NORTHEAST UTILITIES

THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

General Offices • Selden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 665-5000

June 2, 1987

D01530

Mr. Michael Deland, Regional Administrator
U.S. Environmental Protection Agency
Region I
J. F. Kennedy Federal Building
Boston, Massachusetts 02203

Dear Mr. Deland:

Millstone Nuclear Power Station
Oil Spill Report

On January 22, 1987 and March 26, 1987, at Northeast Nuclear Energy Company's (NNECO) Millstone Nuclear Power Station, oil spills amounting to less than five gallons and approximately ten gallons, respectively, into or upon navigable waters of the United States occurred. Since the two spills occurred within a 12-month period, a report to the U.S. Environmental Protection Agency (EPA) regional administrator, containing information outlined in 40CFR112.4(a), is required.

Therefore, pursuant to 40CFR112.4(a), Northeast Utilities Service Company (NUSCO), on behalf of NNECO, hereby submits the following information:

1. Name of Facility:

   Millstone Nuclear Power Station

2. Name of the Owner or Operator of the Facility:

   Northeast Nuclear Energy Company
   P.O. Box 270
   Hartford, Connecticut 06101

3. Location of the Facility:

   The facility is located on a 515-acre site at Millstone Point on Long Island Sound, Waterford, Connecticut.

4. Date and Year of Initial Facility Operation:

   The station was first placed into operation in December 1970 with the commercial operation of Unit 1.

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1/1

5. Maximum Storage and Handling Capacity of the Facility and Normal Daily Throughput:

The Millstone site has a total oil storage capacity of approximately 550,000 gallons. This total oil storage is located in many tanks, no one of which is larger than 35,000 gallons, and includes all types of oils including lubricating oil, transformer oil, diesel fuel, house heating oil, jet fuel, etc. All site deliveries of oil are by truck having maximum capacity of 8,000 gallons; transfer operations of greater than 16,000 gallons per day are rare.

Normal daily usage is approximately 5,260 gallons.

6. Description of Facility:

Millstone Nuclear Power Station is a three-unit facility located on a 515-acre site at Millstone Point on Long Island Sound in Waterford, Connecticut. The site boundary includes Route 156 on the north, Long Island Sound on the south, Jordan Cove on the east, and Niantic Bay on the west. See attached map for general layout.

7. A Complete Copy of the SPCC Plan With Any Amendments:

See attached.

8. The Causes of the Spills, Including a Failure Analysis of the System or Subsystem in Which the Failure Occurred:

The first spill occurred on January 22, 1987, when water was pumped out of a condenser pit into the Unit 3 turbine building floor drains at a rate that exceeded the capacity of the oil/water separator. This caused oil to be carried over to the water side of the separator and be discharged into Long Island Sound.

The second spill occurred on March 26, 1987, when a float valve malfunctioned in the Unit 1 Main Generator Hydrogen Seal Oil System causing oil to be vented onto the roof of a maintenance shop. A rainstorm subsequently carried the oil into the storm drain system and into Long Island Sound.

9. Corrective Action and/or Countermeasures Taken, Include a Description of Equipment Repairs and/or Replacements:

a. January 22, 1987, oil spill.

1) An oil boom was deployed to contain the oil.

2) The set points of the sump level alarm switches associated with the oil/water separator vault were revised to provide earlier warning of an impending overflow condition within the vault.

3) Operating procedures were revised to incorporate cautions regarding the flow capacity of the oil/water separator vault.

b. March 26, 1987, oil spill.

1) An oil boom was deployed to contain the oil.

2) Absorbent material was placed around the roof drains and the catch basins.

3) An open 55-gallon drum was placed under the seal oil system to catch any further discharges.

4) The malfunctioning float valve was removed, cleaned (debris on valve seat), inspected, tested, and verified to be operable.

10. Additional Preventive Measures Taken or Contemplated to Minimize the Possibility of Recurrence:

a. January 22, 1987, oil spill.

1) Design changes are being evaluated that will increase the flow capacity of the oil/water separator.

2) The existing cover of the oil/water separator will be replaced with a grating to allow increased monitoring and maintenance.

b. March 26, 1987, oil spill.

1) The Hydrogen Seal Oil System will be drained and cleaned during the upcoming refueling outage. It is suspected that debris in the system contributed to the float valve failure.

2) The oil system screens will be cleaned and a preventive maintenance program will be initiated to schedule recleaning during each future refueling outage. This action will maintain system cleanliness to prevent recurrences.

