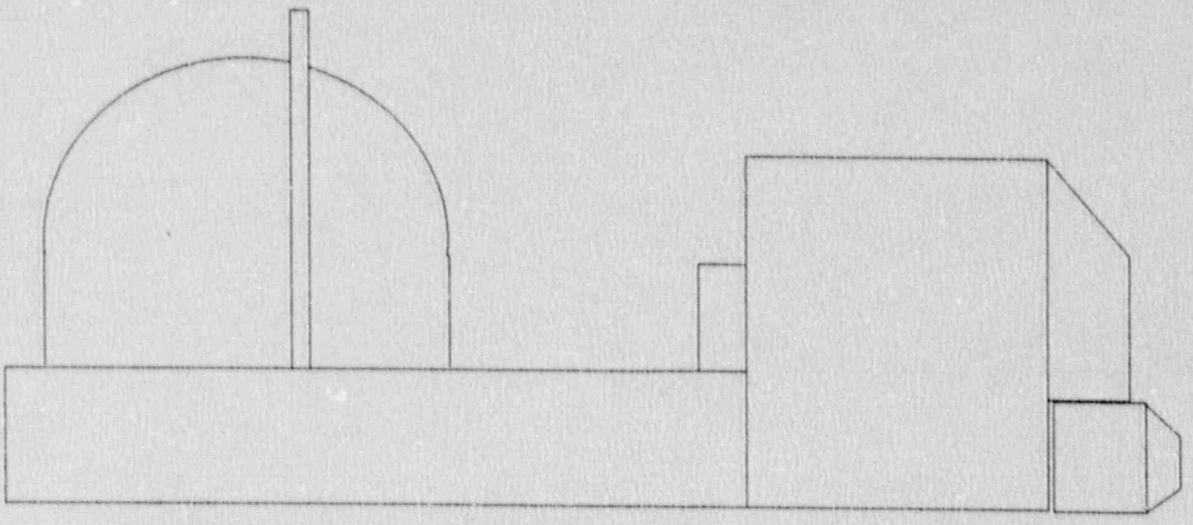
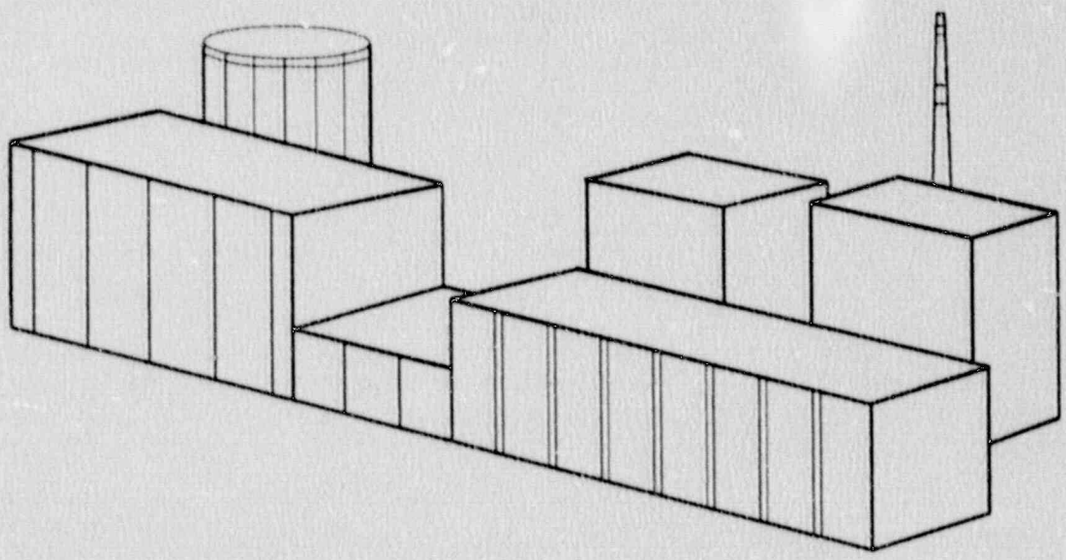
NORTHEAST UTILITIES
USNRC READ AND SIGN



CONNECTICUT YANKEE Haddam Neck, CT



MILLSTONE STATION Waterford, CT

CONNECTICUT YANKEE (PWR)
Haddam Neck, Connecticut

- Connecticut Yankee remains one of the most productive single nuclear units in the United States, having generated 86 billion kilowatt-hours of electricity since entering commercial operation.

Current Capacity:	**591 MW**
Construction Permit:	**May 1964**
Fuel Load:	**July 1967**
Commercial Operation:	**January 1968**
Reactor Manufacturer:	**Westinghouse Electric Corporation**
Turbine Generator Manufacturer:	**Westinghouse Electric Corporation**
Engineer/Constructor:	**Stone & Webster Engineering Corporation**
Initial Cost:	**$94.6 million**
Net Investment (12/89):	**$214.4 million**
Decommissioning Scheduled to Begin:	**2007**
Projected Decommissioning Cost:	**$198.4 million (12/89 Dollars)**

Ownership:

	Percent	MW
Northeast Utilities:	44.0*	260.04
New England Electric System:	15.0	88.65
The United Illuminating Company:	9.5	56.15
Boston Edison Company:	9.5	56.15
Central Maine Power Company:	6.0	35.46
Public Service Company of New Hampshire:	5.0	29.55
Montaup Electric Company:	4.5	26.59
Commonwealth Energy System:	4.5	26.59
Central Vermont Public Service Corporation:	2.0	11.82

Performance Statistics	Total Unit	NU's Entitlement
Capacity Factor (1989):	57.3 percent	
(1968-1989):	73.5 percent	
Net Generation (1989):	2,962,000 MWh	1,258,000 MWh
(1968-1989):	81,305,000 MWh	35,353,000 MWh
Total Gross Generation:	86,093,000 MWh	—
Oil Equivalent (1989):	5.2 million bbl	2.2 million bbl
(1968-1989):	144.6 million bbl	62.7 million bbl

MILLSTONE 1 (BWR)
Waterford, Connecticut

Current Capacity:	**659.5 MW**
Construction Permit:	**May 1966**
Fuel Load:	**November 1970**
Commercial Operation:	**December 1970**
Reactor Manufacturer:	**General Electric Company**
Turbine Generator Manufacturer:	**General Electric Company**
Engineer/Constructor:	**Ebasco Services, Inc.**
Initial Cost:	**$101.4 million**
Net Investment (12/89):	**** million**
Decommissioning Scheduled to Begin:	**2010**
Projected Decommissioning Cost:	**$277.8 million (12/89 Dollars)**

Ownership:

Northeast Utilities:	**100 percent**

Performance Statistics	NU's Entitlement*
Capacity Factor (1989):	80.4 percent
(1970-1989):	70.6 percent
Net Generation (1989):	4,119,000 MWh
(1970-1989):	75,979,000 MWh
Total Gross Generation:	81,422,000 MWh
Oil Equivalent (1989):	8.2 million barrels (whole plant)
(1970-1989):	144 million barrels (whole plant)

NORTHEAST UTILITIES

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

USNRC

READ AND SIGN PROGRAM

Prepared by the General Nuclear Training Branch

L.F. SILLIN, JR. NUCLEAR TRAINING CENTER

EXCELLENCE IN OPERATIONS

USNRC READ AND SIGN INDEX

NORTHEAST UTILITIES GENERAL NUCLEAR TRAINING BRANCH

SITE ORIENTATION TO NORTHEAST UTILITIES NUCLEAR FACILITIES

This document has been developed to familiarize USNRC inspectors, agents and contractors (hereinafter referred to as inspectors) with the nuclear facilities operated by Northeast Utilities. It is the purpose of this document to provide USNRC Inspectors, with site specific information which will help to ensure that inspections conducted by the USNRC at Millstone or Connecticut Yankee will be performed safely and efficiently.

It is not the intent of this program to prepare USNRC inspectors for "hands on" work. Additionally, USNRC inspectors may not assume responsibility for other personnel involving safety procedures or practices (such as firewatch) with the exception of an emergency situation.

This text will familiarize Inspectors of the USNRC with information on the following topics:

1. Plant Location, Layout and Administration
2. Plant Safety
3. Plant Security
4. Emergency Situation Response
5. Radiation Protection

This instruction is not as comprehensive as that given to plant staff or contractors who are granted unescorted access to the Protected and Radiological Control Areas of Northeast Utilities Nuclear Facilities. Limited amounts of the background material on these topics is contained in this text. It is assumed that the USNRC has provided this instruction to its personnel, as applicable. It is understood that USNRC personnel are not considered to be "workers" or "individuals" as specified in 10CFR19.3(C).

In the event a USNRC inspector who has been granted unescorted access to a Northeast Utilities Nuclear Facilities needs to perform "hands on" tasks or otherwise deviate from the role of observer/inspector, it is requested that the station management will be consulted regarding the need for additional training.

Once you have completed your review of this document we request that you complete Attachment 1 and return it to:

Larry A. Chatfield
Manager
General Nuclear Training Branch
Northeast Utilities
P.O. Box 270
Hartford, CT 06141-0270

Upon receipt of this form the General Nuclear Training Branch will document that you have been provided with sufficient information to safely conduct inspections at Northeast Utilities Nuclear Facilities.

We strongly suggest that you retain this document for reference prior to and during your visits to these facilities.

Please note:

NRC personnel who have not completed general NRC Staff Training in radiological protection, security and personal safety must be escorted or must attend regularly scheduled training.

Safety, Security and Emergency Plan (SS&E) training is required for unescorted access to the Protected Areas. Level 1 Radiation Worker Training (full day) is required for unescorted access to Radiological Control Areas. Individuals who have received training at another site within the last twelve months may be qualified for Level 2 Radiation Worker training (experienced class). Each of these classes are scheduled once per week at both sites.

To schedule into any of these classes:

At Connecticut Yankee: Extension 522 or direct dial (203)-267-3522
At Millstone: Extension 4621 or direct dial (203)-444-4348

NORTHEAST UTILITIES

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

L.F. SILLIN JR. NUCLEAR TRAINING CENTER
EXCELLENCE IN OPERATIONS

NORTHEAST UTILITIES GENERAL NUCLEAR TRAINING BRANCH
NU GENERAL RULES AND REGULATIONS ACKNOWLEDGMENT

I have reviewed and will fully comply with the NORTHEAST UTILITIES NUCLEAR FACILITIES USNRC Read and Sign Program Site General Rules and Regulations.

It is the intent and understanding of this USNRC Read and Sign Program that this training limits the inspector/agent to an "observation and inspection" function. If an inspector/agent needs to deviate from his role as an observer, it is requested that the station management be consulted with regards to the need for additional training.

_____

Name (Print) Last, First, M.

_____

Date of Completion

_____

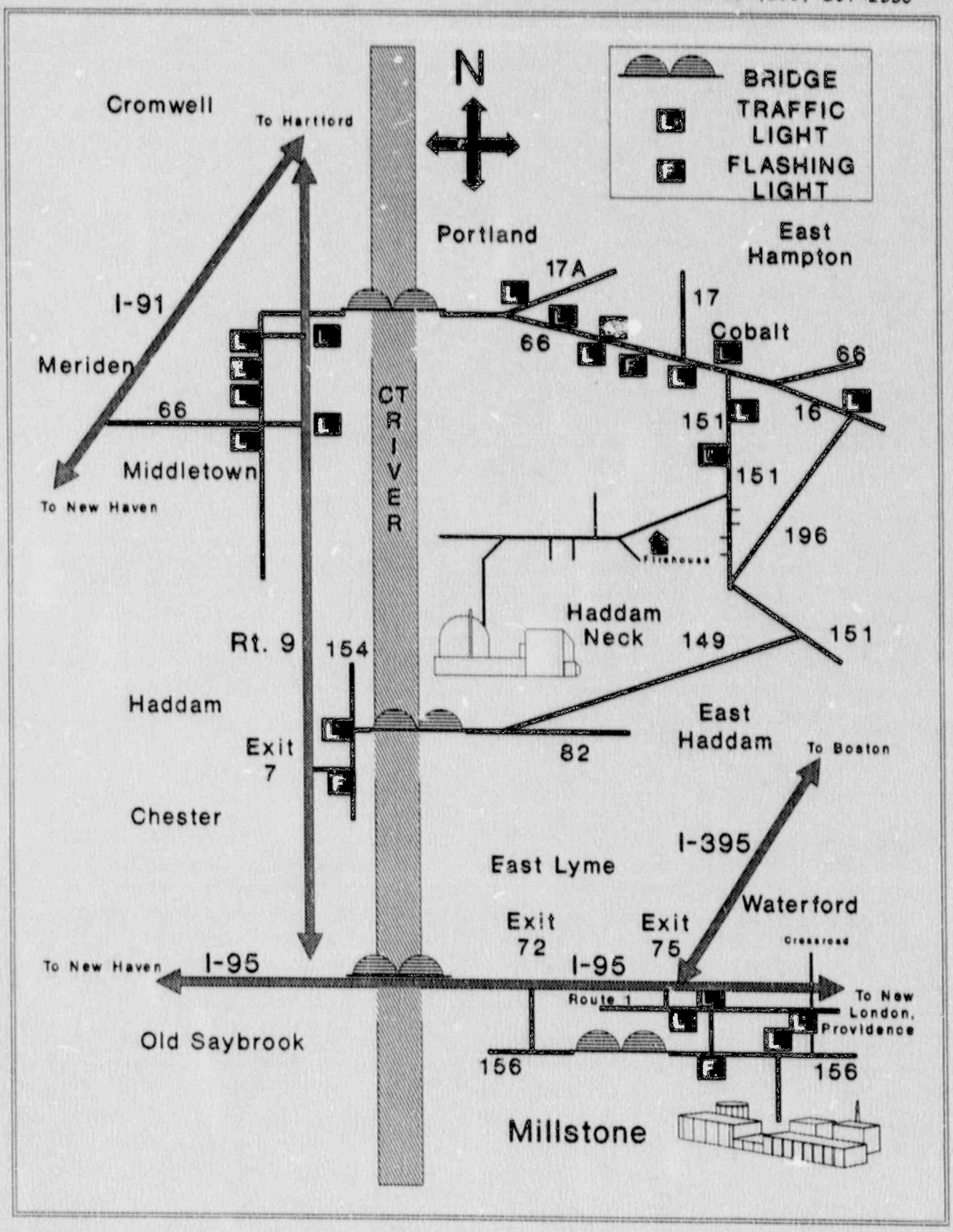
Social Security Number

_____

Signature NRC Badge #

Note: If this form is being completed upon arrival at the site, obtain a copy to provide to Dosimetry as documentation of completion.

Millstone (203)-447-1791 Connecticut Yankee (203)-267-2556



DIRECTIONS TO MILLSTONE:

From BRADLEY INTERNATIONAL AIRPORT (See NOTE below)

Take Route 20 to I-91 South. South of Hartford take the Route 9-South exit for Middletown and Old Saybrook. Proceed on Route 9-South and exit onto I-95 North. Passing over the bridge proceed on I-95 North and get off on exit 72 (Rocky Neck State Park). At the end of the exit ramp turn left onto Route 156 East. Follow Route 156 East approximately 5 miles passing over the Niantic River Bridge. Once over the bridge turn right at the second traffic light onto the access road. Proceed straight down the access road following directions for Millstone Unit 3 to the North Access Point (NAP) parking lot.

From NEW HAVEN (see NOTE below)

Take I-95 North and proceed to exit 72 (Rocky Neck State Park). At the end of the exit ramp turn left onto Route 156 East. Follow Route 156 East approximately 5 miles passing over the Niantic River Bridge. Once over the bridge turn right at the second traffic light onto the access road. Proceed straight down the access road following directions for Millstone Unit 3 to the guard station at the NAP parking lot.

From BOSTON

Take the Mass Pike (I-90) West to I-395. Take I-395 South to I-95 South, stay in the right lane and take the very next exit off I-95 onto Route 1 South. Immediately on Route 1, merge left to cross the median to Route 1 North. Follow Route 1 North to the second traffic light (River Road). Turn right onto River Road (no thru trucks) and follow to Route 156. Turn left onto Route 156 and proceed up the hill to the access road (traffic light). Proceed straight down the access road, following directions for Millstone Unit 3, to the guard station at the NAP parking lot.

