(b) when such are promulgated.

In 1982, PSNH requested a modification of their Newington Station permit to increase the maximum discharge temperature (T_{max}) from $90^0F/(32.2^0C)$ to $95^0F/(35^0C)$ and the maximum rise over the intake water temperature or ($\triangle T$) from $20^0F/(11.1^0C)$ to $25^0F/(13.9^0)$. The NHWSPCC and EPA agreed to the permit modification, with the stipulation that a monitoring program be conducted in the near-field area of the thermal discharge, to ascertain resulting impacts, if any, from the increased thermal conditions.

The environmental study was conducted, in 1983, in the area adjacent to the discharge to evaluate the changes, if any, which were evident to the benthic community. The study consisted of intertidal and sub-tidal macrobenthic studies and diver observations of the eel-grass bed in the vicinity of the plant.

In 1983, Newington Station did not reach the maximum allowable discharge temperature or the maximum allowable $\triangle T$. The results of the benthic study indicated a community exists in the near-field area similar to that observed in previous years. The community analyses and an examination of the dominant species showed the community to be stable.

Since the maximum observed discharge temperature essentially never exceeded the previous thermal limit (90^0F) and the $\triangle T$ rarely approached the new limit of 25^0F, the study was considered to be inconclusive with respect to effects on the benthic

community which might result from effluent discharges having higher allowable temperatures. Therefore, PSNH was allowed to defer the benthic community studies until such time as the discharge temperatures more frequently approach the maximum limits specified in the modified permit.

A yearly review of temperature-monitoring data was to be made to determine the point at which the studies should be reinstated. The decision to reinstate the study was to be made by the NHDES and the NHFGD. To this date, the need to reinstate the benthic study has not materialized.

The Regional Administrator granted 316(a) variances in previous permits and in the current permit, based on previous hydrological and biological studies and upon the absence of obvious environmental degradation during the operating history of the station.

Each time the permit is reissued (not to exceed 5 years), the 316(a) and (b) determinations are reviewed. The permittee must certify any changes in: (1) the facility discharge characteristics; (2) the waterway characteristics, and (3) resident or transient aquatic community. The permittee must then explain any differences identified and their impact on the local ecological community. A new amended determination is then made on this incremental change in the environmental conditions at the facility based on recommendations of the Technical Advisory Committee (TAC). This committee is comprised of senior biologists from those regulatory agencies which have responsibility for the aquatic community in the lower Piscataqua River, the Great Bay Estuarine System, and in the near-shore waters off Portsmouth, New Hampshire.

After permit reissuance, the permittee may annually, on January 1st of each year, submit proposed revisions of the existing biological, hydrological, and chlorination monitoring programs included herein to the Regional Administrator and the Director. Upon approval, the revised biological, and/or hydrological monitoring programs shall become an enforceable element of the permit.

In the current reapplication for its NPDES permit, PSNH-Newington Station has demonstrated to EPA that since the last reissuance of its NPDES permit:

a. There have been no significant changes to the design or to the operation of the station and, in particular, no changes to the circulating cooling water system.

b. There have been no significant changes in the hydrology or in the biology of the lower Piscataqua River and the surrounding waters known as the Great Bay Estuarine System.

c. There have been no fish kills or other observable environmental impacts in the Bay and the surrounding waters.

Therefore the Regional Administrator has tentatively determined that the current biological, hydrological, and chlorination monitoring data satisfactorily show that a once-through cooling system for PSNH-Newington Station satisfies the State of New Hampshire thermal requirements and will insure the protection and propagation of a balanced indigenous community of fish, shellfish, and wildlife in and on the lower Piscataqua River Estuary. The thermal limits proposed in the draft permit constitute a Section 316(a) thermal discharge variance.

The Regional Administrator has also tentatively determined that the location, design, construction, and capacity of the intake structure and rotating screens reflect the best available technology for minimizing adverse environmental impact upon the indigenous ecological community, Section 316(b) of the CWA.

The proposed draft permit effluent limitations, monitoring requirements, and special conditions assure satisfaction of the New Hampshire State water quality standards (WQS) for the lower Piscataqua River Estuary and Sections 301, 316(a), and 316(b) of the Clean Water Act.

