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JAMES A. FITZPATRICK NUCLEAR POWER PLANT
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FROM: CATHY IZYK - EMERGENCY PLANNING DEPARTMENT

SUBJECT: EMERGENCY PLAN AND IMPLEMENTING PROCEDURES

Enclosed are revisions to your assigned copy of the JAFNPP Emergency Plan and Implementing Procedures. Please remove and **DISCARD** the old pages. Insert the attached, initial and date this routing sheet and return the completed routing sheet to ***Cathy Izyk in the Emergency Planning Department within 15 days.*** If this transmittal is not returned within 15 days, your name will be removed from the controlled list.

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ENTERGY NUCLEAR OPERATIONS, INC
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

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SECTION 1

DEFINITIONS/ACRONYMS

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1.0 DEFINITIONS/ACRONYMS

1.1 Definitions

This section contains the definition of terms for the James A. FitzPatrick Nuclear Power Plant.

Accident Management Team (AMT) - Staff in the Control Room (CR) or Technical Support Center (TSC) used to implement the Severe Accident Operating Guidelines (SAOG's)

Accountability - The process by which the onsite emergency organization determines the location of personnel in order to identify missing and/or injured personnel.

Activated - . A facility is in the process of being staffed after an order has been made to activate an emergency response facility

Alert - Events are in process or have occurred which involve a potential or actual substantial degradation of the level of safety of the plant, or a Security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act. Any releases are expected to be limited to small fractions of the EPA Protective Action Guides exposure levels beyond the site boundary.

Alternate NY State Warning Point (Alternate SWP) - The Alternate NY SWP is located in the New York State Police Communications Center in Public Security Building No. 22, State Office Building Campus, Albany, New York. This facility is manned 24 hours per day to receive Radiological Emergency Communication System (RECS) or alternate notifications during off-hours.

Area Radiation Monitor (ARM) - Instruments (some of which are fixed) which typically measures gross gamma radiation levels in a local area and alarms when the radiation exposure rate reaches the preset alarm level.

Assessment Actions - Those actions taken during or after an accident to obtain and process information necessary to make decisions to implement specific emergency measures.

Augmented Dose Assessment - Dose Assessment from the Emergency Offsite Facility (EOF) or Technical Support Center (TSC) utilizing dose assessment staff.

Committed Dose Equivalent (CDE) - The dose equivalent to organs or tissues of reference that will be received from an intake of radioactive material by an individual during the 50-year period following the intake (organ dose)(per EPA-400 definition).

Committed Effective Dose Equivalent (CEDE) - The sum of the products of the weighing factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to these organs or tissues.

Corporate Support Manager - Coordinates requests for personnel, equipment, materials, and support services during the emergency or recovery phase.

Corrective Actions - Those emergency measures taken to mitigate or terminate an emergency situation at or near the source of the problem in order to prevent an uncontrolled release of radioactive material or to reduce the magnitude of a release.

County Warning Point - The E-911 Center at the Oswego County Public Safety Building in Oswego. This serves as a notification point for messages from the utilities to appropriate officials in Oswego County.

Deep Dose Equivalent (DDE) - Applies to external whole body exposure, is the dose equivalent at tissue depth of 1 cm (1,000 mg/cm^2) [external whole body dose].

Dose Equivalent (DE) - The product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest; measured in rem or seivert.

Dose Projection - A calculated estimate of the potential dose to individuals at a given location, usually off site.

Emergency Actions - A collective term which encompasses the assessment, corrective and protective actions taken during the course of an emergency.

Emergency Action Levels (EAL) - Plant instrumentation readings, survey measurements, or off normal plant conditions that are used to classify an emergency. (See Emergency Classification System.)

Emergency Action Procedure (EAP) - The procedures which provide a detailed list of responsibilities and actions to be implemented by personnel staffing emergency facilities.

Emergency Alert System (EAS) [formerly Emergency Broadcast System (EBS)] - A network of radio stations organized to permit designated government officials a means of timely and efficient issuance of emergency information and instructions to the public.

Emergency Classification System - A system that categorizes certain abnormal plant conditions into one of the following classes:

- Unusual Event
- Alert
- Site Area Emergency
- General Emergency

Emergency Director (ED) - The position designated in the emergency response organization that has the authority and responsibility to implement and administer the Emergency Plan. The Shift Manager, Emergency Plant Manager, TSC Manager, or Operations Coordinator may act as the Emergency Director.

Emergency Dose Assessment Modeling System (EDAMS) - A Personal Computer (PC) based computer program that calculates release rates, dose projections, protective actions and obtains meteorological data for emergencies, based on data input.

Emergency Operations Center (EOC) - Designated state and county facilities, used for the assessment of emergency information and coordination and control of local and state emergency response personnel.

Emergency Operations Facility (EOF) - The designated and equipped facility that is used to provide continuous coordination with local, state, and federal agencies, and provide evaluation of FitzPatrick activities during an emergency having or potentially having environmental consequences. The EOF is located on County Route 176, approximately 12 miles south of the JAF plant.

Emergency Plan Implementing Procedures - The procedures, which detail the specific course of action for implementing the emergency plan at the JAF Facility.

Emergency Planning Manager - The individual responsible for the coordination of emergency planning efforts.

Emergency Plant Manager (EPM) - Individual normally assigned to the TSC who normally oversees the onsite and plant aspects of the emergency. The EPM reports to the Emergency Director and may assume the Emergency Director role.

Emergency Planning Zone (EPZ) - There are two Emergency Planning Zones. The first is an area, approximately 10 miles in radius around the JAFNPP, for which detailed emergency planning consideration of the Plume Exposure Pathway has been given to ensure prompt and effective protective actions for the public. The second is an area, approximately 50 miles in radius around the JAFNPP, for which emergency planning consideration of the Ingestion Exposure Pathway has been given to ensure effective preventative measures for the public.

Emergency and Plant Information Computer (EPIC) - A computer, which provides a display of plant data to the Control Room, Technical Support Center and Emergency Operations Facility. EPIC includes Safety Parameter Display System (SPDS) information.

Emergency Response Data System (ERDS) - A computerized link between JAF EPIC data system and the NRC Operations Center.

Emergency Response Facility (ERF) - ERF is a generic term referring to a facility that is used for emergency purposes. These facilities include the Control Room, Technical Support Center, Emergency Operations Facility, Operational Support Center, Alternate Operational Support Center, Joint Information Center, Oswego County Emergency Operations Center.

Emergency Response Planning Area (ERPA) - Pre-designated sub-areas within the 10-Mile Emergency Planning Zone used to more specifically target the recommendation of off site protective actions.

Emergency Response/Recovery Organization - The organizational structure within the White Plains Office and the James A. FitzPatrick Nuclear Power Plant Emergency Response Organization, which is responsible for coordinating response and recovery from emergency conditions at the plant.

Emergency Telecommunications System (ETS) - Part of the Federal Telecommunications system used by the NRC for emergency communications.

Exclusion Area - The property of the James A. FitzPatrick Nuclear Power Plant and Nine Mile Point stations surrounding the Protected Area in which the licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area.

Federal Radiological Monitoring and Assessment Plan - An arrangement whereby the Department of Energy and other federal agencies provide teams to assist JAFNPP, Oswego County and New York State with an in-depth capability during a radiological emergency.

Final Safety Analysis Report (FSAR) - Multi-volume report describing a nuclear power plant's site, design features, safety features and the utility's intended methods of operation.

General Emergency - Events, which are in process or have occurred which involve imminent or actual substantial core degradation or melting with the potential for loss of containment integrity, or Security events that result in an actual loss of physical control of the facility.

White Plains Office - The corporate offices of Entergy Nuclear Northeast, located at 440 Hamilton, White Plains, New York 10601.

Ingestion Exposure Pathway - A pathway by which individuals can be exposed to radiation from ingestion of contaminated water or foods such as milk, fresh vegetables, and fish.

Initial Dose Assessment - Dose assessment using a pre-calculated dose assessment value tree, to be conducted before augmented dose assessment.

Joint Information Center - Located next to the Oswego County Airport on Co. Rt. 176 in the Town of Volney. The Joint Information Center provides a central facility for the release of information to the public. The facility includes participants from JAFNPP, Nine Mile Point, Oswego County, New York State, and Federal Agencies.

Joint Information Center Director - ERO position whose primary responsibility is direction of all activities at the Joint Information Center and coordination of information.

Meteorological Monitoring System - A computer and software that accesses the main, backup and inland tower data. Data is accessible by EDAMS.

National Warning System (NAWAS) - A nationwide warning system used to warn of actual or impending natural or man-made disasters. NAWAS warning points are strategically located and are manned on a 24-hour-a-day basis.

New York State Emergency Operations Center (NYSEOC) - The New York State EOC is located in the substructure of the Public Safety Building No. 22, State Office Building Campus, Albany, New York. It is the State Command Post from which emergency operations will be directed and coordinated.

New York State Warning Point (SWP) - A center for receipt and dissemination of warnings of an attack upon the United States as well as for actual or impending natural or man-made disasters.

NSSS Supplier - Nuclear Steam Supply System Supplier, General Electric Company, San Jose, California.

Offsite - The area outside the Exclusion Area. Offsite surveys include the area inside the exclusion area, but outside the protected area.

Onsite - The area within the Exclusion Area.

Operational - The emergency facility has been activated and staffed, and has assumed responsibilities for performing its intended functions.

Operational Support Center (OSC) - The area on the 272' level of the old administration building that serves as an onsite assembly and dispatch area for plant survey, fire, rescue, and maintenance teams.

Oswego County Emergency Management Office (OCEMO) - The lead local government agency responsible for off site emergency response within the 10 mile EPZ surrounding the James A. FitzPatrick Nuclear Power Plant.

Oswego County Emergency Operations Center (OCEOC) -Located in the Emergency Management Office in the basement of the Oswego County Branch Building, Fulton, New York; serves as a command post from which emergency operations will be directed and coordinated.

Oswego County Warning Point (OCWP) - The dispatch center at Oswego E-911 Center in Oswego. This serves as a notification point for messages from the utilities to appropriate officials in the County.

Plant Data Acquisition System - A computer link making plant data available for onsite and offsite emergency facilities.

Plume Exposure Pathway - The principal exposure sources from this pathway are: a) external exposure to gamma radiation from the plume and from deposited material; and b) inhalation exposure from the passing radioactive plume. This pathway is commonly identified as the 10 mile EPZ.

Population at Risk - Those persons for whom protective actions are being or would be taken.

Primary Assembly Areas - Specific locations at the plant designated for the assembly of personnel in the event of a Protected Area Evacuation.

Projected Dose - The estimated radiation dose that would be received by individuals following a release of radiation.

Protected Area - The area within the plant security fence designated to implement the security requirements of 10 CFR 73.

Protected Area Evacuation - Evacuation of individuals from the Protected Area, with assembly at designated primary assembly areas.

Protective Actions - Actions taken in anticipation of / or after a release of radioactive material, for the purpose of preventing or minimizing radiological exposures to persons that would otherwise be likely to occur if the actions were not taken. Some of the protective actions are:

- Protected Area Evacuation On Site
- Site Evacuation
- Sheltering off site population
- Evacuation of the off site population
- Isolation of ingestion pathways and sources

Protective Action Guides (PAG) - Guidance developed by the Environmental Protection Agency regarding projected radiological dose or dose commitment values to individuals in the general population that warrant protective action following a release of radioactive material.

RADDOSE V - A sub-program of EDAMS that performs the dose assessment calculations during emergencies, based on input.

Radiologically Controlled Area (RCA) - Any area, access to which is limited for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. The RCA is posted with a sign bearing the radiation caution symbol in magenta, purple or black on a yellow background. Examples of radiologically controlled areas are:

- Reactor Building
- Turbine Building
- Radwaste Building
- Main Stack

Examples of other postings within an RCA include:

- RADIOACTIVE MATERIALS
- CONTAMINATED AREA
- AIRBORNE RADIOACTIVITY AREA
- HIGHLY CONTAMINATED AREA
- RADIATION AREA
- HIGH RADIATION
- VERY HIGH RADIATION AREA

Radiological Emergency Communications System (RECS) -System used to provide initial notification of an emergency, and continuing emergency information, to the State, Oswego County and Nine Mile Point Stations.

Recovery Activities - Those actions taken after the emergency to restore the plant as nearly as possible to its pre-emergency condition.

Remote Assembly Area - Specific locations outside the JAFNPP exclusion area for the assembly of personnel in the event of a Site Evacuation. The primary Remote Assembly Area is the Oswego County Airport on Co. Rt. 176 in the Town of Volney.

Restricted Area - An area, access to which is limited by the licensee, for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Separate rooms or areas in any building may be set apart as a restricted area. The restricted area is that area inside of the protected area fence and any other area within the site boundary that is appropriately identified and restricted from unauthorized entry.

Severe Accident Operating Guidelines (SAOG's) - Guidelines for use by the Accident Management Team (AMT) to assist in dealing with a Severe Accident.

Safety Parameter Display System (SPDS) - System providing a display of plant data from which the safety status of plant operations may be assessed in the Control Room, Technical Support Center and Emergency Operations Facility.

Site Area Emergency - Events which are in process, or have occurred, which involve potential or actual major failure of plant functions needed for protection of the public, or Security events that result in intentional damage or because of intentional malicious dedicated efforts of hostile action:

(1) toward site personnel or equipment that could lead to the likely failure of, or:

(2) prevents effective access to equipment needed for the protection of the public.

Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guide exposure levels beyond the site boundary.

Site Evacuation - Evacuation of all people, except NMPNS personnel, from the exclusion area and evacuation of all nonessential personnel from the JAFNPP protected area via the security gate to the designated Remote Assembly Area or home.

Site Recovery Director - The Site Recovery Director is responsible for the management of recovery operations and other support functions. The Recovery Director is the senior company official who has the requisite authority, management ability and technical know-how to manage the nuclear power plant recovery operations. He has full authority to make required decisions regarding plant recovery without consulting higher management.

Spokesperson - ERO position whose primary responsibility is to act as the individual to coordinate all outgoing information to public officials, the news media and to the public.

Staffed - The emergency response facility has been activated and sufficient personnel are available to perform the required functions as determined by the facility manager.

State Emergency Operations Center - The New York State EOC is located in the substructure of the Public Safety Building No. 22, State Office Building Campus, Albany, New York. It is the State Command Post from which emergency operations will be directed and coordinated.

State Warning Point (SWP) - A center for receipt and dissemination of warnings of an attack upon the United States as well as for actual or impending natural or man-made disasters.

Technical Support Center (TSC) - The emergency facility activated and staffed by plant management and other personnel during an emergency to utilize technical data and displays to provide direction for implementation of emergency procedures, and in-depth technical support to Control Room activities. Located on the second floor of the old administration building.

Technical Support Guidelines (TSG's) - Guidelines providing information for use by the AMT.

Thyroid Dose and Thyroid Dose Rate - These terms have been replaced with Committed Dose Equivalent-Thyroid (CDE-Thyroid). CDE-Thyroid is defined as the internal dose that will be received by the thyroid over 50 years following an intake of radioactive materials plus the deep dose equivalent to the thyroid. For application offsite, dose to the child thyroid has been agreed upon by the New York State Dose Assessment Task Force. For application onsite to JAFNPP emergency workers, an adult thyroid dose is used.

Total Effective Dose Equivalent (TEDE) - The sum of the Deep Dose Equivalent (DDE) plus Committed Effective Dose Equivalent (CEDE) from inhalation components.

Unrestricted Area - An area, access to which is neither limited nor controlled by the licensee.

Notification of Unusual Event (NUE) - Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection. No releases of radioactive material requiring offsite response or monitoring are expected, unless further degradation of safety systems occurs.

Web-based Emergency Operations Center (WebEOC) - A crisis information management software tool.

Whole Body Dose and Whole Body Dose Rate - These terms have been replaced with Total Effective Dose Equivalent (TEDE). TEDE is defined as the sum of the deep dose equivalent (DDE)(external dose) and the inhalation components. The New York State Utilities Dose Assessment Task Force agrees with the recommendation of NUMARC in defining TEDE (previously external dose) as the DDE and any measurable thyroid CEDE components during the early phase of the emergency. The early phase is defined up to the first four days after an emergency. In this usage, the TEDE rate may be considered equivalent to a gamma dose rate reading on a fixed or portable survey instrument. Actual iodine, particulate and ground shine dose components should be factored in to the TEDE as soon as possible, although this is not required for initial TEDE determination. Default iodine to noble gas ratios may be used until actual data becomes available. Since the iodine contribution to TEDE is very small using the default ratio of approximately 1E-4, it can be omitted from the determination of TEDE.