From PROVIDENCE

Take I-95 South to the Crossroad exit (Waterford, CT). At the end of the exit turn left onto Crossroad and proceed to Route 1 (traffic light). Cross Route 1 to Spithead Road (directly across from Crossroad). Follow Spithead Road to Route 156. Turn right onto Route 156 and proceed to the access road (traffic light). Proceed straight down the access road, following directions for Millstone Unit 3, to the guard station at the NAP parking lot.

NOTE: Due to road construction on Route 156 in East Lyme, it may be desirable to proceed past exit 72 to exit 75 (Route 1, Waterford). From exit 75, follow the directions provided from Boston, Route 1 North.

DIRECTIONS TO CONNECTICUT YANKEE

From BRADLEY INTERNATIONAL AIRPORT

Take Route 20 to I-91 South. South of Hartford take Route 9-South for Middletown and Old Saybrook. As you approach the Arrigonni Bridge and first traffic light, stay in the right lane and take the Portland-Willimantic Route 66-East exit. Go up the ramp to the traffic rotary and bear right and cross the bridge into Portland, CT. Once across the bridge, bear right and follow Route 66 East approximately 6 miles to Cobalt, CT. At the traffic light in Cobalt, turn right onto Route 151. Follow Route 151 through middle Haddam (one traffic light). About two miles further on Route 151 you will come to a second traffic light which marks the entrance to Hurd State Park. Continue on Route 151 - Do not turn into Hurd Park. About one mile further on Route 151 there is a large, green sign CONNECTICUT YANKEE ENERGY INFORMATION CENTER. Turn right off Route 151 onto Haddam Neck Road. Follow Haddam Neck road past a church and several houses. After passing the firehouse, bear right and proceed down a long, steep hill. About three-quarters of the way down the hill, turn left onto Injun Hollow Road. Follow Injun Hollow road about a mile and a half directly into the Connecticut Yankee plant parking area.

From MILLSTONE

From I-95 South, take Route 9 North to Exit #7 (Rt. 82 East Haddam-Moodus) exit. The exit ramp is approximately 2 miles long. At the end of the exit ramp, turn left and proceed to the traffic light. Turn right at the light and follow the road across the bridge over the Connecticut River. Go past the Goodspeed Opera House and the Gelston House restaurant, and fork left onto Route 149 North. Follow Route 149 North approximately 3 miles, and again fork left by the Entertainment Enterprises Video Rental Store onto Route 151 North. Continue on Route 151 North about 5 miles until you see a large green sign CONNECTICUT YANKEE ENERGY INFORMATION CENTER. Turn left off Route 151 North onto Haddam Neck Road. Follow Haddam Neck Road past a church and several houses. After passing the firehouse, bear right and proceed down a long, steep hill. About three-quarters of the way down the hill, turn left onto Injun Hollow Road. Follow Injun Hollow Road about a mile and a half directly into the Connecticut Yankee plant parking area.

From NEW HAVEN

Take I-95 North to New Haven, CT. In New Haven, connect to I-91 north toward Hartford, CT. Travel on I-91 North approximately 17 miles to the Route 66-East exit for Middletown. Along the way, you will pass a reservoir, signs for a ski area, and a number of fast food restaurants, shopping malls and service stations. After passing Wesleyan University, Route 66 East turns left at a traffic light and becomes the Main Street of Middletown. Travel left down Main Street through three traffic lights. Follow Route 66 East across the Arrigonni Bridge from Middletown to Portland. Once across the bridge, bear right and continue to follow Route 66 East to Cobalt, CT, about six miles. At the traffic light in Cobalt, turn right onto Route 151. Follow Route 151 through Middle Haddam (one traffic light) and about two miles further, you will come to a second traffic light that marks the entrance to Hurd State Park. Continue on Route 151 - Do not turn into the park. One mile further you will see a large green and white sign CONNECTICUT YANKEE INFORMATION CENTER. Turn right off Route 151 onto Haddam Neck Road. Follow Haddam Neck Road past a church and several houses. After passing the fire house, bear right and proceed down a long, steep hill. About three quarters of the way down the hill, turn left onto Injun Hollow Road. Follow Injun Hollow Road about a mile and a half directly into the Connecticut Yankee plant parking area.

NOTE: Because Route 66 East is a congested, stop and go route, some people choose to travel a bit further on I-91 North past the Route 66 East exit to Route 9 South. Take the Route 9 South exit towards Middletown. As the Arrigonni Bridge comes into view, stay in the right lane of Route 9 South and take the Portland-Willimantic exit (Route 66 East) which is directly below the bridge at a traffic light. Bear right up the ramp to the traffic rotary. Stay to the right and cross the Arrigonni Bridge from Middletown to Portland, CT. Then follow the directions above from this point on.

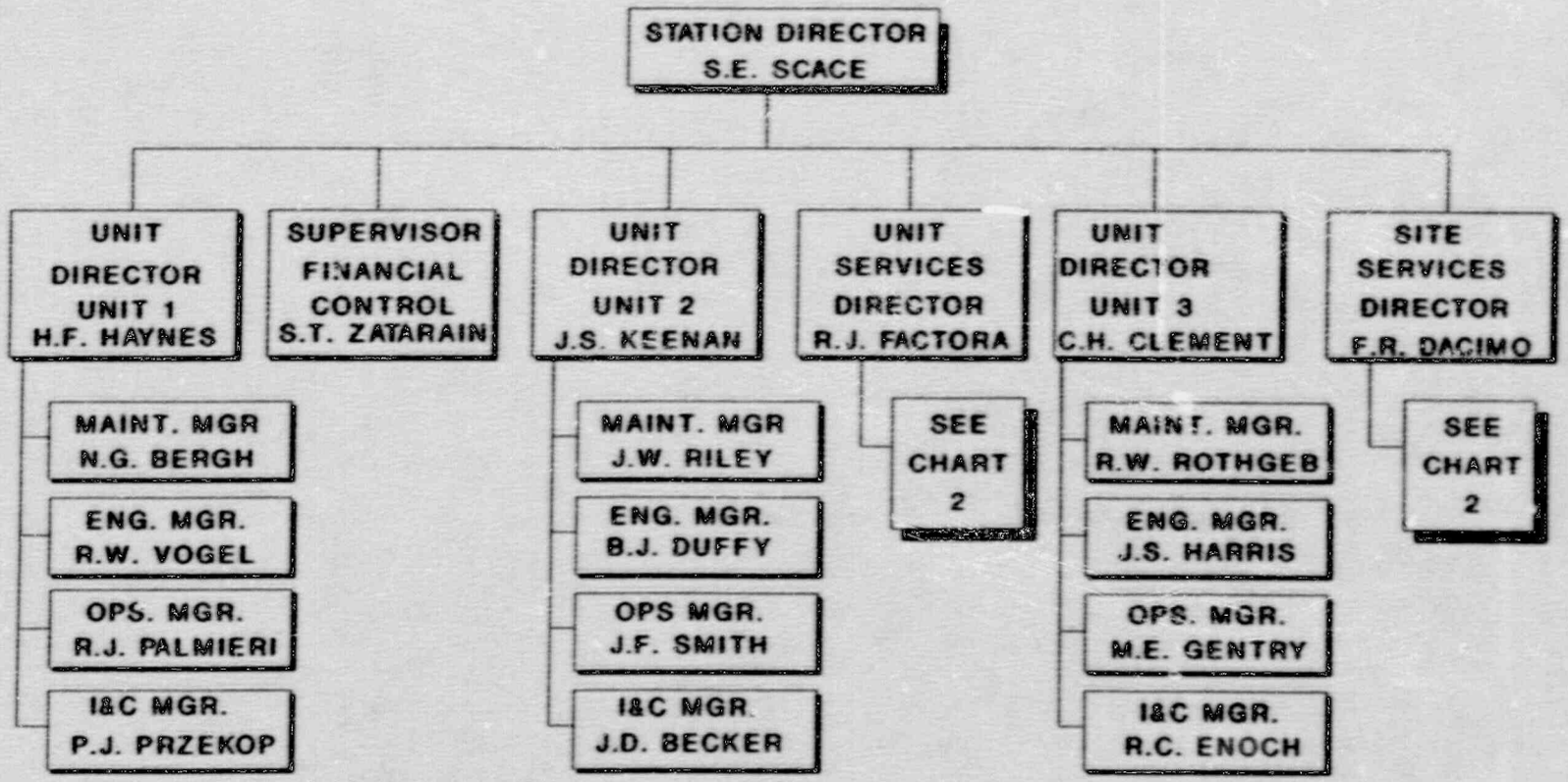
Acronyms and Abbreviations

The following acronyms and abbreviations are applicable to this attachment and to other station documents:

ACP	Administrative Control Procedure
ALARA	As Low As Reasonably Achievable
AO	Auxiliary Operator
AWO	Automated Work Order
CAS	Central Alarm Station
Category I	NU's Classification for "Safety Related" Equipment, Parts, and Work. It is the Highest QA Category.
CFR	Code of Federal Regulations
CPE	Condensate Polishing Enclosure
CPF	Condensate Polishing Facility
CPM	Counts Per Minute
CO	Control Operator (Operations)
CONVEX	Connecticut Valley Exchange
CTMT	Containment
CYAPCO	Connecticut Yankee Atomic Power Company
DAS	Document Acknowledgment Sheet
DO	Duty Officer
EB	Enclosure Building
EPA	Environmental Protection Agency
EOF	Emergency Operations Facility
EPIP	Emergency Plan Implementing Procedure
HP	Health Physics
I&C	Instrumentation and Control
LSA	Low Specific Activity
MAP	Millstone Administrative Procedure
MEPL	Material Equipment Parts List
MLST	Millstone
MP-1	Millstone Unit 1
MP-2	Millstone Unit 2
MP-3	Millstone Unit 3
MREM	Millirem
NAP	North Access Point
NE&O	Nuclear Engineering and Operations
NNECO	Northeast Nuclear Energy Company
NRC	Nuclear Regulatory Commission
NU	Northeast Utilities
NUSCO	Northeast Utilities Service Company
NPRD	Nuclear Plant Records Department
OSC	Operational Support Center
PAP	Primary Access Point

PC	Protective Clothing
PDCR	Plant Design Change Report
PEO	Plant Equipment Operator
PMMS	Production Maintenance Management System
PORC	Plant Operations Review Committee
QA	Quality Assurance
QAS	Quality Assurance Supervisor
QC	Quality Control
QS	Quality Services
R	Rem
RCA	Radiologically Controlled Area
ROB	Refueling Outage Building
ROM	Refueling Outage Manager
RPS	Radiation Protection Supervisor
RWP	Radiation Work Permit
SAP	South Access Point
SAS	Secondary Alarm Station
SF	Station Form
SORC	Site Operations Review Committee
SCO	Supervising Control Operator (Operations)
SRO	Senior Reactor Operator
SS	Shift Supervisor
SSS	Security Shift Supervisor
SSSA	Shift Supervisor Staff Assistant
S/D	Shutdown
S/G	Steam Generator
TR	Trouble Report
TS	Technical Specification
TSC	Technical Support Center
VAP	Vehicle Access Point

MILLSTONE CHART 1



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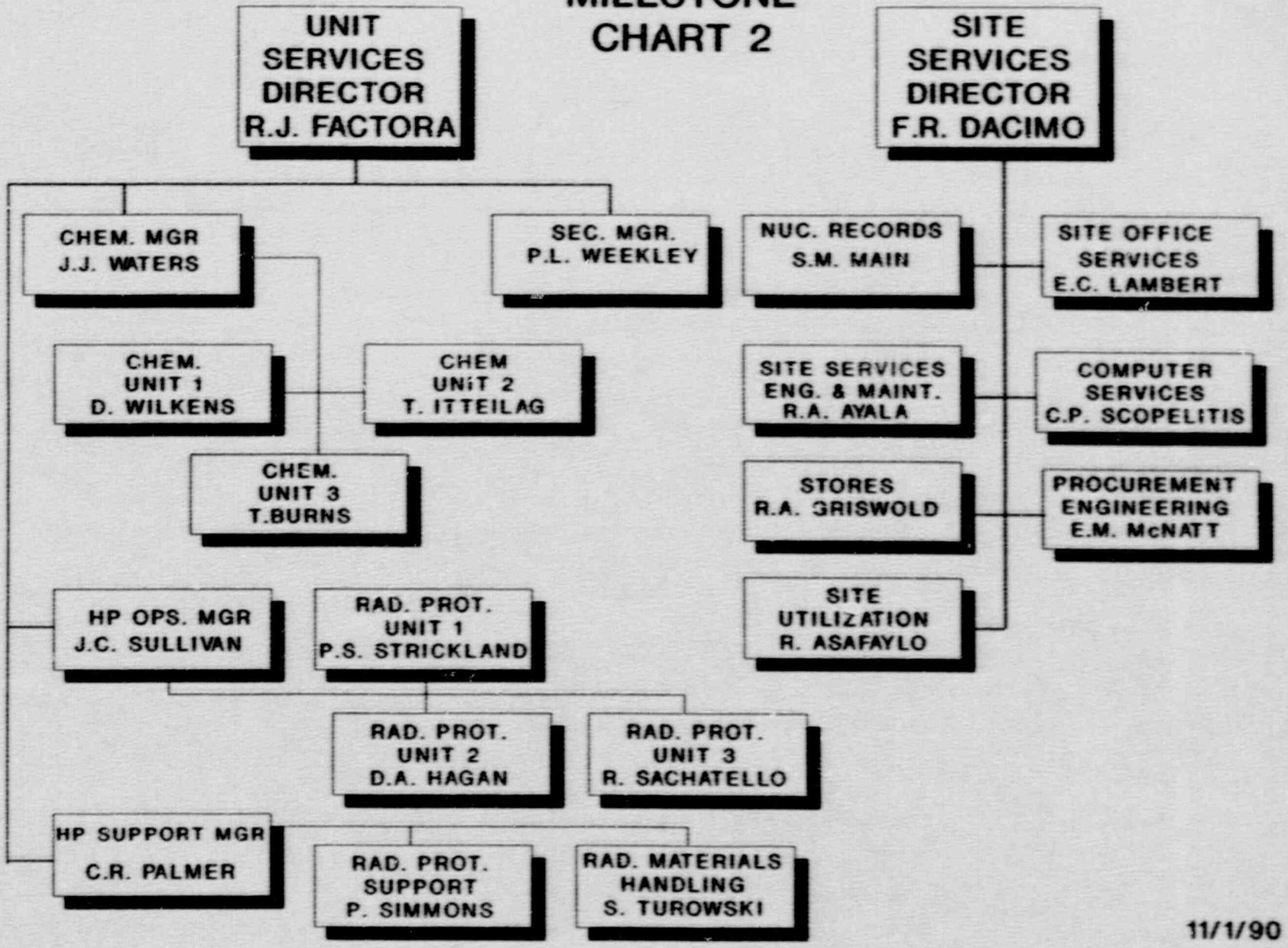
MILLSTONE CHART 2