Storm Water Requirements

Section 402(p) of the Clean Water Act requires that EPA issue permits for storm water discharges associated with industrial activity. This steam electric power generating facility discharges storm water associated with industrial activity within the meaning of 40 CFR § 122.26(b)(14)(xi).

The permittee submitted an individual storm water discharge permit application on September 30, 1992. A copy of the Newington site plan indicating the storm water drainage area, important structures, and on-site buildings is included in the fact sheet as Attachment D. The plan indicates that all station storm water runoff is collected in a catch basin system. With one exception, all the catch basins merge together to a single outfall (SW-1). The exception is the bermed fuel oil storage area where storm water is directed to the wastewater treatment system after passing through the station's oil/water separator. There is a manual valve at the discharge of the catch basin system. If pollutants find their way into the storm water drainage system, this valve can be closed, isolating the system

and preventing the discharge of contaminated runoff into the Piscataqua River.

PSNH-Newington Station engages in operations which could result in the storm water discharge of pollutants to the receiving water body (Piscataqua River). These operations include at least one of the following from which there is or could be site runoff: materials storage, in-facility transfer, materials processing, materials handling, and/or loading and unloading. The permit requires this facility to develop a SWPPP which will include best management practices (BMPs) appropriate for this specific facility to control storm water discharges from these and other activities which could contribute pollutants to the Piscataqua River through storm water. EPA has incorporated in this draft permit the SWPPP (Attachment A of the draft permit) from the General Permit for Storm Water Discharges Associated with Industrial Activity as published in 57 federal Register (FR) 41307-41311 (September 9, 1992). EPA Region I has made a BPJ determination that this is the minimum SWPPP needed to identify sources of pollution at this facility that affect the quality of storm water discharges associated with industrial activity and that the implementation procedures and practices requirements of this SWPPP are sufficiently stringent to control these pollutants from violating the terms and conditions of this draft permit or of the State of New Hampshire water quality standards.

The storm water discharge from this facility must satisfy BCT/BAT requirements, which are technology standards, as well as comply with any more stringent water quality standards if BCT/BAT are inadequate. On September 9, 1992, EPA promulgated through its General Permit for Storm Water Discharges Associated with Industrial Activity that the minimum BCT/BAT requirement for this type of discharge is a storm water pollution prevention plan (SWPPP).

EPA Region I has determined that a combination of BCT/BAT and "reporting" requirements for oil & grease, total suspended solids (TSS), and pH are required in this draft permit to authorize the discharge of storm water via Outfall SW-1. These monitoring requirements then become a supporting element to the SWPPP, when implemented.

The draft permit requires the permittee to develop the SWPPP within 4 months after the effective date of the permit and implement that SWPPP as soon as practicable, but no later than 12 months after the effective date of the permit. The goal of the SWPPP is to eliminate or reduce the potential for a discharge of pollutants through the storm water system. In the event the potential cannot be eliminated, the permittee should select BMPs to reduce or eliminate the pollutant loading to the receiving water. The SWPPP requirements direct the permittee to review the physical equipment, the operational procedures, and the operator

training at the facility. The objective of this review is to protect the waters of the United States by eliminating or minimizing the potential discharge of any pollutants. The SWPPP becomes an enforceable element of the permit upon the effective date of the permit. Consequently, the SWPPP is as enforceable as any effluent limits on the discharge(s).

EPA has determined that the proposed permit limitations satisfy all the technology requirements of the Clean Water Act, including the 1984 BAT requirements for toxic pollutants and BCT for conventional pollutants. Review of the toxic pollutant portion of the NPDES permit application indicates that no organic pollutants were detected, significantly, above detection limits.

This draft permit is being reissued with an allowable waste-load identical to the current permit with the same parameter coverage. The State of New Hampshire has indicated that there will be no lowering of water quality and no loss of existing water uses and that no additional antidegradation review is warranted.

The effluent monitoring requirements have been established to reflect state certification requirements under Section 401 (a)(1) of the CWA and 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), §122.41(j)(4),(5), §122.44, and §122.48.