1.2 Acronyms

AE	Architect/Engineer
ALARA	As Low As Reasonably Achievable
AMT	Accident Management Team
AOP	Abnormal Operating Procedure
ARM	Area Radiation Monitor
BRH	New York State Bureau of Radiological Health
CDE	Committed Dose Equivalent
CEDE	Committed Effective Dose Equivalent
CWP	County Warning Point
DDE	Deep Dose Equivalent
DE	Dose Equivalent
DLR	Dosimeter Legal Record
DO	Duty Officer
DOE	U. S. Department of Energy
EAL	Emergency Action Level
EAP	JAFNPP Emergency Action Procedure
EAS	Emergency Alert System
ECCS	Emergency Core Cooling System
ED	Emergency Director
EDAMS	Emergency Dose Assessment Modeling System
EMS	Emergency Medical Service

ENS	Emergency Notification System
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
EP	EOP Support Procedure
EPA	Environmental Protection Agency
EPC	Emergency Planning Coordinator
EPM	Emergency Plant Manager
EPP	NMPNS Emergency Plan Implementing Procedure
EPZ	Emergency Planning Zone
ERDS	Emergency Response Data System
ERPA	Emergency Response Planning Area
ETS	Emergency Telecommunications System
FEMA	Federal Emergency Management Agency
FRMAP	Federal Radiological Monitoring and Assessment Plan
FSAR	Final Safety Analysis Report
IAP	JAFNPP Emergency Plan Immediate Action Procedure
JAFNPP	James A. FitzPatrick Nuclear Power Plant
JIC	Joint Information Center
KI	Potassium Iodide
LCO	Limiting Condition of Operation
LOCA	Loss of Coolant Accident
MSIV	Main Steam Isolation Valve
NAWAS	National Warning System
NFO	Nuclear Facility Operator
NGDO	Nuclear Generation Duty Officer
NMPNS	Nine Mile Point Nuclear Station
NRC	U. S. Nuclear Regulatory Commission
NSSS	Nuclear Steam Supply System
NWS	National Weather Service
NYSDOH	New York State Department of Health
NYSEOC	New York State Emergency Operations Center
NYSEMO	New York State Emergency Management Office
NYSPIO	New York State Public Information Officer
NYSWP	New York State Warning Point
OCEMO	Oswego County Emergency Management Office
OCEOC	Oswego County Emergency Operations Center
OCNFLO	Oswego County Nuclear Facility Liaison Officer

OP	Operating Procedure
OSC	Operational Support Center
OSRC	Onsite Safety Review Committee
PA	Public Address
PAG	Protective Action Guides
PAR	Protective Action Recommendation
PASS	Post Accident Sampling System
PNS	Prompt Notification System
RCA	Radiologically Controlled Area
RECS	Radiological Emergency Communications System
RERP	Radiological Emergency Response Plan
SAOG	Severe Accident Operating Guidelines
SAP	JAFNPP Emergency Plan Supplemental Action Procedure
SBGT	Standby Gas Treatment
S/D	Shutdown
SEMO	State Emergency Management Office
SEOC	State Emergency Operations Center
SGTS	Standby Gas Treatment System
SM	Shift Manager
SUNY	State University of New York
SWP	State Warning Point
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeter
TSC	Technical Support Center
TSG	Technical Support Guidelines
WPO	White Plains Office

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ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN VOLUME 1

PROCEDURE NO: SECTION 2

TITLE: SCOPE AND APPLICABILITY

APPROVED BY: Brian M. Fenn
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SECTION 2

SCOPE AND APPLICABILITY

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SECTION 2

SCOPE AND APPLICABILITY

2.0 SCOPE AND APPLICABILITY

2.1 Description of the Plant and Site

The James A. FitzPatrick Nuclear Power Plant (JAFNPP) is a single-unit electric power generating plant equipped with a boiling water reactor rated at approximately 2536 megawatts thermal with a net electrical output of approximately 850 megawatts. The plant's principal components are a nuclear steam generating system, a turbine-generator unit, 345 kv and 115 kv switchyards, lake water pumping facilities complete with intake and discharge structures, and other auxiliary equipment.

The plant consists of five principal buildings interconnected to form one structure approximately 640 feet long and 250 feet wide. These buildings are the turbine building, the reactor building, the radwaste building, the pump house and screen well building, and the administrative building. There is a 385 ft. high stack located approximately 400 feet south of the plant. The 345 kv and 115 kv switchyards are approximately 200 feet west of the plant. Figure 2.1 shows a map of the site. The plant buildings and switchyards use approximately one percent of the total site area. About 600 acres of the site has been left in its natural condition.

The plant site is on the shore of Lake Ontario in the town of Scriba, Oswego County, New York. The plant is located adjacent to and east of the Nine Mile Point Nuclear Station (NMPNS) which is operated by another Corporation. Figure 2.5 shows a map of the combined NMPNS/JAFNPP Site. Exclusion distances for the NMPNS/JAFNPP site are 3,000 feet to the east, over a mile to the west and approximately one and one-half miles to the southern site boundary. Markers have been placed in Lake Ontario denoting an exclusion distanced north of the plant site. These markers are removed prior to the onset of the winter season. For the purpose of off-site emergency planning, the NMPNS/JAFNPP sites are considered to be one exclusion area. This exclusion area may also be referred to as the site boundary or combined owner controlled areas.

2.2 Emergency Planning Zones

There are two Emergency Planning Zones (EPZ). The first is the Plume Exposure Pathway Emergency Planning Zone which is an area approximately 10 miles in radius around the JAFNPP (see Figure 2.2), for which detailed emergency planning consideration of the plume exposure pathway has been given to ensure prompt and effective protective actions for the public. The second is the Ingestion Exposure Pathway Emergency Planning Zone which is an area approximately 50 miles in radius around the JAFNPP (see Figure 2.3), for which emergency planning consideration of the ingestion exposure pathway has been given to ensure effective protective measures for the public.

The area within 10 miles of the James A. FitzPatrick Nuclear Power Plant is located on Lake Ontario and in Oswego County. Oswego County is predominantly rural in nature with the majority of its total land acres consisting of woodland, wetlands and inactive agricultural land. Although active agricultural lands account for only a small part of the total land acres, agriculture is the major land use in the county.
In recent years, there has been a trend toward fewer farms and increased residences in low density areas.

Available statistics indicate that the area surrounding the site is primarily woodland with some active agricultural land. The major agricultural activity in Oswego County is dairy, accounting for the greatest percentage of the value of all farm products produced in the county. The major harvested crops are hay, alfalfa, and corn. The major livestock animals are cattle.

The industrial activities within 10 miles of the site are confined principally to the city of Oswego and the community of Scriba, with little industry in the outlying communities of Minetto, Volney, and Mexico. One facility in the immediate area is the NOVELIS manufacturing plant which is located approximately three miles southwest of the site on Route 1. An electrical generating facility has been constructed adjacent to the NOVELIS manufacturing plant.

The public institutions, aside from the schools and churches, within the 10 mile Plume Exposure EPZ of the site are a hospital and a college in the city of Oswego. There are no public institutions within five miles of the site.

A detailed listing of special facilities in Oswego County within the 10 mile Plume Exposure EPZ is presented in the "Oswego County Radiological Emergency Response Plan."

2.3 **Population**

The total 2003 population of the plume exposure pathway EPZ is 41,903. (This data is extrapolated from 2000 census data and is discussed in Appendix K of the Emergency Plan.) Most of the population within the plume EPZ is located in metropolitan Oswego, which is seven miles southwest of the plant. The population of Oswego was 18,047 in 2000. The population density of the immediate area surrounding the site is quite low. The only other major concentration of population in the plume EPZ is the Village of Mexico, located approximately nine miles from the site, which contains about 1,592 residents. According to the 2002 Residence Census performed for the Radiological Environmental Monitoring Program, the nearest permanent resident is on Lake Road, about 0.7 miles east-southeast of the plant. The population distribution within 10 miles of the site is presented in Figure 2.4.

2.4 Scope

This JAFNPP Emergency Plan provides guidance for response to both on site and off site emergency situations. The plan provides responses to all levels of emergencies that have an actual or potential degradation of the level of safety at JAFNPP. To this end, this plan has been prepared in general accordance with NUREG-0654/FEMA-REP-1, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980.

This plan presents the organization and emergency response activities that will be performed to provide an organized response to an accident. Detailed actions are described in the Emergency Plan Implementing Procedures. Inter-relationships of this plan with procedures, other plans and emergency arrangements include:

a. Detailed actions to be taken by plant personnel in response to emergency conditions are described in Emergency Plan Implementing Procedures. A listing of JAFNPP Emergency Plan Implementing Procedures is contained in Appendix A.

b. Plant Operating Procedures are coordinated with the Emergency Plan and Implementing Procedures to ensure appropriate actions are taken on a timely basis.

c. The JAFNPP Radiation Protection Procedures define such areas as radiological controls and precautions, personnel decontamination and instructions for health physics activities. These instructions are implemented on a routine basis and may be used during emergency situations as necessary. Specific Implementing Procedures, such as those necessary for emergency radiological surveys, are included in the Emergency Plan Implementing Procedures.

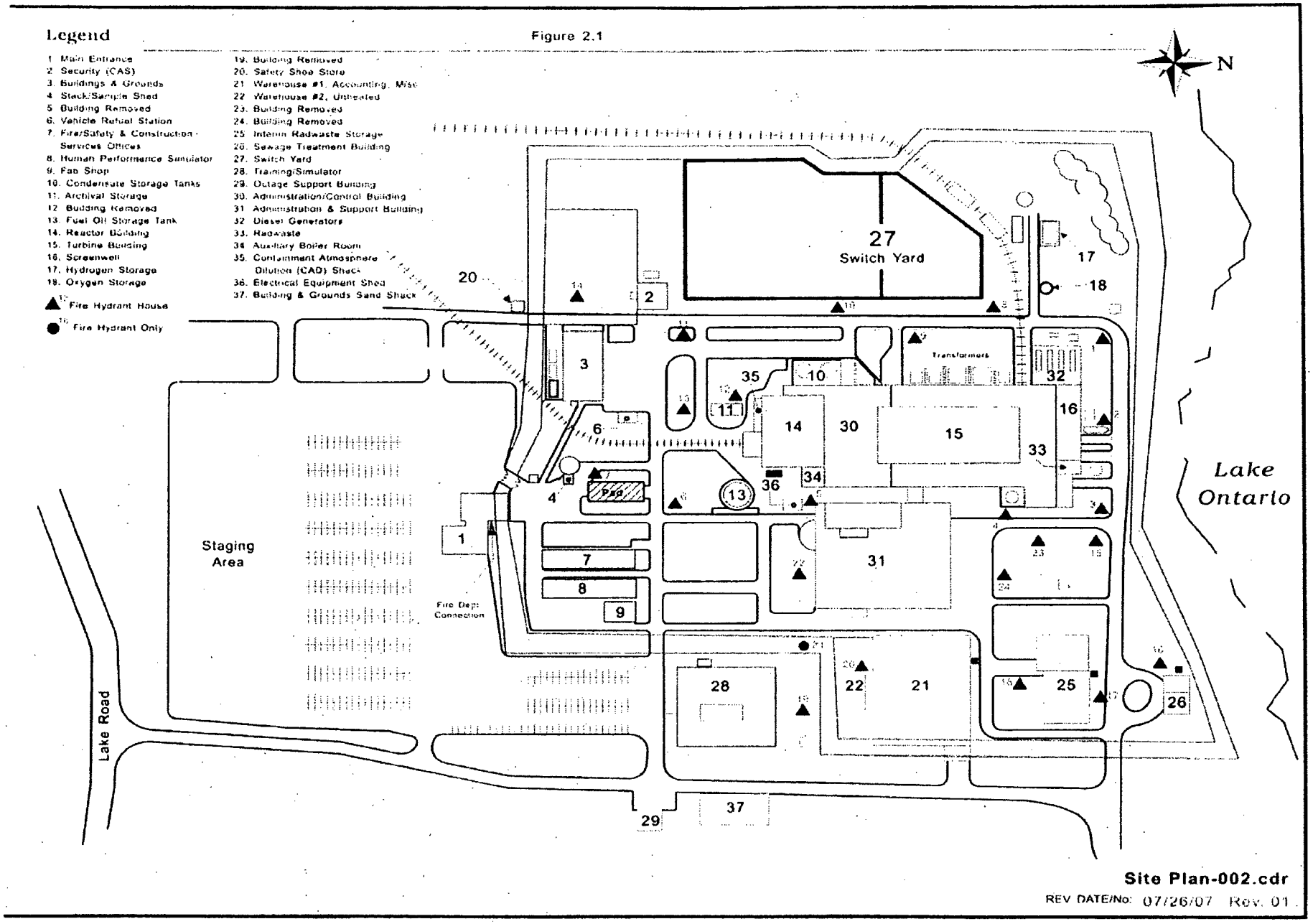
d. The JAFNPP Security and Safeguards Plans and Implementing Procedures and the Emergency Plan and Implementing Procedures are coordinated to ensure compatibility. The Oswego County Radiological Emergency Preparedness Plan and the New York State Radiological Emergency Plan, in conjunction with this Plan and Implementing Procedures, provide for early and redundant notification schemes, continual assessment and update, and the initiation of protective actions.

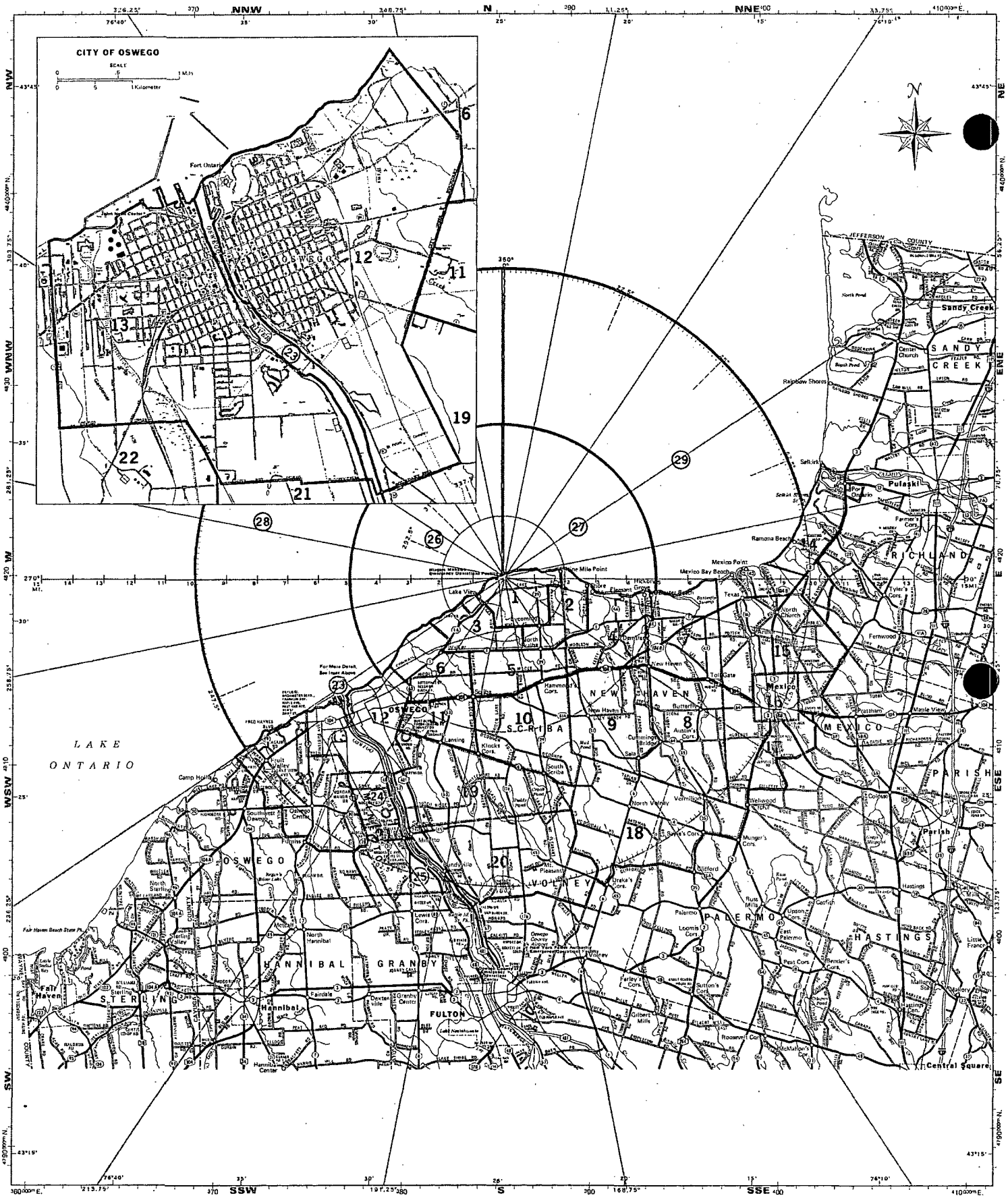
e. The concept of JAF emergency operations and its relationship to the Federal, State, County and private organizations is described in Section 5.0 and 6.0. A block diagram which illustrates these interrelationships is included in Figure 5.1.