By copy of this letter, NNECO, pursuant to 40CFR112.4(c) and Section 22a-450 of the Connecticut General Statutes, is providing the Water Compliance Unit of the Connecticut Department of Environmental Protection with a copy of all information sent to the EPA Regional Administrator.

Should you have any questions, please call Mr. Thomas P. Arcari, NUSCO Generation Facilities Licensing, at (203) 665-3713.

Very truly yours,

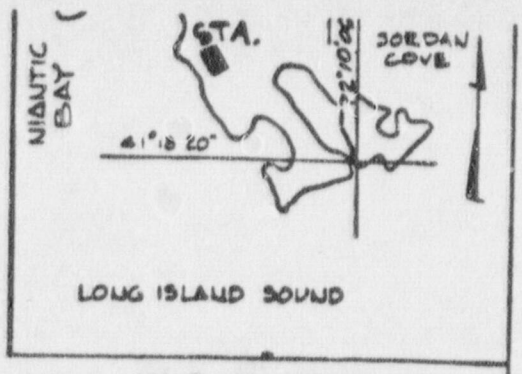
NORTHEAST UTILITIES SERVICE COMPANY
As Agent for Northeast Nuclear Energy Company

E. J. Mroczka
Senior Vice President

Attachments
cc: Mr. Richard Barlow, Director
Water Compliance Unit
Department of Environmental Protection
122 Washington Street
Hartford, Connecticut 06106

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

W. T. Russell, Region I Administrator
R. L. Ferguson, NRC Project Manager, Millstone Unit No. 3
J. T. Shedlosky, Resident Inspector, Millstone Unit No. 3



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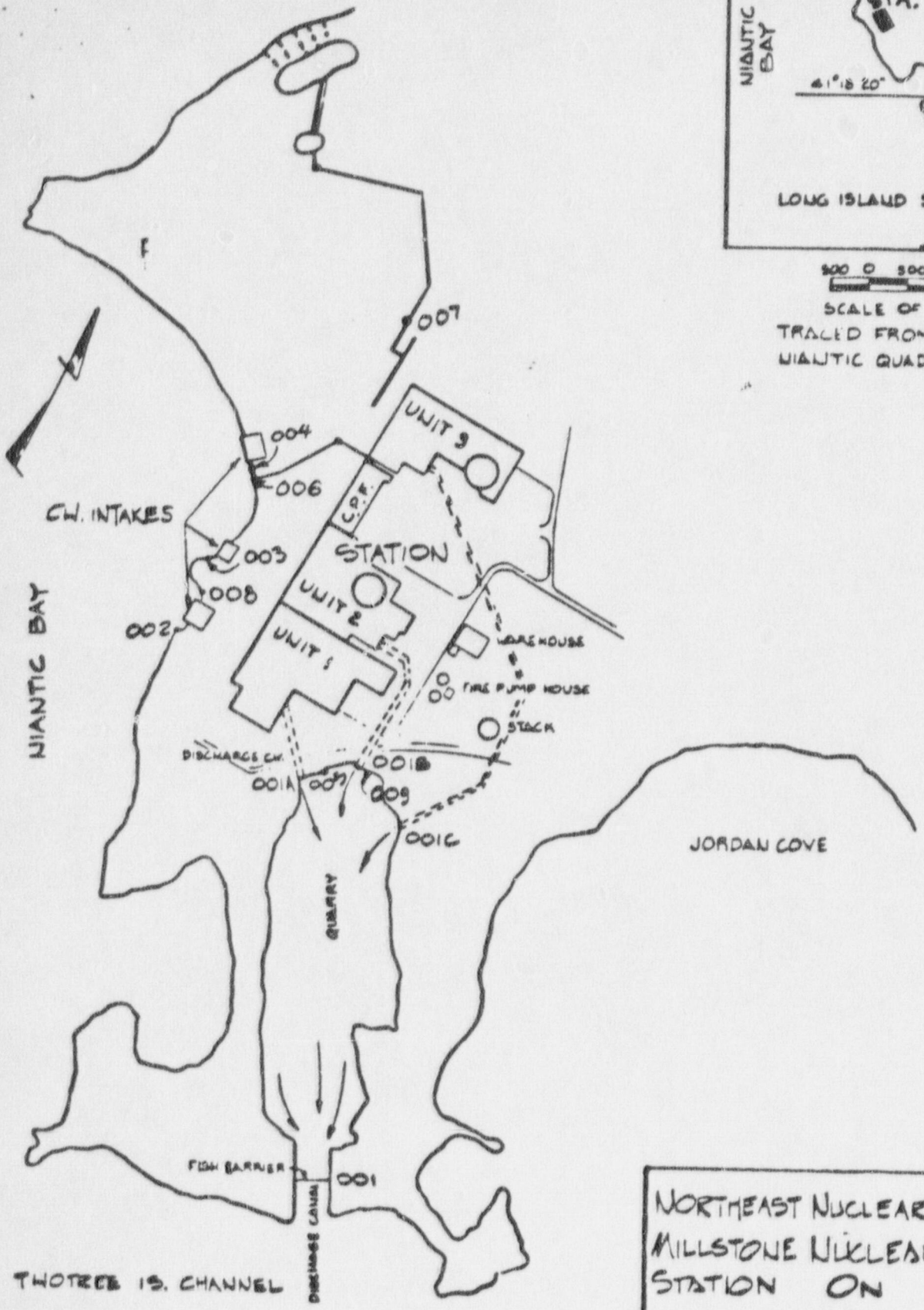
SCALE OF FEET
TRACED FROM USGS.
NIANTIC QUADRANGLE



