

BOSTON EDISON COMPANY
800 BOYLSTON STREET
BOSTON, MASSACHUSETTS 02199

WILLIAM D. HARRINGTON
SENIOR VICE PRESIDENT
NUCLEAR

October 5, 1983

BEC0 83-245

Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

License No. DPR-35
Docket No. 50-293

NPDES Permit of September, 1983

Dear Sir:

Your letter of March 11, 1983 transmitted Amendment 67 to Pilgrim's operating license. This amendment deleted Appendix B, which dealt with water quality requirements. In place of Appendix B, it was decided to rely on the more restrictive requirements of the National Pollutant Discharge Elimination System (NPDES) permit for Pilgrim.

In accordance with your request to be kept informed about changes in our NPDES Permit, attached is the latest change which was issued and effective as of September 8, 1983. Should you wish any information on this, please contact us.

Very truly yours,

W D Harrington

PMK/mat

Attachment: NPDES Permit

cc: Mr. Thomas E. Murley, Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

8310120307 831005
PDR ADDCK 05000293
P PDR

*Cool
11*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

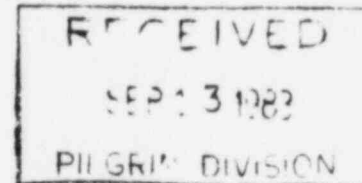
J. F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 9, 1983

Mr. Richard Machon
Station Manager
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, MA 02360

Re: NPDES Application No. MA0003557



Dear Mr. Machon:

Enclosed is your final National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to the Clean Water Act (the "Federal Act"), as amended, and the Massachusetts Clean Waters Act (the "State Act"), 21 M.G.L. §§43-45, as amended. The Environmental Permit Regulations, at 40 C.F.R. §124.15, 48 Fed. Reg. 14271 (April 1, 1983), require this permit to become effective on the date specified in the permit. Under State law the permit shall become effective 30 days from receipt.

Also enclosed is a copy of the Agency's response to the comments received on the draft permit and information relative to hearing requests and stays of NPDES permits. Should you desire to request a formal hearing, your request should be submitted to the Agency as outlined in the enclosure and a similar request should also be filed with the Director of the Massachusetts Division of Water Pollution Control in accordance with the provisions of the Massachusetts Administrative Procedures Act and the Division's Rules for the Conduct of Adjudicatory Proceedings. Hearing requests should be filed with the State within 21 days of receipt of this letter.

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning the permit, feel free to contact Robert Leger, of my staff at 617/223-5061.

Sincerely,

Edward K. McSweeney, Chief
Water Quality Branch

Enclosures

cc: State Water Pollution Control Agency
All Interested Parties

If you wish to contest any of the provisions of this permit you may request a formal hearing within 30 days of receipt of this letter. The request should be submitted to the Regional Hearing Clerk at the following address:

Regional Hearing Clerk
U.S. Environmental Protection Agency
Office of Regional Counsel
John F. Kennedy Federal Building
Room 2103
Boston, MA 02203

Any request for a formal hearing must conform to the requirements of 40 C.F.R. §124.74 (b) and (c). You should also be aware that no issues can be raised at a hearing that were not previously raised on the draft permit unless good cause is shown. See 40 C.F.R. §124.76.

Copies of 40 C.F.R. §§124.74 and 124.76 are enclosed for your information.

STAYS OF NPDES PERMITS

NEW SOURCE, NEW DISCHARGER, RECOMMENCING DISCHARGER

Should the Agency receive and grant a request for a formal hearing, you shall be without a permit pending final Agency action, unless an order authorizing operation is obtained from the Presiding Officer, in accordance with the provisions of 40 C.F.R. §§124.16 (a)(1) and 124.60 (a)(1) and (2).

EXISTING SOURCES

Should the Agency receive and grant a request for a formal hearing, the contested provisions of the permit will be stayed and will not become effective until the administrative review process is completed, in accordance with 40 C.F.R. §§124.16 and 124.60(c). All uncontested provisions of the permit will be effective and enforceable in accordance with the provisions of 40 C.F.R. §124.60(c)(5).

Copies of 40 C.F.R. §§124.16 and 124.60 are enclosed for your information.

§ 124.74 Requests for evidentiary hearing.

(a) Within 30 days following the service of notice of the Regional Administrator's final permit decision under § 124.15, any interested person may submit a request to the Regional Administrator under paragraph (b) of this section for an evidentiary hearing to reconsider or contest that decision. If such a request is submitted by a person other than the permittee, the person shall simultaneously serve a copy of the request on the permittee.

(b)(1) In accordance with § 124.76, such requests shall state each legal or factual question alleged to be at issue, and their relevance to the permit decision, together with a designation of the specific factual areas to be adjudicated and the hearing time estimated to be necessary for adjudication. Information supporting the request or other written documents relied upon to support the request shall be submitted as required by § 124.73 unless they are already part of the administrative record required by § 124.18.

Note.—This paragraph allows the submission of requests for evidentiary hearing even though both legal and factual issues may be raised, or only legal issues may be raised. In the latter case, because no factual issues were raised, the Regional Administrator would be required to deny the request. However, on review of the denial the Administrator is authorized by § 124.91(a)(1) to review policy or legal conclusions of the Regional Administrator. EPA is requiring an appeal to the Administrator even of purely legal issues involved in a permit decision to ensure that the Administrator will have an opportunity to review any permit before it will be final and subject to judicial review.

(2) Persons requesting an evidentiary hearing on an NPDES permit under this section may also request an evidentiary hearing on a RCRA or UIC permit. PSD permits may never be made part of an evidentiary hearing under Subpart E. This request is subject to all the requirements of paragraph (b)(1) of this section and in addition will be granted only if:

(i) Processing of the RCRA or UIC permit at issue was consolidated with the processing of the NPDES permit as provided in § 124.4;

(ii) The standards for granting a hearing on the NPDES permit are met;

(iii) The resolution of the NPDES permit issues is likely to make necessary or appropriate modification of the RCRA or UIC permit; and

(iv) If a PSD permit is involved, a permittee who is eligible for an evidentiary hearing under Subpart E on his or her NPDES permit requests that the formal hearing be conducted under the procedures of Subpart F and the Regional Administrator finds that consolidation is unlikely to delay final permit issuance beyond the PSD one-year statutory deadline.

(c) These requests shall also contain:

- (1) The name, mailing address, and telephone number of the person making such request;

- (2) A clear and concise factual statement of the nature and scope of the interest of the requester;

- (3) The names and addresses of all persons whom the requester represents; and

- (4) A statement by the requester that, upon motion of any party granted by the Presiding Officer, or upon order of the Presiding Officer *sua sponte* without cost or expense to any other party, the requester shall make available to appear and testify, the following:

- (i) The requester;

- (ii) All persons represented by the requester; and

- (iii) All officers, directors, employees, consultants, and agents of the requester and the persons represented by the requester.

- (5) Specific references to the contested permit conditions, as well as suggested revised or alternative permit conditions (including permit denials) which, in the judgment of the requester, would be required to implement the purposes and policies of the CWA.

- (6) In the case of challenges to the application of control or treatment technologies identified in the statement of basis or fact sheet, identification of the basis for the objection, and the alternative technologies or combination of technologies which the requester believes are necessary to meet the requirements of the CWA.

- (7) Identification of the permit obligations that are contested or are inseparable from contested conditions and should be stayed if the request is granted by reference to the particular contested conditions warranting the stay.

- (8) Hearing requests also may ask that a formal hearing be held under the procedures set forth in Subpart F. An applicant may make such a request even if the proceeding does not constitute "initial licensing" as defined in § 124.111.

- (d) If the Regional Administrator grants an evidentiary hearing request, in whole or in part, the Regional Administrator shall identify the permit conditions which have been contested by the requester and for which the evidentiary hearing has been granted. Permit conditions which are not contested or for which the Regional Administrator has denied the hearing request shall not be affected by, or considered at, the evidentiary hearing. The Regional Administrator shall specify these conditions in writing in accordance with § 124.60(c).

(e) The Regional Administrator must grant or deny all requests for an evidentiary hearing on a particular permit. All requests that are granted for a particular permit shall be combined in a single evidentiary hearing.

(f) The Regional Administrator (upon notice to all persons who have already submitted hearing requests) may extend the time allowed for submitting hearing requests under this section for good cause.

§ 124.76 Obligation to submit evidence and raise issues before a final permit is issued.