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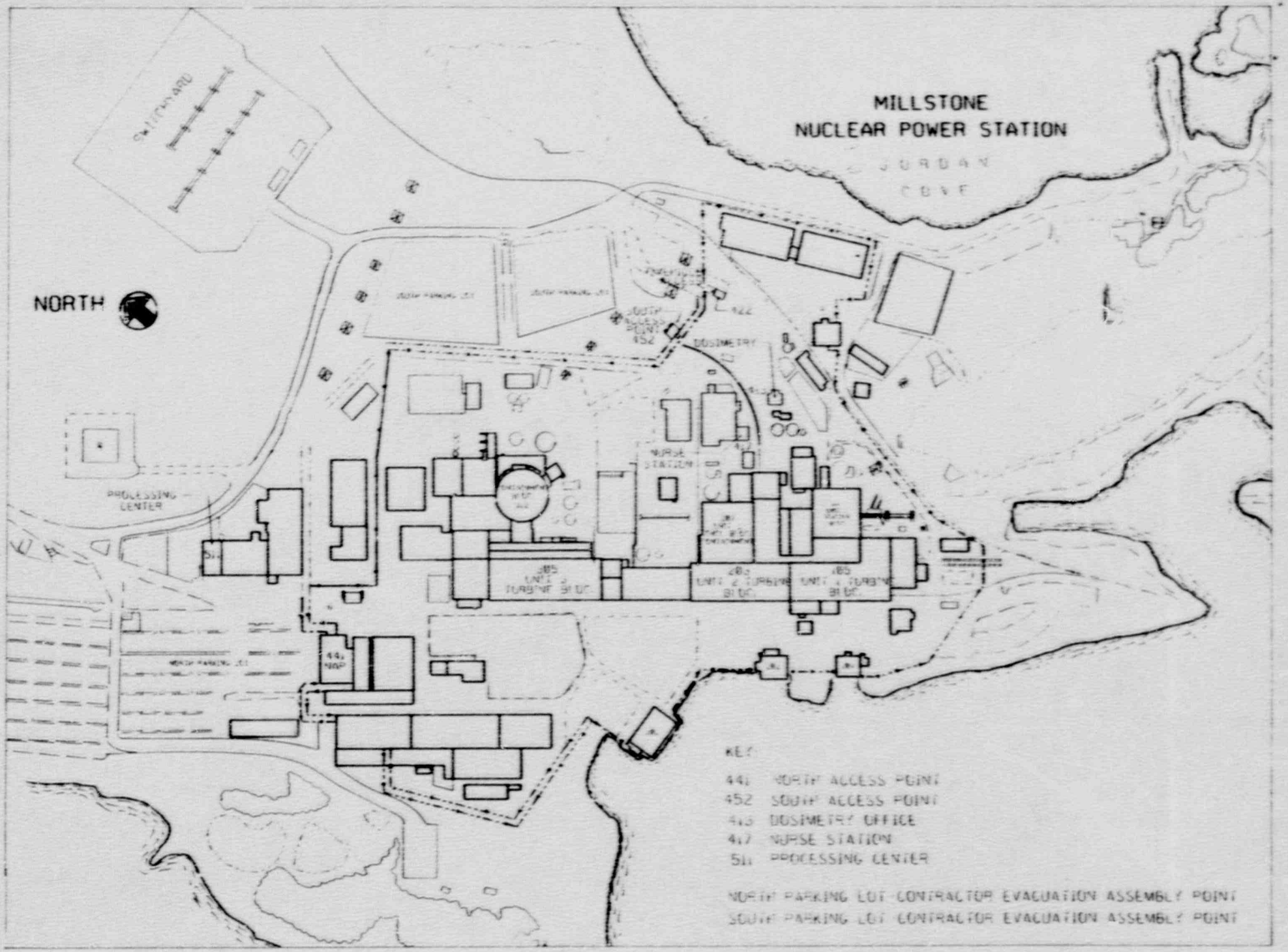

MILLSTONE
NUCLEAR POWER STATION
JORDAN
COVE
NORTH
PROCESSING
CENTER
DOSIMETRY
NURSE
STATION
KEY
441 NORTH ACCESS POINT
452 SOUTH ACCESS POINT
445 DOSIMETRY OFFICE
447 NURSE STATION
511 PROCESSING CENTER
NORTH PARKING LOT CONTRACTOR EVACUATION ASSEMBLY POINT
SOUTH PARKING LOT CONTRACTOR EVACUATION ASSEMBLY POINT

MILLSTONE TELEPHONE LISTING

Station Director	Steve Scace	4300
Unit Services Director	Bob Factora	4304
Site Services Director	Fred Dacimo	4305
Staff Assistant	John Murphy	4319
Chemistry Manager	Jeff Waters	4316
Computer Services Supervisor	Charles Scopelitis	4244
Health Physics Manager-Operations	John Sullivan	4318
Health Physics Manager-Support	Charles Palmer	5256
Nuclear Concerns Director	Peter Santore	4349
Nuclear Records Supervisor	Steve Main	4284
Radioactive Materials Handling Supervisor	Steve Turowski	4221
Radiation Protection Supervisor-Support	Peter Simmons	4557
Station Services Engineering Supervisor	Robert Ayala	4312
Security Manager	Patricia Weekley	4329
Security Supervisor-Administration	Mark Gelinas	4258
Security Supervisor-Operations	Pat Anhalt	5224
Security Supervisor-I&C	Ernie Strom	5339
Stores Supervisor	Robert Griswold	4091
In Processing Center	Cheryl Foley	4621
USNRC Senior Resident	Bill Raymond	5394
USNRC Unit One Resident	Doug Dempsey	4717
USNRC Unit Two Resident	Peter Habighorst	4717
USNRC Unit Three Resident	Ken Kolacsyk	5404

Unit One

Unit 1 Director	Harry Haynes	4301
Operations Manager	Ray Palmieri	4286
Engineering Manager	Ray Vogel	4296
Maintenance Manager	Neil Bergh	4212
I&C Manager	Peter Przekop	4200
Radiation Protection Supervisor-Unit	Peter Strickland	4556
Health Physics Office		4222
After Hours: Control Room-Outside Line		444-4252

Unit Two

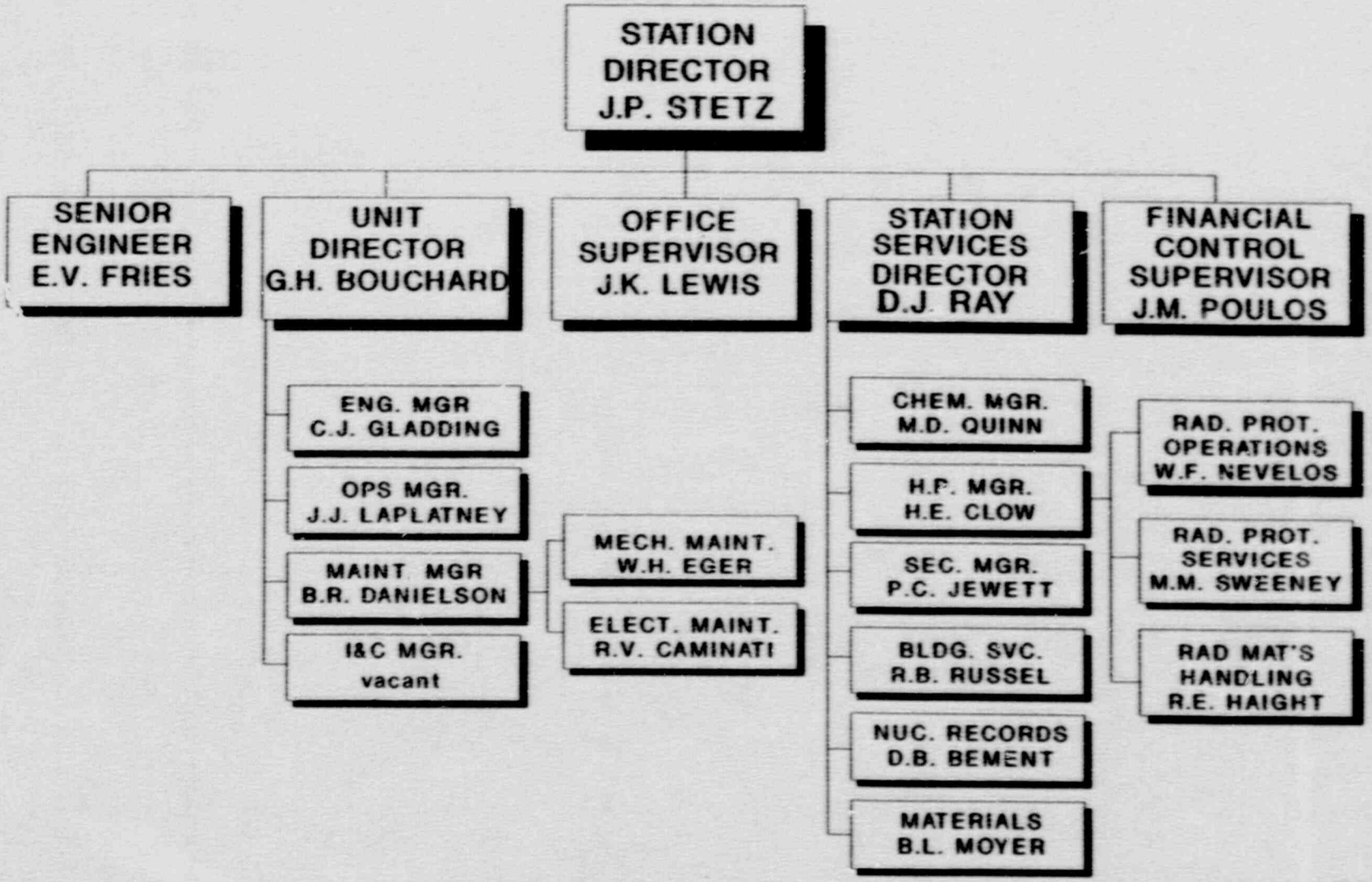
Unit 2 Director	John Keenan	4302
Operations Manager	Jeff Smith	4386
Engineering Manager	Brendan Duffy	4341
Maintenance Manager	John Riley	4337
I&C Manager	John Becker	5265
Radiation Protection Supervisor-Unit	Dan Hagan	4551
Health Physics Office		4555
After Hours: Control Room-Outside Line		444-4352

Unit Three

Unit 3 Director	Carl Clement	4303
Operations Manager	Mike Gentry	4203
Engineering Manager	James Harris	4206
Maintenance Manager	Ronald Rothgeb	4201
I&C Manager	Robert Enoch	4209
Radiation Protection Supervisor-Unit	Ron Sachatelllo	4265
Health Physics Office		5355
After Hours: Control Room-Outside Line		444-6220

Body Count	4552
Control Room Unit 1	4252
Control Room Unit 2	4352
Control Room Unit 3	6200
Dosimetry Office	4558/4772
Fit Booth	4552
Nurse	4[illegible]7
Respirator Issue	4552
Security Badging	4600
Security Shift Supervisor	4620
Switchboard	447-1791
Non Business hours: Security Shift Supervisor	444-4213

CONNECTICUT YANKEE ATOMIC POWER COMPANY



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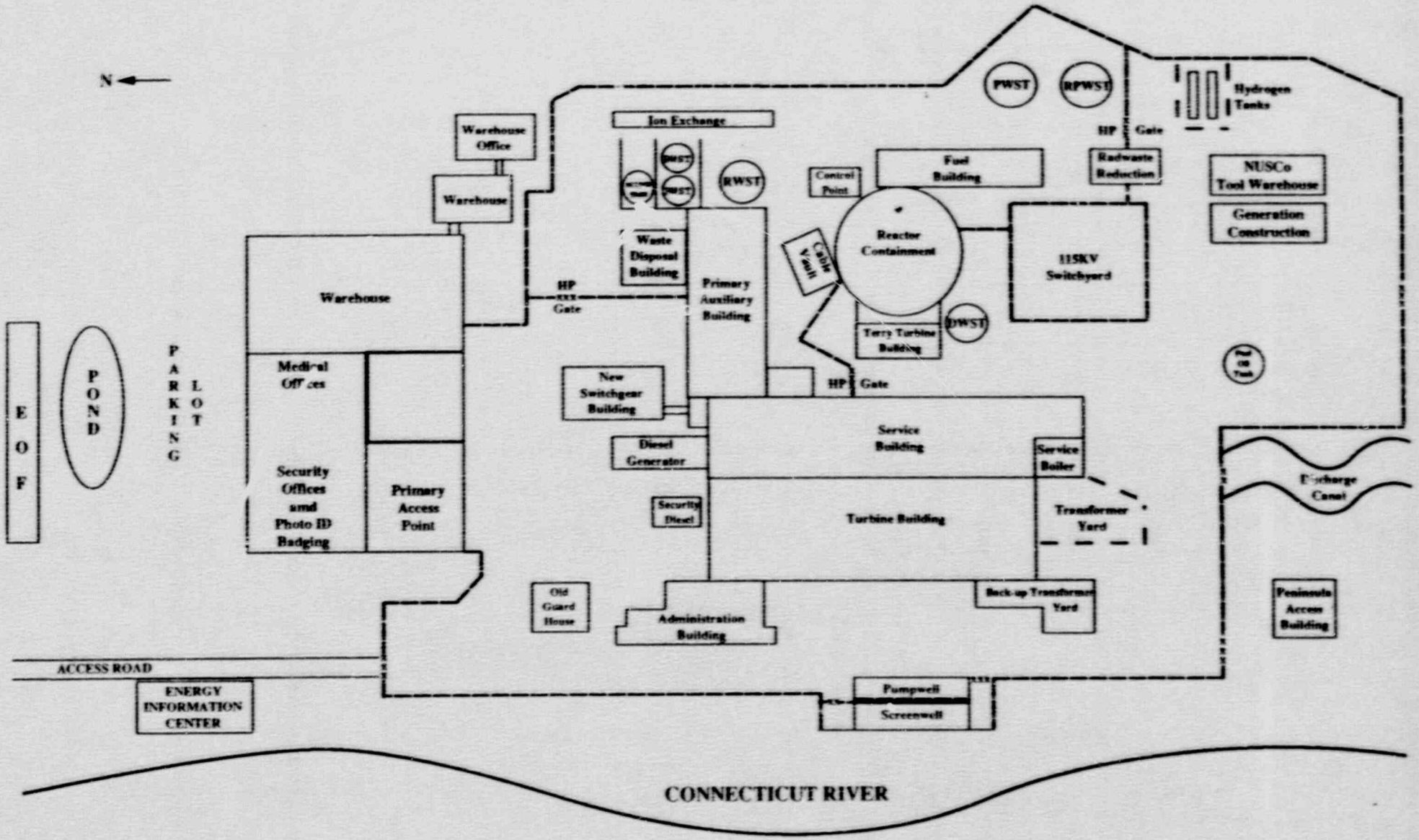
CONNECTICUT YANKEE ATOMIC POWER COMPANY - HADDAM NECK PLANT



CONNECTICUT YANKEE TELEPHONE LISTING

Station Director	John Stetz	690
Unit Director	Gary Bouchard	692
Station Services Director	Don Ray	693
Operations Manager	Jere LaPlatney	680
Maintenance Manager	Bruce Danielson	669
Chemistry Manager	Michael Quinn	583
Engineering Manager	Clint Cladding	628
Security Manager	Phil Jewett	521
Health Physics Manager	Hal Clow	506
I&C Manager	Vacant	658
Nuclear Concerns Director	Peter Santoro	276
Nuclear Records Supervisor	Donald Bement	623
Quality Services Supervisor	Jerry Beauchamp	571
Radioactive Materials Handling Supervisor	Roy Haight	537
Radiation Protection Supervisor-Operations	William Nevelos	525
Radiation Protection Supervisor-Services	Mary Sweeney	549
Storeroom Supervisor	Barry Moyer	686
USNRC	Tom Shedlosky	326
Control Room		211/212
Dosimetry Office		228/363
Health Physics Control Point		278/441
Nurse	Marianne Nericcio	349
Security Badging	Jan Templeton	522
Security Shift Supervisor		415
Switchboard		267-2556
Non-Business Hours		267-2558

SAFETY

Safety is ultimately the responsibility of each individual at the plant. Everyone must be aware of the safety practices and procedures applicable to their jobs. Everyone must follow those procedures and most importantly be alert and use good common sense.

YOUR SAFETY RESPONSIBILITIES

- Follow basic safety rules and observe all postings
- Report serious injuries to the Control Room. Report minor injuries and illnesses to the nurse.
- Use personal protection equipment as required.
- Place waste materials and debris in the appropriate receptacles.
- Be familiar with the purpose and use of personal protective devices and clothing.
- Be familiar with potentially hazardous conditions so as to avoid accidents.
- Do not smoke in posted "No Smoking" areas. Smoking materials should be placed in the appropriate receptacles and not thrown on the floor or ground.