NORTHEAST NUCLEAR ENERGY CO.
MILLSTONE NUCLEAR POWER STATION ON
NIANTIC BAY & LONG IS. SOUND
NEW LONDON COUNTY
WATERFORD CONN.
NOVEMBER 1984

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (SPCC)

Millstone Nuclear Power Station
Rope Ferry Road
Waterford, Connecticut

This plan describes the procedure adopted to prevent the discharge of oil into the navigable water of the United States, as required by 40 CFR Part 112, Environmental Protection Agency, Oil Pollution Prevention, Non transportation related onshore and offshore facilities.

Originally prepared: January 1974
Latest revision: April 1986

GENERAL

The Millstone Nuclear Power Station contains one General Electric Boiling Water Reactor of 682 MWe capacity presently operating, one Combustion Engineering Pressurized Water Reactor of 850 MWe capacity presently operating, and one Westinghouse Pressurized Water Reactor of 1150 MWe capacity scheduled for commercial operation in May 1986.

The Station, situated on approximately 500 acres of land, was first placed in operation in late 1970. The site is located in the town of Waterford, Connecticut, on the north shore of Long Island Sound and on the east side of Niantic Bay. A site plan is attached.

The outside oil tank storage is listed in Section 2A. Additional oil is contained outside in tanks and equipment in volumes in varying quantities including both equipment fuel oil tanks and lubricating oil.

This plan has been prepared by: Mr. Ralph Brisco
The latest revision was made by: J. Richard Robertson

The person responsible for oil spill prevention and control is:

Station Superintendent - Millstone

A. Previous Spill Events

This facility has not experienced an oil spill into navigable water in the twelve month period prior to the effective date of the regulations. The last spill event into navigable water occurred on 8/21/85, when approximately 1 gallon of #4 oil was released after overfilling a storage tank. A similar spill had occurred earlier in June 1985. Corrective action was taken to prevent reoccurrence of similar spills and information has been submittal to the E.P.A. Administrator. Additional recommendations to enchance spill control measures at the site are undergoing an engineering evaluation. These recommendations are listed as an amendment to this plan.

B. Potential for Equipment Failure

Experience at this facility does not indicate a reasonable potential for equipment failure that could result in quantities of oil released to navigable water that could not be easily controlled and contained.

C. Spill Prevention and Containment

1. Transformers are located on concrete retention barriers large enough to hold the entire oil contents plus ten percent of the transformers.
2. Underground tanks and transformer oil tanks are filled by truck. Liquid levels in these tanks are always measured before filling. Yard drains in these areas are directed to oil separating sumps.
3. Sorbent materials are kept onsite to control any spillage.
4. Any spills that may be experienced would be responded to by implementing Northeast Nuclear Energy Company's Emergency Procedures.

D. Conformance with Applicable Guidelines

1. Facility Drainage Site Plan (Attached)

(a) Inplant Drainage

Plant floor drain systems in areas where there are potential sources of oil leakage are collected in oil separating sumps. Samples of the sump contents are visually inspected periodically to determine the presence of oil.