No evidence shall be submitted by any party to a hearing under this Subpart that was not submitted to the administrative record required by § 124.18 as part of the preparation of and comment on a draft permit, unless good cause is shown for the failure to submit it. No issues shall be raised by any party that were not submitted to the administrative record required by § 124.18 as part of the preparation of and comment on a draft permit unless good cause is shown for the failure to submit them. Good cause includes the case where the party seeking to raise the new issues or introduce new information shows that it could not reasonably have ascertained the issues or made the information available within the time required by § 124.15, or that it could not have reasonably anticipated the relevance or materiality of the information sought to be introduced. Good cause exists for the introduction of data available on operation authorized under § 124.60(a)(2).

§ 124.60 Issuance and effective date and stays of NPDES permits.

In addition to the requirements of § 124.15, the following provisions apply to NPDES permits and to RCRA or UIC permits to the extent those permits may have been consolidated with an NPDES permit in a formal hearing:

(a)(1) If a request for a formal hearing is granted under § 124.75 or § 124.114 regarding the initial permit issued for a new source, a new discharger, or a recommending discharger, or if a petition for review of the denial of a request for a formal hearing with respect to such a permit is timely filed with the Administrator under § 124.91, the applicant shall be without a permit pending final Agency action under § 124.91.

(2) Wherever a source subject to this paragraph has received a final permit under § 124.15 which is the subject of a hearing request under § 124.74 or a formal hearing under § 124.75, the Presiding Officer, on motion by the source, may issue an order authorizing it to begin operation before final agency action if it complies with all conditions of that final permit during the period until final agency action. The Presiding Officer may grant such a motion in any case where no party opposes it, or, if a party opposes the motion, where the source demonstrates that (i) it is likely to prevail on the merits; (ii) irreparable harm to the environment will not result pending final agency action if it is allowed to commence operations before final agency action; and (iii) the public interest requires that the source be allowed to commence operations. All the conditions of any permit covered by that order shall be fully effective and enforceable.

(b) The Regional Administrator, at any time prior to the rendering of an initial decision in a formal hearing on a permit, may withdraw the permit and prepare a new draft permit under § 124.6 addressing the portions so withdrawn. The new draft permit shall proceed through the same process of public comment and opportunity for a public hearing as would apply to any other draft permit subject to this Part. Any portions of the permit which are not withdrawn and which are not stayed under this section shall remain in effect.

(c)(1) If a request for a formal hearing is granted in whole or in part under § 124.75 regarding a permit for an existing source, or if a petition for review of the denial of a request for a formal hearing with respect to that permit is timely filed with the Administrator under § 124.91, the force and effect of the contested conditions of the final permit shall be stayed. The Regional Administrator shall notify, in accordance with § 124.75, the discharger and all parties of the uncontested conditions of the final permit that are enforceable obligations of the discharger.

(2) When effluent limitations are contested, but the underlying control technology is not, the notice shall identify the installation of the technology in accordance with the permit compliance schedules (if uncontested) as an uncontested, enforceable obligation of the permit.

(3) When a combination of technologies is contested, but a portion of the combination is not contested, that portion shall be identified as uncontested if compatible with the combination of technologies proposed by the requester.

(4) Uncontested conditions, if inseparable from a contested condition, shall be considered contested.

(5) Uncontested conditions shall become enforceable 30 days after the date of notice under paragraph (c)(1) of this section granting the request. If, however, a request for a formal hearing on a condition was denied and the denial is appealed under § 124.91, then that condition shall become enforceable upon the date of the notice of the Administrator's decision on the appeal if the denial is affirmed, or shall be stayed, in accordance with this section, if the Administrator reverses the denial and grants the evidentiary hearing.

(6) Uncontested conditions shall include:

(i) Preliminary design and engineering studies or other requirements necessary to achieve the final permit conditions which do not entail substantial expenditures;

(ii) Permit conditions which will have to be met regardless of which party prevails at the evidentiary hearing;

(iii) When the discharger proposed a less stringent level of treatment than that contained in the final permit, any permit conditions appropriate to meet the levels proposed by the discharger, if the measures required to attain that less stringent level of treatment are consistent with the measures required to attain the limits proposed by any other party; and

(iv) Construction activities, such as segregation of waste streams or installation of equipment, which would partially meet the final permit conditions and could also be used to achieve the discharger's proposed alternative conditions.

(d) If at any time after a hearing is granted and after the Regional Administrator's notice under paragraph (c)(1) of this section it becomes clear that a permit requirement is no longer contested, any party may request the Presiding Officer to issue an order identifying the requirements as uncontested. The requirement identified in such order shall become enforceable 30 days after the issuance of the order.

(e) When a formal hearing is granted under § 124.75 on an application for a renewal of an existing permit, all provisions of the existing permit as well as uncontested provisions of the new permit, shall continue fully enforceable and effective until final agency action under § 124.91. (See § 122.6) Upon written request from the applicant, the Regional Administrator may delete requirements from the existing permit which unnecessarily duplicate uncontested provisions of the new permit.

(f) When issuing a finally effective NPDES permit the conditions of which were the subject of a formal hearing under Subparts E or F, the Regional Administrator shall extend the permit compliance schedule to the extent required by a stay under this section provided that no such extension shall be granted which would:

(1) Result in the violation of an applicable statutory deadline; or

(2) Cause the permit to expire more than 5 years after issuance under § 124.15(a).

Note.—Extensions of compliance schedules under § 124.60(f)(2) will not automatically be granted for a period equal to the period the stay is in effect for an effluent limitation. For example, if both the Agency and the discharger agree that a certain treatment technology is required by the CWA where guidelines do not apply, but a hearing is granted to consider the effluent limitations which the technology will achieve, requirements regarding installation of the underlying technology will not be stayed during the hearing. Thus, unless the hearing extends beyond the final compliance date in the permit, it will not ordinarily be necessary to extend the compliance schedule. However, when application of an underlying technology is challenged, the stay for installation requirements relating to that technology would extend for the duration of the hearing.

(g) For purposes of judicial review under CWA section 509(b), final agency action on a permit does not occur unless and until a party has exhausted its administrative remedies under Subparts E and F and § 124.91. Any party which neglects or fails to seek review under § 124.91 thereby waives its opportunity to exhaust available agency remedies.

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

Boston Edison Company

Pilgrim Station, Unit No. 1

is authorized to discharge from the facility located at

Rocky Hill Road

Plymouth, Massachusetts

to receiving waters named

Cape Cod Bay

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

This permit shall become effective on the date of signature.

This permit and the authorization to discharge expire at midnight, five years from the effective date.

This permit supersedes the permit issued on 15 May 1980.

This permit consists of 13 pages in Part I including effluent limitations, monitoring requirements, etc. and 19 pages in Part II including General Conditions and Definitions.

Signed this 8th day of September, 1983



David G. Fierro

Acting Director, Water Management Division
Environmental Protection Agency
Region I
Boston, MA



Thomas C. McMahon
Director, Division of Water
Pollution Control
Department of Environmental
Quality Engineering
Commonwealth of Massachusetts
Boston, MA

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Except as specified in this paragraph and in paragraphs 2 thru 6 below, the permittee is not authorized to discharge to Cape Cod Bay a final effluent to which it has added any pollutants.

- a. Chlorine may be used as a biocide. No other biocide shall be used without explicit approval from EPA and the Director.

(1) Total residual chlorine (total residual oxidants) may not be discharged from any single generating unit for more than two hours per day. The quantity of total residual chlorine (total residual oxidants) discharged in once through cooling water from each discharge point shall not exceed a maximum concentration of 0.10 mg/l. Simultaneous multi-unit chlorination is permitted.

(2) Continuous chlorination of the service water system may be used for macroinvertebrate control. The total residual chlorine (total residual oxidant) concentration shall not exceed a maximum daily concentration of 0.5 mg/l nor exceed an average daily concentration of 0.25 mg/l in the service water discharge prior to mixing with any other stream.

- b. The discharges shall not jeopardize any Class SA use of the Cape Cod Bay and shall not violate applicable water quality standards. 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 Sections 307 or 311 of the Act or applicable water quality standards.
- c. This permit shall be modified, or revoked and 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 Act, 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 Act.