2.5 **Figures, Forms and Attachments**

Figure 2.1	JAFNPP Fenced Area Map
Figure 2.2	Plume Emergency Planning Zone (10 Mile Radius)
Figure 2.3	Ingestion Emergency Planning Zone (50 Mile Radius)
Figure 2.4	Population Distribution by Emergency Response Planning Area
Figure 2.5	Combined NMPNS/JAFNPP Site Map

Figure 2.1


Legend
Figure 2.1
1. Main Entrance
2. Security (CAS)
3. Buildings & Grounds
4. Stack/Sample Shed
5. Building Removed
6. Vehicle Refuel Station
7. Fire/Safety & Construction Services Offices
8. Human Performance Simulator
9. Fab Shop
10. Condensate Storage Tanks
11. Archival Storage
12. Building Removed
13. Fuel Oil Storage Tank
14. Reactor Building
15. Turbine Building
16. Screenwell
17. Hydrogen Storage
18. Oxygen Storage
Fire Hydrant House
Fire Hydrant Only
19. Building Removed
20. Safety Shoe Store
21. Warehouse #1, Accounting, Misc
22. Warehouse #2, Unheated
23. Building Removed
24. Building Removed
25. Interim Radwaste Storage
26. Sewage Treatment Building
27. Switch Yard
28. Training/Simulator
29. Outage Support Building
30. Administration/Control Building
31. Administration & Support Building
32. Diesel Generators
33. Radwaste
34. Auxiliary Boiler Room
35. Containment Atmosphere Dilution (CAD) Shack
36. Electrical Equipment Shed
37. Building & Grounds Sand Shack
N
27
Switch Yard
Transformers
Staging Area
Fire Dept Connection
Lake Road
Lake Ontario
Site Plan-002.cdr
REV DATE/No: 07/26/07 Rev. 01



Ten Mile Emergency Planning Zone (Plume Exposure Pathway)

LEGEND

- Interstate Highways
- U.S. & State Highways
- County Roads
- Town Roads
- County Boundaries
- Township Boundaries
- City & Village Boundaries
- Railroads
- Emergency Response Planning Areas (ERPA) & Number — 22
- ERPA – Water Area Nos. — 27

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Chester, Vermont 05143

SCALE
0 5 1 2 3 4 Miles
0 1 2 3 4 5 Kilometers

James A. FitzPatrick/Nine Mile P
Radiological Emergency Plans and Procedu

MAP NUMBER 1

Figure 2.3

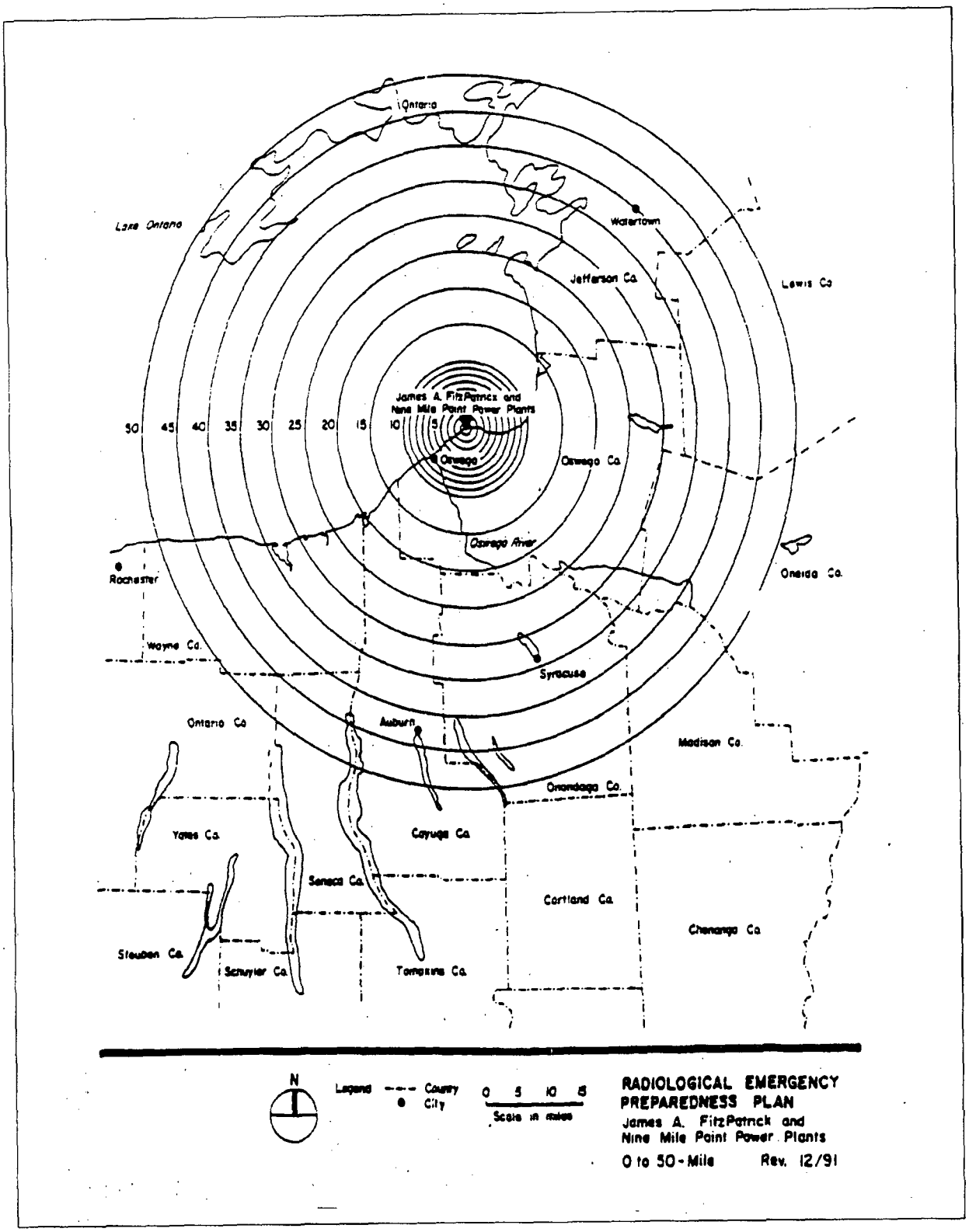
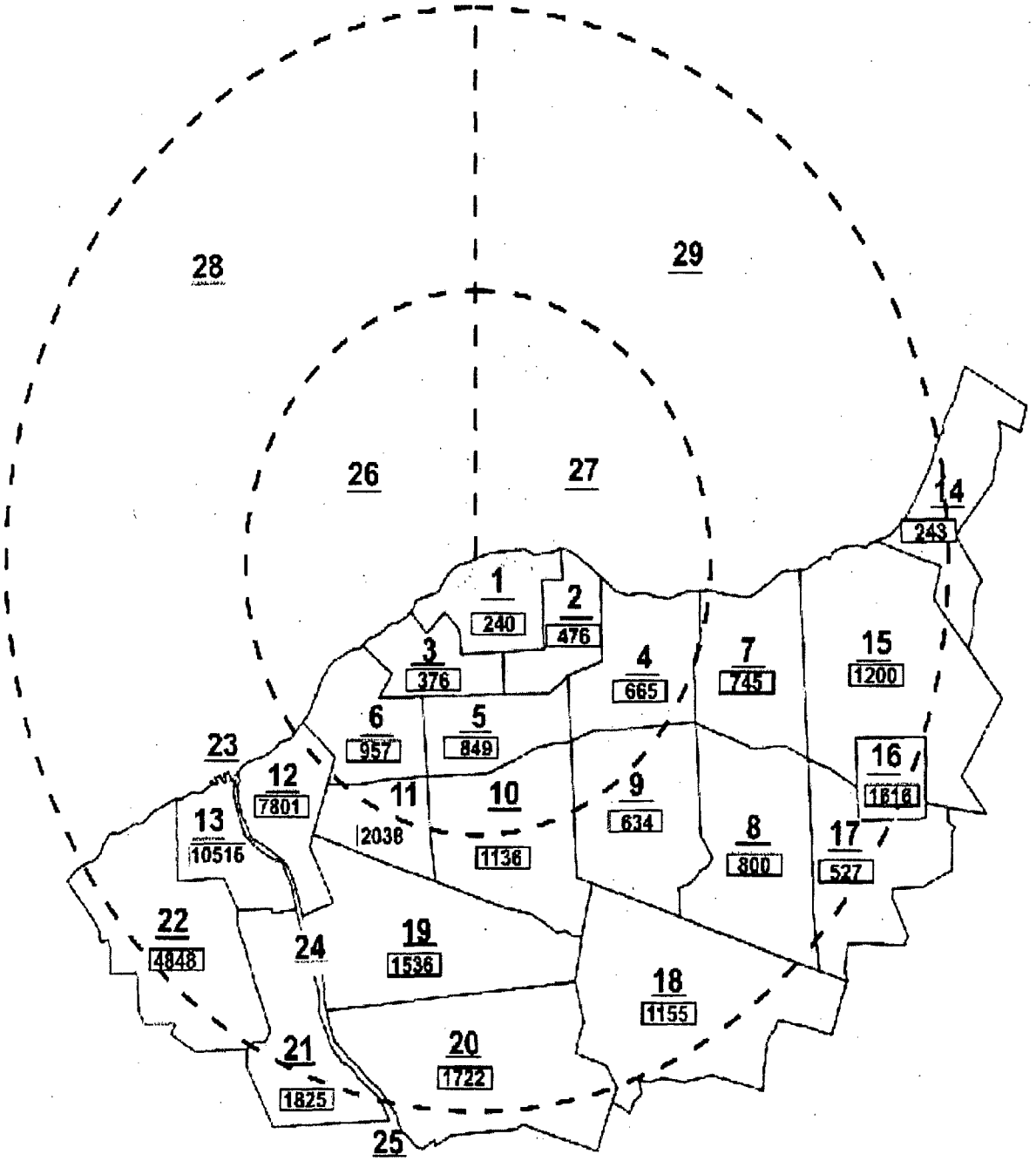

Ontario
Lake Ontario
Watertown
Jefferson Co.
Lewis Co.
James A. FitzPatrick and Nine Mile Point Power Plants
50 45 40 35 30 25 20 15 10 5
Oswego
Oswego Co.
Oswego River
Rochester
Oneida Co.
Wayne Co.
Syracuse
Ontario Co.
Auburn
Madison Co.
Onondaga Co.
Yates Co.
Cayuga Co.
Seneca Co.
Cortland Co.
Chenango Co.
Steuben Co.
Schuyler Co.
Tompkins Co.
N
Legend
County
City
0 5 10 15
Scale in miles
RADIOLOGICAL EMERGENCY PREPAREDNESS PLAN
James A. FitzPatrick and Nine Mile Point Power Plants
0 to 50-Mile
Rev. 12/91

Figure 2.4
Figure 2.4



LEGEND 1 ERPA Number 240 ERPA Population

2003 Population Estimates Emergency Response Planning Areas (ERPAs)

J.A. FitzPatrick/Nine Mile Point Radiological Emergency Response Plan and Procedures

Figure 2.4 (continued)

2003 PERMANENT RESIDENT POPULATION ESTIMATES

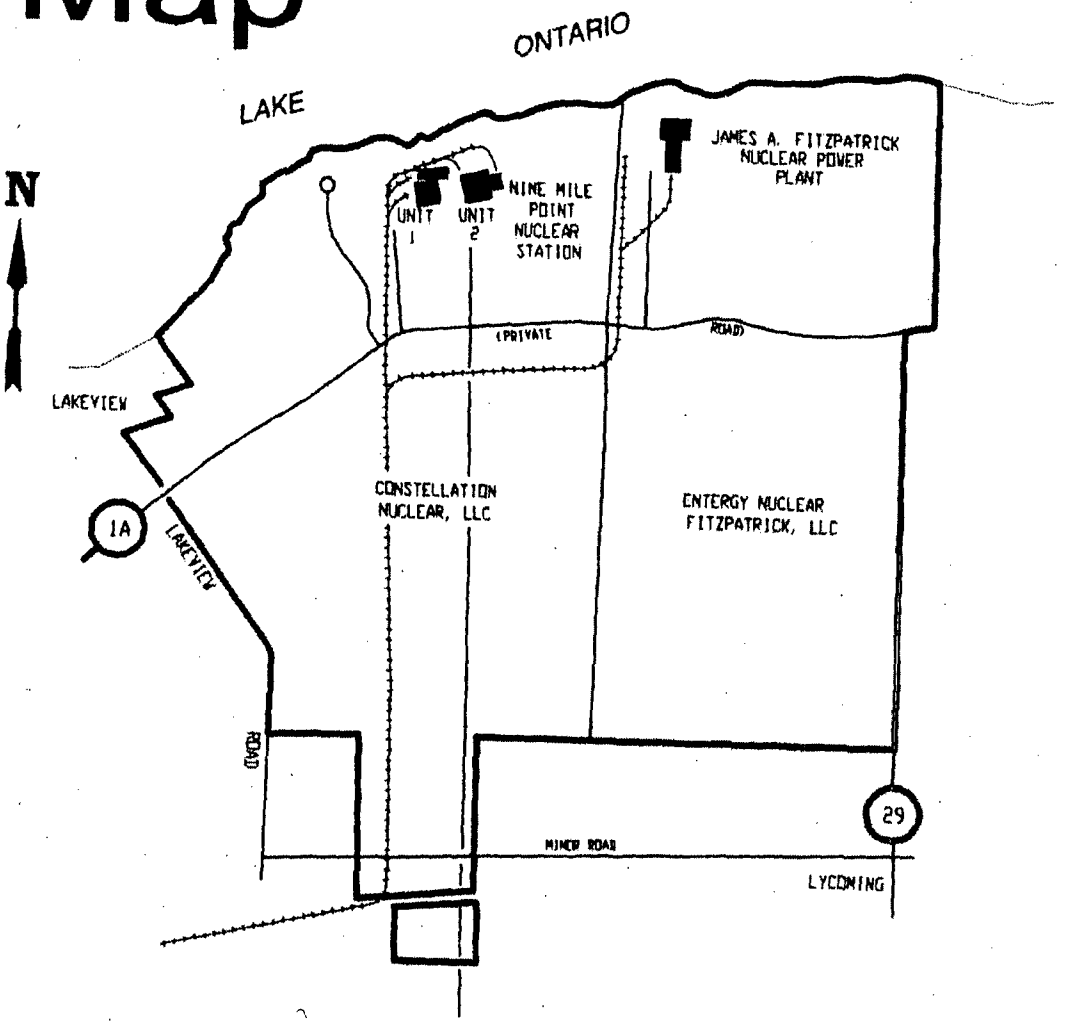
EMERGENCY RESPONSE PLANNING AREAS

EMERGENCY RESPONSE PLANNING AREA	2003 PERMANENT RESIDENT POPULATION ESTIMATES
1	240
2	476
3	376
4	665
5	849
6	957
7	745
8	800
9	634
10	1,136
11	2,038
12	7,801
13	10,516
14	243
15	1,200
16	1,616
17	527
18	1,155
19	1,536
20	1,722
21	1,825
22	4,848
TOTAL	41,903

Source: NYSEMO from 2000 census data.

Figure 2.5

Site Map



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ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO: SECTION 3

TITLE: SUMMARY OF THE JAFNPP EMERGENCY PLAN

APPROVED BY: _____
Director of Safety Assurance

APPROVED BY: _____ 12/13/7
Emergency Planning Manager

EFFECTIVE DATE: 12/28/2007

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Rev. No. 11

SECTION 3

SUMMARY OF THE JAFNPP EMERGENCY PLAN

3.0 SUMMARY OF THE JAFNPP EMERGENCY PLAN

The JAFNPP Emergency Plan is a three volume set of documents which is organized into Volume 1 - Emergency Plan and Volumes 2 & 3 -Implementing Procedures.

Volume 1 - "Emergency Plan" describes the preparedness program that has been established, implemented and coordinated by the JAFNPP staff to ensure the capability for responding to emergencies.

Volumes 2 & 3 - "Implementing Procedures" contains detailed step-by-step methods to be used for the specialized functions performed during implementation of the emergency plan. Volume 3 also contains Emergency Plan maintenance procedures used by the Emergency Planning Department to maintain the plan and procedures. These three volumes are supported by the emergency plans of the state, county, and private agencies involved in an emergency response.