Safety deficiencies should be reported to Plant Management as soon as practical.

PROTECTIVE TAGGING

Protective tagging is done by the Operations Department. Do not remove protective tags.

A Red tag means "Do Not Operate". Operation of red tagged equipment may endanger personnel and/or equipment.

A Blue tag indicates that the equipment is to be operated only by orders of the individual to whom the tag is issued.

Green Striped, or Yellow tags contain important information and restrictions concerning equipment use. Observe all directions on tags.

Do not operate any equipment which you are unfamiliar with or which you are unauthorized to use. Plant equipment is operated only by the Operations Department, with few exceptions, which are specifically covered in approved procedures and always with the direct knowledge and consent of the Shift Supervisor/Supervising Control Room Operator (SS/SCO).

PERSONAL PROTECTIVE EQUIPMENT

Hardhats

Hardhats are required in the protected area at all times; this requirement also applies to entry into Contaminated Areas. An individual is responsible for frisking his hardhat making certain it is not contaminated. Exceptions: Hardhats are not required for certain jobs with the approval of the Unit Director, at the beginning and at the end of the shift in the operations area of the Control Room, and in areas such as offices, laboratories, training areas, or lunchrooms.

Eye Protection

Safety glasses with side shields are required in all industrial areas of the plants. In addition, approved goggles and safety glasses shall be worn whenever there is a danger of exposing the eyes to one of the following: acids, caustics, flying particles, hazardous light rays, electrical flashes, or any conditions considered hazardous.

Full face shields may be required over goggles and safety glasses in cases, such as when grinding or welding. This equipment is available from the Stores Department (Warehouse) at each site or contact the site NRC office.

Hearing Protection

Various types of approved hearing protection are available for use in the plant. Ear muffs and various ear plugs provide protection against noise induced hearing loss if worn properly.

Hearing protection is available from the Stores Department. In addition at Millstone, disposable ear plugs are available from dispensers located throughout the station.

Ear protection must be worn where posted or if loud noise is being generated.

Protective Clothing

Clothing should be worn which is appropriate for the work performed and the conditions encountered. Loose fitting clothing, ties, jewelry, etc. should be avoided around open machinery or moving parts.

Safety shoes are recommended. Leather upper, hard soled shoes are required. Open-toed shoes, sandals, high heels or tennis shoes are not allowed.

Fall Protection

Personnel in elevated areas are required to wear safety belts or safety harnesses with lanyards.

Ladders should be tied off at the top and bottom to prevent slipping from position. Personnel working with portable ladders must position them securely and face the ladder while ascending and descending. If a ladder access is provided with a safety chain, the chain should be secured after use.

Flotation Devices

Flotation devices are required when inspecting on (in a boat) or over water.

COMPRESSED GAS CYLINDERS

Compressed gas cylinders must be stored upright, capped and secured when not in use. Cylinders must be capped when being moved.

CONFINED SPACES (ENCLOSED VOLUMES)

A confined space is an area which has only one exit or lacks a normal air supply. Some examples of confined spaces are tanks, vessels, deep pits, tunnels and pipes. Before you may enter a confined space the air must be tested to ensure an adequate oxygen concentration and the absence of hazardous or explosive gasses. For details on confined space entry consult the following procedure:

- Connecticut Yankee Administrative Control Procedure No. ADM 1.1-7.2 "Enclosed Volume and Hazard Atmosphere Work Practices"

- Millstone Administrative Control Procedure No. ACP 2.09 "Enclosed Volume Work Practices"

QUALITY SERVICES

Quality Services Departments have been established to comply with Federal law. They assure work has been performed in compliance with plant procedures and specifications.

Quality Services is also involved in monitoring Foreign Material Exclusion Areas. Areas where there is potential for problems resulting from items entering the systems are designated Foreign Material Exclusion Areas. Items brought into, or out of such areas must be accounted for and recorded in a log. Items which might be dropped must be tethered or placed in a sealed bag.

For Questions Regarding Quality Services

Millstone - contact Fred Dacimo, Site Services Director, ext. 4305

Connecticut Yankee - Jerry Beauchamp, ext. 571

Nuclear Concerns Program

Northeast Utilities has established a Nuclear Concerns Program to investigate and resolve Nuclear safety allegations. The program maintains the confidentiality of personnel voicing nuclear safety concerns while bringing attention to problems.

EMERGENCIES

An emergency may be defined as any abnormal condition that could affect the health or safety of the public or plant personnel, or could affect the safe operation of plant equipment.

FIRE

Fire Hazards

When welding or flame cutting, personnel must wear the proper protective equipment such as safety glasses, face shields, work gloves, etc. Before the job can commence, authorization must be obtained and a fire watch must be assigned by the job supervisor.

Fire Barriers

Fire doors are identified by Red and White signs. When passing through a fire door, make sure the door closes securely behind you. If the door fails to close securely contact the Control Room. Fire doors must not be propped open unless a Quality Services approved work order is obtained from the Control Room.

If you see a fire, call the Control Room, state your name, location, size and class of fire and remain on the line until the Control Room hangs up. Control Room telephone numbers are posted on or near all plant telephones. If the Control Room cannot be reached by telephone the in-plant paging system should be used. The Millstone page system numbers extensions are: 810 for the entire site, 811 to page at Unit 1, 812 to page at Unit 2, and 813 to page at Unit 3. At Connecticut Yankee the page system number is ext. 700.

Fighting Fires

Once you have reported the fire, use fire extinguishers only if you feel capable of fighting the fire. When using extinguishers always determine an escape route. Direct spray at the source of the fire using a sweeping motion. Do not attempt to use installed reel hoses. Avoid inhaling smoke as it may contain toxic fumes.

Classes of Fires

Class A: Solid combustible material; can be extinguished with water, CO_2, dry chemicals or halon.

Class B: Gasoline, oil or combustible fuels; can be extinguished with dry chemicals, CO_2 or halon.

Class C: Energized electrical equipment; can be extinguished using CO_2, halon or dry chemicals. If de-energized this type of fire can be treated like a Class A or B fire depending on material burning.

Class D: Combustible metals; this type of fire requires special chemicals which absorb heat, but do not react with the burning metal.

Installed CO_2 and Halon Fire Protection Systems

CO_2 and halon systems are installed in localized areas. Operation may be manual and/or automatic. If you are in one of these localized areas, such as a cable vault, switchgear room or turbine deck exciter, and the siren or horn is sounded, discharge of CO_2 or halon will begin in 30-60 seconds. If you hear a siren or horn exit the area as quickly as possible making certain to securely close the door behind you.

At Millstone on Units 1 and 2, the CO_2 system is signaled by a horn with actuation following 30-60 seconds later. These areas are marked with "DO NOT ENTER" signs. Entry should not be made into these areas unless the system has been disabled by Operations.

On Unit 3 the CO_2 system in the automatic mode is actuated 60 seconds after the Control Room receives a signal from the detectors. A red light will come on when the signal is received. Pull stations are provided to activate the system manually. On pull stations there are red and green lights. If a pull station has been manually activated, the red light will go on. NOTE: Red light will not be lit on a pull station if the system is automatically actuated. Other signals include a flashing strobe light, a horn actuated by the CO_2, itself located inside the area (NOTE: Once this buzzing horn is heard actuation is about 4 seconds away.) There is also an effective tonal alarm with hi-lo-hi-lo-hi-lo pitch. The alarm is very distinguishable. Once this alarm is heard, you have 60 seconds to evacuate the area. Actuation of the system is accompanied by the scent of oil of wintergreen. The locations of CO_2 and Halon Fire Protection Systems are identified in Appendix B.

At Connecicut Yankee the halon system in the Switchgear Room and Control Room is signaled by flashing lights and a buzzing horn alarm. In Nuclear Records there are audible signals adjacent to the area. In the CO_2 areas such as the cable vault and the PAB there is a siren. Actuation of these fire protection systems occurs 30-60 seconds after the alarm. (Appendix B)

Water Jel Fire Blankets

Water Jel Fire Blankets help to reduce the loss of body fluids, reduce pain, minimize the chance of infection, and help prevent shock for an individual injured by fire. They may also be used to escape a burning area. To use the blankets remove them from the canister and cover or wrap the burned individual.

Water Jel Fire Blankets are available for use in a fire emergency. On Unit 1 and 2 there are two large blankets located in fire locker #8 adjacent to the Unit 2 Health Physics window, 14'6 level and in fire locker #1 located outside the Control Room door, 36'6 level.

On Unit 3 there is a large blanket in a foam locker in the turbine building, 24'6' level. Another large blanket in the foam locker on the west wall near the door of the Control Room, 24'6 level, and a large and small blanket in a foam locker in the lube oil area of the turbine building, 38'6 level.

At Connecticut Yankee fire blankets are located in the turbine hall on the north wall of the oil storage room and in the Service Building hallway on the north end by the entrance to the PAB.

INJURIES

Any injury received on site should be reported to the nurse. Nurses are available during the day shift during normal operations at both sites. During major outages, nurses are available around the clock. At Millstone the nurse's station is located across from the firewater tanks and can be reached at extension 4397. At Connecticut Yankee the nurse's station is located in the new Administration Building and can be reached at ext. 349. Minor injuries sustained in radiological control areas should first be reported to Health Physics. To report a major injury at Millstone, call the Unit 1 Control Room, ext. 4252. At Connecticut Yankee call the Control Room at extension 211.

SPILLS

Hazardous Material or Waste Spills

Maintain a safe distance from spills of acids, caustics, chlorine, solvents etc., as the fumes may be hazardous. If you see a spill or leak of material you suspect may be hazardous material call the Control Room. Do not attempt to clean up this type of spill.

Chemicals or hazardous material on the skin or in the eyes should be flushed with large amounts of water. For this purpose there are portable and fixed emergency showers and eye wash stations located at various sites where hazardous or corrosive material is handled. A listing of the location of the emergency eye washes and showers at Millstone and Connecticut Yankee can be found in Appendix A.

INCIDENT CLASSIFICATIONS

The NRC has four levels of incident classifications. The State of Connecticut also utilizes corresponding state posture codes. The table below lists the NRC classifications, State of Connecticut posture codes, and a short narrative for the various levels of incidents.

Incident Classifications

Event	NRC Incident Class	State Posture Code
Unusual event which indicates potential degradation of the level of safety of the plant.	Unusual Event	Delta-One
Unusual event which indicates potential degradation of the level of safety of the plant; may involve a radioactive release.	Unusual Event	Delta-Two
Event which involves an actual or potential substantial degradation of the level of plant safety; may involve radioactive release.	Alert	Charlie-One
Event which involves an actual or likely major failure of plant functions needed for protection of the public; may involve a radioactive release.	Site Area Emergency	Charlie-Two

Event which involves an actual or imminent substantial core degradation or core melt with potential for loss of containment integrity (alpha is most severe).	General Emergency	Bravo/Alpha

STATION EVACUATIONS

If the need to evacuate the site arises, a station evacuation alarm will sound. Connecticut Yankee utilizes two alarms. The annunciation alarm at Connecticut Yankee is a rising sweep tone used to get the attention of personnel for an important announcement. The station evacuation alarm is a continuous wail. Both of these alarms are tested every Friday at noon. At Millstone the station evacuation alarm is a yelp, an up and down tone which is tested monthly.

In the event of an evacuation alarm, listen to the page announcement to determine if the alarm is a test, a drill or an actual evacuation. In the event of an actual evacuation, personnel without an emergency response function should report to an assembly area.

- At Connecticut Yankee the assembly area is the Energy Information Center.

- At Millstone, personnel in the protected area should assemble in the nearest access point parking lot. Personnel outside the fence but in the Owner Controlled Area should proceed to the Training Center.

At the assembly area a Personnel Accountability check will be performed to assure that all personnel are accounted for. Further directions will be given at the assembly area.

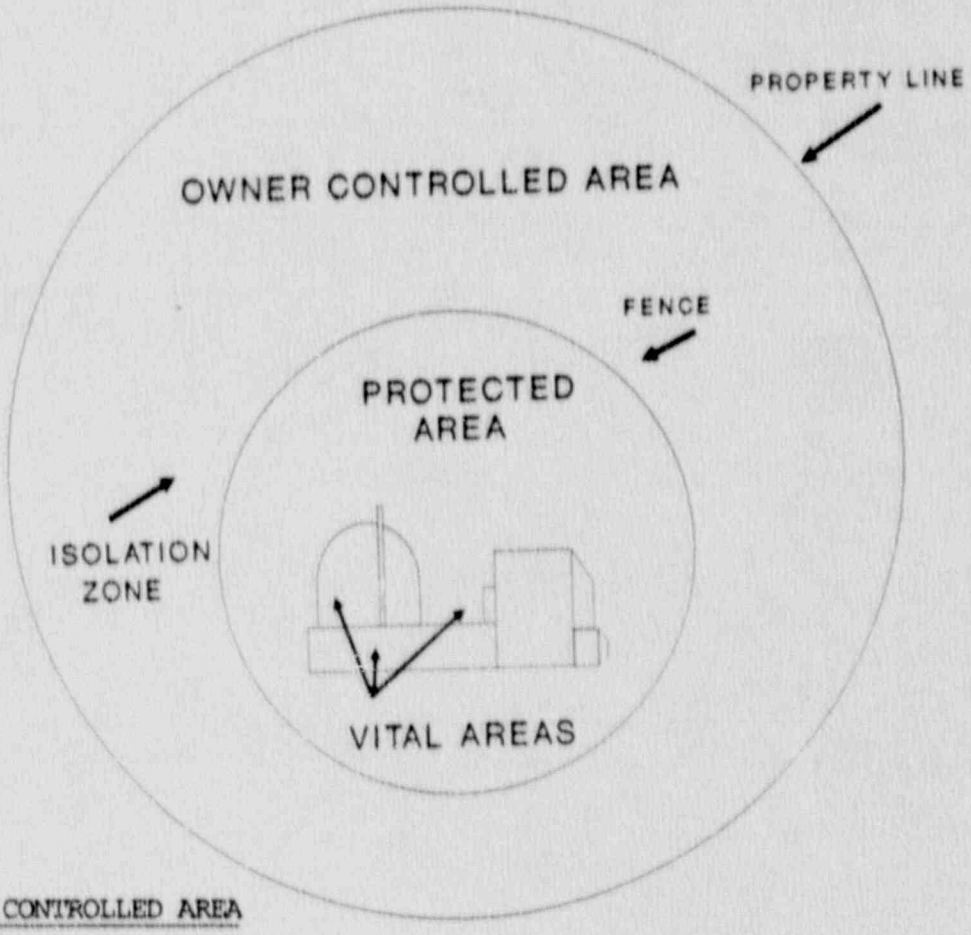
Questions concerning emergency plans should be directed to:

Millstone - Walter Buch, ext. 4456

Connecticut Yankee - Tom McCance, ext. 502

SECURITY

Both Millstone and Connecticut Yankee are divided into three designated areas:



THE OWNER CONTROLLED AREA

The Owner Controlled Area consists of company owned or leased property outside the security fence.

Certain items are prohibited from the Owner Controlled Area. These items include alcohol (except in approved recreation areas), controlled drugs not prescribed for your use, illegal drugs, firearms, ammunition, knives not used for work and considered illegal, explosives and incendiary devices. This list is not all inclusive. Any question concerning the appropriateness of bringing equipment or material on site should be directed to the Security Shift Supervisor.

At Millstone, USNRC inspectors must present a USNRC ID, to receive a visitor's parking pass. This pass will allow inspectors to park in the visitor parking or other unassigned parking space in lieu of having a parking sticker. At Connecticut Yankee, USNRC inspectors may park in any unassigned parking space.

Observe traffic signs, signals, and posted speed limits. The Millstone Security force enforces speed limits on the access road. Roads leading to Connecticut Yankee are closely monitored for speeding motorists.

THE PROTECTED AREA

The Protected Area consists of the area inside the security fence. A photo I.D. badge is required for unescorted access and must be worn on the upper part of the body, on the outer most garment, at all times.