(b) Yard Drainage

Yard drain systems are also collected in catch basins. In order for oil to reach these yard drain basins, there would have been equipment failure, (transformer/switchgear) which in most cases would have alarmed in the control room.

2. Oil Containing Equipment

(a) Bulk Storage Tanks (Buried Metallic Tanks)

(i) Unit 1 has four (4) house heating oil tanks, two (2) Jet fuel tanks, and one (1) diesel oil tank of 25,000 gallons each. These tanks are coated with a Bituminuous coating and are provided with cathodic protection,

(ii) Unit 2 has one (1) 25,000 gallon Jet fuel underground storage tank that is coated with a Bituminous coating and is provided with cathodic protection,

(iii) Unit 3 has (2) 25,000 gallon house heating oil underground storage tanks having Bituminous coatings and cathodic protection, and (2) 35,000 gallon underground vaulted storage tanks for diesel oil storage.

(iv) The services group has 8,000, 2,000 and 500 gallon underground tanks for storage of house heating oil. Additional underground tanks are a 4,000 gallon gasoline tank, a 3,000 gallon waste oil tank, and a 1,000 gallon diesel oil tank.

(v) Each tank is precision tested on a schedule that at a minimum is in compliance with Connecticut regulatory requirements. In addition the tanks are visually inspected, when possible, from inside the tanks whenever tank cleaning is necessary.

(vi) Above ground tanks are located inside buildings and are observed on a periodic basis as part of the general plant surveillance rounds.

(vii) Tank level indications

(a) Unit 1, 2 and 3 tank level readings are taken daily by the operating shift personnel and recorded for surveillance purposes.

(b) Level devices are checked every refueling outage.

(viii) Plant effluents, other than those sumps mentioned in D. 1., are processed through the radioactive waste system. Minimum processing is filtration into a sample tank from which a laboratory sample is taken for analysis prior to a discharge permit being prepared. Any oil present in the samples is readily detectable. The presence of oil in a sample requires that the liquid be reprocessed.

(ix) Visible oil leaks from joints, valves, etc., are promptly repaired.

(x) Because of heavy construction activities at certain times, temporary oil storage in drums and equipment occurs in areas having low potential for causing oil spills.

(b) Other Oil Containing Equipment

Apart from the oil storage facilities mentioned above, the following equipment contains oil in excess of 660 gallons:

(i) The gas turbine electric generator lube oil storage tank is 730 gallons. This unit is located in a building supplied with flood gates.

(ii) Electrical equipment in the Unit 1 transformer yard containing oil is as follows:

Main Transformer	22,506 gallons
Normal Station Service Transformer	4,425 gallons
Auxiliary Transformer	11,000 gallons
Emergency Station Service Transformer	1,540 gallons

(iii) Unit 1 Turbine lubricating equipment containing oil is as follows:

Main Turbine Lube Oil Reservior	7,100 gallon capacity
Dirty Lube Oil Tank	7,200 gallon capacity
Clean Lube Oil Tank	7,200 gallon capacity
Bowser Filter Operating Level	953 gallons

(iv) Unit 1 Diesel Day Tank 1,610 gallons

(v) Unit 2 Diesel Supply Tanks (2) 13,600 gallons each

(vi) Unit 2 Turbine lubricating equipment containing oil is as follows:

Main Turbine Lube Oil Reservoir	6,400 gallon capacity
Main Turbine Lube Oil Reservoir	20,000 gallon capacity
Steam Generator Feed Pump Oil Tank (2)	1,020 gallon capacity each

(vii) Electrical equipment in the Unit 2 transformer yard containing oil is as follows:

Main Transformer	17,470 gallons
Normal Station Service Transformer	16,172 gallons
Reserve Station Service Transformer	4,800 gallons

(viii) Unit 3 Diesel Lube Oil Tank (2) 2,300 gallon each

(ix) Unit 3 Turbine lubricating equipment containing oil is:

Turbine Clean Oil Tank	12,000 gallon
Turbine Dirty Oil Tank	12,000 gallon
Turbine Oil Reservoir	7,000 gallon
Turbine Oil Conditioner	1,000 gallon
Turbine Waste Oil Sump	1,000 gallon

(x) Electrical equipment in the Unit 3 transformer yard:

Main Transformer (2)	6,500 gallon each
Normal Station Services Transformer (2)	3,353 gallon each
Reserve Station Services Transformer (2)	3,290 gallon each

(xi) Portable equipment fuel oil tanks (2) for onsite construction equipment — 275 gallon each

(xii) 55 gallon drum oil storage locations with adequate protection for spill prevention

(xiii)

Spare (Main Transformer)	15,120 gallons
Spare (Reserve Station Services Transformer)	14,000 gallons

(c) Underground Oil/Water Separators

Several underground oil/water separators exist at various locations for treatment of equipment floor drains on Units 1 & 2.