- d. The term "EPA" means the Regional Administrator (or designee) of Region I of the U.S. Environmental Protection Agency and the term "Director" means the Director of the Division of Water Pollution Control of the Department of Environmental Quality Engineering.
- e. There shall be no discharge of polychlorinated biphenyl compounds such as commonly used for transformer fluid.
- f. There shall be no discharge of treated or untreated chemicals which result from the cleaning or washing of condensers or equipment wherein heavy metals may be discharged.
- g. The permittee shall operate all facilities in such a manner as to prevent a rise or fall of more than 3°F above the normal steady state condenser T over any 60-minute period. Variation in inlet temperature shall not be considered as an operational rise or fall of temperatures. During normal load cycling, a temperature change of 10°F rise or fall over any 60 minute period will be allowed. Normal startup temperature rise shall not exceed the maximum allowed in subsection I.A.2.b. In the event of reactor scram or emergency shutdown, the allowable decrease of 10°F per hour may be exceeded. If such an event occurs, the permittee shall report the occurrence in the next quarterly report to EPA and the Director.
- h. The thermal plumes from the station:
 - (1) shall not deleteriously interfere with the natural movements, reproductive cycles, or migratory pathways of the indigenous populations within the water body segment;
 - (2) shall have minimal contact with the surrounding shorelines.
- i. It has been determined that the circulating water intake structure presently designed employs the best technology available for minimizing adverse environmental impact. No change in the location, design or capacity of the present structure can be made without prior approval of EPA and the Director. The present design shall be reviewed for conformity to regulations pursuant to Section 316(b) when such are promulgated.
- j. All live fish, shellfish, and other aquatic organisms collected or trapped on the intake screens shall be returned to water of ambient temperature sufficiently distant from the intake structures to prevent reimpingement. All solid materials except leaves and twigs removed from the screens shall be disposed of on land.
- k. The permittee shall notify EPA and the Director as soon as it knows or has reason to believe:

(1) 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:"

(a) one hundred micrograms per liter (100 ug/l) for all toxic pollutants except for (b) to (d) below.

(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; or

(d) any other notification level established by the EPA in accordance with 40 C.F.R. §122.62(f).

(2) That it has begun or expects to begin to use or manufacture as an intermediate or final product or by-product any pollutant which was not reported in the permit application.

1. Any discharge of radioactive waste shall be in conformance with regulations promulgated by the Nuclear Regulatory Commission.

2. During the period beginning effective date and lasting through expiration date, the permittee is authorized to discharge from outfall serial number 001, Condenser cooling waters.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow-MGD	447.0	510.0	Continuous*	Daily average and range
Total Residual Oxidants, mg/l		0.1	2 representative grab samples when in use	

- b. The temperature of the discharge shall at no time exceed a 32°F rise over the temperature of the intake water but also shall at no time exceed a maximum of 102°F. Temperature shall be monitored continuously to determine the daily average and range.

- c. The pH of the discharge shall not vary by more than 0.5 standard units from that of the intake water.

- d. There shall be no discharge of a visible oil sheen, foam, or floating solids in other than trace amounts except in cases of condenser leak seeking and sealing. In such cases, the use of a reasonable quantity of biodegradable and non-toxic material may be used to the extent necessary to find and/or seal the leak. Each quarter the permittee shall report the times and amounts of such material used.

- e. Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point within the Discharge Canal prior to its discharge into Cape Cod Bay.

* The flow rate shall be estimated from pump capacity curves and operational hours.

f. The permittee shall maintain a barrier net as near to the terminal end of the discharge canal as good engineering practice will allow. Except for changing nets or other barrier maintenance, it shall at all times prevent fish entry into the canal.

g. If EPA or the Director of the Massachusetts Division of Water Pollution Control (MDWPC) determine that the physical barrier net required by subparagraph f above does not effectively prevent the mortality of menhaden or other finfish, the permittee shall, from the date of said determination, maintain an average dissolved nitrogen saturation level of less than 115%. The dissolved nitrogen saturation level is defined as the dissolved nitrogen saturation at the surface layer of the canal at the point of discharge into the bay during periods of time when a school of menhaden or other finfish susceptible to mortality from gas bubble disease is detected in or near the discharge canal by the program developed under paragraph 6(b) below. After it has been determined by representatives of the permittee, EPA, or MDWPC that fish as mentioned above are within the prescribed area, the permittee shall as soon as possible take the necessary steps to reduce the dissolved nitrogen saturation level to the permitted level.

3. During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from outfall serial number 002, thermal backwash for bio-fouling control.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow - MGD		255.0	When in use	Estimate*

- b. The discharge shall not be more frequent than three hours a day twice each week for those periods when required for the plant to operate most efficiently. Infrequent, abnormal environmental conditions may require this frequency to be doubled. These conditions shall be specified in the subsequent quarterly report.
- c. The temperature of the discharge shall at no time exceed a maximum temperature of 120°F. Temperature shall be monitored continuously when in use to determine the average and range.
- d. The pH shall not vary more than 0.5 standard units from that of the intake water.
- e. There shall be no discharge of oil, floating solids or visible foam in other than trace amounts.
- f. Samples taken in compliance with the monitoring requirements specified above shall be taken at the point of discharge into the intake canal.

* Flow rate is to be estimated as if backflushing took place for 24 continuous hours.

4. During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from outfall serial number 003 - Intake Screen Wash

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow - MGD	0.336	2.02	Daily	Estimate

b. The temperature of the discharge shall at no time exceed the temperature of the intake water used for this discharge.

c. All live fish, shellfish, and other organisms collected or trapped on the intake screen should be returned to water of ambient temperature sufficiently distant from the intake structures to prevent reimpingement.

d. There shall be no discharge of floating solids or visible foam in other than trace amounts.

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

5. During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from outfall serial number 010 service cooling water.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow-MGD	11.7		Continuous*	Daily Average and Range
Total Residual Oxidants, mg/l	0.25	0.5	Continuous	Daily Average and Range

b. Continuous chlorination of the service water system may be used for macroinvertebrate control.

c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the heat exchanger.

* The flow rate shall be estimated from pump capacity curves and operational hours.

6. During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from outfall serial number 011*, make up water and demineralizer waste discharge.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Avg. Monthly	Max. Daily	Measurement Frequency	Sample Type
Flow-MGD	0.015	0.06	Estimate	Estimate Daily Average & Range
Suspended Solids mg/l	30	100	Batch	Grab

- b. The pH shall not be less than 6.1 standard units nor greater than 8.4 standard units.
- c. Samples taken in compliance with the monitoring requirements specified above shall be taken at a point prior to mixing with any other stream.

* Formerly designated Discharge 001B.

7. Biological Monitoring

a. Any incidence of fish mortality associated with the thermal plume or of unusual numbers of fish impinged on the intake traveling screens shall be reported to EPA and the Director immediately by telephone report as required in Part II(1)(5) of this permit. A written confirmation report is to be provided within five (5) days. These reports should include the following:

- (1) The kinds, sizes, and approximate number of fish involved in the incident.
- (2) The time and date of the occurrence.
- (3) The operating mode of the plant at the time of the occurrence.
- (4) The opinion of the company as to the reason the incident occurred.

b. The permittee shall conduct such studies and monitoring as are determined by EPA and the Director to be necessary to evaluate the effect of the operation of the Pilgrim Station, Unit 1, on the balanced, indigenous community of shellfish, fish, and wildlife in and on Cape Cod Bay.

c. The 1983 Environmental Monitoring, Thermal Discharge Fish Surveillance and Dissolved Nitrogen Saturation Reduction Program and Plan submitted on December 20, 1982 have been approved and are presently in effect (see Attachment I).

d. No later than December 31st of each year, the permittee shall submit to the Regional Administrator and the Director for approval any revisions of the existing biological monitoring program (subparagraph b above) which may be warranted by the availability of new information. Upon approval by the Regional Administrator and the Director, the revised program submitted in accordance with this paragraph shall be incorporated as part of this permit.

C. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on _____.

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

Environmental Protection Agency
Region I
Permits Processing Unit
Room 2109, JFK Federal Building
Boston, Massachusetts 02203

The state agency is:

Massachusetts Division of Water Pollution Control
Lakeville Hospital
Lakeville, Massachusetts 02203

Signed copies of all other notifications and reports required by this permit shall be submitted to the state at:

Massachusetts Division of Water Pollution Control
Permit Section - 7th Floor
One Winter Street
Boston, Massachusetts 02108

*The permittee shall continue reporting on the quarterly cycle of January 1st, April 1st, July 1st, and October 1st.

D. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency and the Division of Water Pollution Control under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Director of the Massachusetts Division of Water Pollution Control pursuant to M.G.L. Chap. 21, §43.

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

MARINE ECOLOGY STUDIES
RELATED TO OPERATION OF PILGRIM STATION UNIT 1
(NPDES PERMIT PROGRAMS)

In accordance with NPDES Permit requirements for Pilgrim 1 (Permit #MA0003557) the following modified programs which commenced in January 1978, are presented for 1983. The 1978, 1979, 1980, 1981 and 1982 programs were submitted to the Regional Administrator, U. S. Environmental Protection Agency and Director, Mass. Division of Water Pollution Control, in December 1977, 1978, 1979, 1980 and 1981, respectively.

I. ENVIRONMENTAL MONITORING

The Environmental Monitoring Program represents a continuation of previous studies. Pre-operational studies for Pilgrim Unit 1 commenced in 1969, almost four years before initial operation in December 1972. In accordance with environmental monitoring and reporting requirements of the Unit 1 Operating License, DPR-35, issued by the U. S. Atomic Energy Commission (now the Nuclear Regulatory Commission) Boston Edison has carried out a post-operational Marine Ecology Program. This program was designed to investigate the Cape Cod Bay ecosystem, with emphasis on the Rocky Point area, in order to determine whether the operation of Pilgrim Station resulted in measurable effects on the marine ecology and evaluate the significance of any such effects. The Marine Ecology Program for Unit 1 continued for five years from initial full power operation - that is, through December 1977 and is now replaced by this NPDES Permit Program. The post-operational studies for Pilgrim Unit 1 and the collected data are incorporated and analyzed in the Marine Ecology Semi-Annual Reports (#1-20), Marine Ecology Final Report (1978), and the 316 Demonstration Document (1975) and Supplement (1977).

The NPDES Program includes the following elements:

A. Pilgrim Administrative - Technical Committee

The Pilgrim Administrative - Technical Committee (PATC) is an advisory committee that was established to ensure that the Pilgrim marine studies have the benefit of qualified scientific and technical advice and are responsive to regulatory agency concerns. The PATC recommends, helps plan, and reviews marine studies and recommends improvement to ongoing studies based on the latest results. It has held 60 meetings since July 16, 1969, and will continue to be involved in the Pilgrim future marine studies. The PATC concurs with the Environmental Monitoring Program presented here for 1983. The PATC is composed of two representatives (technical and administrative) from each interested federal and state regulatory agency and Boston Edison Company, and one member from the University of Massachusetts. The present membership is as follows:

Agency

National Marine Fisheries Service

Mass. Division of Water Pollution Control

U. S. Environmental Protection Agency (non-voting)

Mass. Division of Marine Fisheries

U. S. Fish and Wildlife Service

University of Massachusetts

Boston Edison Company

Each meeting is chaired by a representative of the U. S. Environmental Protection Agency and all members have a voting right except as noted. Minutes of PATC meetings appear in semi-annual Pilgrim Station marine ecology reports.

B. Marine Fisheries Studies (Mass. Division of Marine Fisheries)

Since 1969 the Division of Marine Fisheries (DMF), an agency of the Commonwealth of Massachusetts, has conducted a number of field studies pertinent to Pilgrim Station. Those studies listed below will be continued.

Fish

Since 1969 the DMF has studied the occurrence and distribution of fish around Rocky Point and at sites around the area of predicted temperature increase. Groundfish and pelagic species will continue to be sampled using a gill net (10 foot depth, 7 mesh sizes), and a 32-foot Shrimp trawl (1/2 inch mesh liner) biweekly. One new sampling station will be added for the Shrimp trawl in Plymouth-Kingston-Duxbury Bay. Figures 1 & 2 show sampling station locations. The 35-foot Yankee trawl (1.5 inch mesh liner) study, conducted since 1970, will be discontinued and a final report prepared for submittal to EPA and DWPC.

A finfish observational dive survey (Figure 2) will continue in 1983 for the Pilgrim Station thermal plume area. This study will involve biweekly diving from March through October to document fish behavior and condition at selected stations. During mid-August to mid-September weekly diving will be done to document potential thermal plume-related mortalities.

In April-September 1983 a 150-foot beach seine (3/16 inch mesh bag) survey (Figure 2) will be performed weekly, including the Pilgrim Station intake embayment. This study will record fishes which are most susceptible to impingement mortalities that have occurred in previous years. The 1982 White Horse Beach Station will be shifted to the mouth of Plymouth Harbor.

A sport fish creel census, similar to that conducted from 1973-1975, will be undertaken at the Pilgrim Station shorefront during the May-October period.

Lobster

Since early 1970, the DMF has collected lobster catch statistics biweekly through each fishing season (March to November) by sampling commercial lobstermen's pot hauls. This effort will continue as a measure of Pilgrim effect on the local lobster population (Figure 3).

Irish Moss

The DMF began recording the amount of Irish Moss harvested in the Pilgrim study area in 1971. To facilitate comparison of the moss harvest in the

immediate discharge area with that of control areas, the coastline was divided into eight monitoring zones (Figure 4). The total weight of moss harvested and the effort expended in each monitoring zone by each raker was recorded daily both within and without the Station's influence. In 1983 this study will be discontinued and a final report prepared for submittal to EPA and DWPC.

Gas Saturation

In 1983 analyses will be conducted during periods of potential discharge-related mortalities. A Weiss satumeter will be used in situ to measure total partial pressure of dissolved gases, and percent saturation of total gas, nitrogen, and oxygen will be determined. A study defining the 115% dissolved gas discharge plume will be conducted in the Spring and Fall periods around slack tides.

C. Impingement Studies (Marine Research, Inc./BECO.)

The impingement of fishes and invertebrates on the intake screens at the Pilgrim Nuclear Power Station in Plymouth, Massachusetts has been recorded since Unit 1 commenced operation in late 1972. The main objective of the continuing impingement study is to calculate impingement rates of marine organisms by gathering and analyzing data on numbers and species carried onto the four travelling screens at Pilgrim Station. In 1983 the weekly collection time will be twenty-four hours (three 8-hour periods). In addition, impinged fish survival studies will be continued for the modified sluiceway and screen wash system completed in 1980. Emphasis in survival studies will be on rainbow smelt, Atlantic herring, alewife, cunner, Atlantic silverside and winter flounder. In 1983 large numbers of fishes will be held and released in front of intake screens to help determine the reasons for the high screen mortality experienced.

D. Benthic Studies (Battelle New England Marine Research Lab)

The benthic flora and fauna are being monitored at three sampling stations at depths of approximately 10 feet (MLW) (Figure 1). The dominant flora and fauna in each plot are recorded, and quantitative samples are collected from rock surfaces. Sampling will continue two times a year to determine power plant related changes, if any.

In addition, transect studies to map extent of stunted and denuded areas immediately off the discharge canal will be continued 4 times a year in 1983.

E. Entrainment Studies (Marine Research, Inc./BECO.)

Since August 1973 MRI has been studying entrainment in Pilgrim Station cooling water. Entrainment monitoring studies in 1982 emphasized consideration of ichthyoplankton, as will those in 1983.

The 1983 entrainment studies will consist of routine monitoring of the Pilgrim discharge. This monitoring will be on a weekly basis during the period March-September and twice monthly during the periods January-February and October-December. Samples will be collected in triplicate. If unusually high egg or larvae concentrations are found in the discharge when compared with previous years, steps will be taken to implement a special ichthyoplankton contingency sampling plan to assess the reason for the high concentrations. This plan will consist of single tows at each

of 13 bay stations off the plant, and samples will be analyzed immediately (Figure 5). BECo will analyze data and prepare the report.

F. Winter Flounder Larvae Studies (Marine Research, Inc.)

The 1983 program is not firmly determined at present. Various options are being explored to allow for the most cost effective determination of any plant effects on winter flounder and perhaps other species' populations. (As soon as a program is finalized and approved by the PATC, it will be communicated to the EPA). The 1982 program which consisted of determining the contribution of larvae from Green Harbor vs. that of Plymouth Harbor-Kingston-Duxbury Bay will not be repeated.

G. Reporting of Environmental Monitoring

A semi-annual and an annual report covering each of the above (Items A-F), will be submitted to the EPA and MDWPC on October 31, 1983 and April 30, 1984, covering the periods January-June and January-December, respectively.