Badging

Upon arrival at Millstone an unbadged USNRC inspector should check in at the visitor's desk downstairs in the NAP. Following the initial check in, the inspector may be provided with an escort or may choose to be badged. In the latter case the inspector will be directed to Security Badging upstairs in the NAP.

At Security Badging, a current training date will be verified. The inspector will then have a picture taken and a photo I.D. badge and key cards will be issued.

At Connecticut Yankee, the inspector should proceed to Security Badging in the new Administration Building. There again, a current training date is verified and a photo I.D. and key card will be issued.

Photo I.D. badges are stored at the security access points. Personnel and materials are subject to search. Personal items brought into the Protected Area may require a property pass for later removal from the site. The property pass can be completed by the Security Department at Connecticut Yankee, or any supervisor at Millstone.

ENTERING AND EXITING THE PROTECTED AREA

Prior to entering the Protected Area personnel must pass through metal and explosive detection devices. To obtain your photo I.D. badge give your badge number to the security guard. The guard will hand you your photo I.D. badge with your key or keycard. Use the key or keycard to pass into the Protected Area.

To exit the Protected Area personnel must once again pass through an access point. You will pass through a metal detector and a radiation portal monitor (Note: If a portal monitor is not available you will be required to frisk). Items removed from the Protected Area are once again subject to search. If the portal monitor alarms, you will be asked to pass through again. If it alarms once again, the Health Physics Department will be notified. After the second alarm, you must wait at the portal monitor until Health Physics evaluates the reason for the alarm, performs any necessary decontamination, and authorizes your release. Your photo I.D. badge and key cards must be returned to the security guard prior to exit.

Vehicle Entry

Vehicles entering the Protected Area must enter through the Vehicle Access Points and will be searched. Vehicles in the Protected Area must be locked when left unattended.

Surveillance System

The Protected Area is surrounded by a security fence equipped with microwave and E-field intrusion detection devices as well as closed circuit television cameras.

Stay clear of the security fence in order to avoid setting off alarms. An area around the security fence is established as an Isolation Zone. Do not park or store material in this area as it may interfere with the surveillance systems. The Isolation Zone extends 20 feet on either side of the security fence.

Visitors

Visitors in the Protected Area must be escorted. The following is a list of pertinent escort responsibilities:

- Non-picture badged visitors must display their visitor badges, on the outer garment, at all times.

- Visitors must be kept under observation and control at all times.

- The ratio of visitors to an escort in the Protected Area is not to exceed 10 to 1, in a vital area 5 to 1.

- Authorization for the escort and the visitior must be obtained prior to entering vital areas. Authorization forms are available from security.

- Prior to entering or exiting vital areas, the escort of visitors(s) without key cards shall contact security so that security can log the visitor(s) in or out of the vital area.

- At Millstone, visitors with key cards entering vital areas shall insert their key card. The escort must immediately enter their key card after the visitor.

- Redstriped badged individuals (Millstone) cannot escort visitors in vital areas.

- Any unauthorized activities by escorted individuals must be reported to security.

- If, you become separated from a visitor you are escorting, contact the Security Department. At Millstone call ext. 4701, at Connecticut Yankee call ext. 251.

VITAL AREAS

A Vital area is any area that is vital to the safe operation of the plant, for example Containment, Control Room or Screenwell.

If Vital area access is necessary for a USNRC Inspector to conduct an inspection, the request should be processed along with the initial security badging paperwork.

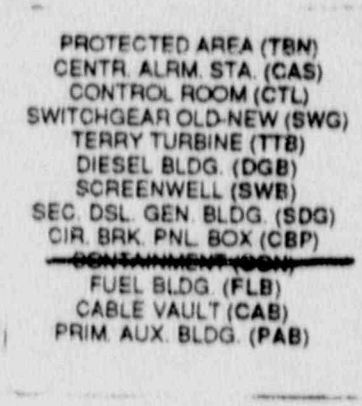


fig. 2a

Connecticut Yankee

If the name of a vital area is crossed out you are not allowed to enter that area. This card (fig. 2a) is laminated onto the back of your badge. In this example entry is not allowed into containment.

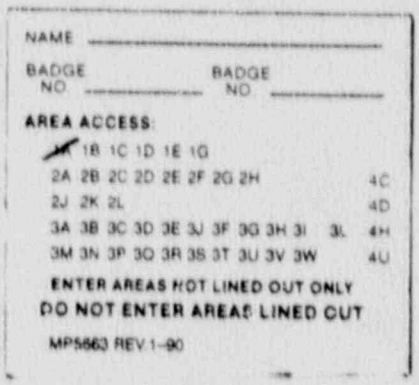


fig. 2b

Millstone

If the Alpha Numeric is crossed out you are not allowed to enter that area. These alpha numerics match alpha numerics marked on or near Vital Area doors. The card (fig. 2b) is attached to your badge. In this example, entry into Vital Area 1A is not authorized.

Key Cards/Keys

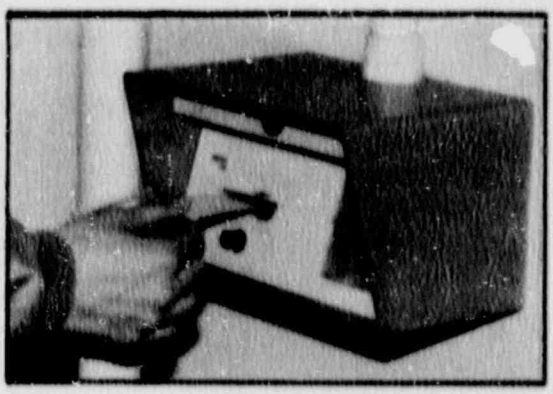
Access to authorized Vital Areas and the Protected Areas is controlled by locked doors or turnstiles which are unlocked with keycards (figure 3a) or keys (figure 3b). Millstone utilizes keys; Connecticut Yankee utilizes a "credit card" type key card. Keys and key cards allow access to the Protected Area and authorized Vital Areas. Keys and key cards must remain with your photo I.D. badge.

If a group of people are passing through a key reader door, each individual must insert his or her key card or key into the reader.

Key cards/keys access areas you are authorized to enter.

a. Key cards

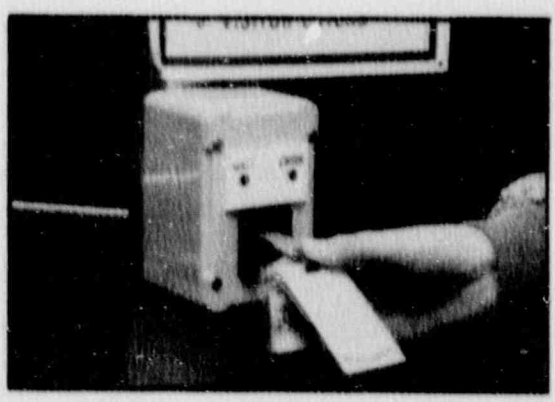
(fig. 3a)



Insert the card into the cardreader. Wait for the light to come on and the lock to click. Retract your key card, open the door and pass through. Be sure the door closes securely behind you.

b. Keys

(fig. 3b)



Insert the key into the key reader then withdraw it. When the "enter" light comes on, open the door and pass through. Be sure the door closes securely behind you.

If a Vital Area door must remain open for an extended period of time, notify security prior to entry. Millstone ext. 4701. Connecticut Yankee ext. 251.

FITNESS FOR DUTY

Northeast Utilities has established a fitness for duty program as required by 10CFR26. This program is described in detail in the Northeast Utilities Personnel Policy NUP 90. This program does not apply to employees of the Nuclear Regulatory Agency; it does, however, apply to USNRC Contractors.

Objectives

The objectives of the fitness for duty program are to:

- Ensure a safe, productive, healthy work environment.
- Ensure personnel perform work in a reliable, trustworthy manner and are not under the influence of any substance, legal or illegal.
- Provide for early detection of individuals who are not fit to perform their duties.
- Maintain an alcohol and drug free workplace.

NUP 90 Alcohol Policy

- Consumption of alcoholic beverages during working hours or on company property is prohibited.
- Consumption of alcoholic beverages within five hours prior to the start of scheduled work is prohibited.
- Reporting to work or working with a blood alcohol content higher than .04 percent is prohibited.

NUP 90 Drug Policy

- The sale, use or possession of illegal drugs any time, on or off company property is prohibited.
- The abuse of prescription and over-the-counter drugs is prohibited.

Testing

- Urine is tested for drugs. Breath or blood tests are used for alcohol.
- New personnel are tested prior to badging.

- Random testing is conducted.

- Testing may take place for cause; that is, if an individual is suspected of abusing chemicals.

- Testing may take place following a failure in individual performance which indicates use.

For further information regarding security matters contact the Security Manager:

Connecticut Yankee Security Manager - Phil Jewett (acting) ext. 521

Millstone Security Manager - Patricia Weekley, ext. 4329

RADIATION MEASUREMENT AND CONTROL

OCCUPATIONAL EXPOSURE LIMITS

1990 Northeast Utilities Administrative Guideline Limits:

Whole Body	2,500 mrem/QTR not to exceed 4,500 mrem per year
Skin	7,500 mrem/QTR
Extremity	15,000 mrem/QTR
Neutron	For the purpose of calculating available exposure: 2x neutron plus whole body beta gamma

Personnel approaching exposure limits, such that continued exposure might exceed those limits shall be kept from working in radiation areas until an exposure upgrade can be approved. In accordance with As Low As Reasonably Achievable (ALARA) principles the following guidelines have been established:

Personnel with undocumented exposure:	300 mrem/QTR
Personnel with documented NRC Form 4:	1000 mrem/QTR
Health Physics Manager approval:	2000 mrem/QTR
Health Physics Manager and Station Director approval:	2500 mrem/QTR

In accordance with Regulatory Guide 8.13 Northeast Utilities has established three categories for radiation workers:

Declared Pregnacy-excluded from Airborne Radioactivity Areas	150 mrem/QTR 500 mrem/Term
Expectant Pregnancy (30 to 60 days)	500 mrem/QTR
All others (10CFR20 limits/NU Corporate Guidelines)	2500 mrem/QTR

DOSIMETRY

Dosimetry Issue

At Millstone USNRC personnel requiring dosimetry should proceed to the Dosimetry Office. The Dosimetry Office, Building #413, is located near the stack in a one story brown building. An incoming whole body count is required unless waived by the Health Physics Manager. If the body count is needed, the technician will fill out a Body Count Verification Form (Appendix C). Return this form to the Dosimetry Issue Office. USNRC personnel are not required to fill out an NRC Form 4, but must fill out a Dosimetry Issue Sheet (Appendix B). A limit of 300 mrem will be assigned. Your dosimetry will be stored at the Security Access Point with your photo I.D. badge.

At Connecticut Yankee USNRC personnel should proceed to the Dosimetry Issue Office located near the Health Physics Control Point in the Service Building. A dosimetry checklist will be generated which indicates the individual data for training, whole body count, etc. (Appendix C). A whole body count is required unless waived by the Health Physics Manager/Designee. USNRC personnel must fill out an NRC Form 4 and a Request for Radiation History (Appendix C). Once this paperwork is completed, a limit of 1000 mrem is assigned. Your dosimetry is stored at the Health Physics Control Point located near the entrance of the Radiological Control Area (RCA).

Dosimetry Storage

It is the responsibility of all personnel to ensure their dosimetry is stored at the designated location. At Connecticut Yankee, dosimetry is stored at the Health Physics Control Point. At Millstone, dosimetry is stored in the Security Access Point along with your security photo ID badge.

Visitor Dosimetry

Individuals escorted as visitors into Radiological Control Areas (RCA), will be issued a green Thermoluminescent Dosimeter (TLD), and given a visitor pamphlet to read. Visitor exposure will be documented on a daily visitor exposure record.

Dosimetry Use

Personnel entering RCAs, are required to wear personnel monitoring devices. TLD's and Pocket Ion Chambers (PICs) are to be worn directly adjacent to each other on the front of the body above the waist and below the neck.

When using a PIC, be certain it is zeroed prior to entering into an RCA. Check your dosimeter frequently, and have your PIC re-zeroed at or near three-quarters of scale. If your PIC should go off scale, exit the area immediately and notify the Health Physics Department.

Lost or Damaged Dosimeters

Action:

- Immediately leave the RCA if a TLD or PIC is lost or damaged
- Notify Health Physics Department
- Obtain a new dosimeter prior to re-entry (must have express approval of Health Physics Manager/Designee prior to RCA re-entry).

Recording PIC Information

It is the responsibility of all personnel to record their PIC reading on the Radiation Work Permit (RWP) when entering or leaving an RWP area (on

blanket RWPs, PIC information need only be recorded at the end of the shift; no entry is required for PICs reading zero). At Connecticut Yankee all entries into Radiological Control Areas require the use of an RWP. At Millstone an RWP is not required for routine entry into a Radiation Area. If not on an RWP, dosimeter readings should be recorded on the Weekly Incidental Exposure Report (figure 4) located outside the Unit One and Unit Three Health Physics Offices. Your name, unit where exposure was received, social security number, and exposure for the corresponding day should be entered on the exposure sheet.

APPROVED Stephen J. Scace STATION SUPERINTENDENT SORC # 86-52 DATE 1/14/87

WEEKLY DOSIMETER RECORD

WEEK OF

DP4358 REV 11-86

NAME	UNIT FROM WHICH DOSE WAS RECEIVED	SOCIAL SECURITY NUMBER	SUN	MON	TUE	WED	THU	FRI	SAT	TOTAL

HELPORE ENTRY | TECHNICIAN | DATE

FORM SHP-4902-10 REV 1

Figure 4 MILLSTONE Incidental Exposure Sheet

WORK IN RADIOLOGICAL CONTROL AREAS (RCA'S)

Surveys

At Millstone radiological survey information is posted outside each Unit's Health Physics Office. At Connecticut Yankee, surveys are attached to the RWP at the appropriate control points.

Survey Symbols

100.....Dose rate in millirem per hour at waist level

(4).....Contamination Survey Point

500*.....Contact Dose Rate

900 Hot Spot.....Hot Spot

70.....Neutron Dose Rate (or indicated by an N)

60mrad.....Beta Dose Rate

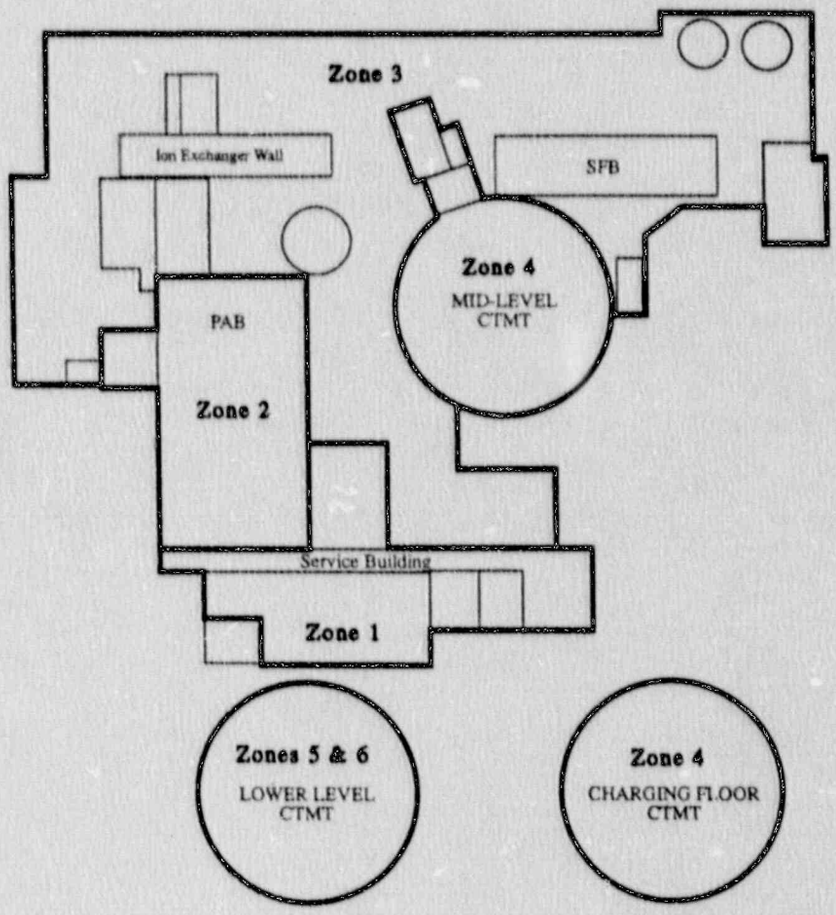
Radiation Work Permit Requirements

A Radiation Work Permit is required for entry into the following areas: High Radiation Area, Contaminated Area, Neutron Area, Airborne Radioactivity Area or any other area posted with an "RWP Required" sign. At Connecticut Yankee an RWP is required for entry into all Radiological Control Areas. A USNRC Inspector must contact Health Physics to be added to an RWP to conduct inspections and tours. At Millstone contact ext. 4222 for Unit 1, ext. 4555 for Unit 2, ext. 3256 for Unit 3, at Connecticut Yankee, ext. 278.