The JAFNPP Emergency Plan describes the emergency response organization that will be in place during an emergency and describes the interfaces with and responsibilities of the corporate, state, county, federal, and private organizations.

County, State and Federal agencies having lead responsibilities specifically related to this Emergency Plan are:

a. New York State Department of Health (NYSDOH) - The lead State emergency response agency, responsible for requesting necessary monitoring and for activating assessment and evaluation of personnel, equipment and other resources.

b. New York State Emergency Management Office (NYSEMO) - Responsible for developing, implementing, and maintaining comprehensive emergency plans and procedures for prompt reactions to potential emergencies at nuclear power plants in New York or in bordering states and adjoining provinces.

c. Oswego County Emergency Management Office (OCEMO) - Designated by local laws and executive orders to coordinate Oswego County's emergency response.

d. U.S. Nuclear Regulatory Commission (NRC) - The cognizant Federal agency responsible for verifying appropriate emergency plans have been implemented and for conducting investigative activities associated with an emergency.

e. U.S. Federal Emergency Management Agency (FEMA) - The Federal agency designated to serve as the contact point for State officials and to coordinate and manage all non-technical aspects of the Federal response.

f. U.S. Department of Energy (DOE) - The Federal agency responsible for coordinating offsite monitoring, evaluation and assessment activities.

Emergency response is categorized by the following four functional areas:

a. Initiation

Initiation of the emergency response occurs with the classification of a situation into one of the four emergency classes: Notice of Unusual Event (NUE), Alert, Site Area Emergency, and General Emergency. Based on the level of emergency, the appropriate plant staffing, emergency facility activation, and notification of offsite authorities occurs. Appropriate initial action to alleviate the situation is taken in accordance with plant operating procedures.

b. Assessment

The emergency, and its potential or actual radiological consequences, is assessed by the plant operating and emergency staffs. Onsite plant instrumentation, both fixed and portable, and other parametric measurements provide data for projecting radiological exposures. Offsite, radiological survey teams sample air, effluent water, snow, rain, vegetation, and milk; measure ambient gamma and beta radiation levels; and otherwise evaluate actual environmental levels of radiation to provide radiological data. The most reliable assessment data available are utilized to make offsite and onsite protective action recommendations.

c. Protective and Corrective Action

Based on the assessment, onsite or offsite protective actions may be required. The Emergency Director, or Emergency Plant Manager, may implement the plant protective actions of protected area or site evacuation. Also, only the Emergency Director may recommend to offsite authorities that the implementation of protective actions is appropriate. These actions may include sheltering or evacuation. It is the responsibility of offsite authorities to evaluate these recommendations and implement any protective actions in accordance with Oswego County Radiological Emergency Preparedness Plans and the New York State Radiological Emergency Preparedness Plan and their respective implementing procedures.

Corrective actions will be implemented by onsite personnel to alleviate the emergency situation. Onsite personnel may be supported by local offsite organizations in implementing onsite corrective actions.

d. Recovery

Once the emergency situation has been controlled, recovery begins. Recovery is defined as: restoration of the plant to its pre-emergency conditions. The onsite emergency organization will be supported with assistance from corporate, federal, and private organizations, as needed.

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ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO: SECTION 4

TITLE: EMERGENCY CONDITIONS

APPROVED BY: Brian W. Fenn
Director of Safety Assurance

APPROVED BY: P. Cullinan 12/19/7
Emergency Planning Manager

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SECTION 4

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SECTION 4

EMERGENCY CONDITONS

4.0 **EMERGENCY CONDITIONS**

4.1 Classification System

This plan and its associated implementing procedures provide the means for responding to a wide range of emergency conditions. These emergency conditions have been categorized into four emergency classes, which cover the spectrum of postulated accidents. The classification system used in this plan has been developed based on the guidance contained in NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels" and NRC Bulletin 2005-02 "Emergency Preparedness and Security Related Events" and is compatible with the systems used by county and state agencies.

Emergency conditions will be evaluated using Implementing Procedure IAP-2, Classification of Emergency Conditions. That procedure contains event categories, initiating conditions, and emergency action levels for each of the four emergency classes. The emergency action levels are specific plant conditions, instrument readings, alarms, or other conditions that indicate that an abnormal condition exists which warrants the declaration of an emergency and implementation of the emergency plan.

The purpose of the emergency classification system is to initiate a planned response to a given severity of accident. JAFNPP, county, and state plans and implementing procedures provide for specific emergency organization, notification, emergency facility activation, and preliminary actions to be taken based on the level of emergency that is declared.

As the emergency situation changes, the emergency class will be reviewed and revised in accordance with IAP-2. This allows for the augmentation of emergency personnel and resources to respond to a more severe emergency and provides for an orderly close out of the emergency and entry into recovery operations once the situation has been controlled.

Facility activation may be modified by the Emergency Director if the safety of incoming personnel may be jeopardized by a security event or other event hazardous to incoming personnel.

4.1.1 Unusual Event

This class applies to an unusual plant condition, which either has occurred or is impending. This plant condition could eventually lead to a potential degradation in overall safety or indicate a security threat to facility protection. Inherently, however, this is a situation in which sufficient time is available to take precautionary and constructive steps to prevent a more serious event or to mitigate any consequences that may occur.

The primary purpose for this class is to ensure that the plant operating staff recognizes initiating conditions, takes appropriate action such as assessment and verification, and comes to a state of readiness to respond if the condition becomes more severe. The Unusual Event class requires that off site authorities be notified of the event.

No protective actions will be recommended to state and county authorities for an Unusual Event and no offsite agency response is required. The TSC, OSC, or other facilities may be activated as a precautionary measure, or to assist as needed.

4.1.2 Alert

An Alert emergency class is declared when events are in process or have occurred which involve an actual or potential substantial degradation of the level of plant safety or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of HOSTILE ACTIONS. Although the potential for limited releases of radioactivity in excess of technical specification limits may exist, the initial assessment leading to this class indicates that it is unlikely that a public hazard will be created. An Alert requires response by the plant emergency organization, augmentation of on site emergency resources and constitutes the lowest level where emergency off site response may be required.

The declaration of an Alert results in the activation of the Technical Support Center (TSC), Emergency Operations Facility (EOF), Operational Support Center (OSC) and the Joint Information Center (JIC). The JIC may be declared operational prior to a Site Area Emergency at the discretion of the JIC Director, or designee. Also prompt initial and follow-up notification is provided to federal, state, and local authorities.

At the Alert classification, the EOF and/or JIC may be deactivated at the discretion of the Emergency Director if operation is not necessary based upon conditions or events. (This decision should be discussed with State and County prior to deactivation of the EOF or JIC.)

Although initial and follow-up notification to state and county authorities will include projected off site exposures, if applicable, no protective actions will be recommended to those authorities since the exposures possible during an Alert are below the Protective Action Guides (PAG).

4.1.3 Site Area Emergency

The Site Area Emergency class is declared when events are in process or have occurred which involve actual or probable major failures of plant functions needed for protection of the public or security events that result in intentional damage because of intentional malicious dedicated efforts of HOSTILE ACTIONS; (1) towards site personnel or equipment that could lead to the likely failure of or; (2) prevents effective access to equipment needed for the protection of the public. Many events within this class constitute an actual or clear potential for significant releases of radioactive material to the environment. These releases, however, are not normally in excess of the PAGs.

The Technical Support Center (TSC), Operational Support Center (OSC), Emergency Operations Facility (EOF) and Joint Information Center will be activated for a Site Area Emergency.

The declaration of a Site Area Emergency requires the notification of federal, state, and county authorities so that they may activate their emergency operation centers and dispatch key emergency personnel.

4.1.4 General Emergency

The General Emergency class is declared when events are in process or have occurred which involve actual or imminent substantial core degradation or melting with the potential for loss of containment integrity and significant releases of radioactivity to the environment or security events that result in an actual loss of physical control of the facility.

The Technical Support Center (TSC), Operational Support Center (OSC), Emergency Operations Facility (EOF), and Joint Information Center will be activated for a General Emergency.

The declaration of a General Emergency requires the notification of federal, state, and county authorities so that they may activate their emergency operating centers and dispatch key emergency personnel. A General Emergency involves the potential or actual release of airborne radioactivity which may result in off site projected exposures that would exceed the limits specified in the USEPA Protective Action Guides. The Emergency Director will recommend protective actions to state and county authorities based on actual measurements, projections, or calculations.

It is the responsibility of state and county authorities to implement off site protective actions and to provide an independent determination of the type and extent of such actions.

4.2 Spectrum of Postulated Accidents

The Emergency Action Levels contained in IAP-2 Classification of Emergency Conditions provide the ability for classifying approximately sixty discrete types and levels of events. However, in order to develop the maximum projected exposure information contained in Figure 4.2, it was necessary to evaluate several discrete accidents. The discrete accidents addressed in this section are those which are defined in the JAFNPP FSAR Update as "design basis accidents."

4.2.1 Control Rod Drop Accident

An accident that results in radioactive material release from the fuel with the Reactor Coolant Pressure Boundary, Primary Containment and Secondary Containment intact.

As an example, this accident is postulated to occur with the reactor in hot standby, critical condition, and is expected to result in the failure of about 330 fuel rods. With the elimination of the automatic closure of the Main Steam Isolation Valves (MSIVs) on high radiation fission products will be transported to the offgas system and subsequently out the stack. The whole body dose at the site boundary is detailed in the JAFNPP FSAR.

4.2.2 Refueling Accident

An accident that results in radioactive material release directly to the Secondary Containment with the Primary Containment not intact.

As an example, this accident is postulated to occur with the reactor in shutdown condition with the vessel head removed. A fuel assembly is assumed to drop onto the top of the core, resulting in the failure of about 440 fuel rods. The refueling floor ventilation radiation monitoring system alarms, isolates the ventilation system, and starts operation of the Standby Gas Treatment System (SGTS), within about one minute.

Noble gases and radioiodines are released to the reactor coolant, migrate to the secondary containment, and are released to the environment through the SGTS.

4.2.3 Main Steam Line Break

An accident that results in radioactive material releases outside the Secondary Containment.

As an example, this accident is postulated to occur with the reactor operating at rated conditions. The steam line break occurs outside the secondary containment and releases reactor coolant for a period no longer than 10.5 seconds, until complete closure of the MSIVs. Noble gases and radioiodines in the coolant are assumed to be released directly to the environment.

An estimate of the resultant exposures as shown in Figure 4.2 is for worst case conditions. Actual exposures are proportional to the fission product activity in the steam, as monitored by the off-gas release rate prior to the accident. The exposures in Figure 4.2 are based on the assumption that the off-gas release rate is at the upper limiting condition for operation.

4.2.4 Loss of Coolant Accident (LOCA)

An accident that results in radioactive material release directly to the Primary Containment.

As an example, this accident is postulated to involve a complete circumferential break of a recirculating loop pipe inside the primary containment with the reactor operating at full power. The accident results in the release of a significant quantity of fission products into the primary containment, leakage into the secondary containment, and release to the environment through the SGTS.

4.2.5 Other Accident Types

Additional accident types have been included for the purposes of dose assessment. The types allow for the variability of isotopic mixtures and, by pre-establishing isotopic mixtures and developing a ratio of containment to atmosphere leakage, allow for simplified use. These include accidents "Containment Design Basis Accident" and "Severe Accident."

4.3 **Figures, Forms, and Attachments**

Figure 4.1	Recommended Protective Actions for the General Population and Emergency Workers
Figure 4.2	Maximum Estimated Doses Resulting From Design Basis Accidents

FIGURE 4.1

RECOMMENDED PROTECTIVE ACTIONS FOR THE GENERAL POPULATION AND EMERGENCY WORKERS

PAGs for the Early Phase of a Nuclear Incident

Protective Action	PAG (projected dose)	Comments
Evacuation (or sheltering[a])	1 - 5 rem[b]	Evacuation (or, for some situations, sheltering[a]) should normally be initiated at 1 rem.
Administration of stable iodine	5 rem[c]	Per local and State upon declaration of a GE

[a]Sheltering may be the preferred protective action when it will provide protection equal to or greater than evacuation, based on consideration of factors such as source term characteristics, and temporal or other site-specific conditions.

[b]The sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent incurred from all significant inhalation pathways during the early phase. Committed dose equivalents to the thyroid and to the skin may be 5 and 50 times larger, respectively. Reference: Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA-400-R-02-001, May 1992.

[c]Committed dose equivalent to the child thyroid from radioiodine, per "Implementation of the Use of Potassium Iodide (KI) as a Protective Agent for the Public", March 2003.

Guidance on Dose Limits for Workers Performing Emergency Services

Dose Limit[a] (rem)	Activity	Condition
5	All	
10	Protecting valuable property	Lower dose not practicable
25	Life saving or protection of large populations	Lower dose not practicable
>25	Life saving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved

[a]Sum of external effective dose equivalent and committed effective dose equivalent to nonpregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any other organ (including skin and body extremities) to ten times the listed value. These limits apply to all doses from an incident, except those received in unrestricted areas as members of the public during the intermediate phase of the incident.

FIGURE 4.2

MAXIMUM ESTIMATED DOSES RESULTING FROM
DESIGN BASIS ACCIDENTS

	Maximum Estimated Dose (rem)			
	Whole Body		Thyroid	
Postulated Accident	0-2 Hours 3000 Feet	0-30 Days 3.4 Miles	0-2 Hours 3000 Feet	0-30 Days 3.4 Miles
Control Rod Drop	0.0142	0.0049	0.201	0.137
Refueling	2.40 TEDE	0.270 TEDE	———	———
Main Steam Line Break	0.0906	0.0111	7.14	0.799
Loss of Coolant	2.34	1.89	62.2	68.7

Estimated doses taken from Chapter 14 of the JAFNPP FSAR

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JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO: SECTION 6

TITLE: EMERGENCY MEASURES

APPROVED BY: _____
Director of Safety Assurance

APPROVED BY: _____ P. Cullinan 12/13/7
Emergency Planning Manager

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SECTION 6

EMERGENCY MEASURES

6.0 EMERGENCY MEASURES

Emergency measures are actions taken to ensure that an emergency situation is assessed and that proper corrective and/or protective actions are taken. These actions include activation of the appropriate components of the emergency organizations, both onsite and offsite; assessment of plant systems status and radiological conditions; corrective actions to ameliorate or terminate an emergency situation; protective actions to minimize the consequences of the emergency to plant personnel and to the general public in the plant environs; decontamination and medical treatment for plant personnel; and other supporting actions such as timely and accurate emergency news dissemination to the public media.

Emergency actions are initiated primarily in response to alarmed instrumentation, but may be initiated through notification to the Control Room by the first individual at the JAFNPP to become aware of an apparent emergency situation.

The occurrence of an off-normal event will initiate the classification of that event via an established procedure into one of the four emergency classes. Once an emergency is classified and declared, the implementation of the JAFNPP Emergency Plan Implementing Procedures will begin. This plan and procedures provide for the implementation of measures to respond to the emergency. The following sections provide a description of the emergency measures.

6.1 Activation of the Emergency Organization

Prior to an emergency being declared, the normal plant operating organization is in place. The initial classification of an off-normal event occurs in the Control Room and is performed by the Shift Manager (see Section 4). Upon the classification and declaration of an emergency the Shift Manager assumes the role of Emergency Director and retains that role until a designated Emergency Director can assume control. It is the primary responsibility of the Shift Manager, however, to act in accordance with any Emergency Operating Procedures (EOPs), and Abnormal Operating Procedures (AOPs) to verify the proper operation of engineered safety features prior to implementation of the emergency plan procedures.
The Emergency Director will, upon classification of the emergency, immediately initiate IAP-1, EMERGENCY PLAN IMPLEMENTATION CHECKLIST. This procedure directs the initiation of notification and activation of the emergency organization and for the initiation of corrective and protective actions appropriate for the emergency class.

6.1.1 Notification and Activation of Onsite Organization

The onsite emergency organization is activated by personnel notification or when the station alarm is sounded and the emergency is announced over the public address system.

Initially, the emergency response organization will consist of the normal operating shift personnel who will function as the emergency team members. The normal operating staff will be augmented, as needed, by plant personnel and corporate headquarters personnel. Those personnel onsite will respond when the station alarm is sounded and the announcement is made or when individuals are notified by another means. Personnel not onsite during off-hours operations or located at the corporate headquarters will be notified. A designated on-staff plant employee shall perform notifications. The details of notifying all emergency operations personnel during normal and off-hours are contained in EAP-17, EMERGENCY ORGANIZATION STAFFING.

The emergency organization for each class of emergency is discussed in Section 5 of this Plan. Figures 5-2 and 5-3 the normal organization and the Emergency Augmented Staff.