II. THERMAL DISCHARGE FISH SURVEILLANCE

The Thermal Discharge Fish Surveillance Program for Pilgrim Station has the following four primary parts:

A. Telecons

This involves close contact with various utilities, Massachusetts Division of Marine Fisheries, and National Marine Fisheries Service (its Beaufort, North Carolina Menhaden Research Facility) in order to predict when large numbers of menhaden and other fishes may appear in the Cape Cod Bay area.

B. Overflights

Periodic aerial overflights of Cape Cod Bay and the Pilgrim vicinity also alert Boston Edison to the presence of large schools of fish in the area. These overflights will be conducted weekly throughout the year and summarized in each annual report.

C. Observations of the Discharge Canal

Boston Edison personnel will make frequent visual observations of the Pilgrim discharge canal during periods of fish migration.

D. Dive Surveys

Diver inspections of the discharge canal and fish barrier net determine fish presence and condition, and barrier net performance. BECo will report dive survey findings in each annual report. Also, fish sampling and diver observation in the plume area will be conducted by-weekly from March through October by Massachusetts Division of Marine Fisheries personnel as part of the Environmental Monitoring Program.

The dive survey and canal observation elements of the Surveillance Program will provide a continuing check on the adequacy of the barrier net in preventing the passage of fish into the canal. Stated differently, these elements will monitor compliance with the barrier condition of the permit. If these elements indicate that the barrier is not functioning adequately and the permit's 115% surface nitrogen limitation is triggered by the PA

the overflights, as well as the canal observations and dive surveys, will indicate when fish susceptible to gas bubble disease mortality are sufficiently near Pilgrim Station to warrant action to reduce surface nitrogen saturation level to 115%. Boston Edison will notify the EPA Regional Administrator and Massachusetts DWPC Director of the presence of a large school of fish within $\frac{1}{2}$ mile of the discharge canal concurrent with water quality conditions potentially harmful to the fish.

III. DISSOLVED NITROGEN SATURATION REDUCTION

The plan for reducing dissolved nitrogen surface saturation levels to less than 115% in the discharge canal will involve a power reduction or outage, should a school of fish susceptible to gas bubble disease mortality be in the immediate vicinity of Pilgrim Station. The procedure for determining the need, feasibility and request for a power reduction or outage is as follows:

1. Responsible regulatory/agency personnel familiar with fishery statistics (e.g., Mass. Division of Marine Fisheries) estimate the magnitude of the fish school and, based on measured water quality and other pertinent environmental data, make an initial judgment as to the likelihood and effect of gas bubble disease mortality. They also determine the potential necessity for a nitrogen saturation reduction, and notify Boston Edison of this initial judgment.
2. Boston Edison notifies Rhode Island, Eastern Massachusetts, and Vermont Energy Control (REMVEC) of the possibility of a power reduction and obtains projections through at least the upcoming weekend. Boston Edison transmits this information and load information to the agencies/persons taking the action identified in No. 1 above.
3. On the basis of this information, agency personnel formulate a specific recommendation to the EPA Regional Administrator and/or the MDWPC Director on the timing and duration of the power reduction that is, in their judgment, appropriate and in the overall public interest.
4. Responsible regulatory personnel request power reductions through a telephone call to the Boston Edison Nuclear Operations Department Manager.
5. Boston Edison personnel record the results of periodic surveillance of the condition and location of the fish prior to and subsequent to any plant operational changes.

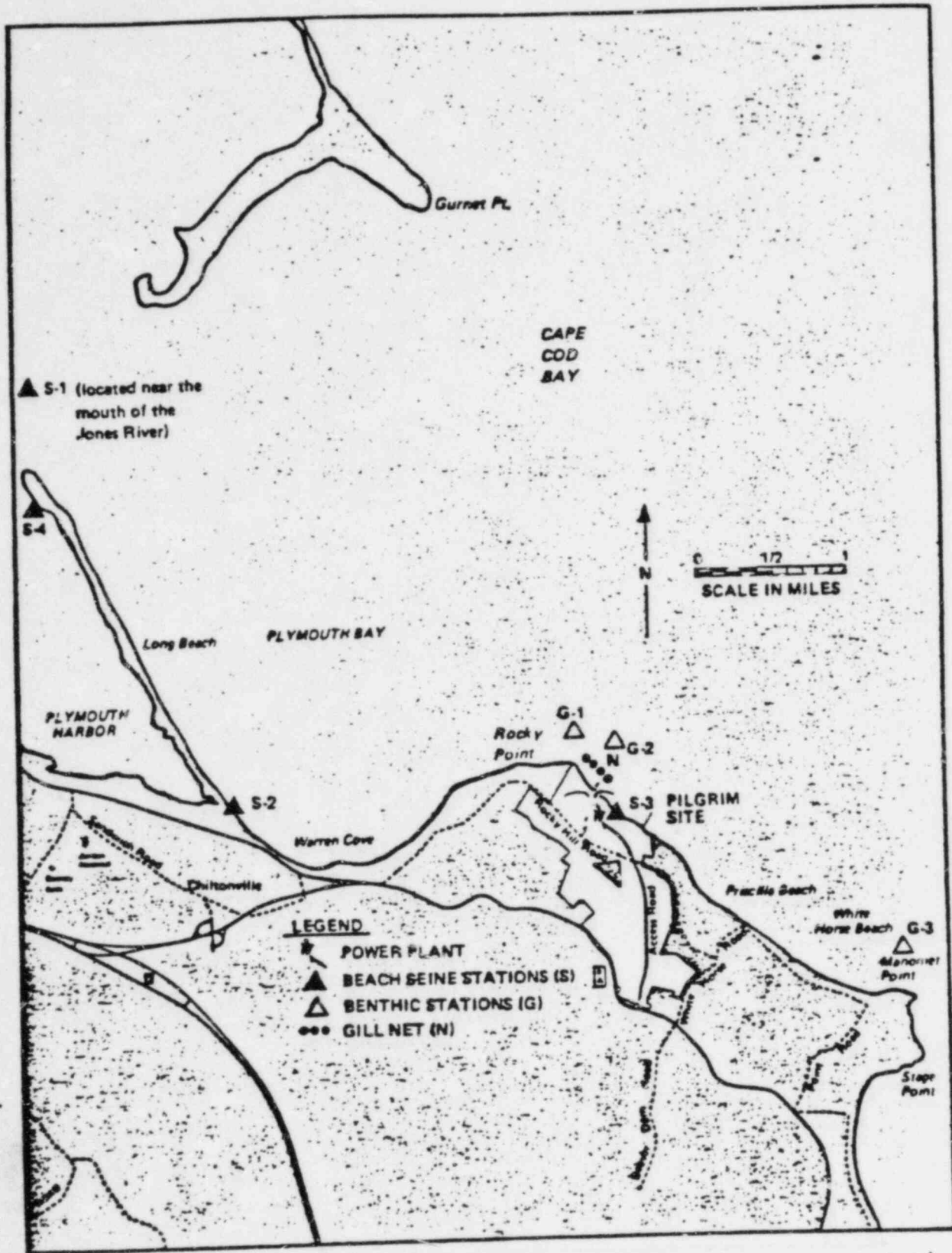


Figure 1. Location of Beach Seine and Gill Net Sampling Stations for Marine Fisheries Studies, and Benthic Studies Sampling Stations