During outages, Connecticut Yankee utilizes numerous control points for RCA Zones. Zones are numbered and have a corresponding color for ease in recognition. (Figure 5) Personnel are allowed to enter the RCA without signing in on an RWP if they are proceeding to a Zone Control Point.

Figure 5

CONNECTICUT YANKEE
OUTAGE RCA ZONES



Additional information:

Zone 1 - Respirator Decon Facility and turbine building
Zone 2 - PAB/Spent Fuel
Zone 3 - RCA Yard
Zone 4 - Secondary side of S/Gs accessible from charging floor
Zone 5 - LLOA, Loops, RCP levels, and S/G secondary handholes
Zone 6 - S/G channel heads, skirts, and bullpens

GENERAL INSTRUCTIONS WHILE WORKING IN AN RCA

- By initialing the appropriate exposure control sheet (RWP page 2, see figure 6) you signify that you are aware of the:

- o radiation exposure you are allowed to receive
- o personnel monitoring devices required to wear for entry
- o radiologial conditions in the area
- o protective clothing you are required to wear
- o all other instructions specified on the RWP

- Work only in the areas specified on the RWP

  - o during outages at Connecticut Yankee, work only in your assigned RCA zone

- Perform only those tasks specified on the RWP.

- For cuts or abrasions, see the nurse who will determine if the injury will prevent you from entering Radiological Control Areas.

  - o Obtain protection for cuts or abrasions before start of job.

- Eating, drinking, smoking or chewing is not allowed in Radiological Control Areas (except in designated areas as specified by Health Physics).

- In case of change in radiological conditions, immediately notify Health Physics Manager/Designee.

- Tools and equipment must be surveyed by Health Physics prior to removal from Radiological Control Areas.

- Keep exposure ALARA. Use time, distance and shielding to minimize your exposure.

DEFINITIONS OF AREAS

Radiation Area (0.5 - 100 mrem/hr)

Entries into a Radiation Area require that personnel wear monitoring devices.

High Radiation Area (> 100 mrem/hr)

The following is required for entry into a High Radiation Area:

- TLD and PIC (low range and/or high range)

- Radiation Work Permit

- Health Physics Technician or individual equipped with a radiation dose rate monitoring device (survey meter) or an alarming dosimeter.

- Pre-job briefing

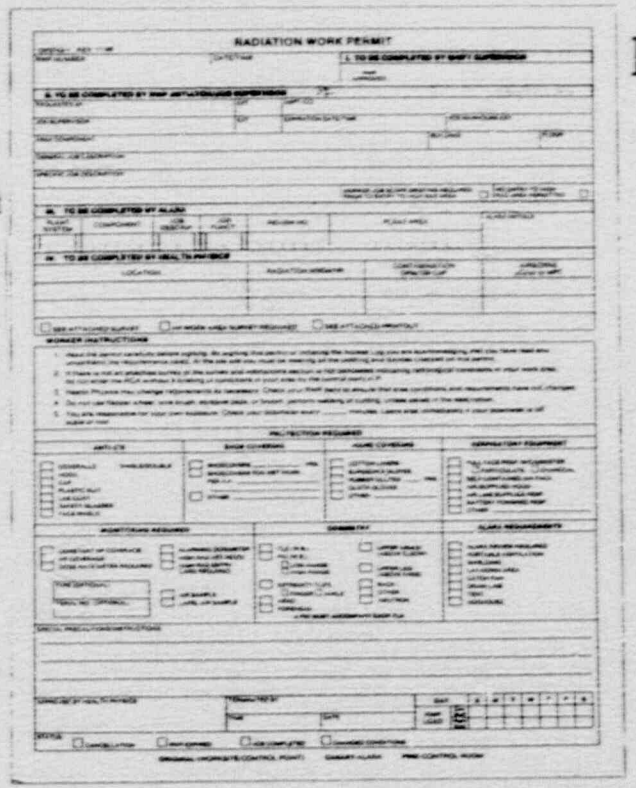
Figure 6

Radiation Work Permits

Connecticut Yankee

Page 1 →

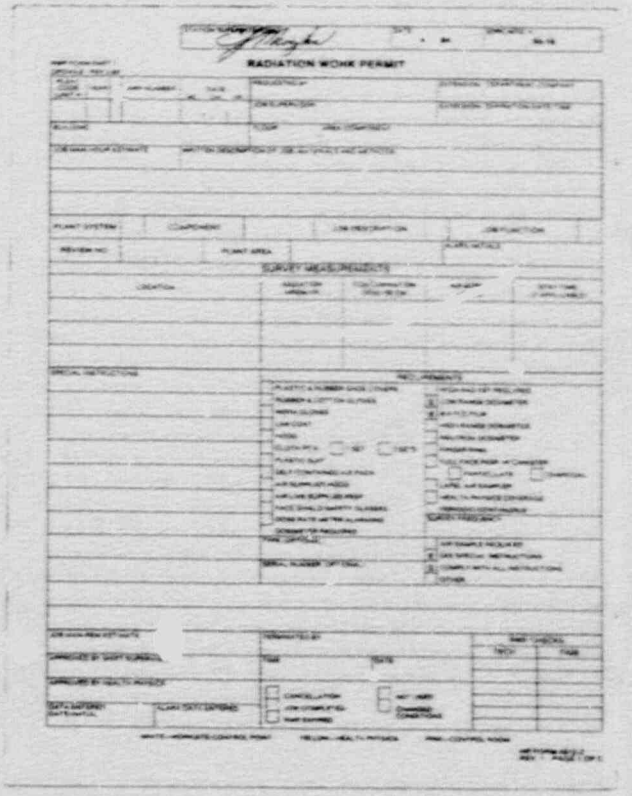
Page 2 ↓

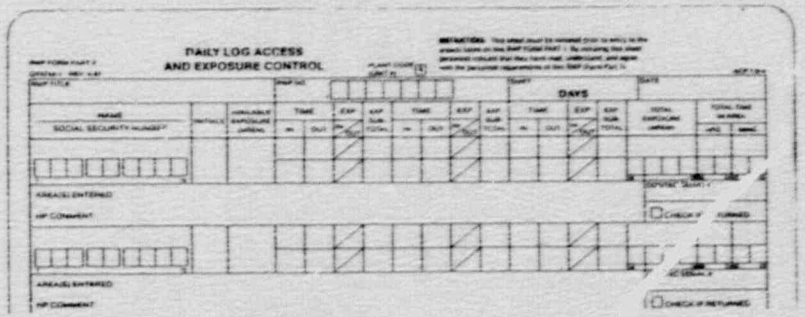


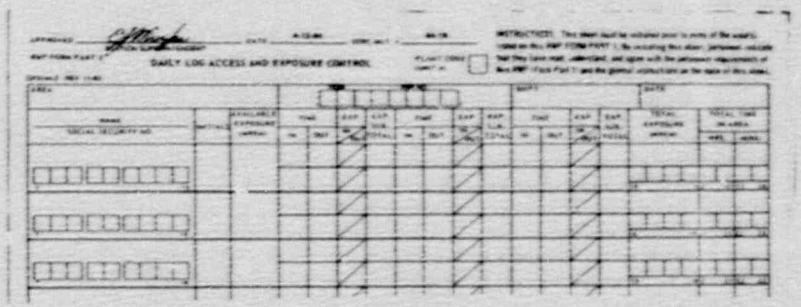
Millstone

Page 1 ←

Page 2 ↓







Locked High Radiation Area (>1000 mrem/hr):

In areas where dose rates are 1000 mrem/hr or greater, (18 inches from source) the same requirements as a High Radiation Area apply. In addition, access to the area must be locked and/or continuously guarded to prevent unauthorized entry into areas. Contact the Health Physics Department for entry into Locked High Radiation Areas. Locked doors will not prevent rapid exit from the area. When passing through Locked High Radiation Area doors ensure the door closes securely behind you. If you are issued a High Radiation Area key it is for your use only. Maintain key control. If for some reason, a door cannot be locked, it must be continuously guarded by a member of the work party. At Millstone Units 1 and 2, Locked High Radiation Areas in excess of 1,000 mr/hr are equipped with two locks and require the use of two keys for entry.

CONTAMINATION MEASUREMENT AND CONTROL

RELEASE OF MATERIALS

In general, anything that enters an RCA is considered to be contaminated until released by a Health Physics Technician.

Before any item is given an unconditional radiological release from an RCA it shall meet the following requirements:

- < 1000 dpm/100cm2	removable beta-gamma
- < 100ccpm	total (fixed plus removable) beta-gamma
- < 20 dpm/100cm2	removable alpha
- < 4ccpm	total (fixed plus removable) alpha

PROTECTIVE CLOTHING

- Each individual is responsible for the inspection and correct use of protective clothing.

- Contaminated protective clothing must be deposited in the appropriately marked receptacle when exiting a contaminated area.

- Reimbursement will not be made for loss of personal items due to contamination, with exception of shorts, shoes and socks.

BLUE BAGS AND SAVE TAGS

- Items which are not to be disposed of as trash but are contaminated should be placed in a blue bag (where available). The bag should be labeled to identify the contents.

PERSONNEL CONTAMINATION CONTROL

Northeast Utilities uses white step-off pads which are considered "clean". Protective clothing should be removed before stepping on the white step-off pad.

When removing protective clothing, start with the outer shoe covers. Remove the outer gloves next. Continue removing protective clothing turning each item carefully inside out and placing it in the appropriate receptacle. Remove dosimetry and place it in the receptacle, if provided, or on the floor outside the contaminated area. If a hard hat is removed, place it on the corner of the step-off pad. Remove the inner shoe covers as you step onto the clean step-off pad. Remove one cotton glove liner. With dosimetry in your gloved hand proceed to the nearest frisker. Use your gloved hand to hold your dosimetry and hard hat while frisking.

It is each individual's responsibility to monitor for contamination at designated frisking areas after exiting a contaminated area. Notify a Health Physics Technician if a frisker or PCM-1 alarms.

The personnel contamination limit, using a hand held frisker on the (X1) scale is 100 Corrected Counts Per Minute (CCPM). Hand frisking should be accomplished by holding the probe 1/2" away from the surface and moving at a speed no greater than 1-2" per second. Notify a Health Physics Technician if the background is greater than 300 cpm.

In certain areas PCM-1's or automatic friskers may supplement or replace hand frisking. These machines frisk one half of your body at a time. Due to different plant layouts PCM-1 requirements differ between Connecticut Yankee and Millstone. At Connecticut Yankee, after exiting a contaminated area, the PCM-1 is used. If the PCM-1 alarms, perform a manual frisk. At Millstone, after exiting a contaminated area, perform a manual frisk, then use the PCM-1. If either device alarms contact Health Physics.

Prior to leaving the site personnel shall be required to monitor themselves in a portal monitor, where available, or with a frisker.

RESPIRATORS

Use of Respiratory Protection Equipment

Prerequisites:

- Successful completion of Radiation Worker Training
- Respirator fit test
- A whole body count
- A pulmonary function test (PFT) and medical evaluation

At Millstone the Fit Booth is located in the Contractor Processing Center, located near the North Access Point (NAP) and can be contacted by dialing ext. 5135. After hours contact the Unit 1 or 2 Health Physics Office at ext. 4222 or 4555. The normal hours of operation for the fit booth are 7:00-3:30 Friday and on request Monday through Thursday. These hours are expanded during outages.

At Connecticut Yankee respirator fit testing is conducted in the Emergency Operations Facility (EOF), located at the North end of the site, and can be contacted by dialing 477 or 445. After hours contact the Health Physics Control Point at ext. 278 or 441. The hours of operation for the fit booth are Monday and Tuesday morning (8:00 am - 11:00 am) and Friday afternoon (1:00 pm - 3:00 pm). These hours are expanded during outages.

Beards or glasses with temple bars may not be worn with face sealing respirators.

The Millstone 3 containment is kept at a subatmospheric environment when the reactor is operating. If entry under these conditions is necessary, further respiratory protection training and medical evaluation will be required prior to entry.

Respirator Issue

RWPs specify the type of respiratory protection required.

Respirators are issued from a designated issue point. The issue point monitor checks that the person is cleared to wear the type of respirator they are requesting.

Respirators will be issued only to individuals who are clean shaven (no beards). At Millstone Respirator Issue is located in the service hallway by the Unit 2 Health Physics Office (ext. 4552) as well as Unit 3 behind the Health Physics Office (ext. 6239). After hours you should contact the Unit 1 or 2 Health Physics Office at ext. 4222 or ext. 4555. At Connecticut Yankee Respirator Issue is located in the service building. To arrange respirator issue call the Health Physics Control Point at ext. 278 or 441.

Respirator Return

Used respirators should be deposited in designated respirator receptacles. If receptacles are not provided you should bag (yellow at Millstone, blue at CY) the respirator and return it to the respirator issue point.

Respirators will not be reissued and should not be reused prior to cleaning, decontamination, and inspection.

Respirator Precaution

Respirators must be worn when specified on the RWP or when specified by a Health Physics Technician.

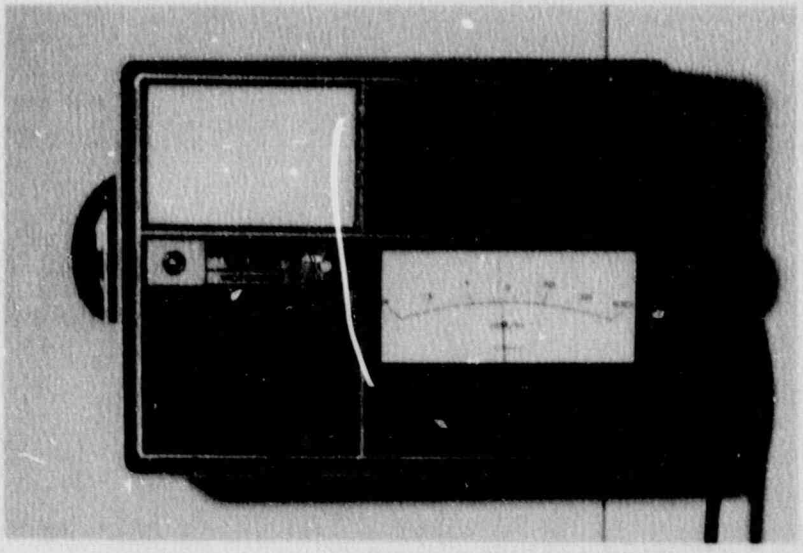
Normally, the mask is not removed until the wearer is completely clear of the area. However, if the mask becomes inoperable, such that the wearer experiences difficulty breathing, the user should remove the mask, quickly exit the area and notify a Health Physics Technician immediately. If the mask malfunctions but still supplies air, or the wearer experiences physical or emotional distress, he or she should exit the area and remove the mask following the normal procedure.

AREA RADIATION MONITORS (ARM)

Area radiation monitors alarm when general area radiation levels exceed the set point on the monitor. Alarms on the various ARMs consist of audible and visual warnings.