Five additional underground oil separators have been installed on Unit 3.

3. Facility Transfer Operations

(i) Buried piping has a Bituminous coating. Cathodic protection is utilized where practical. Buried pipe will be inspected whenever a section of the pipe is exposed. Examinations and repair will be initiated as required.

(ii) Pipelines removed from service will be drained and isolated using blank flanges.

(iii) All above ground valves and pipelines will be inspected annually for preventive maintenance and observed daily by the operator during rounds.

(iv) Vehicular traffic in the general area of the filling station for the underground tanks is limited to authorized vehicles for security reasons. Signs are provided to warn drivers of the location of sensitive above ground piping.

4. Facility for Tank Truck Unloading

(i) Unloading procedures require that plant personnel be present to ensure that the oil is delivered to the correct tank and that there is sufficient space in the tank to receive the shipment. Plant personnel monitor the unloading and have absorbent materials available to them in the event of a small spill. Communications are maintained verbally and through use of local telephone.

(ii) Procedures require that the fill pipe be locked immediately after hose disconnect from the truck. The truck unloading station is located within an electrically operated gate and the truck cannot leave without permission from the security officer on duty.

E. Inspection and Records

Written procedures are provided where required. Results of all inspections will be recorded on appropriate data sheets and filed for reference.

F. Security

(i) The facility is located within a fenced and monitored site. Gates are locked shut and under the control of the security force.

(ii) The starter control of all oil pumps is under the control of the operating personnel.

(iii) The loading connections are secured when not in use. Control of these connections is with the operating personnel.

(iv) Adequate lighting is provided for security and operating reasons.

(a) Operating personnel observe the facility at least once per shift.

(b) The entire facility is monitored by security patrol.

G. Personnel Training and Spill Prevention Procedures

(i) Personnel Training is provided via written procedures in the operation and maintenance of equipment to prevent the discharge of oil. Essential personnel are also instructed in the applicable pollution control laws and regulations.

(ii) The Unit/Station Services Superintendents are responsible and accountable for oil spill prevention in their respective areas. These Superintendents report to the Station Superintendent.

(iii) Spill prevention briefings for the operating personnel will be conducted annually to assure adequate understanding of the SPCC Plan.

(iv) All training related to SPCC will be documented in each person's training record.

JRR:jlc/jlm

Oil Spill Clean-Up Service - List of Contractors

East Coast Environmental Services, Inc.
454 Quinnipiac Avenue
New Haven, CT 06503
(203) 469-2376

Hitchcock Oil Pollution Systems
40 California Street
Bridgeport, CT
(203) 334-4812

New England Pollution Control, Inc.
7 Edgewater Place
East Norwalk, CT 06855
(203) 777-0339

Sealand Environmental Services, Inc.
326 Derby Avenue
Derby, CT 06418
(203) 735-1817

AMENDMENT TO MILLSTONE
SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

The following items are additional corrective measures that will enhance the Spill Prevention Control Plan. The engineering evaluations and corrective action will be implemented by January 17, 1989. These items are being tracked internally through issuance of Controlled Routing (CR 6191).

1. Removing the underground waste oil storage tank to an above ground location away from high traffic areas and away from area yard drains. Designated oil drum storage only in certain areas. Determine a better location and provide containment for rolling equipment fuel oil tanks.

2. Providing an alarm function for station oil/water separators which would provide early warnings of potential oil spills, Unit 3 separators already have that function.

3. Fabrication of a small spill barrier at the Unit 2 Diesel Oil Storage Tank fill location.

4. Modifying N.P.D.E.S. discharge pathway 006 in Unit 3, to allow for containment of oil spills if they should occur. A permanent sea broom may be a viable alternative.