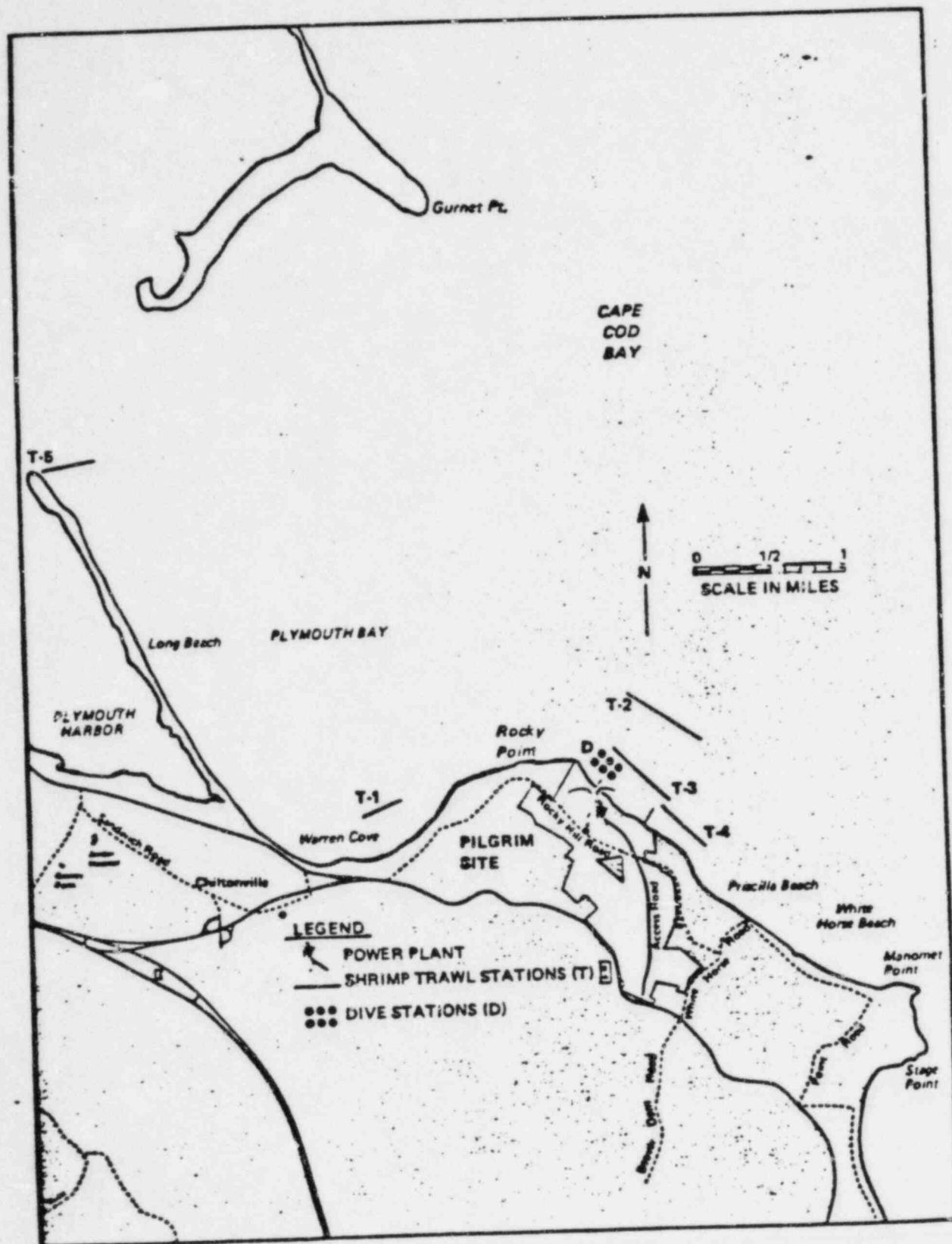


Figure 2. Location of Shrimp Trawl and Dive Sampling Stations for Marine Fisheries Studies