DO NOT ignore an alarm even if the meter indicates a low dose rate.

If an alarm sounds in the area where you are working you should stop what you are doing, warn others around you as they may not have heard the alarm, and exit the area quickly, using the normal dress out procedure. Check your PIC and notify a Health Physics Technician.

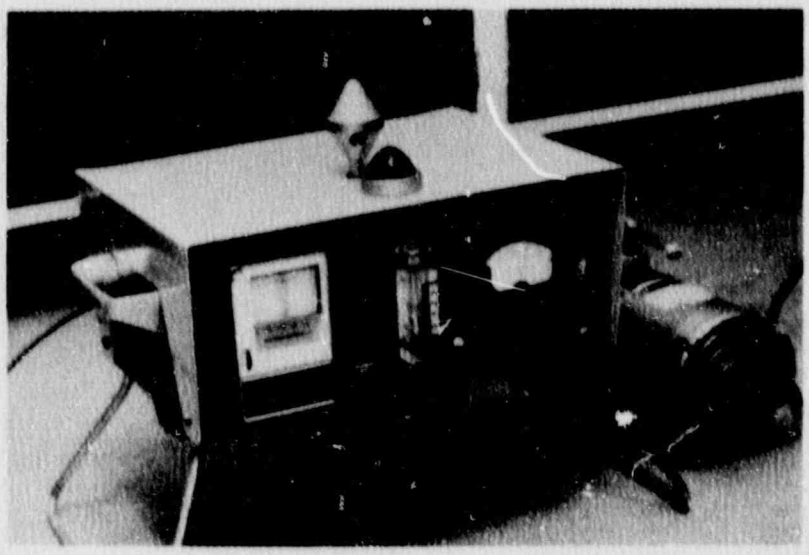


Continuous Air Monitors (CAM)

A CAM is used to continuously monitor the air for airborne radioactivity.

The alarm consists of audible and visual warnings.

If an alarm sounds stop what you are doing, warn others around you, and exit the area quickly, using the normal dressout procedure. Check your PIC and notify a Health Physics Technician.



Radioactive Spill

A radioactive spill or leak is an uncontrolled release of radioactive materials. If you encounter a spill you should SWIM:

- o Stop the leak.
- o Warn others. Call the Control Room and Health Physics.
- o Isolate the area.
- o Minimize exposure and contamination.

Personal Injury

- Minor Injury

If a minor injury occurs while working in an RCA, exit the area and remove any protective clothing following the normal step-off pad procedure. Show the wound to a Health Physics Technician. They will monitor it for contamination. If the wound is not contaminated, you will be directed to medical services.

- Serious Injury

If a serious injury occurs, call the Control Room and inform them of the injury. The immediate welfare of the injured person is of prime importance.

APPENDIX A

EMERGENCY EYEWASH STATIONS

APPENDIX A

MILLSTONE UNIT 1:

- Radwaste by Batching Tanks
- Mezzanine - 34'6 1. by ramp
  2. by telephone room
  3. by acid tank
- Turbine Building - 14'6 South Side of Condenser Bay
- Outside Maintenance by Caustic Tanks
- Chemistry Lab
- Radwaste by Hopper Room

MILLSTONE UNIT 2:

- Auxiliary Building 14'6 by Make-Up Batch Tanks
- Radwaste - R.R. Access
- Turbine Building - 31'6 Southwest
- Turbine Building - 14'6 Northwest
- Urea Formaldehyde Building

CONDENSATE POLISHING FACILITY BUILDING

- -4 Level Southeast
- -4 Level Acid Tank
- 28'6 North Loading Ramp
- 28'6 Northwest Decon Room Inside
- 28'6 South Filtration Area

MILLSTONE UNIT 3:

- Machine Shop (Portable Station)
- Turbine Building 24'6" Outside Southeast Corner Acid/Caustic Fill Area
- Turbine Building 14'6" Southeast Corner Acid/Caustic Area
- CPE 14'6" North End/Stairs to Auxiliary Boiler Room
- Turbine building 38'6" Southeast Corner against South Wall
- CPE 38'6" North End/Stairs by Auxiliary Boiler Room
- CPE 38'6" Far South Wall (Eye Wash Only)
- Auxiliary Building 4'6" South of Auxiliary Tunnel Pit
- Solid Waste Building 24'6" Mid-way South Wall
- Liquid Waste Building 24'6" Mid-way North of Double Doors to Fuel Building
- Fuel Building 24'6" Equipment Decon Area Far East Wall
- Auxiliary Building 24'6" East Hallway - Mid-way Cooling Water Pump Area
- Waste Disposal Building 43'6" North Wall Mid-way
- Auxiliary Building 43'6" in North Hallway
- Intake Structure - Northeast Corner Chlorine Room (Eye Wash Only)
  - Northeast Corner - Inside Hypochlorite Enclosure
- Auxiliary Building 66'6" North of Center Stairs

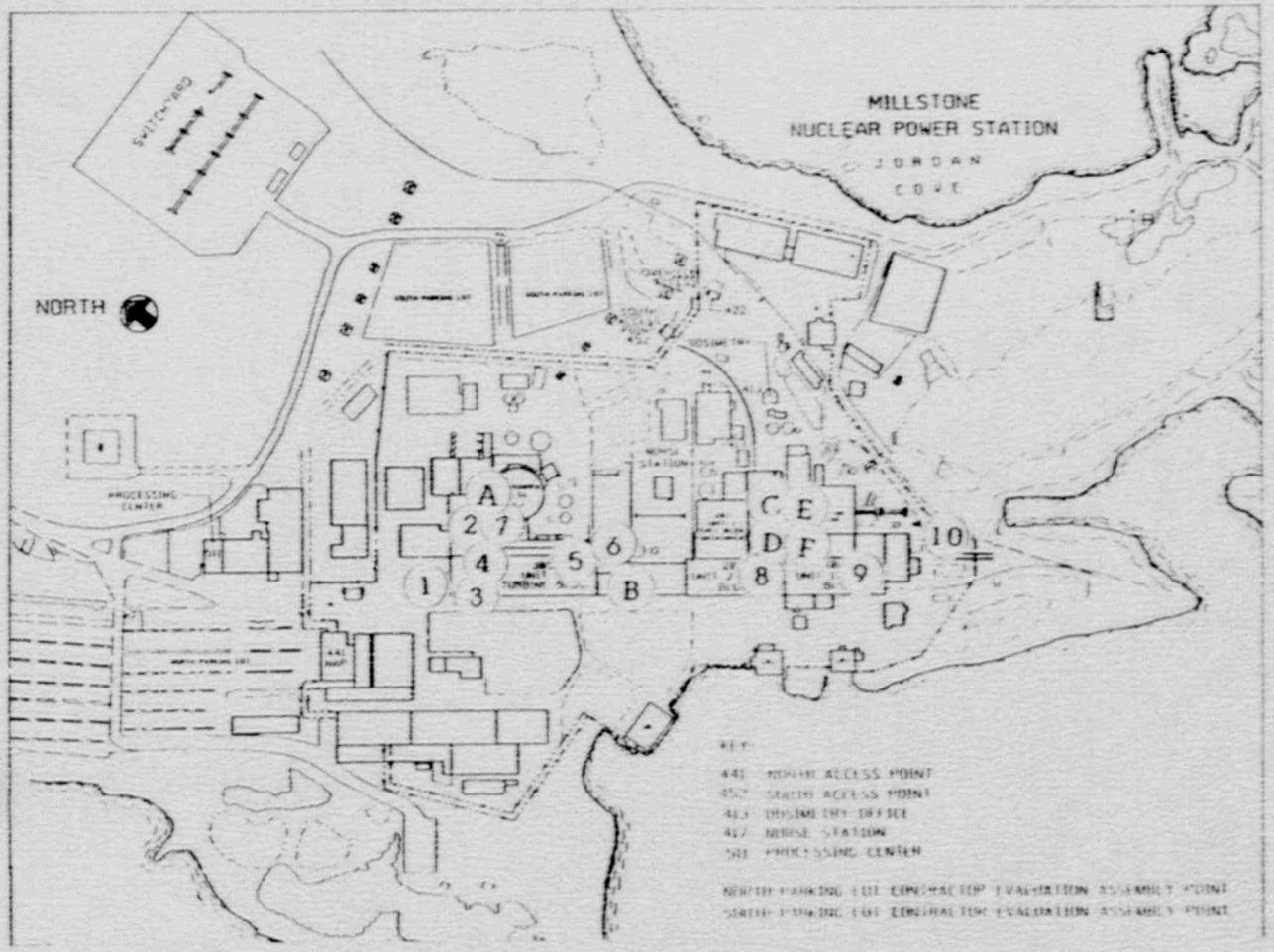
CONNECTICUT YANKEE

LOCATIONS:

1) Water Treatment
2) Hydrazine Addition Area
3) Steam Generator Chemical Addition Pot
4) Hypochlorite Room/receiving Area
5) Boiler Room/Acid Caustic Receiving
6) VCT Chemical Addition Station - UL PAB
7) Maintenance Shop
8) Turbine Floor
9) Chemistry Lab
10) Chemistry - Outside Module 2nd Floor Turbine Building
11) Lube Oil Storage Area
12) PAB A/O Station
13) I&C Shop
14) Switchgear batteries
15) Security Diesel Batteries
16) Lower Level Waste Disposal Building
17) Health Physics Checkpoint
18) Containment Access
19) Maintenance Pump Overhaul Building
20) Records Room
21) Hot Machine Shop
22) Resin Storage (New Warehouse)
23) Storage (New Warehouse)
24) Emergency Operations Facility, Mechanical and Electrical Equipment Room
25) Emergency Operations Facility, Respirator Fit Test Room

APPENDIX B

HALON AND CO_2 SYSTEMS



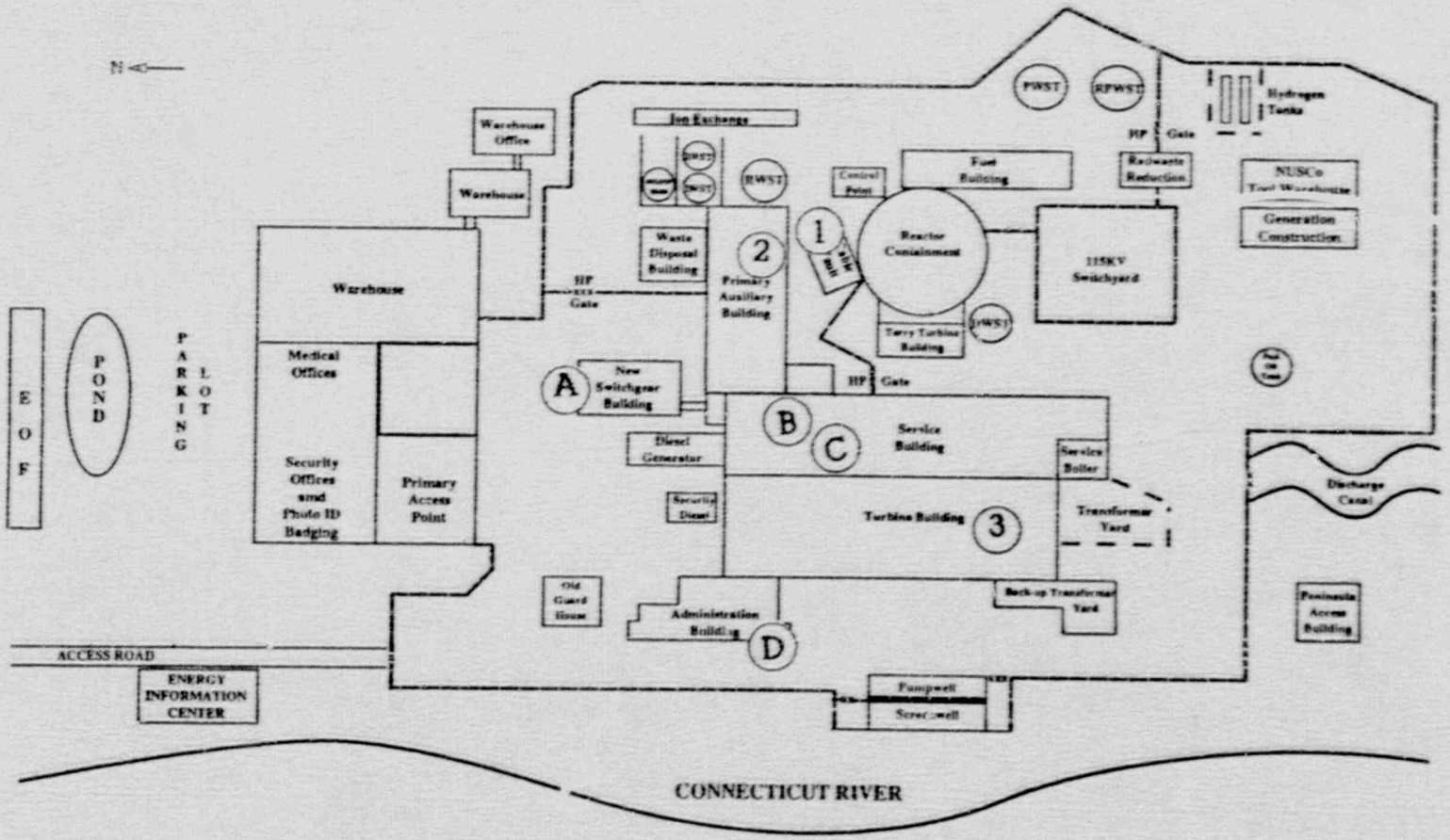
CO₂ PROTECTED AREAS

1. DIESEL FUEL OIL VAULTS
2. CABLE TUNNELS
3. EAST, WEST, NORMAL SWITCHGEAR ROOMS
4. CABLE SPREADING ROOMS
5. ALTEREX ENCLOSURE
6. AUX. BOILER FUEL OIL PIT
7. MCC/ROD CONTROL AREAS
8. UNIT 2 EXCITER
9. UNIT 1 EXCITER
10. JET ENCLOSURE

HALON PROTECTED AREAS

A. INSTRUMENT RACK ROOM (UNDER FLOOR)
B. NUCLEAR RECORDS VAULT
C. UNIT 2 COMPUTER ROOM
D. UNIT 2 SWITCHGEAR EAST/WEST ROOMS
E. UNIT 1 CONTROL ROOM
F. UNIT 1 COMPUTER ROOM

CONNECTICUT YANKEE ATOMIC POWER COMPANY - HADDAM NECK PLANT



Carbon Dioxide Systems

1. Cable Vault
2. Charcoal Filters
3. Exciter

Halon Systems

A. Third Floor, Switchgear
B. Control Room, Computer Room, CAS
C. Switchgear
D. Records Vault

APPENDIX C

DOSIMETRY ISSUE FORMS

MILLSTONE

—DO NOT WRITE IN SHADED AREAS—

APPROVED BY	DATE	SORC MTG NO
Stephen Dean	11/4/87	87-41

OP4166-2 REV 10-86

DOSIMETRY ISSUE

NAME (LAST)	FIRST	M.I.

SOCIAL SECURITY NO	DATE OF BIRTH	AGE	SEX (CHECK)
			☐ MALE ☐ FEMALE

PERMANENT MAILING ADDRESS	CITY	STATE	ZIP CODE

EMPLOYER	CO.	JOB FUNCTION	CODE

EMPLOYER PHONE ON SITE	PICTURE BADGE NO	STORAGE LOCATION
		☐ AAP ☐ PAP ☐ NAP

EMPLOYER'S ADDRESS

HP TRAINING	WBC	QTR. EXPOSURE LIMIT	HELPORE ID
			☐ NEW ☐ UPDID

1. Have you ever worn a personal monitoring device? (TLD or Film Badge) ☐ YES ☐ NO

   A. If yes, at Millstone? ☐ YES ☐ NO

2. List locations where monitoring devices were worn within the past three months. _____

LOCATION	DATE		EXPOSURE	TYPE (WHOLE BODY) SKIN, EXTREMITY
	FROM	TO		

FIRST QTR = (JAN, FEB, MAR) SECOND QTR = (APRIL, MAY, JUNE) THIRD QTR = (JULY, AUG, SEPT) FOURTH QTR = (OCT, NOV, DEC)

3. What is your estimated whole body exposure for the current quarter? _____ Current year? _____

4. Do you have any medical restrictions that would prohibit you from working with radioactive materials or in radiation areas? ☐ YES ☐ NO

5. NUSCO PERSONNEL ONLY. Have you worn a respirator since your last whole body count? ☐ YES ☐ NO

HLPR ASSIGN	TLD #	TYPE	LOCATION WORN	ISSUE DATE	END DATE	RESULT	COMMENTS

I hereby certify that the above information is correct to the best of my knowledge.