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

V. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the New Hampshire Department of Environmental Services has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State and expects that the draft permit will be certified.

VI. 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 the arguments in full by the close of the public comment period, to the U.S. EPA, Compliance Branch, JFK Federal Building, Boston, Massachusetts 02203. 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 issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. 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, 48 Fed. Reg. 14279-14280 (April 1, 1983).

VII. EPA Contact.

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

Nicholas Prodany
Wastewater Management Section (NH-VT-RI)
Wastewater Management Branch (WMN)
U.S. Environmental Protection Agency
John F. Kennedy Federal Building
Boston, Massachusetts 02203
Telephone: (617)565-3587

July 13, 1993
Date

David A. Fierra, Director
Water Management Division
Environmental Protection Agency

ATTACHMENT A

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE

DISCHARGE: 001

DESCRIPTION OF DISCHARGE: Combined plant discharge to the discharge canal, thence to the Piscataqua River.

Parameter	Averaged Values of Average Monthly	Maximum Daily	Range	Number of Violations[2]	Existing Limits Average Monthly	Maximum Daily
Flow, MGD	191.0	317.0	101.5 - 317.0	0	325.4	326.0
Temperature, ^{0}F	----	69.3	60.0 - 84.0	0	----	95.0
▲ T, ^{0}F	----	25.0	12.0 - 23.0	0	----	25.0
pH, s.u.	7.7	7.7	7.6 - 7.9	0	6.5 - 8.0	

1. The values presented in this Attachment are based on data reported in discharge monitoring reports (DMRs) for the period of January 31, 1992 to January 1, 1993.

2. These are NPDES permit effluent limitation violations for the period.

DISCHARGE: 01A

DESCRIPTION OF DISCHARGE: Settling basin effluent consisting of treated wastewater from metal cleaning operations, demineralizer regeneration wastes, chemical area sink and floor drains, fuel oil heater drains, boiler blowdown, boiler drains, and yard drains.

Parameter	Averaged Values of Average Monthly	Maximum Daily	Range	Number of Violations[2]	Existing Limits Average Monthly	Maximum Daily
Flow, MGD	0.14	0.27	0.081 - 0.345	0	0.200	0.350
TSS, mg/l	3.6	5.8	1.9 - 11.5	0	30.0	100.0
Total Copper, mg/l	0.04	0.05	0.02 - 0.18	0	1.0	1.0
Total Iron, mg/l	0.4	0.6	0.2 - 1.0	0	1.0	1.0
Total Lead, mg/l	——	0.03	<0.01 - 0.05	0	——	Report
Oil & Grease, mg/l	2.2	4.8	0.5 - 9.0	0	15.0	20.0
pH, s.u.	6.6	7.8	6.5 - 8.0	0	6.5 - 8.0	

1. The values presented in this Attachment are based on data reported in discharge monitoring reports (DMRs) for the period of January 1, 1992 to January 1, 1993.