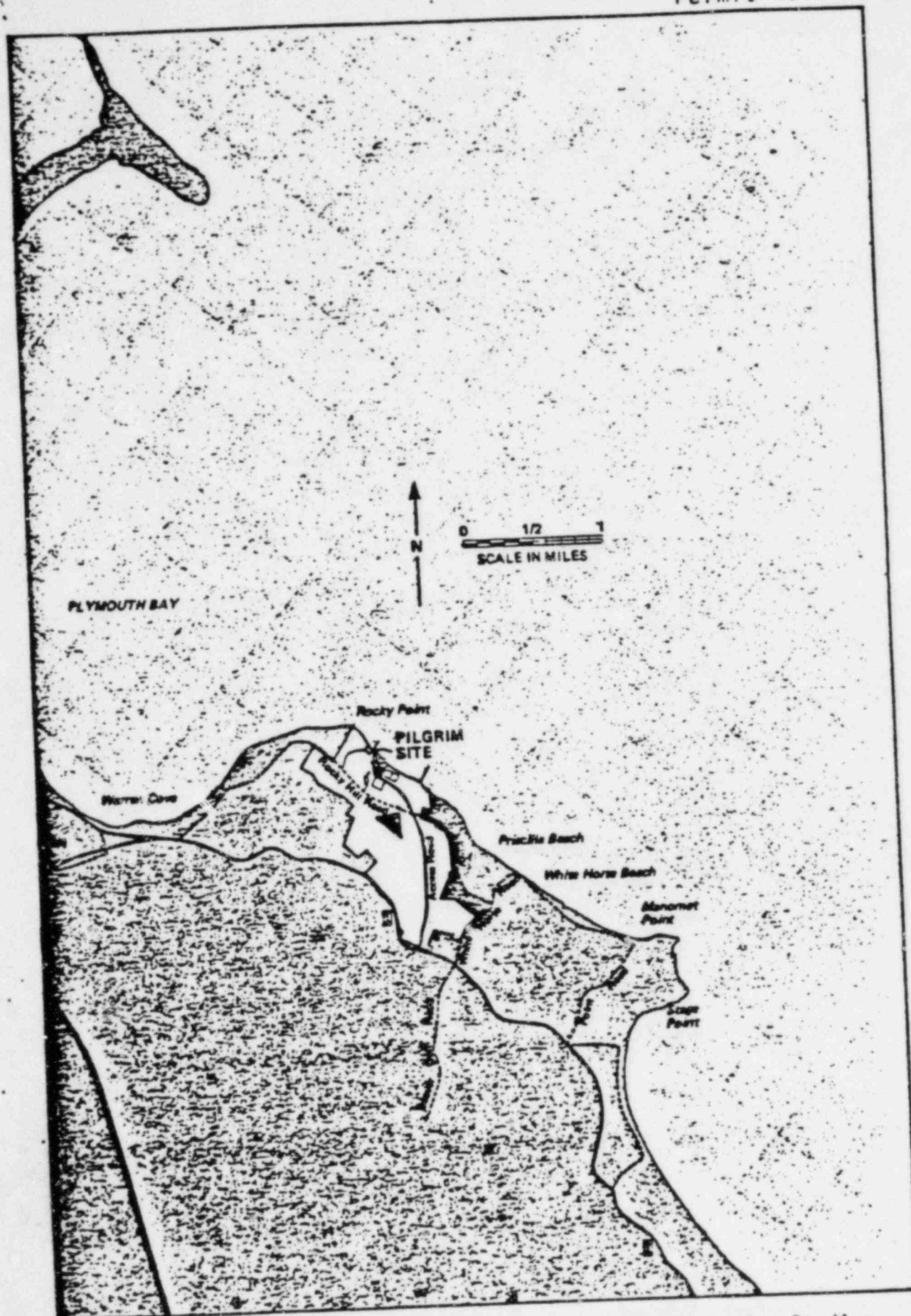


Figure 3. Lobster Pot Sampling Grid for Marine Fisheries Studies

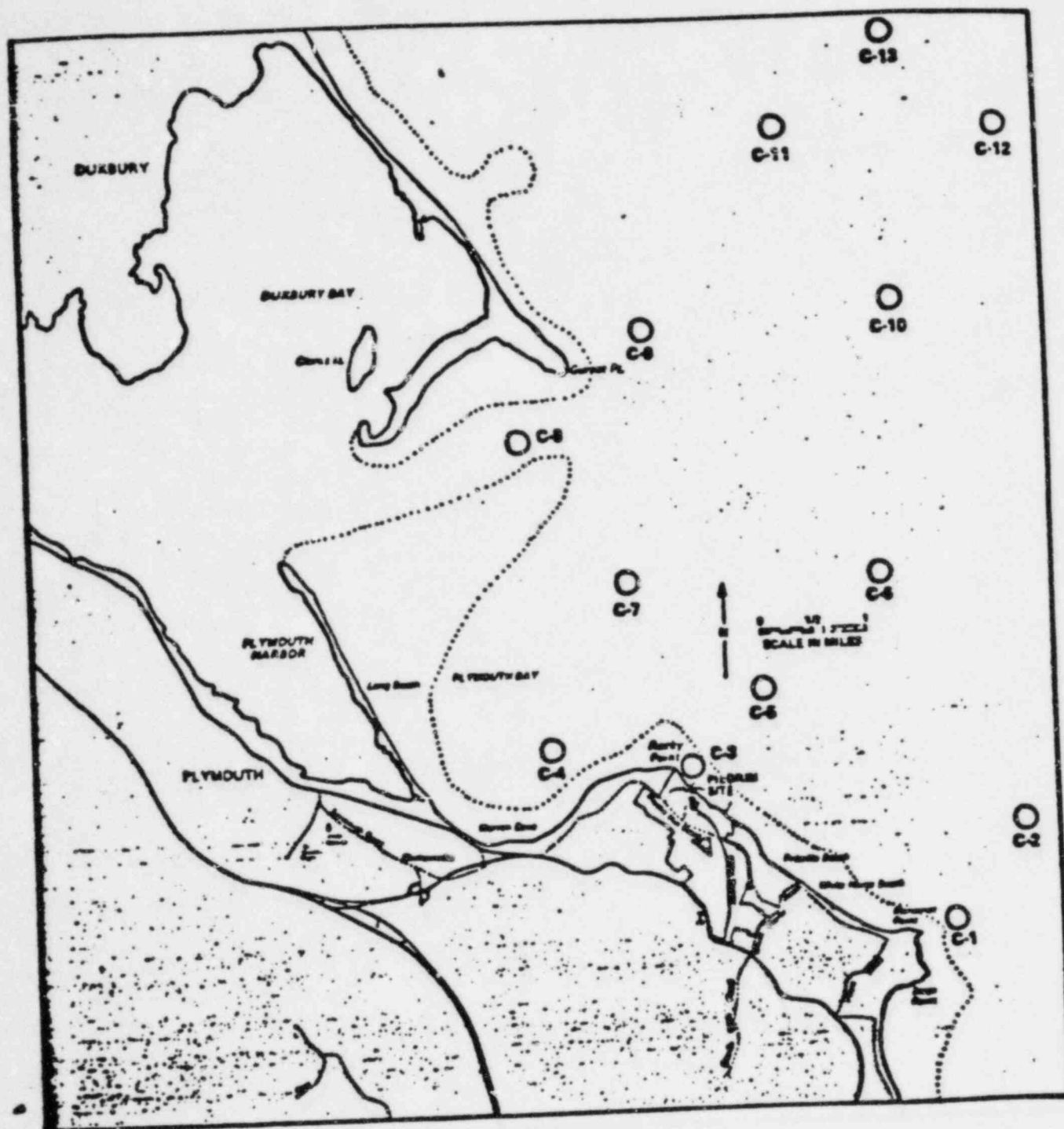


Figure 5. Location of Entrainment Contingency Plan Sampling Stations, C

PART II
TABLE OF CONTENTS

GENERAL REQUIREMENTS

- (a) Duty to Comply
- (b) Duty to Reapply
- (c) Need to Halt or Reduce Activity
- (d) Duty to Mitigate
- (e) Proper Operation and Maintenance
- (f) Permit Actions
- (g) Property Rights
- (h) Duty to Provide Information
- (i) Inspection and Entry
- (j) Monitoring and Records
- (k) Signatory Requirements
- (l) Reporting Requirements
- (m) Bypass
- (n) Upset
- (o) Change in Discharge
- (p) Removed Substances
- (q) Power Failure
- (r) Availability of Reports
- (s) Oil and Hazardous Substance Liability
- (t) State Laws
- (u) Other Laws
- (v) Severability
- (w) Reopener Clause
- (x) Confidentiality of Information
- (y) Right of Appeal

DEFINITIONS

GENERAL REQUIREMENTS

- (a) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- (1) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (2) The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.
- (b) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- (c) Need to halt or reduce activities not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost.
- (d) Duty to mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

- (e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (f) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause, including but not limited to: (1) Violation of any terms or conditions of this permit; (2) Obtaining this permit by misrepresentation or failure to disclose all relevant facts; or (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (g) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.
- (h) Duty to provide information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- (i) Inspection and entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
 - (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

(j) Monitoring and records.

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the discharged over the sampling and reporting period.
- (2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings from continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- (3) Records of monitoring information shall include:
 - (i) The date, exact place, and time of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed;
 - (iv) The individual(s) who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.
- (4) Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136, unless other test procedures have been specified in this permit.
- (5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 6 months or by both.

- (6) Monitoring results must be reported on a Discharge Monitoring Report (DMR).
 - (7) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 C.F.R. Part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (k) Signatory requirement. All applications, reports, or information submitted to the Director shall be signed and certified in accordance with 40 C.F.R. §§122.6 and 122.7. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 6 months, or by both.
- (l) Reporting requirements.
- (1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.
 - (2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
 - (3) Transfers. This permit is not transferable to any person except after written notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA.
 - (4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (5) Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances or the next working day.

A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following information must be reported within 24 hours (24-hour reporting) or the next working day:

- (i) Any unanticipated bypass which causes a violation of any effluent limitation in the permit; or
- (ii) Any upset which causes a violation of any effluent limitation in the permit; or
- (iii) Any violation of a maximum daily discharge limitation for any of the pollutants specifically listed by the Director in the permit.

The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours or the next working day.

- (6) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1), (2), and (5), of this section, at the time monitoring reports are submitted. The reports shall contain the information required in paragraph (1)(5) of this section.
- (7) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

(m) Bypass

(1) Definitions.

- (i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

- (ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Prohibition of bypass.

- (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless all the following conditions occur:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (C) The permittee submitted notices as required under paragraph (m)(3) of this section.
- (ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(2)(1) of this section.
- (iii) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraph (m)(3) of this section.

(3) Notice

- (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

- (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (1)(5) of this section (24-hour notice).

(n) Upset

- (1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary non-compliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (i) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
 - (ii) The permitted facility was at the time being properly operated;
 - (iii) The permittee submitted notice of the upset as required in paragraph (1)(5) of this section (24-hour notice); and
 - (iv) The permittee complied with any remedial measures required under (d) above.
- (4) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(o) Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, at least 180 days prior to commencement of such discharges if such changes will not violate the effluent limitations specified in this permit, by notice, in writing, to the Director of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.

(p) Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner consistent with applicable Federal and State laws and regulations including, but not limited to the CWA and the Federal Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq., and regulations promulgated thereunder.

(q) Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- (1) In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

- (2) Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(r) Availability of Reports

Except for data determined to be confidential under Paragraph X below, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

(s) Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

(t) State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the CWA.

(u) Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.

(v) Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

(w) Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA in order to bring all discharges into compliance with the CWA.

(x) Confidentiality of Information.

- (1) In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).
- (2) Claims of confidentiality for the following information will be denied:
 - (i) The name and address of any permit applicant or permittee;
 - (ii) Permit applications and permits; and
 - (iii) NPDES effluent data.
- (3) Information required by NPDES application forms provided by the Director under 40 C.F.R. §§122.4 and 122.53 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

(y) Right of Appeal.

Within thirty (30) days of receipt of notice of a final permit decision, the permittee may submit a request to the Regional Administrator for an evidentiary hearing under Subpart E, or a formal hearing under Subpart F, of 40 C.F.R. Part 124, to reconsider or contest that decision. The request for a hearing must conform to the requirements of 40 C.F.R. §124.74.

DEFINITIONS

1. For purposes of this permit, the following definitions shall apply.

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all State, interstate, and Federal standards and limitations to which a "discharge" or a related activity is subject to, including

water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," and pretreatment standards under sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions.

Average - The arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgement (BPJ) means a case-by-case determination of best practicable treatment (BPT), best available treatment (BAT) or other appropriate standard based on an evaluation of the available technology to achieve a particular pollutant reduction.

Composite Sample - A sample consisting of a minimum of eight grab samples collected at equal intervals during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample continuously collected proportionally to flow over that same time period.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217 and Pub. L. 95-576; 33 U.S.C. §§1251 et seq.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hours period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the daily discharge is calculated as the average measurement of the pollutant over the day.

Director means Director, Enforcement Division, EPA, Region I.

Discharge of a pollutant means:

- (a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any "indirect discharger" as defined in 40 C.F.R. §122.3

Discharge Monitoring Report Form ("DMR") means the EPA standard national form, including any subsequent additions, revisions, or modifications, for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitations guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise "effluent limitations."

EPA means the United States "Environmental Protection Agency."

Grab Sample - An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Indirect Discharger means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Industrial User means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Maximum daily discharge limitation (NPDES) means the highest allowable "daily discharge."