6.1.2 Notification and Activation of Offsite Organizations

The offsite organization will be notified as soon as possible after the declaration of an emergency. Offsite notifications will be made in accordance with EAP-1.1, OFFSITE NOTIFICATIONS. Notifications will be made to:

a. NRC

b. State of New York, Nine Mile Point Nuclear Station and Oswego County

c. Company headquarters

The contents of the initial notification message are in a pre-arranged notification form that will be used by both the transmitting and receiving parties. The initial messages will transmit key information. Date, time, location of emergency, person reporting information and telephone number, the emergency class, whether a release is occurring, the potentially affected area (s), the protective actions recommended, and meteorological conditions are included on the form. No verification of message authenticity is required when the notification will be transmitted via a dedicated telephone line. The content of the notification message will be verified with the State of New York. It is the responsibility of the State to verify message content with other State and Local government agencies. The notification will be repeated for each change in emergency classification or on a periodic basis in accordance with EAP-1.1.

Once the initial notification is made, additional information will be transmitted from JAFNPP to offsite agencies. These follow-up messages will consist of the following information in addition to that transmitted during the initial notification (if known and appropriate):

a. General Release Information

b. Atmospheric Release Information

c. Waterborne Release or Surface Spill Information

d. Dose/Dose Rate Calculations

e. Field Measurements of Dose Rates or Surface Contamination

The information will be transmitted and received in accordance with EAP-1.1.

Additional follow-up information regarding plant parameters will be transmitted, if known and appropriate, in accordance with EAP-1.1. The following plant system information may be transmitted:

a. Primary coolant system information

b. Safety coolant system information.

c. Radiation monitoring system information

In addition to those organizations notified, other offsite agencies may be contacted as indicated in EAP-1.1, OFFSITE NOTIFICATIONS. The Emergency Director will ensure that offsite emergency support groups are contacted to request the type and level of assistance, which may be necessary to deal with the emergency condition. The following organizations may be contacted for assistance, either through direct telephone contact or by message relay through the Oswego County Sheriff's Department or Oswego E-911 Center:

a. Local fire departments through agreement with the Oswego County Fire Coordinator
b. Oswego Hospital
c. University Hospital
d. Oswego County Sheriff's Department
e. Nine Mile Point Nuclear Station
f. United States Department of Energy
g. Radiation Management Consultants
h. R.E. Ginna Nuclear Power Plant

Letters of agreement are maintained with each of the offsite agencies, which specify the commitment of that organization to provide assistance to JAFNPP. Copies of the letters of agreement are contained in Appendix C to this plan. The offsite agencies contacted will activate their organizations to the level required in accordance with their plans and procedures. See Appendix J of this Plan for a list of supporting documents.

In addition to the services provided by the above-mentioned organizations, support may be provided by other private organizations. Copies of letters of agreement are contained in Appendix C of this Plan.

6.2 Assessment Actions

Provisions are made for assessment and continuing reassessment throughout the course of an emergency to ensure the effective coordination, direction and upgrading of emergency activities in a timely manner. The assessment actions are described in detail in the Emergency Plan Implementing Procedures. The assessment functions and the general methodology and techniques utilized are identified in this section.

Initially, the Shift Manager will assume the responsibility for the emergency response direction and coordination and will take charge of all assessment activities until these functions are turned over to another designated Emergency Director. Once the normal shift organization has been augmented, the Radiological Support Coordinator, or designee, will direct all in-plant and out-of-plant survey teams and the dose assessment activities of JAFNPP.

6.2.1 Assessment Actions and General Discussion

Unusual Event

Continuous assessment of the status of plant systems and radiological conditions is provided by plant instrumentation and is supplemented by routine surveillance function. The occurrence of an Unusual Event will be recognized by instrument indications and / or alarms, surveillance results or other observations of an off-normal condition by an individual at the plant.

Many events within this classification involve exceeding the Limiting Conditions of Operation cases, assessment and corrective actions are described in detail in operating procedures. Supplementary assessment actions are described, where appropriate, in the Emergency Plan Implementing Procedures.

For events which require dispatching of emergency teams, such as a fire or damage control, the initial and continuing assessment will be performed by the team leader. Through training and experience the team leader will be able to evaluate the condition, implement proper corrective action and escalate the response as necessary.

Offsite dose projections will be performed if the event involves radiological effluents exceeding the Technical Specification limits or if such releases are projected. These dose projections are based on the rate and estimated duration of the releases and current meteorological parameters. The projections will be repeated throughout the duration of the emergency to reflect any significant changes. Methods for performing rapid dose projections including the use of computerized meteorological/dose assessment models are described in the Emergency Plan Implementing Procedures.

Alerts

Assessment actions for an Alert include an upgrading of the functions performed for an Unusual Event as appropriate for the condition. Examples are:

- Increased surveillance of in-plant instrumentation
- Additional assistance from off-duty personnel and/or offsite support groups.
- Possible radiological monitoring of offsite areas and increased dose projection activities.

Site Area Emergency

Assessment actions for a Site Area Emergency will be in accordance with the increased probability of a major failure of plant safety functions and the potential release of significant quantities of radioactive material. Examples are:

- Increased surveillance of instrumentation, which may provide information on the status of the core and reactor coolant system.
- Increased offsite monitoring efforts including direct radiation measurements, sampling and analysis of air and other environmental media.
- Dose projection results correlated with offsite monitoring data.
- Coordinated offsite dose assessment activities with other emergency response organizations.
- Increased reactor coolant sampling and analysis frequency.

General Emergency

The emphasis of assessment actions for a General Emergency will be based on the likelihood of substantial core degradation, potential loss of containment integrity, and the release of large quantities of radioactive material. Surveillance of instrumentation relative to the core condition, reactor coolant system activity, containment pressure and radiation level and radioactive effluents will be increased. Dose projection and offsite monitoring efforts will be further intensified and on-going communications will be maintained with the Oswego County Emergency Operations Center (OCEOC) and New York State Emergency Operations Center (NYSEOC) to ensure that offsite assessments are based on the best available information.

Specifically, post-accident assessment capability will include:

- Post-accident sampling analysis of reactor coolant and containment atmosphere.
- In-plant iodine instrumentation.
- Plots showing containment radiation versus time.
- Determination of the degree of reactor core damage.

6.2.2 Field Radiological Assessment

Field radiological data will be collected by onsite and offsite survey teams. There will be at least one onsite and one offsite survey team, when the ERO is fully staffed and radiological conditions warrant it. Each team should be comprised of at least two individuals. (In instances of a fast breaking event, only a single technician may be available). The teams will be deployed for any emergencies, which involve actual releases of radioactive materials and at the discretion of the Emergency Director. Survey teams will be formed following the request by the Emergency Director or his designee by direct communication or over the PA system. It is expected that the teams can be deployed in about 30 minutes during normal working hours and in about 60 minutes during other hours. The survey teams will use emergency vehicles (or personal vehicles, if needed) for transportation and will maintain phone or radio contact with the Emergency Director or his designee while deployed.

An onsite survey kit and two offsite survey kits are maintained for emergency use by survey teams. Each kit contains portable instrumentation for direct radiation surveys, for contamination surveys and for collecting and analyzing airborne samples for gross and iodine radioactivity.

Rapid assessment of any radiological hazards resulting from the gaseous pathway will be made in the field by direct radiation surveys and by collecting airborne samples and then analyzing these samples for gross radioactivity and iodine radioactivity. These data will be communicated to the Emergency Director or his designee as the information is obtained.

Rapid field assessment of liquid samples is not considered to be essential because the nearest drinking water supply is far enough away to provide ample time for warning the appropriate state and local authorities in the event protective measures are required. When field liquid samples are required, they will be taken and transported to the Environmental Lab for assessment.

6.2.2.1 In-plant Surveys

In-plant survey teams will be dispatched during an emergency if annunciators, alarms, or other instrumentation indicate the possible or actual release of radioactivity to in-plant locations. The Emergency Plant Manager, Radiological Support Coordinator, or designee will notify, brief, and dispatch the survey teams. All dispatching and directing of survey teams and the performance of surveys will be accordance with EAP-6, IN-PLANT EMERGENCY SURVEY/ENTRY.

The in-plant survey teams will be composed of a team leader and team member. The teams will report to and be dispatched from the Operational Support Center. Emergency survey kits are maintained for use by the in-plant survey teams. These kits contain portable instrumentation for direct radiation surveys, contamination surveys, the collection and analysis of airborne samples for gross and iodine radioactivity, and the collection of liquid samples.

Equipment is also provided for post-accident reactor water sampling. For details of the specific type and quantities of equipment contained in each kit see SAP-2, EMERGENCY EQUIPMENT INVENTORY.

6.2.2.2 Out-of-plant Emergency Surveys

Out-of-plant survey teams may be dispatched if releases of radiation have occurred, or to verify that releases above technical specifications are not occurring. The Emergency Director, Emergency Plant Manager, or Radiological Support Coordinator or designee will notify, brief, and dispatch the survey teams. The dispatching and direction of survey teams to designated locations (see Figures 6.5 and 6.8) and the performance of out-of-plant surveys will be performed in accordance with EAP-5.3, ONSITE/OFFSITE DOWNWIND SURVEYS AND ENVIRONMENTAL MONITORING and EAP-4, DOSE ASSESSMENT CALCULATIONS.

Out-of-plant survey teams will (if possible), be composed of a team leader and team member. The teams will report to and be dispatched from the Technical Support Center or the Emergency Operations Facility. Emergency survey kits are maintained for use by the out-of-plant survey teams.

The out-of-plant survey teams have the capability and equipment to collect environmental and emergency TLD/DLR (Dosimeter of Legal Record), filter media from the environmental air samplers, water, milk, soil, vegetation, and snow samples. The field teams can also take direct radiation surveys and collect and analyze in the field, airborne samples for gross and iodine radioactivity. For details of the specific type and amount of equipment contained in the out-of-plant survey kits see SAP-2, EMERGENCY EQUIPMENT INVENTORY.

The field assessment of airborne samples will be reported back to the TSC or EOF where the Radiological Support Coordinator will use the data for dose assessment. Other environmental media will be transported to the Environmental Lab for analysis.

One type of radiological data which the onsite and offsite survey teams will be collecting to aid in dose assessment is airborne radioiodine concentrations. Monitoring is accomplished by the use of portable air sampling pumps equipped with a particulate filter and silver zeolite cartridge. The particulate filter and silver zeolite cartridge can be analyzed in a low background area using a count rate meter and mini-scaler for determination of total radioiodine. The silver zeolite cartridges have an iodine retention in excess of 99% while retaining only traces of noble gases. Particulates are removed using a pre-filter. Gamma spectrometry at the Environmental Lab will be used for analysis as time permits but is not necessarily required to make a rapid estimation of airborne radioiodine.

The count rates obtained from the filter and silver zeolite cartridges are multiplied by correction factors to determine the concentrations of particulates and airborne radioiodine.

With the use of silver zeolite cartridges, the interference from the presence of noble gases is not expected to impair the capability to detect less than 1E-7 μCi/cc of radioiodine. Cartridges and filters also can be analyzed using gamma spectrometry in either the JAFNPP counting laboratory, the environmental laboratory, or the adjacent NMPNPS, Unit 1 laboratory.

6.2.3 Dose Assessment Methods and Techniques

Three methods are available at JAFNPP to assess offsite doses following an accident. The first method utilizes EAP-4, Attachment 1, Initial Protective Actions for Control Room Dose Assessment. The second method utilizes EAP-4, Attachment 2, Augmented Dose Assessment and Protective Actions in conjunction with the Emergency Dose Assessment Modeling System (EDAMS) computer application. This method approximates dose rates using an enhanced Class A computer model (RADDOSE V) that account for site specific spatial and temporal variations in meteorological and atmospheric conditions, including lake breeze effects and ground or elevated releases. The third method uses measured activity in environmental samples collected by the Emergency Radiological Survey Teams. All of these methods estimate external doses from noble gases and thyroid doses from radioiodine. A summary of each method is described in the following paragraphs.

6.2.3.1 Initial Protective Actions (EAP-4, Attachment 1)

Pre-calculated threshold release rates have been determined using EDAMS, which are presented in Table 4.1.1 of EAP-4, Attachment 1 for use in initial decision-making. Affected downwind ERPAs within three 22.5 degree sectors are provided in Table 4.1.2 of EAP-4, Attachment 1 for use in determining PARs.

6.2.3.2 Augmented Dose Assessment and Protective Actions (using EAP-4, Attachment 2 and EDAMS)

The methodology used in EAP-4, Attachment 2 is similar to the previous method with the exception that the pre-calculated release rate portion of the flowchart is replaced by the use of the EDAMS computer application.

The main dose assessment component of EDAMS, RADDOSE V, accommodates both real time and forecast modes in the calculation of exposures to the general public.

The system provides results of the sum of the effective dose equivalent from external radiation (both the plume and ground deposition) and the committed effective dose equivalent from inhalation of radioisotopes (this total is referred to as the TEDE), committed dose equivalent to the thyroid (CDE-thyroid), as well as deposition rates and cumulative deposition at the ground. RADDOSE V uses both meteorological and source term data screens patterned after familiar spreadsheet formats with full-screen editing capabilities, allowing both easy data-entry and the ability to review, edit, or update data entered for other time steps. User "help" functions are available on command, and upon entry of invalid data. The RADDOSE V meteorological data entry screen also allows for direct entry of data from the NMP-JAF Meteorological Monitoring System (MMS) resident on the NMP/JAF VAX system. Program results are presented both in tabular form, selected from an output menu, and in graphic form to facilitate visualization of the overall emergency situation. All information presented by the program is available in an ASCII file and for output to a printer for a permanent, hardcopy record.

RADDOSE V uses a variable trajectory, puff advection model of dispersion to predict the position of both ground level and elevated radioactive plumes. Inside the ten mile Plume

Exposure Pathway (EPZ), the model uses finite cloud techniques to estimate external exposure received from the plume while the standard concentration χ/Q (semi-finite) methodology is used to estimate doses received from inhalation of radioisotopes and external exposure over a four day period from material deposited on the ground. In addition, the model incorporates routines for computing total deposition and the current dose rate from radioactive material deposited on the ground out to 50 miles.

RADDOSE V calculation routines include those for considering source term and plume decay, as well as the effects of wet and dry deposition of iodines and particulates. The model also includes predefined Protective Action Guidelines for the plume and ingestion pathway EPZs to alert users of the program to any exceedances of pre-determined limits.

The accident default types available for a release from JAFNPP are the following:

CDBA - Containment Design Basis Accident
CRD - Control Rod Drop
RFA - Refueling Accident
SLB1 - Steam Line Break (Steam Only)
SLB2 - Steam Line Break (Two Phase)
LOCA - Loss of Coolant Accident
SAST - Severe Accident Source Term

Other isotopic mixtures can be entered or the default values changed to more accurately characterize an accident.

6.2.3.3 Dose Estimates from Field Measurements

The third method available to assess dose rate is based on activity measured in environmental media. Three techniques will be used to calculate doses from gross radioactivity measurements: Direct gamma dose by TLD/DLR, in mrem; direct beta-gamma dose rate by portable survey instruments, in mrem/hr; and dose from gross measurements following radioiodine sampling. The first two techniques yield direct dose information. The third technique for dose rate determinations involve environmental sampling by the survey teams with later evaluation using EAP-4, DOSE ASSESSMENT CALCULATIONS, to determine offsite doses.

Dose rates will be measured using portable survey instruments. Selective sampling for radioiodine will be performed using a silver zeolite cartridge preceded by a particulate filter. Silver zeolite cartridges are iodine specific because they permit approximately 99% of the noble gases to pass through.

The particulate filters and the silver zeolite cartridges are analyzed in the field by determining a gross count rate using a portable count rate meter and mini-scaler. Calculations of dose from the silver zeolite are based on the cartridge assumption that any measured activity is totally attributable to I-131. Gross measurements of particulate filters and silver zeolite cartridges will be performed in the field.

Because this method of analysis is less accurate than laboratory analysis, protective actions will not be taken based on these data unless protective actions are deemed necessary and laboratory analytical results are not available.

If it is determined that a release of radioactive liquid to Lake Ontario has occurred, the projected TEDE and CDE skin doses received while boating or swimming on the lake will be determined in accordance with EAP-2, DOSE ESTIMATED FROM AN ACCIDENTAL RELEASE OF RADIOACTIVE MATERIAL TO LAKE ONTARIO.

Survey teams will also collect environmental media such as milk, human food products, water snow and soil which will be analyzed in the laboratory for radioiodine (I-131, 133) by gamma spectrometry. These results, along with the gross radioiodine measurements mentioned above, will be used in determining CDE thyroid dose estimates in accordance with EAP-4, DOSE ASSESSMENT CALCULATIONS and environmental surveillance procedures.