2. These are NPDES permit effluent limitation violations for the period.

DISCHARGE: 01B

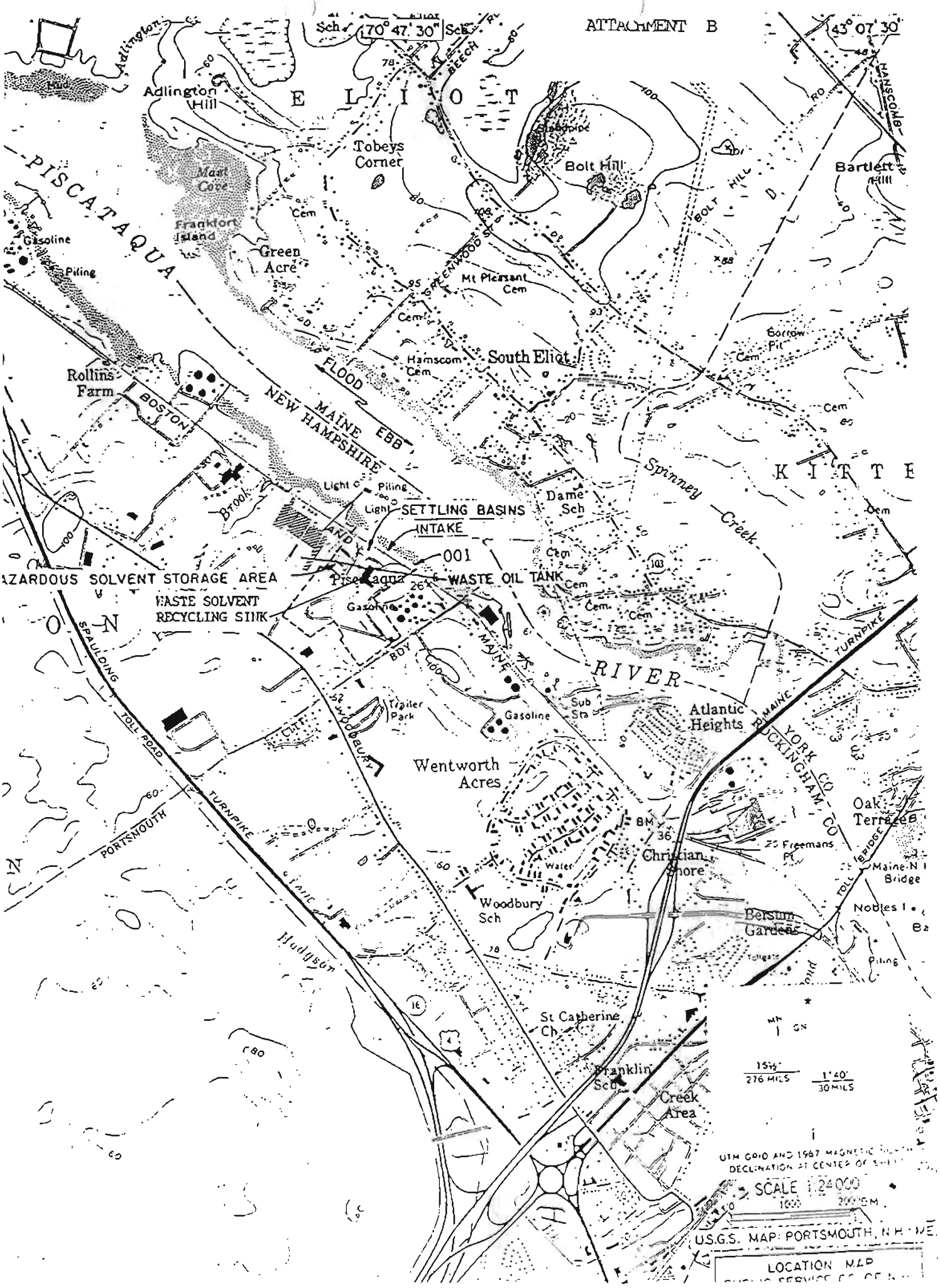
DESCRIPTION OF DISCHARGE: Once-through condenser cooling water.