Interference means an addition or disruption of the POTW, its treatment processes or operations, or its sludge processes, use or disposal which is cause of or significantly contributes to either a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or to the prevention of sewage sludge use or disposal by the POTW in accordance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, and the Toxic Substance Control Act. An Industrial User significantly contributes to such a permit violation or prevention of sludge use or disposal in accordance with above-cited authorities whenever such User:

- (a) Discharges a daily pollutant loading in excess of that allowed by contract with the POTW or by Federal, State, or local law;
- (b) Discharges wastewater which substantially differs in nature or constituents from the User's average Discharge; or
- (c) Knows or has reason to know that its Discharge, alone or in conjunction with Discharges from other sources, would result in a POTW permit violation or prevent sewage sludge use or disposal in accordance with the above-cited authorities as they apply to the POTW's selected method of sludge management.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal or sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under section 208 of CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an "approved program."

New discharger means any building, structure, facility, or installation:

- (a)(1) From which there is or may be a new or additional "discharge of pollutants" at a "site" at which on October 18, 1972 it had never discharged pollutants;
 - (2) Which has never received a finally effective NPDES "permit" for discharges at that site; and
 - (3) Which is not a "new source."
- (b) This definition includes an "indirect discharger" which commences discharging into "waters of the United States." It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a location for which it does not have an existing permit.

New Source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

- (a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source; or
- (b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass Through means the Discharge of pollutants through the POTW into navigable waters in quantities or concentrations which are a cause of or significantly contribute to a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation). An industrial User significantly contributes to such permit violation where it:

- (a) Discharges a daily pollutant loading in excess of that allowed by contract with the POTW or by Federal, State, or local law;
- (b) Discharges wastewater which substantially differs in nature and constituents from the User's average Discharge;
- (c) Knows or has reason to know that its Discharge alone or in conjunction with Discharges from other sources would result in a permit violation; or
- (4) Knows or has reason to know that the POTW is, for any reason, violating its final effluent limitations in its permit and that such Industrial User's Discharge either alone or in conjunction with Discharges from other sources, increases the magnitude or duration of the POTW's violations.

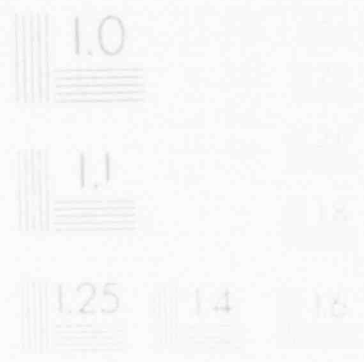
Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State."

Point source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

- (a) Sewage from vessels; or
- (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by

IMAGE EVALUATION
TEST TARGET (MT-3)



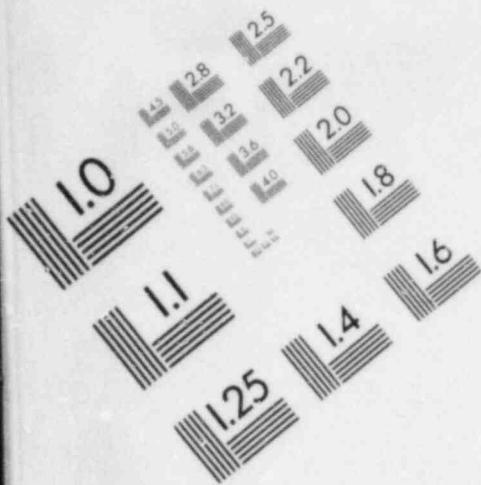
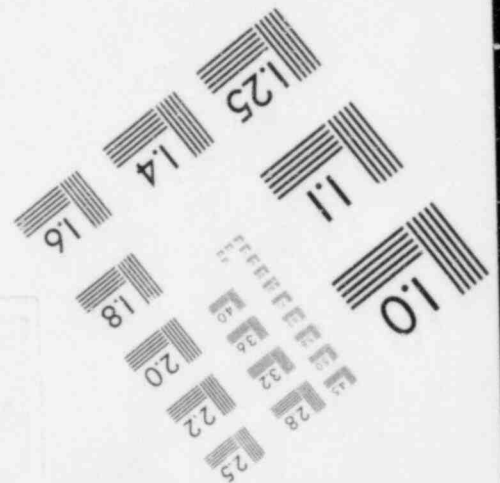
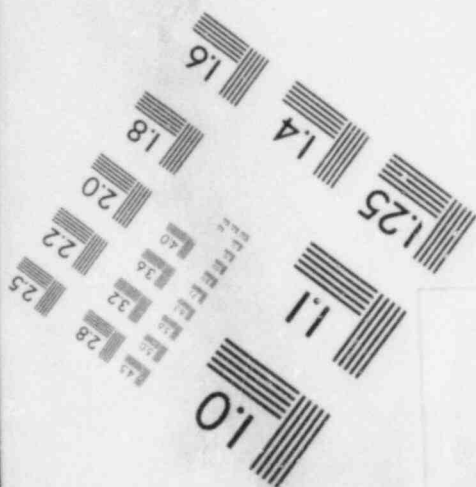
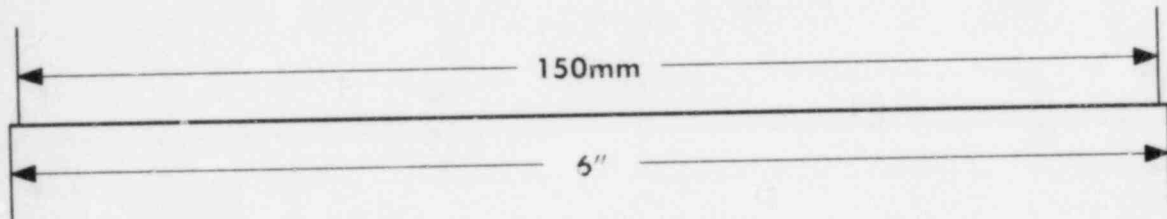
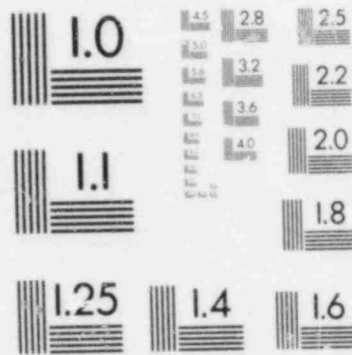
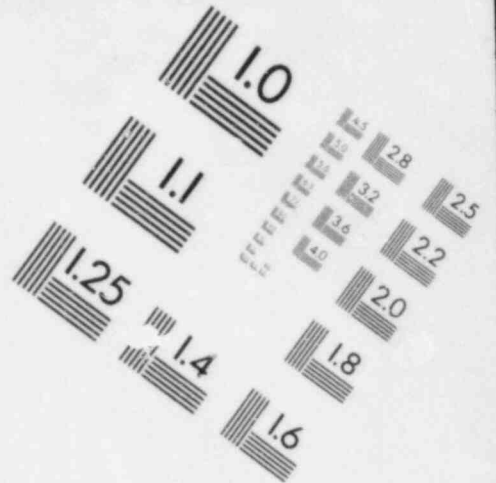


IMAGE EVALUATION TEST TARGET (MT-3)



authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surfact water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense

Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D.D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality." This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator, EPA, Region 1, Boston, Massachusetts.

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands

Secondary Industry Category means any industry category which is not a "primary industry category."

Sewage Sludge means the solids, residues, and precipitate separated from or created in sewage by the unit processes of a "publicly owned treatment works." "Sewage" as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff, that are discharged to or otherwise enter a publicly owned treatment works.

Toxic Pollutant means any pollutant listed as toxic in Appendix D of 40 C.F.R. Part 122, under Section 307(a)(1) of CWA.

Waters of the United States means:

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

- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in paragraphs (a) - (d) of this definition;
- (f) The territorial sea; and
- (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) - (f) of this definition.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

2. The following abbreviations, when used, are defined below.

cu. M/day or M ³ /day	cubic meters per day
mg/l	milligrams per liter
ug/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. °C	temperature in degrees Centigrade
Temp. °F	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)

TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH ₃ -N	ammonia nitrogen as nitrogen
Total P	total phosphorus
COD	chemical oxygen demand
TOC	total organic carbon
Surfactant	surface-active agent
pH	a measure of the hydrogen ion concentration
PCB	polychlorinated biphenyl
CFS	cubic feet per second
MGD	million gallons per day
Oil & Grease	Freon extractable material
Total Coliform	total coliform bacteria
Fecal Coliform	total fecal coliform bacteria
ml/l	milliliter(s) per liter
NO ₃ -N	nitrate nitrogen as nitrogen
NO ₂ -N	nitrite nitrogen as nitrogen
NO ₃ -NO ₂	combined nitrate and nitrite nitrogen as nitrogen
Cl ₂	total residual chlorine