Dose rate and dose information will be provided to the Radiological Support Coordinator for use in determining recommended protective actions.

6.3 Corrective Actions

Detailed operating procedures, emergency operating procedures, and Severe Accident Operating Guidelines (SAOGs) are utilized by the plant operating personnel to assist them in responding to potential or actual emergency events.

These procedures describe the corrective actions necessary to place the plant in a safe condition. Long term corrective actions will be taken as part of the Recovery phase (Section 9).

In addition, the Operational Support Center will be activated and serve during the emergency as the location for the assembly and dispatch of teams to respond to plant conditions. Specifically, damage control teams, fire brigades, and search and rescue teams will be directed in accordance with emergency implementing procedures. The Emergency Director or Emergency Plant Manager will direct all corrective actions through the appropriate emergency coordinators.

Some essential corrective actions may involve the risk of higher than normal radiation exposure to emergency response personnel. Such actions could involve protecting valuable property, protection of large populations, or lifesaving actions. Figure 6.1 specifies the limits for such emergency radiation exposure and other relevant criteria to be considered.

6.4 Protective Actions

Protective actions are measures which are implemented to prevent or mitigate consequences to individuals during or after a radiological emergency. Protective actions within the JAFNPP site boundary are primarily the responsibility of the Emergency Director and Emergency Plant Manager, but may include assistance by offsite organizations. Protective actions outside the JAFNPP site boundary are primarily the responsibility of State and local emergency organizations, but may include coordination of activities and dissemination of appropriate data with JAFNPP, and recommendations by the JAFNPP Emergency Director.

6.4.1 Onsite Protective Actions

The primary protective measure for onsite personnel in an emergency is prompt evacuation from areas which may be affected by radiation, concentrations of airborne radioactivity that exceeds normal limits for specific area or areas and cannot be readily controlled, or other hazardous conditions.

All personnel (including employees not having emergency assignments, visitors, and contractor and construction personnel) will be notified of an emergency situation by the sounding of the station alarm and an announcement over the public address system and by Security for the Wellness Center, etc.

6.4.1.1 Protected Area Evacuation

A Protected Area Evacuation may be ordered by the Emergency Director or Emergency Plant Manager for all of the protected area based on initiating conditions such as; high radiation levels, fire, toxic gases, etc. Actions will be taken in accordance with EAP-10, PROTECTED AREA EVACUATION.

When a Protected Area Evacuation is ordered, personnel will be instructed to proceed to the nearest primary assembly area via a route that bypasses the hazardous area.

Once at the primary assembly areas, accountability will be conducted. The Emergency Director or Emergency Plant Manager will then decide whether to implement a Site Evacuation, order an early dismissal, or to allow personnel to return to their normal work stations.

6.4.1.2 Site Evacuation

A Site Evacuation involves the movement of personnel from the site to a remote assembly area offsite or to their homes. A site evacuation may be ordered by the Emergency Director or Emergency Plant Manager based on severe abnormal conditions such as high radiation levels, safety hazards, or declaration of a General Emergency. Initiating conditions and the implementation of a Site Evacuation are described in detail in EAP-11, SITE EVACUATION.

When a Site Evacuation is ordered by the sounding of the evacuation alarm, all personnel without emergency assignments will proceed offsite to the remote assembly area or to their homes using their own vehicles.

The remote assembly area is located at the Oswego County Airport on County Route 176 adjacent to the EOF and JNC in the Town of Volney. Should offsite radiological considerations exist, the Emergency Director or Emergency Plant Manager will direct the evacuating personnel to take alternate routes or designate an alternate remote assembly area, if necessary.

A Site Evacuation may be ordered with or without a Protected Area Evacuation previously being ordered. If a Protected Area Evacuation has been ordered, accountability will have been accomplished previously. If no Protected Area Evacuation was ordered, accountability will be accomplished when personnel exit the plant and turn in their badges.

To minimize the spread of contamination, the Emergency Director or Emergency Plant Manager will direct a team to evaluate contamination on cars and decontaminate them by onsite washing, if time permits. Personnel will be monitored and decontaminated at the remote assembly area by a radiation survey team dispatched from the plant if necessary.

6.4.1.3 Personnel Accountability

The Emergency Director or Emergency Plant Manager will inform Security and direct them to begin personnel accountability. An Accountability Supervisor is designated and is responsible for the implementation of personnel accountability and the reporting of results. All actions will be taken in accordance with EAP-8, PERSONNEL ACCOUNTABILITY.

Accountability compares the name and number of persons in the primary assembly areas with the name and number of persons badged into the protected area. The results of this comparison and any discrepancies are reported to the Emergency Director or Emergency Plant Manager.

Following any unsuccessful attempts to locate missing personnel through supervisors, co-workers, and PA announcements, the Emergency Director or Emergency Plant Manager will be notified and will initiate search and rescue actions in accordance with implementing procedure EAP-9, SEARCH AND RESCUE OPERATIONS.

6.4.1.4 Other Onsite Protective Actions

a. Contamination Control

The JAFNPP Radiation Protection Department Procedures and Programs contain provisions governing the control of contamination including access control, use of protective clothing, contamination monitoring, and the release of potentially contaminated items from Radiologically Controlled Areas. The guidelines of this manual shall apply to contamination control during emergency conditions.

b. Food and Water in Plant

Drinking water at the JAFNPP is provided by the City of Oswego and distributed by the domestic water system, which is a closed system. As a result of this configuration, contamination of the drinking water is unlikely.

A supply of water is maintained in the Control Room. With the exception of food brought to the site by Plant personnel, or prepared in the cafeteria, all other food supplied to the site arrives sealed for vending machine sale. These machines and the cafeteria are located in non-radiologically controlled areas. If these areas become contaminated, they will be considered as radiologically controlled areas, and eating will be prohibited as is normally the case for radiologically controlled areas. Normal radiologically controlled areas access controls will prevent the removal of contaminated food from these radiologically controlled areas and possible ingestion by unwary individuals.

c.Exposure Control

The exposure of Plant personnel during emergency operations shall be maintained as low as reasonably achievable, and should be maintained less than the administrative guides established in JAFNPP RP Procedures and Programs and/or less than the Federal radiation exposure standards established in 10 CFR 20. In order to accomplish this objective, administrative means used during normal operations to minimize personnel exposure, such as Radiation Work Permits, Authorization to Exceed Radiation Exposure Guides, and ALARA measures should remain in force to the extent consistent with timely implementation of emergency measures.

EAP-15, EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL shall be utilized to provide guidance where normal operations exposure control procedures are not sufficient.

Dosimetry equipment in the form of TLDs/DLRs, direct reading dosimeters and electronic dosimeters are provided at the plant, and such dosimetry will continue to be used during emergency situations.

Personnel will be available 24 hours per day during an emergency to issue and/or process dosimetry devices. JAFNPP RP Procedures and Programs provide guidelines and procedures for issuing, using, and reading/processing dosimetry devices and provisions for exposure record keeping. During an emergency the processing frequency will be based upon the exposure rates and/or the exposures received by emergency personnel.

Exposure control shall include accelerated or additional bioassays in the event there are individuals who are suspected of being exposed to elevated levels of airborne activity as a result of the emergency.

This bioassay consists primarily of whole body counts. This is supplemented by urinalysis when predetermined screening levels, or predetermined airborne activity exposure levels, are exceeded or suspected of being exceeded (with provisions for follow-up monitoring, medical treatment, and incident reporting).

Exposure control may also involve administration of radioprotective drugs in accordance with EAP-19, EMERGENCY USE OF POTASSIUM IODIDE (KI).

d. Respiratory Protection

The JAFNPP RP Procedures and Programs contain provisions covering the use of respiratory protection equipment and the administration of the JAFNPP Respiratory Protection program. The provisions of this program shall apply to all usage of respiratory protection equipment during emergencies.

6.4.2 Offsite Protective Actions

If an emergency exists at JAFNPP that involves the actual or potential release of airborne or waterborne radiation, the Radiological Support Coordinator (RSC), or designee, will evaluate the doses projected to occur in the offsite area as described in section 6.2.3. Based on the projected doses, the RSC, or designee, will evaluate the need for protective actions for the public using EAP-4, DOSE ASSESSMENT CALCULATIONS. The evaluation of protective actions will consider projected TEDE and CDE thyroid doses. The doses will be compared to the EPA Protective Action Guides Figure 4.1 and a protective action recommended to the Emergency Director. The results of this evaluation and the recommended protective action information will be transmitted to the State of New York and Oswego County by the Emergency Director via the dedicated communication system, or alternate communication method.

NOTE: If a General Emergency has been declared, protective action recommendations will be based on the flowcharts contained in EAP-4 (Attachment 1 and 2). However, responsible offsite officials must decide the feasibility of implementing the protective actions at the time of the accident.

The responsibility for actions to protect offsite individuals rests with the State of New York Department of Health, as described in the New York State Radiological Emergency Preparedness Plan.

The Commissioner, State Department of Health is responsible for implementation of that plan and the ordering of actions to protect the public.

NYSDOH is responsible for evaluating information obtained from JAFNPP and/or other sources and recommending appropriate offsite protective actions to Oswego County. Such recommendations, based on all available data, local constraints and other consideration my include:

- Shelter for affected populations.
- Evacuation within designated area(s).
- Control of drinking water, milk, and agricultural products.

Since the 10-mile Emergency Planning Zone is located entirely in Oswego County (see Figure 6.2), the principal offsite local coordinating agency for providing response to radiological emergencies in the vicinity of the JAFNPP is the Oswego County Emergency Management Office. Upon notification by NYSDOH or by the JAFNPP Emergency Director of a situation which may require protective actions for offsite populations, the Oswego County Emergency Management Office will initiate appropriate actions, including notification (see Figure 6.7) and provision of prompt instructions to the people within the plume exposure EPZ, considering recommendations from the notifying party, and within the guidelines of the Oswego County Radiological Emergency Plan.

In order to facilitate the planning and implementation of protective actions, the 10-mile Emergency Planning Zone is further subdivided in Emergency Response Planning Areas (ERPAs), Figure 6.3. All recommendations from JAFNPP to the State and from the State to the County will be in terms of ERPAs. The public Information Program, Appendix H, will ensure that the public is aware of the proper response to an emergency or protective action order.

6.4.2.1 Sheltering

Sheltering may be ordered for the population within the 10-mile EPZ.

Sheltering involves the population going or remaining inside of their homes or place of business, to wait further information and instructions.

Sheltering is particularly useful to assure that a population is positioned so that if the need arises, communication with the population can be carried out expeditiously.

6.4.2.2 Evacuation

Evacuation may be ordered for all or part of the population in the affected ERPAs.

The Oswego County Radiological Emergency Preparedness Plan contains a detailed evacuation plan, which includes specific county agency operating procedures and evacuation route maps (refer to Figures 6.4 and 6.9), as well as special facilities throughout the ten-mile EPZ (see Figure 6.6). In addition, a reception center and congregate care centers are designated in the Onondaga County Radiological Emergency Response Host Plan.

6.4.2.3 Thyroid Prophylaxis

Recent Federal Guidance from the NRC and FDA has prompted New York State and Oswego County to include the prophylactic use of potassium iodide (KI) as an additional public protective action. Implementation of this measure is in accordance with the NYS and Oswego County Plans.

6.4.2.4 Food, Water, and Milk Control

Within the Ingestion Pathway Emergency Planning Zone (approximate 50-mile radius), the State Commissioner of Health may order controls to minimize radiation doses to the public through ingestion of contaminated food, water and milk. When requested, JAFNPP will assist with radiological sampling of environmental media and the results reported to the NYSDOH. In addition, other sources of sampling information will be used to evaluate the need for controls.

Ingestion Pathway protective actions can include the quarantine or destruction of contaminated water and foodstuffs and the substitution of uncontaminated supplies.

6.5 Aid to Affected Personnel

Procedures are established which provide for the control of radiation exposure including emergency exposure, personnel contamination, and for assistance to injured personnel, including situations involving complications due to the presence of radiation or radioactive contamination.

6.5.1 Radiation Exposure Control

The JAFNPP has an onsite dosimetry system. The system consists of DLRs, and/or direct-reading dosimeters or electronic dosimeters. A limited number of TLDs/DLRs and direct reading dosimeters are also available in emergency kits. During an emergency, personnel are available 24 hours per day to issue and/or process dosimetry devices and to document and maintain the results.

Exposures will be controlled based on the guidance and recommendations contained in EAP-15, EMERGENCY RADIATION EXPOSURE CRITERIA AND CONTROL. These procedures provide for expeditious decisions with consideration given for a known and reasonable balance of associated risks.

Reasonable measure will be taken to limit the radiation exposure of emergency personnel who provide rescue, first aid, decontamination, and ambulance or medical treatment services to within applicable exposure limits specified in 10 CFR 20 unless higher exposures are deemed necessary by the Emergency Director or appropriate offsite authority. Figure 6.1 summarizes the emergency and lifesaving actions such as:

- Removal of injured persons
- Undertaking corrective actions
- Performing assessment actions
- Providing first aid
- Performing personnel decontamination
- Providing ambulance service
- Providing medical treatment services

6.5.2 Decontamination and First Aid

Personnel contamination in emergency situations will be controlled to the extent feasible by the normal methods of using protective clothing and surveying for contamination following the removal of such clothing.

Personnel decontamination areas, consisting of showers and sinks, which drain to the radwaste system, are available for either routine or emergency use at the JAFNPP. Similar facilities are available at the NMPNPS. Plant employees are instructed in the proper methods of removal of minor contamination from skin surfaces. Decontamination efforts involving significant amounts of contamination, particularly in the vicinity of facial openings, will normally be performed under the direction of Radiation Protection personnel. Detailed criteria and methods for personnel decontamination are described in the JAFNPP RP Procedures and Programs.

At least two persons who are knowledgeable in basic first aid methods are onsite at all times. Procedure EAP-2, PERSONNEL INJURY delineates steps for handling a contaminated medical injury. First aid to injured personnel can normally be performed in conjunction with any necessary decontamination methods. However, if immediate treatment of injury is vital, that treatment shall take precedence over decontamination. The philosophy also extends to offsite emergency assistance involving radioactive contamination. For that purpose, measures are established to ensure timely offsite medical treatment, as described in Sections 6.5.3 and 6.5.4.

6.5.3 Medical Transportation

Arrangements have been made with the City of Oswego Fire Department for the transportation to a medical treatment facility of personnel who may have injuries complicated with radioactive contamination or who may have been involved in a radiation incident from the JAFNPP.

Copies of the agreements from this organization to provide emergency services is contained in Appendix C. Ambulance emergency supply kits are available for use.

A communication link can be established by radio between the County dispatcher and emergency vehicles. A communication link can be established by telephone between the JAFNPP and the dispatcher.

6.5.4 Medical Treatment

Arrangements have been made with the Oswego Hospital for the medical treatment of patients from the JAFNPP who may have injuries complicated by radioactive contamination.

Similar arrangements have been made with the University Hospital for medical treatment of contamination injuries and significant overexposure to radiation. Both facilities have developed detailed procedures for handling radioactively contaminated patients from the JAFNPP.

Copies of agreements to provide medical treatment from these organizations are contained in Appendix C.

A communication link can be established by telephone between the JAFNPP and any of these medical facilities, if necessary.

Medical treatment facilities and onsite personnel may also contact a radiation management expert who is contracted to provide radiological treatment advice upon request. This service is available to medical personnel 24-hours per day year round. This contracted letter of agreement is contained in Appendix C.

6.6 Figures, Forms and Attachments

Figure 6.1 Emergency Exposure Criteria
Figure 6.2 Ten-Mile EPZ Map
Figure 6.3 2003 Population Estimates ERPs
Figure 6.4 Bus Routes and Pickup Point Map
Figure 6.5 Offsite Survey Locations Map
Figure 6.6 Special Facilities Map
Figure 6.7 Siren Locations Map
Figure 6.8 Offsite Environmental Stations Map
Figure 6.9 Primary Evacuation Routes Map

FIGURE 6.1

EMERGENCY EXPOSURE CRITERIA

Planned exposure to the whole body and/or specific organs shall not exceed the following recommendations of the Environmental Protection Agency in EPA-400-R-92-001

Guidance on Dose Limits for Workers Performing Emergency Services

Dose Limit[a] TEDE (rem)	Activity	Condition
5	All	
10	Protecting valuable property	Lower dose not practicable
25	Life saving or protection of populations	Lower dose not practicable
>25	Life saving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved.

[a]Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any other organ (including skin and body extremities) to ten times the listed value. These limits apply to all doses from an incident, except those received in unrestricted areas as members of the public during the intermediate phase of the incident.