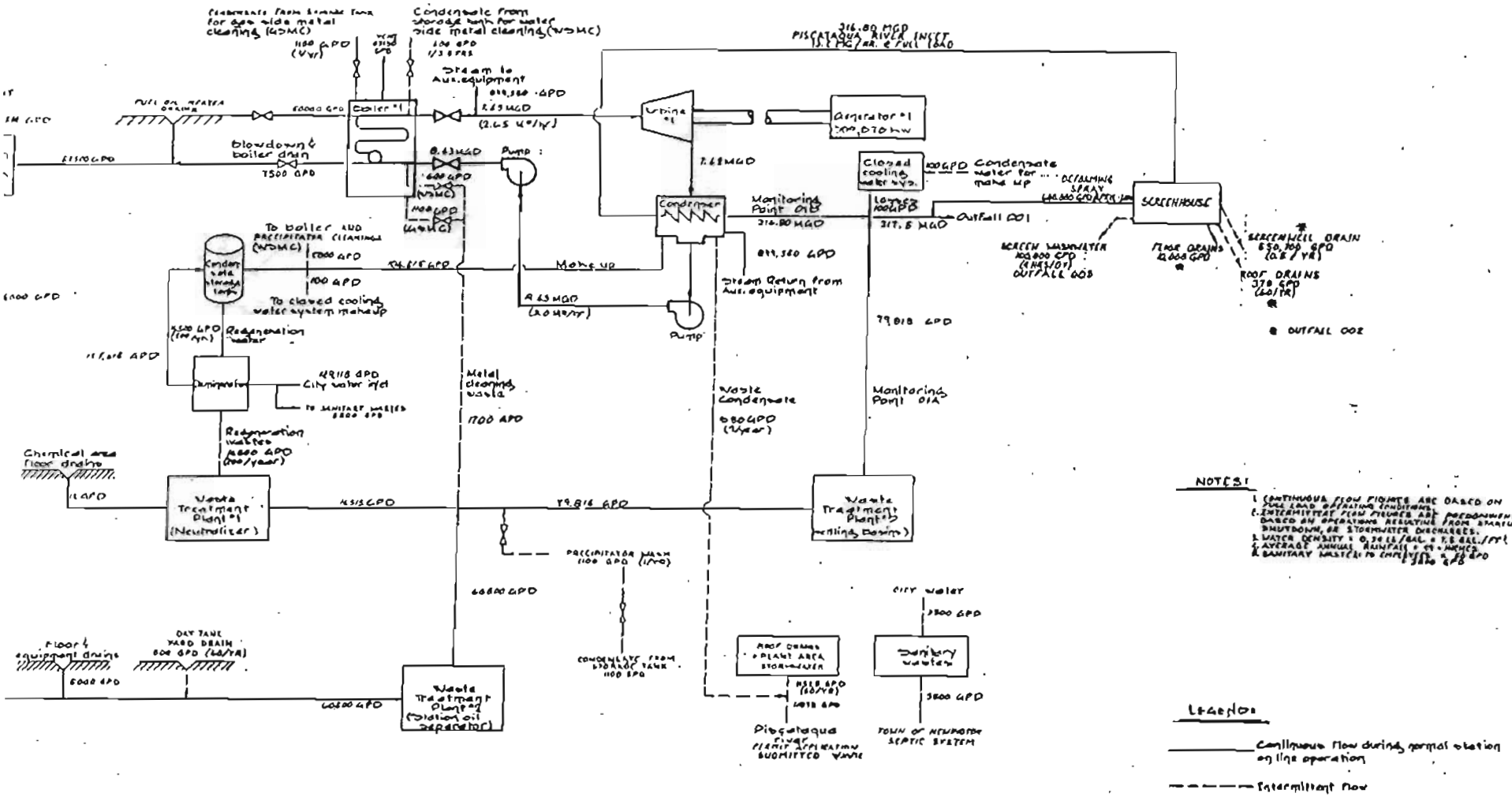
Parameter	Averaged Values of Average Monthly	Maximum Daily	Range	Number of Violations[2]	Existing Limits Average Monthly	Maximum Daily
Flow, MGD	222.6	316.8	101.2 - 316.8	0	324.6	324.8
TRC, mg/l	——	0.196	0.18 - 0.20	0	——	0.20
pH, s.u.	7.7	7.7	7.6 - 7.9	0	6.5 - 8.0	

1. The values presented in this Attachment are based on data reported in discharge monitoring reports (DMRs) for the period of January 1, 1992 to January 1, 1993.