SIGNATURE	DATE

REBADGE ☐ 01 ☐ 00

NAME	SOCIAL SECURITY NO

HELPDRE ASSIGN	TLD NO	TYPE	LOCATION WORN	ISSUE DATE	END DATE	RESULT	COMMENTS

NORTHEAST UTILITIES

WHOLE BODY COUNT VERIFICATION

OP4251 3-86

NAME (LAST)	FIRST	SOCIAL SECURITY NO

COMPANY NAME	DEPARTMENT

TYPE OF COUNT (SCAN)

REASON FOR COUNT

☐ INITIAL ☐ TERMINATION ☐ ANNUAL

COMMENTS

—HEALTH PHYSICS USE ONLY—

CHAIR COUNTER:

☐ #1 ☐ #2

TECHNICIAN'S SIGNATURE	DATE

Data input _____/_____
Date Initials

CONNECTICUT YANKEE
DOSIMETRY ISSUE

SECURITY BADGE #

NAME (LAST)	(FIRST)	(MIDDLE INITIAL)	AGE 1
SOCIAL SECURITY NO.	DATE OF BIRTH		SEX 2
STREET ADDRESS	CITY	STATE	ZIP CODE
EMPLOYED BY	JOB FUNCTION	JOB SUPERVISOR	
EMPLOYER ADDRESS			
ESTIMATED TIME AT THIS SITE			

1. Have you ever worn a personnel monitoring device (TLD, Film Badge, Pocket Dosimeter?)

☐ Yes ☐ No

2. Have you ever worn a personnel monitoring device at this station?

☐ Yes ☐ No If Yes, When

MONTH/YEAR

3. Have you worn a personnel monitoring device within the present quarter?

☐ Yes ☐ No If Yes, indicate below

(1st Qtr. Jan.-Mar./2nd Qtr. Apr.-Jun./3rd Qtr. Jul.-Sep./4th Qtr. Oct.-Dec.)

LOCATION	DATE		EXPOSURE (IN MREM)
	FROM	TO	

3a. What is your estimated whole body exposure for the current year? Total = _____ mrem

4. Do you have any medical restrictions that would prohibit you from working with radioactive materials or in radiation areas?

☐ Yes[3] ☐ No

I hereby certify that the above information is correct to the best of my knowledge.

SIGNATURE	DATE

1. IF 17 YEARS OF AGE OR LESS, NOTIFY HEALTH PHYSICS SUPERVISOR.
2. OCCUPATIONALLY EXPOSED FEMALES MUST COMPLETE 8.13 REGULATORY GUIDE LECTURE.
3. IF YES, NOTIFY HEALTH PHYSICS SUPERVISOR.

Records requested _____
Date

DOSIMETRY USE ONLY	
MILLSTONE DATES	
BODY COUNT	RESP FIT

CONNECTICUT YANKEE ATOMIC POWER COMPANY

SP # 2-8

HADDAM NECK PLANT
RR #1, BOX 127E, EAST HAMPTON, CONN. 06424

OP4167-1 3-80

To: Date: _____

Subject: Request for Report of Radiation History of

NAME	BIRTH DATE	SOCIAL SECURITY NO.

PERIODS OF EXPOSURE _____

_____

_____

Gentlemen:

Under the provisions of the U.S. Nuclear Regulatory Commission "Rules and Regulations, Title 10, Part 19.13, Notifications and Reports to Individuals," and Title 10, Part 20.102 "Determination of Accumulated Dose," we request a report of the radiation exposure history of this individual for the time employed at your facility. Also include the exposure to the skin of the whole body and the extremeties.

A statement authorizing the release of the requested information is given below.

Very truly yours,

Health Physics Supervisor

I hereby authorize release of the requested information to the above company making this request.

SOCIAL SECURITY NUMBER	SIGNATURE OF INDIVIDUAL	DATE

CONNECTICUT YANKEE ATOMIC POWER COMPANY

DP4169-1 REV. 12-88

VISITOR RADIATION INDOCTRINATION AND DOSIMETRY RECORD

NAME (LAST)	FIRST	M.I.	AGE	SOCIAL SECURITY NO.	DATE OF BIRTH

STREET ADDRESS	CITY	ST	ZIP CODE

I have been given a copy of the Northeast Utilities Visitor's Radiation Indoctrination Training Manual. I have read and understood this indoctrination manual, and am satisfied that I have been given the opportunity to ask questions concerning radiation protection, risks and station procedures. Further, I understand that I must remain with the radiation escort assigned to me at all times, while in the radiological control area. The escort will provide all instructions necessary to ensure good radiation protection practices and conformance to station procedures. I recognize that I may receive radiation exposure during this visit at **CONNECTICUT YANKEE ATOMIC POWER COMPANY.**

VISITOR'S SIGNATURE	DATE

FOR FEMALES ONLY:

I have had the Appendix to Regulatory Guide 8.13 presented to me both orally and in written form. I have had the opportunity to ask questions concerning the information in the Appendix and understand that I am allowed to receive occupational radiation exposure not to exceed 125 mrem/calendar quarter.

VISITOR'S SIGNATURE	DATE

ESCORT SECTION

ESCORT'S NAME (LAST)	FIRST	M.I.	SOCIAL SECURITY NO.

PURPOSE OF VISIT

STATION RADIOLOGICAL AREAS ENTERED

	IN	OUT	IN	OUT	IN	OUT	TOTAL EXPOSURE
VISITOR'S DOSIMETER READINGS							
ESCORT'S DOSIMETER READINGS							

I have ensured that this Visitor Record is complete, the proper dosimeter readings are recorded and the visitor will receive a copy of this record.

(SIGN AFTER EXPOSURE IS RECEIVED)

ESCORT'S SIGNATURE	DATE

ORIGINAL - HEALTH PHYSICS CANARY - HEALTH PHYSIC'S VISITOR

NORTHEAST UTILITIES

DOSIMETRY CHECKLIST

NAME (last)	(first)	(initial)	SSN
COMPANY/DEPARTMENT			

1. TRAINING

	DATE	INITIAL RESULT	SIGNATURE	DATE	RETEST RESULT	SIGNATURE
A. SS&E		[ ] Pass Fail [ ]			[ ] Pass Fail [ ]	
B. Radworker Classroom		[ ] Pass Fail [ ]			[ ] Pass Fail [ ]	
C. Radworker Practical		[ ] Pass Fail [ ]			[ ] Pass Fail [ ]	

	DATE	SITE	SIGNATURE
2. WHOLE BODY COUNT *		[ ] CY [ ] MP	
3. MEDICAL CLEARANCE *		[ ] CY [ ] MP	
4. PULMONARY FUNCTION +		[ ] CY [ ] MP	
5. RESPIRATOR FIT +		[ ] CY [ ] MP	

* Required for dosimetry issue + Required for respirator issue

DO NOT LOSE THIS FORM

Bring completed form to the Dosimetry Office for dosimetry issue.

REVIEW QUESTIONS

1. If a fire door must remain open you must contact?

2. The telephone numbers for the Control Room are:

   Millstone Unit 1

   Millstone Unit 2

   Millstone Unit 3

   Connecticut Yankee

3. The Station evacuation alarms are tested _____ at Millstone and _____ at Connecticut Yankee.

4. During an evacuation at Millstone non-essential personnel in the Protected Area should evacuate to the _____.

5. What action should be taken when a minor injury has the potential of being contaminated?

6. Non-essential personnel at Connecticut Yankee should evacuate to the _____.

7. Where is your dosimetry stored at Millstone and Connecticut Yankee when you go home at night?

8. What area extends 20 - 25 feet from the security fence where no material should be stored?

9. What administrative guidelines are set for whole body dose at Northeast Utilities?

10. Whose approval is required to upgrade an individual's exposure guideline to 2,000 mrem/qtr.?

11. Exposure received at Millstone when not on an RWP should be recorded on

12. What action should be taken if your TLD or PIC is damaged?

13. Where are the radiological survey results kept at Millstone and Connecticut Yankee?

14. An RWP is required for entry into what areas at Connecticut Yankee and Millstone?

15. What is required for entry into a High Radiation area?

16. An area where the highest dose rate is 50 mrem/hr is posted as a

_____ area.

17. What is the release limit for loose surface contamination on tools or areas?

18. When frisking, an increase of _____ cpm indicates a person or item is contaminated.

19. If you are frisking and the frisker alarms, what action is required?

20. What are the prerequisites for obtaining respiratory protection?

21. _____ and _____ shall not be worn with respirators.

22. What action is required when an ARM alarms?

23. A CAM is used to monitor ___ _____.

24. An uncontrolled release of radioactive materials is called a

_____.

Use the survey below to answer questions 25-29.

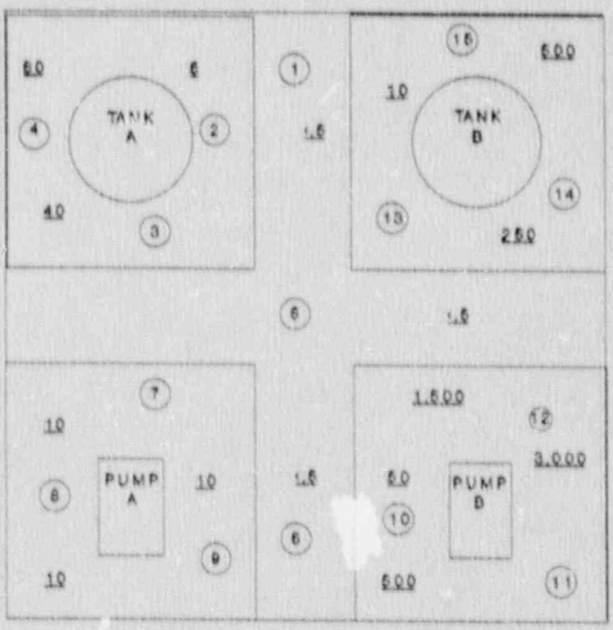
25. What would be required to enter Tank Room A?

26. What would be required to enter Pump Room A to perform an inspection...
...At Millstone
...At Connecticut Yankee

27. Which room(s) must be locked or continuously guarded?

28. What would be the requirements to enter Tank Room B?

29. After exiting Pump Room B, what type of personnel contamination monitoring is required?



SMEAR RESULTS	
POINT	DPM/100CM^2
1	<1K
2	2K
3	10K
4	20K
5	<1K
6	<1K
7	<1K
8	<1K
9	<1K
10	<1K
11	<1K
12	<1K
13	<1K
14	<1K
15	<1K

ANSWERS TO REVIEW QUESTIONS

Answers to review questions:

1. The Control Room

2. MP1 - 4252 MP2 - 4352
   MP3 - 6200 CY - 211

3. MP - monthly; CY - every Friday at noon

4. Nearest access point and out to its parking lot

5. Have a Health Physics Technician check the wound for contamination.

6. Energy Information Center

7. MP - security access point; CY - health physics control point

8. Isolation zone

9. Whole body limit - 2500 mrem/qtr not to exceed 4,500 mrem/yr.

10. Health Physics Manager approval

11. Incidental Exposure Sheet

12. Immediately leave the RCA, notify Health Physics Manager and obtain new dosimeter upon his approval.

13. MP - outside each health physics office; CY - with the RWP at the control points.

14. Connecticut Yankee: any Radiological Control Area. Millstone: High Radiation Area, Airborne Area, Contaminated Area, any other area posted with an "RWP required" sign.

15. Dosimetry, RWP, and a survey meter

16. Radiation Area

17. < 1000 dpm/100cm2

18. > 100 CPM

19. Stay where you are and notify a Health Physics Technician.

20. 1. successful completion of radiation worker training
    2. fit test
    3. pulmonary function test/medical evaluation
    4. whole body count

21. Glasses with temple bars, beards

22. Stop what you are doing, warn others, exit area quickly, notify a health physics technician, check your dosimeter.

23. Airborne radioactivity

24. Spill

25. Dosimetry, RWP, Protective Clothing

26. At Millstone: Dosimetry
    At Connecticut Yankee: Dosimetry and RWP

27. Pump Room B

28. Dosimetry, RWP, survey meter, pre-job briefing

29. Minimum requirement-hand and foot frisk, with use of the PCM-1 a whole body frisk is accomplished.

NOTES

MILLSTONE 2 (PWR)
Waterford, Connecticut

Current Capacity:	**862 MW**
Construction Permit:	**December 1970**
Fuel Load:	**August 1975**
Commercial Operation:	**December 1975**
Reactor Manufacturer:	**Combustion Engineering, Inc.**
Turbine Generator Manufacturer:	**General Electric Company**
Engineer/Constructor:	**Bechtel Corporation**
Initial Cost:	**$424.4 million**
Net Investment (12/89):	**$716.5 million****
Decommissioning Scheduled to Begin:	**2015**
Projected Decommissioning Cost:	**$209.8 million (12/89 Dollars)**

Ownership:

Northeast Utilities: **100 percent**

Performance Statistics	NU's Entitlement*
Capacity Factor (1989):	64.7 percent
(1975-1989):	65.9 percent
Net Generation (1989):	4,434,000 MWh
(1975-1989):	67,514,000 MWh
Total Gross Generation:	71,919,000 MWh
Oil Equivalent (1989):	8.4 million barrels (whole plant)
(1975-1989):	127 million barrels (whole plant)

MILLSTONE 3 (PWR)
Waterford, Connecticut

Current Capacity:	**1,156 MW**
Construction Permit:	**August 1974**
Fuel Load:	**November 1985**
Commercial Operation:	**April 1986**
Reactor Manufacturer:	**Westinghouse Electric Corporation**
Turbine Generator Manufacturer:	**General Electric Company**
Engineer/Constructor:	**Stone & Webster Engineering Corporation**
Initial Cost (Approximate):	**$3.77 billion**
Net Investment (12/89):	**$2.008 billion (NU's 65.1715% investment)**
Decommissioning Scheduled to Begin:	**2025**
Projected Decommissioning Cost:	**$293.2 million (12/89 Dollars)**

Ownership:

	Percent	MW
Connecticut Light and Power Company (CL&P):	52.9330	611.905
Western Massachusetts Electric Company:	12.2385	141.477
TOTAL – NU	65.1715	753.382
New England Power Company:	12.2050	141.090
Massachusetts Municipal Wholesale Electric Company:	4.7990	55.476
Montaup Electric Company:	4.0090	46.344
The United Illuminating Company:	3.6850	42.599
Public Service Company of New Hampshire:	2.8475	32.917
Central Maine Power Company:	2.5000	28.900
Central Vermont Public Service Corporation:	1.7303	20.002
City of Chicopee, Massachusetts:	1.3500	15.606
Connecticut Municipal Electric Energy Cooperative, Inc.:	1.0870	12.566
Vermont Electric Generation and Transmission Cooperative, Inc.:	0.3500	4.046
Fitchburg Gas and Electric Light Company:	0.2170	2.509
Lyndonville (VT) Electric Department:	0.0487	0.563

Performance Statistics	Total Unit	NU's Entitlement*
Capacity Factor (1989):	70.6 percent	
(1986-1989):	73.2 percent	
Net Generation (1989):	7,112,000 MWh	4,116,000 MWh
(1986-1989):	27,487,000 MWh	17,324,000 MWh
Total Gross Generation:	28,683,000 MWh	–
Oil Equivalent (1989):	12.5 million bbl	7.2 million bbl
(1986-1989):	48.6 million bbl	30.6 million bbl