Additional General Criteria

- All reasonable means for keeping personnel emergency exposures as low as reasonable achievable and within 10 CFR 20 limits shall be expended before exposure exceeding 10 CFR 20 limits are permitted.
- All reasonable measures shall be taken to minimize skin contamination and the uptake of radioactive material.
- All personnel performing emergency activities involving exposures, which may or will exceed 10 CFR 20 limits shall be volunteers and shall be briefed on potential exposure consequences prior to receiving such exposures.
- Women of childbearing age shall not be permitted to receive emergency exposures, which exceed 10 CFR 20 limits.
- Retrospective exposures shall be evaluated on an individual case basis.

FIGURE 6.2

PULL OUT MAP - NEED STICKERS FOR THIS ONE

This page is a large map and can be viewed in Merlin under maps and the section of the procedure.

To search for the map do the following in Merlin:

1.) Log onto Merlin Reference Library via the intranet

2.) Type in your user name, pass word, and group is general

3.) Click on general records

4.) Type in Section 6 in search area then hit enter

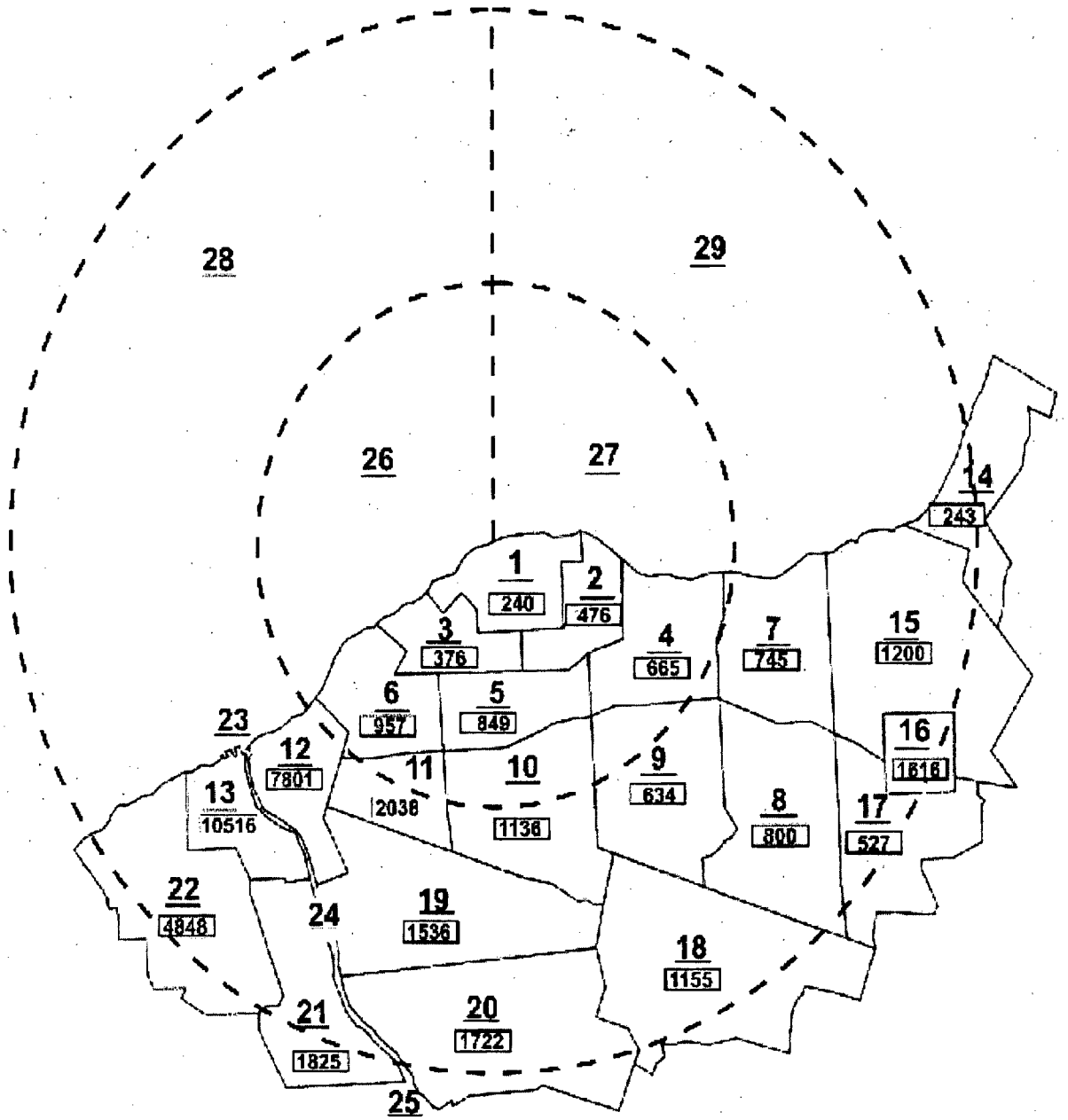
5.) To the right you will see your search results, check the box for emergency plan maps

6.) Click on view

7.) Another screen comes – click open from current location

8.) The map will appear in Adobe Reader

FIGURE 6.3



LEGEND 1 ERPA Number 240 ERPA Population

2003 Population Estimates Emergency Response Planning Areas (ERPAs)

J.A. FitzPatrick/Nine Mile Point Radiological Emergency Response Plan and Procedures

FIGURE 6-4

pull out map - need stickers for this one

This page is a large map and can be viewed in Merlin under maps and the section of the procedure.

To search for the map do the following in Merlin:

1.) Log onto Merlin Reference Library via the intranet

2.) Type in your user name, pass word, and group is general

3.) Click on general records

4.) Type in Section 6 in search area then hit enter

5.) To the right you will see your search results, check the box for emergency plan maps

6.) Click on view

7.) Another screen comes – click open from current location

8.) The map will appear in Adobe Reader

Because these Merlin maps are NOT in color you can not distinguish between evacuation routes. Color hardcopy is clear.

FIGURE 6-5

PULL OUT MAP - NEED STICKERS FOR THIS ONE

THIS PAGE IS A LARGE MAP AND CAN BE VIEWED IN MERLIN UNDER MAPS AND THE SECTION OF THE PROCEDURE.

To search for the map do the following in Merlin:

9.) Log onto Merlin Reference Library via the intranet

10.) Type in your user name, pass word, and group is general

11.) Click on general records

12.) Type in Section 6 in search area then hit enter

13.) To the right you will see your search results, check the box for emergency plan maps

14.) Click on view

15.) Another screen comes – click open from current location

16.) The map will appear in Adobe Reader

It is extremely difficult to find the offsite survey locations on the Merlin version of this figure. Hard copies are in color making them easy to find. Merlin is black and white on these maps.

FIGURE 6-6
PULL OUT MAP - NEED STICKERS FOR THIS ONE

THIS PAGE IS A LARGE MAP AND CAN BE VIEWED IN MERLIN UNDER MAPS AND THE SECTION OF THE PROCEDURE.

To search for the map do the following in Merlin:

17.) Log onto Merlin Reference Library via the intranet

18.) Type in your user name, pass word, and group is general

19.) Click on general records

20.) Type in Section 6 in search area then hit enter

21.) To the right you will see your search results, check the box for emergency plan maps

22.) Click on view

23.) Another screen comes – click open from current location

24.) The map will appear in Adobe Reader

FIGURE 6-7

PULL OUT MAP - NEED STICKERS FOR THIS ONE

THIS PAGE IS A LARGE MAP AND CAN BE VIEWED IN MERLIN UNDER MAPS AND THE SECTION OF THE PROCEDURE.

To search for the map do the following in Merlin:

25.) Log onto Merlin Reference Library via the intranet

26.) Type in your user name, pass word, and group is general

27.) Click on general records

28.) Type in Section 6 in search area then hit enter

29.) To the right you will see your search results, check the box for emergency plan maps

30.) Click on view

31.) Another screen comes – click open from current location

32.) The map will appear in Adobe Reader

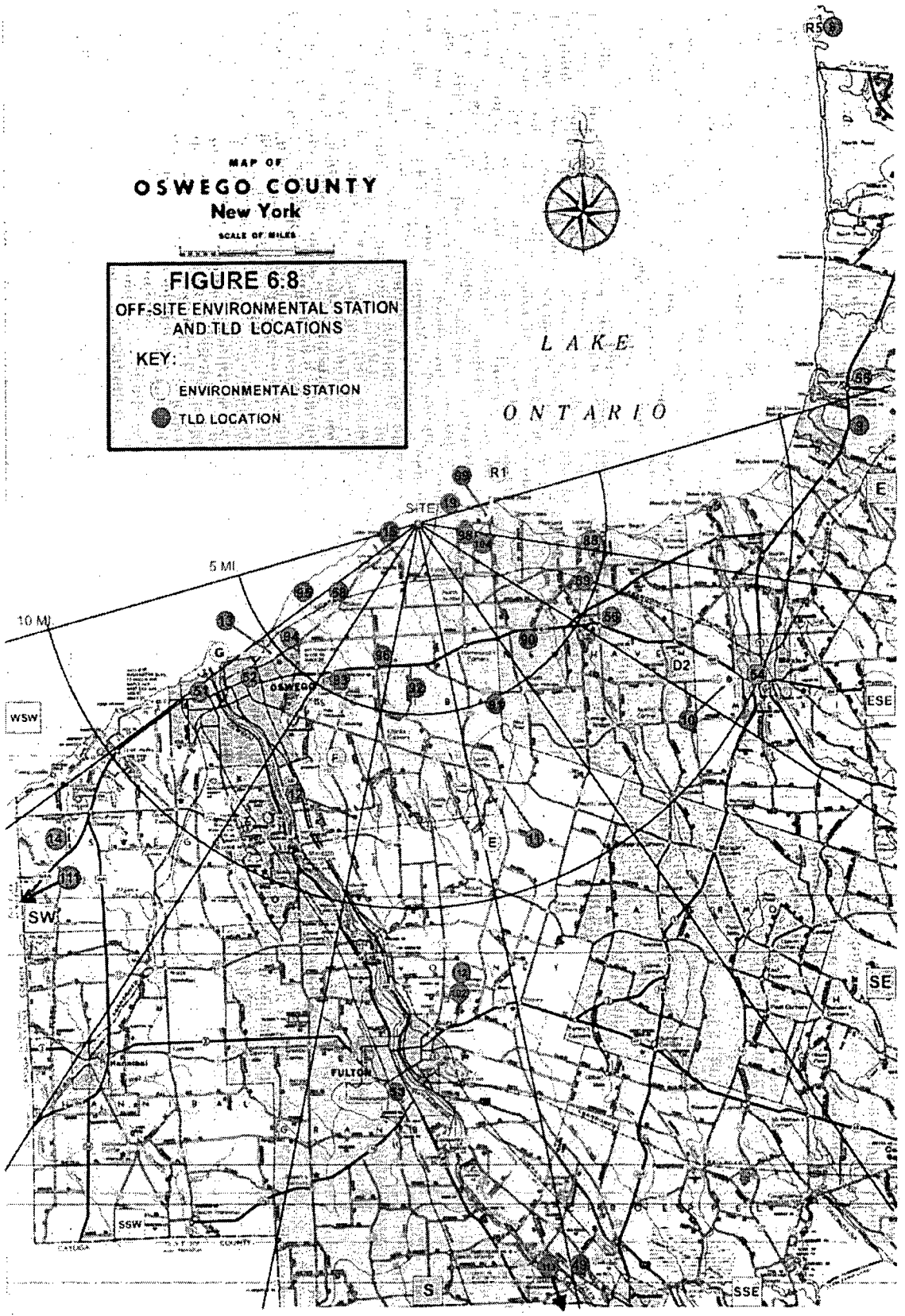

MAP OF
OSWEGO COUNTY
New York
SCALE OF MILES
FIGURE 6.8
OFF-SITE ENVIRONMENTAL STATION AND TLD LOCATIONS
KEY:
ENVIRONMENTAL STATION
TLD LOCATION
LAKE
ONTARIO
R5
R1
SITE
5 MI
10 MI
OSWEGO
FULTON
WSW
SW
SSW
S
SSE
SE
ESE
E
D2

FIGURE 6-9

PULL OUT MAP - NEED STICKERS FOR THIS ONE

THIS PAGE IS A LARGE MAP AND CAN BE VIEWED IN MERLIN UNDER MAPS AND THE SECTION OF THE PROCEDURE.

To search for the map do the following in Merlin:

33.) Log onto Merlin Reference Library via the intranet

34.) Type in your user name, pass word, and group is general

35.) Click on general records

36.) Type in Section 6 in search area then hit enter

37.) To the right you will see your search results, check the box for emergency plan maps

38.) Click on view

39.) Another screen comes – click open from current location

40.) The map will appear in Adobe Reader

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ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO.: SECTION 7

TITLE: EMERGENCY FACILITIES AND EQUIPMENT

APPROVED BY: _____
Director of Safety Assurance

APPROVED BY: _____ P. Cullinan 12/13/7
Emergency Planning Manager

EFFECTIVE DATE: 12/28/2007

PERIODIC REVIEW DUE DATE: 12/08

Rev. No. 27

SECTION 7

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SECTION 7

EMERGENCY FACILITIES AND EQUIPMENT

7.0 EMERGENCY FACILITIES AND EQUIPMENT

Identified and described in this section of the Plan are the emergency response facilities; communications systems; assessment, protective, first aid, and decontamination facilities; and equipment which is available for the Entergy response to an emergency at JAFNPP. (Facility activation may be modified by the Emergency Director if the safety of incoming personnel may be jeopardized by a security event or other event hazardous to incoming personnel).

7.1 Emergency Response Facilities

The emergency response facilities are identified and described in this section.

7.1.1 Control Room

The Control Room is the primary location in which plant conditions are monitored and controlled and corrective actions are taken to mitigate emergency conditions. The room is equipped with instrumentation and controls for major plant systems. It is the facility in which initial accident assessment, emergency classification, and emergency response occurs. Meteorological and radiological instrumentation provide data for dose calculations. Emergency communications systems for in-plant and out-of-plant communications are also provided.

Initially, the on-duty Shift Manager will assume the role of Emergency Director and the Control Room will be the primary location for assessment and coordination of corrective and protective actions for essentially all emergency conditions. The Control Room is staffed as specified in the JAFNPP Emergency Plan.

Emergency control functions which are initially conducted in the Control Room will be transferred to the Technical Support Center or the Emergency Operations Facility, as soon as it is feasible to do so, for events which constitute an Alert, Site Area Emergency or a General Emergency. This transfer of emergency control functions may also be implemented for less severe events, at the discretion of the Emergency Director.

The primary consideration is to ensure that the activities and the number of personnel involved with the emergency in and around the Control Room shall not impair the safe and orderly shutdown of the reactor or the operation of plant safety systems.

7.1.2 Technical Support Center (TSC)

Activation and the location of the TSC/OSC may be modified by the Emergency Director if the safety of incoming personnel is in question. Locations for consideration of ventilation include:

1. The JAFNPP Training Building
2. The JAFNPP Technical Library
3. The Emergency Operations Facility
4. The alternate OSC.

Other locations may also be considered.

The TSC is a facility external to the Main Control Room from which plant management and technical support personnel may operate during emergency situations. It is also the facility from which technical support is provided during recovery operations. Upon activation, the TSC succeeds the Main Control Room as the emergency response command post and functions in this capacity until the EOF is operational. The TSC will be operational within approximately sixty minutes of the notification of an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY. It may also be activated for an UNUSUAL EVENT at the discretion of the Emergency Director. The activation of the TSC is described in EAP-14.1, TECHNICAL SUPPORT CENTER ACTIVATION. The TSC is located in the old Administration Building on the second floor within a two minute walk of the Main Control Room. The TSC is close to normal plant administrative offices which can provide additional documentation and equipment use in the TSC.

Assessment activities as well as coordination of corrective and protective actions for most emergency situations will be performed in this facility. These functions may include:

1. Providing guidance to the Control Room operating personnel.
2. Providing plant systems support for management personnel in the EOF during recovery operations.
3. Communication with other emergency response centers.
4. Providing direction to emergency coordinators.
5. Making recommendations to offsite agencies regarding protective actions, as necessary.
6. Acting as the primary information source to the EOF and the NRC for plant operations.
7. Initial communications with Public Information Personnel.

This center provides an area outside of the Control Room in which to conduct the technical support functions necessary for the control of an emergency situation. These functions include:

1. Capability to display real-time plant status.
2. Capability to transmit plant status data.
3. Capability to communicate with the Control Room and the NRC.
4. Availability of plant systems drawing and other documents for decision making purposes.

The TSC is equipped with appropriate communications and other equipment to perform the above mentioned functions.