2. These are NPDES permit effluent limitation violations for the period.

ATTACHMENT B

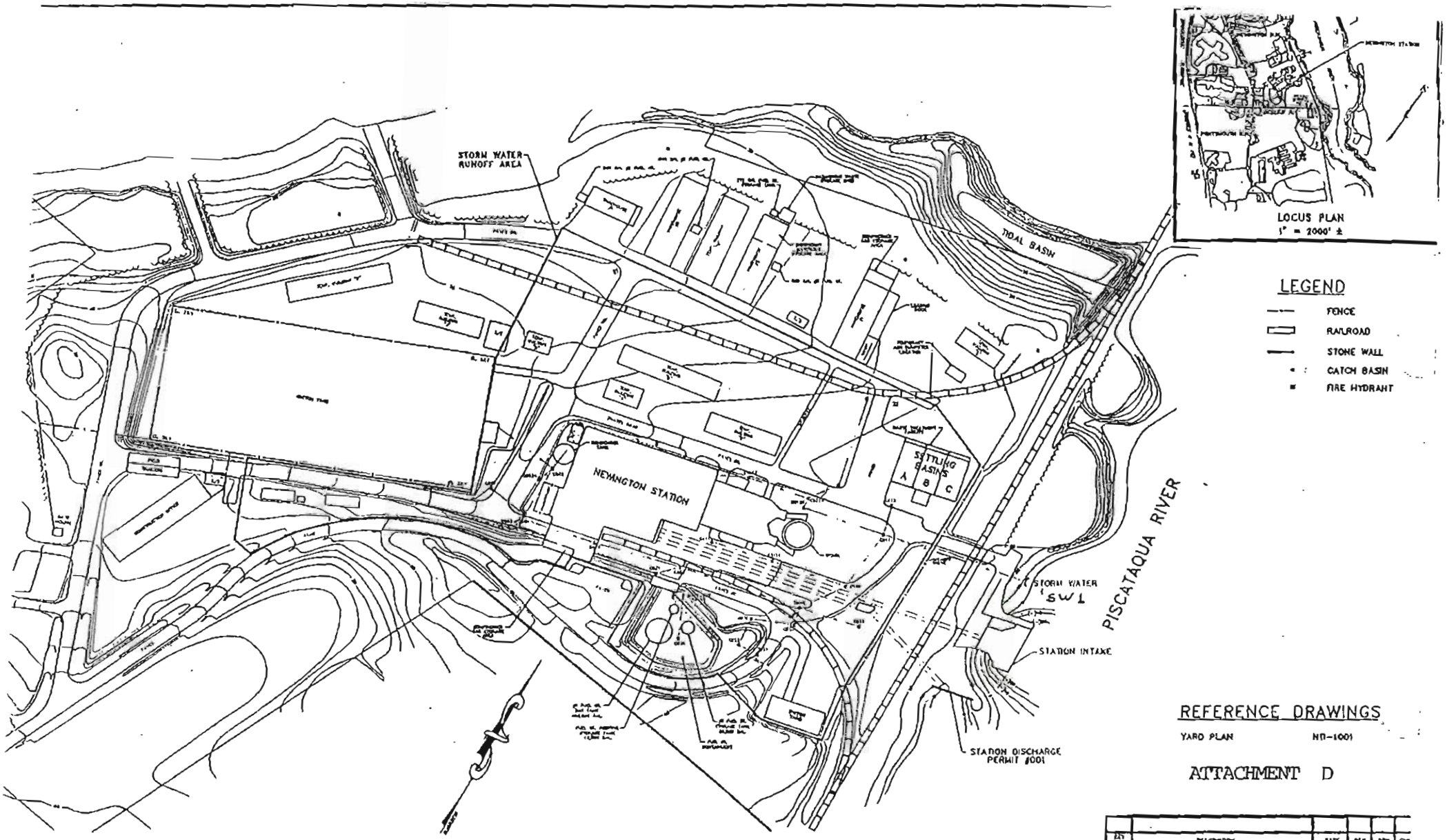




ATTACHMENT C

SCHEMATIC & WATER FLOW
PUBLIC SERVICE CO. OF NEW HAMPSHIRE
NEWINGTON STATION
Newington · Rockingham Co., New Hampshire

NTI-27



REFERENCE DRAWINGS

YARD PLAN NTI-1001

ATTACHMENT D

NOTE:
THIS DRAWING WAS CREATED USING CADD EQUIPMENT-NO MANUAL REVISIONS.

NO.	DESCRIPTION	DATE	BY	CHK
REVISIONS				

PSNH — PUBLIC SERVICE OF NEW HAMPSHIRE — GENERAL ENGINEERING DIVISION

SIGNATURE(S)	DATE
DRN	
DSGN CHK	8/21/92
CHKED	
APPR	

SCALE 1" = 80'

NPDES STORM WATER SITE PLAN
NEWINGTON STATION

DWG NO. NTI-2753

SHEET _ OF _ DATE PLOTTED: 9/29/92