CERTIFICATION

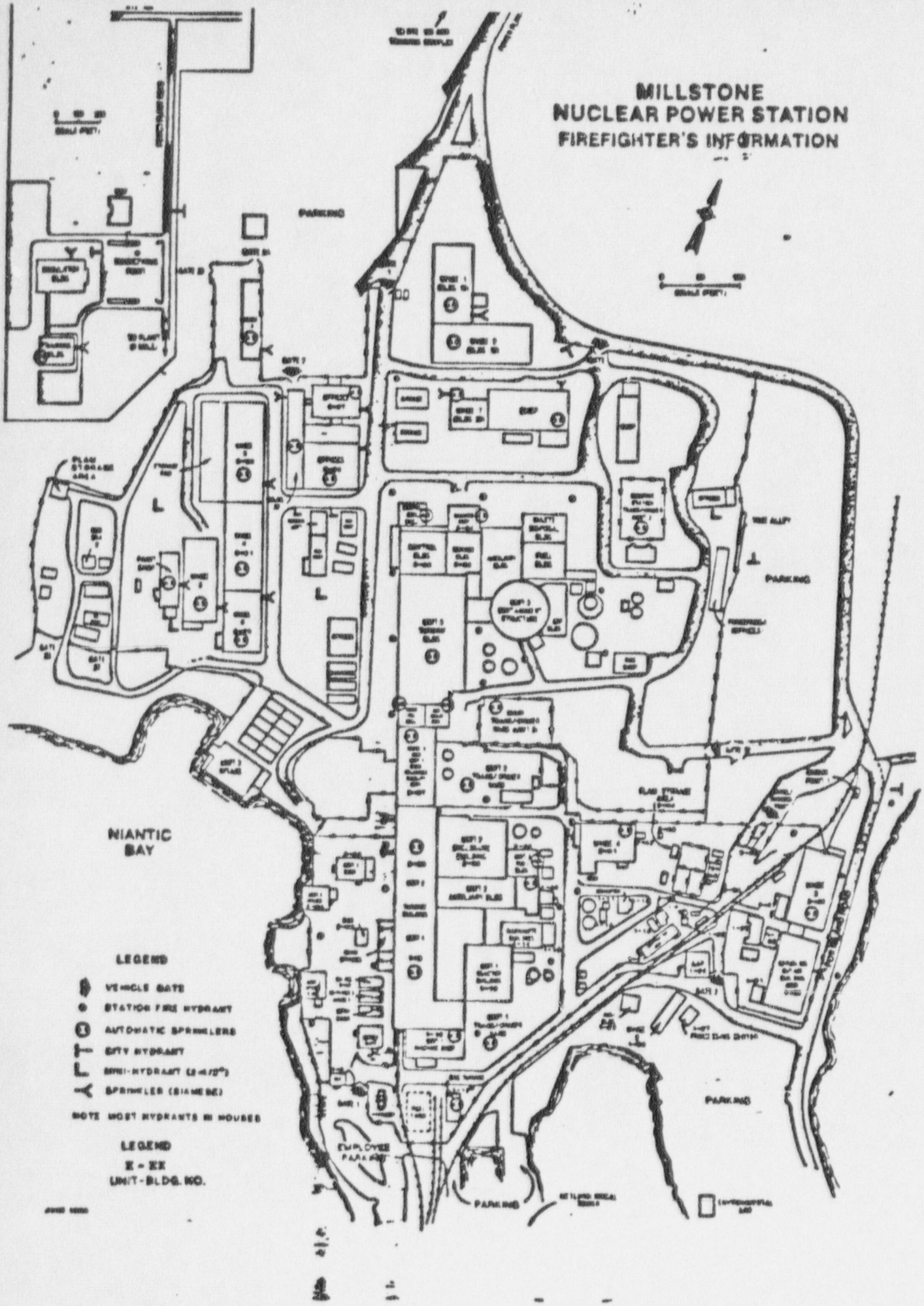
Re: Millstone Nuclear Power Station

I hereby certify that in accordance with 40 CFR Section 112.3(d), I have examined the facility named above, that I am familiar with the provisions of 40 CFR Part 112, and that this plan has been prepared in accordance with good engineering practices.

Signed: Rameshchandra R Patel

Registered Professional Engineer, State of Connecticut No. 10592

Date: 4-4-1986.


MILLSTONE
NUCLEAR POWER STATION
FIREFIGHTER'S INFORMATION
PARKING
NIANTIC
BAY
LEGEND
VEHICLE GATE
STATION FIRE HYDRANT
AUTOMATIC SPRINKLERS
SIAMESE
NOTE MOST HYDRANTS IN HOUSES
LEGEND
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