7.1.3 Operations Support Center (OSC)

The OSC is located on the 272' elevation of the old Administration Building, and is the staging and dispatch area for all:

1. Maintenance and Instrument and Control technicians from which personnel will be selected and dispatched to emergency assignments.
2. Radiation Protection and Chemistry technicians who will be dispatched to obtain in-plant radiation measurements and samples.
3. Damage Control Teams.
4. Search and Rescue Teams.

The OSC is located near a Health Physics checkpoint. The issuance of personnel dosimetry, as well as monitoring and decontamination of personnel, may be accomplished in the OSC. Some specialized equipment is available for use in the OSC and is listed in procedure SAP-2. The Operational Support Center has communications equipment, with which to control OSC related activities, either installed or readily available.

The OSC will be activated upon the declaration of an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY. It may also be activated for an UNUSUAL EVENT at the discretion of the Emergency Director. Activation and operation of the OSC will be in accordance with EAP-14.5, OPERATIONAL SUPPORT CENTER ACTIVATION.

7.1.4 Alternate Operational Support Center (AOSC)

The AOSC is located in a work area adjacent to the JAFNPP Control Room. If conditions warrant, and as directed by the JAFNPP Emergency Director or Emergency Plant Manager, OSC personnel shall move to and equip this facility. The AOSC is an area with same habitability design as the JAFNPP Control Room. (The 300 ft elevation outside the Control Room and within the TSC ventilation boundary may also be used if habitability conditions warrant. This area has the same habitability design as the TSC). Additional locations may be established as directed by the Emergency Director or Emergency Plant Manager, if needed. This facility could further be used to provide a TSC work area.

7.1.5 Emergency Operation Facility (EOF)

The Emergency Operation Facility is located near the Oswego County Airport on Rt. 176. This location is outside of JAFNPP security fence and the 10 mile EPZ and is within 20 minutes ground travel time from the TSC. The EOF will be the location where the following functions are to be performed.

1. Overall management of Entergy emergency response and recovery resources.
2. Evaluation, coordination, and communication of Entergy emergency response activities with Federal, State, and County emergency response organizations.
3. Verification of the magnitude and effects of actual or potential radioactive releases from JAFNPP, as initially calculated in the TSC or Control Room.
4. Receipt and coordination of field radiological survey data and sample media at the adjacent Environmental Lab.
5. Making recommendations to offsite agencies regarding protective actions.

The EOF will be activated following the declaration of an ALERT, SITE AREA EMERGENCY or GENERAL EMERGENCY. The EOF will be staffed within approximately one hour. The activation of the EOF is described in EAP-14.2, EMERGENCY OPERATIONS FACILITY ACTIVATION.

The Emergency Operations Facility also services for Recovery. This area has sufficient space available for personnel and equipment necessary for planning and arranging recovery activities. Systems are provided for communications with other centers.

An emergency diesel generator is available for use at the EOF.

7.1.6 Joint Information Center (JIC)

The Joint Information Center is located next to the Oswego County Airport on Co. Rt. 176 in the Town of Volney. This facility will serve as the central location for release of all information from Entergy, as well as from local and State agencies to the news media.

The JIC is equipped to accommodate the news media for large briefings and conferences. Videotaping capability for briefings is included. Telephones are provided for the use of reporters. Off-air radio and television monitoring and recording capability is provided to alert Entergy and other representatives to incorrect information or rumors which may be broadcast. This information will then be corrected during briefings.

Rumor control will also be provided using a group of telephones at the JIC. Responses to media telephone inquiries will be handled by additional telephones at the JIC.

The Joint Information Center will be activated at the declaration of an ALERT, a SITE AREA EMERGENCY or GENERAL EMERGENCY. It may also be activated at a lesser emergency classification at the discretion of the Emergency Director.

The facility may be declared operational at the discretion of the Entergy Spokesperson prior to a Site Area Emergency.

An emergency diesel generator is available for use at the JIC.

7.1.7 Oswego County Emergency Operations Center (OCEOC)

The Oswego County Emergency Operations Center is located in the Emergency Management Office, County Branch Building, Fulton, NY. The County Warning Point is located at the E-911 Center. Communication systems are manned 24-hours per day at this warning point. Upon activation by the Oswego County Emergency Management Office, communications, planning and coordination personnel will be available for emergency response.

A representative from JAFNPP will be dispatched to this facility to act as a liaison between the County and Entergy, when requested by County Officials.

7.1.8 State Emergency Operations Center

The State Emergency Operations Center is located in the substructure of the Public Security Building No. 22, State Office Building Campus, Albany, NY. State Warning Point communication systems and the New York State Emergency Management Office are also located in this center. Communications systems operate on the around-the-clock basis. Upon activation, planning and coordination personnel will be available for emergency response.

7.2 Communications System

The JAFNPP communication capabilities include multiple systems and redundancies, which ensure the performance of vital functions in transmitting and receiving information throughout the course of an emergency. Figure 7.1 shows the communication systems available and the primary communication links. As can be seen on the diagram, multiple communication modes and paths are available for emergency communications.

Following is a list of available communications systems along with a brief description of each:

7.2.1 Page/Party System (In-Plant)

- Control Room
- Technical Support Center
- Operational Support Center
- Office Area
- Other Plant Areas

The page/party system (Gaitronics) is comprised of a page channel connected to loudspeakers throughout the plant and three channels. System functions allow multiple personnel to participate in a conversation on each of the channels. The page system is also used for announcements and plant alarms.

The alarm mode must be initialized from the Control Room, but the conversation features are available in all emergency response facilities onsite and throughout the plant.

7.2.2 Sound Powered Phone System (In-Plant)

- Control Room
- Technical Support Center
- Other Plant Areas

The sound-powered phone system allows point-to-point Communications as well as multi-point communication without interference from cross-talk. This system is normally used for maintenance and testing but can be used for conversations between individuals performing specialized tasks (e.g., an individual in the Control Room and a technical specialist in the Technical Support Center). This system is operational from the relay room accessible from the TSC and Control Room.

7.2.3 Telephone System

- Control Room
- Operational Support Center
- Technical Support Center
- Emergency Operations Facility
- Other Plant Areas
- Entergy Headquarters
- Various Offsite Agencies

The plant telephone systems can be used for in-plant as well as outside communications. The system can be used for point-to-point or multi-point communications. Normal telephone lines are available at each emergency center.

The phone systems include many automated or programmable features that improve notification and allow communications flexibility. Cellular or satellite phones are also available at various locations.

7.2.4 Dedicated Telephone Links

7.2.4.1 Radiological Emergency Communications system (RECS)

The Radiological Emergency Communications System is a dedicated telephone network to be used for communications pertaining to nuclear emergencies at JAFNPP. The RECS system is available 24 hours per day, 7 days per week and is tested by New York State periodically.

The system consists of dedicated transmission telephones providing multi-party communication in a conferencing mode.

A station set is normally located at each of the following locations:

1. New York State Emergency Operations Center
2. New York State Warning Point
3. Alternate State Warning Point
4. State Department of Health
5. SEMO Regional Office
6. Oswego County Emergency Operations Center
7. Oswego County E-911 Center (Warning Point)
8. Nine Mile Point Control Rooms

9. Nine Mile Point TSC and EOF
10. JAFNPP Control Room
11. JAFNPP Technical Support Center
12. JAFNPP Emergency Operations Facility
13. SEMO Technical Resources
14. Joint Information Center

7.2.4.2 Other Dedicated or Special Lines

In addition to the RECS system, the following dedicated or special telephone connections exist.

a. Control Room to:
NRC
Technical Support Center
NMPNS
EOF
OSC

b. Technical Support Center to:
NRC
Control Room
ENN Headquarters
NMPNS
Emergency Operations Facility
Operational Support Center
Alternate Operational Support Center

c. Emergency Operations Facility to:
NRC
Technical Support Center
Operational Support Center
JAFNPP Rad Support Coordinator
Control Room

7.2.4.3 NRC Health Physics Network (HPN), FTS2000 Phones

This telephone system is part of the FTS2000. It is used to transmit health physics (radiological) data or other data to the NRC during an emergency. JAFNPP facilities at which these telephones are located include:

- Technical Support Center
- Emergency Operations Facility
- Several FTS2000 telephones exist at the TSC and EOF

7.2.5 Radio System

The JAFNPP radio system utilizes various frequencies at the following locations:

- Control Room radio console
- Technical Support Center radio console
- Emergency Operations Facility radio console
- Oswego County radio console
- Security Force radio console
- Portable Units
- Mobile Units

The radio system is intended to serve as a redundant communications system to the telephone system for initial notification and relaying assessment information as necessary. It is also used, in conjunction with cellular phones, to communicate with radiological survey teams.

7.2.6 Data Links

Plant Data System to:

- Technical Support Center
- Emergency Operations Facility
- Joint Information Center
- New York State
- NRC Operations Center

7.2.7 Hard Copy Transceivers (Telecopy)

- Oswego County Emergency Management Office
- Entergy Headquarters
- Technical Support Center
- Emergency Operations Facility
- Joint Information Center
- New York State Emergency Management Office
- Other Services as necessary

7.2.8 Public Notification System

In order to provide prompt notification to the public of emergency conditions, a public notification system has been installed in the plume exposure EPZ.

This system involves alerting the population with sirens and tone alert radios. In accordance with instructions provided during periodic public information programs (Section 8 of the Plan), the alerted population will turn to pre-designated radio stations for emergency information and instructions. Constellation Nuclear, in conjunction with Entergy Nuclear Northeast, shall provide the hardware for this public warning system within the plume exposure pathway EPZ. The design objective of this system is to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. This shall be accomplished by two different warning systems, an outdoor system and an indoor system.

The hardware consists of fixed outdoor sirens located in heavily populated areas within the 10 mile EPZ and tone alert radios in residences and commercial buildings in areas where siren coverage is not practical. The sirens can be activated remotely by radio from Oswego County E-911 Center or the Oswego County EOC and the tone alert radios can be activated by the National Weather Service at the request of Oswego County.

The responsibility for activation of the public warning system rests with the Oswego County Emergency Management Office. This organization will activate the warning system and supply appropriate emergency messages to the Emergency Alert System (EAS) station serving the jurisdiction in accordance with the provisions of their emergency response plans.

The Oswego County notification plan utilizes both outdoor sirens and radio tone alert receivers. This system has been effectively designed to use both outdoor and indoor warning devices so that all NUREG-0654 design criteria are met, i.e.;

1. Capability of providing both an alert signal and an informational or instructional message on an area-wide basis throughout the 10-mile EPZ within 15 minutes of an offsite agency decision to implement protective actions.

2. The initial notification system will assure that direct coverage of essentially 100 percent of the population within 5 miles of the site.
3. Special arrangements shall be made to assure 100 percent of the population who may not have received initial notification within the 10-mile EPZ are notified within 45 minutes.

The Physical and administrative means, incorporated in the final warning system design, necessary to satisfy the above requirements, are summarized as follows:

7.2.8.1 Outdoor Warning Sirens

The prompt notification system utilizes outdoor warning sirens to alert the population within the 10-mile EPZ, in medium-to-high density areas, and in areas with substantial transient populations.

All inhabited areas within the 5-mile EPZ have been covered with sirens to assure that the alerting signal is received within 15 minutes. In addition, beach areas along Lake Ontario between the 5 and 10-mile EPZ were also covered by sirens. These areas are likely to be occupied by many transients and therefore, the effectiveness of tone alert receivers would be limited.

A total of 37 sirens were utilized to satisfy the criteria of the selected alerting system plan. The siren system is comprised of the following types of three-signal sirens:

Power input (240/208 Volt)

Siren Size	Number
125 dB	31
115 dB	6

Figure 7.4 "Siren Locations Map" shows the siren location and approximate coverage area of each siren. Figure 7.5 provides a verbal description of each siren's location.

In accordance with 10CFR50.72(b)(3)(xiii), a major loss of offsite notification system capabilities which could include sirens requires an NRC

notification. This notification will be made when there has been a simultaneous failure of nineteen (19) or more sirens for one (1) hour or more, or a simultaneous failure of four (4) or more sirens lasting 12 hours or more, or notification has been received that the Tone Alert Radio/Emergency Alert System has been out of service for one (1) hour or more.

The prompt notification system surrounding the JAFNPP is completely contained within Oswego County. The siren system is radio controlled using an Oswego County designated frequency. The contact for the county is:

Director
Emergency Management Office
200 North Second Street
Fulton, NY 13069

7.2.8.2 Tone Alert Receivers

The low density populated area in the 10-mile EPZ which does not lie within the effective range of warning sirens will be alerted through the use of automatic tone alert radio receivers located in each residence and commercial building. For the most part, the areas to be covered by the tone alerts are in rural low density populated sections between the 5 miles and the 10-mile EPZ boundary.

The warning system contains about 1000 tone alert receivers.

The tone alert system will be activated by using a transmitter located in Syracuse, New York.

Activation of the system will be as follows:

State or local emergency management personnel will request National Oceanic and Atmospheric Administration (NOAA) to activate the prompt notification system.

NOAA would transmit the alert signal through its station, then broadcast a pre-taped message which would state that there is an emergency condition

at the nuclear plant, and to turn to the local commercial EAS station for further details.

7.2.8.3 Supplemental Systems

The use of alerting systems has been discussed previously. Although the use of mobile systems and the EAS radio network have not been identified as primary elements of the alerting system, they will provide supplemental support to the plan. The EAS system is directed by a procedure manual titled "The Oswego County Emergency Alert System".

7.2.8.4 Mobile Systems

Within the 10-mile EPZ, there are a variety of vehicles used by police and fire emergency personnel. Since their availability cannot be guaranteed, they must be considered as supplemental to the system. In the event of a serious emergency, many of these vehicles would be identified to support evacuation plans and thus may be considered essential elements of the warning plan. If necessary these resources will be activated by the Director, Oswego County Emergency Management Office, in accordance with the Oswego County Radiological Emergency Preparedness Plan.

7.3 Assessment Facilities and Systems

7.3.1 Onsite Assessment Facilities

Initially following an emergency, the primary onsite emergency assessment facility is the Control Room. This assessment function is transferred to the TSC after that facility has been activated. These facilities are described in Section 7.1.

Post-accident radiological samples may be analyzed in the JAFNPP radiochemistry laboratory if background radiation levels permit. This in-plant laboratory has full computer/HPGe gamma spectral, gross beta and gross alpha analysis capabilities.

7.3.2 Offsite Assessment Facilities

In addition to the in-plant radiochemistry laboratory, there is an offsite Environmental Laboratory, located adjacent to the EOF, which can be used for post-accident radiological sample analysis. This environmental laboratory has full computer/HPGe gamma spectral and gross beta analysis capabilities.

Post-accident radiological samples can be sent to the Nine Mile Point Nuclear Power Station radiochemistry laboratory in the event that the JAFNPP in-plant and environmental laboratories are unavailable for any reason, such as high background radiation levels, or operation at full capacity.

If the above facility cannot perform the analyses or cannot handle the number of analyses required, samples can be sent to the R.E. Ginna Nuclear Power Plant laboratory, located near Rochester, about an hour away by car. This laboratory also has similar capabilities to the JAFNPP laboratory.

7.3.3 Assessment System

7.3.3.1 Plant Radiation Monitoring Systems

This system, consisting of process and area radiation monitors, provides for personnel protection and accident assessment by measuring and recording radiation levels and radioactivity concentrations at strategically selected locations throughout the plant. The systems are described in the following paragraphs.

- Post Accident Sampling System (PASS)

The post-accident sampling system shall provide means of obtaining primary and secondary containment atmosphere samples for determination of gas composition by means of gas chromatography, and for performing radiochemical analysis of noble gas, iodine, and particulate activities. Liquid samples shall be taken from the suppression pool and from the reactor coolant system under design conditions of temperature and pressure.

The system is designed in accordance with the criteria set forth in NUREG-0578 with regard to post-accident sampling system performance and scope of radiochemical analysis.

An in-line conductivity cell is used as the primary indicator of liquid chemical concentrations and changing chemical conditions. For rapid characterization of samples, pH paper may be used to establish pH to within ±0.5 pH units at high conductivities. The post-accident laboratory will have the ability to perform accurate chloride and pH determinations. The use of an in-line conductivity cell adequately satisfies the immediate need for chemical information without detailed analysis and eliminates unnecessary personnel exposure and the risk of major laboratory contamination. The system has the capability to provide a 1 to 1000 dilution of liquid samples to permit handling using existing facilities. Specific provisions for boron analysis are not included in the system. The only time boron would be present in the reactor coolant system is when the injection of sodium pentaborate was manually initiated from the Control Room via the standby liquid control system. In this case, an increase in reactor coolant system conductivity would indicate injection of the sodium pentaborate solution.

Liquid samples may be drawn from the reactor coolant system via instrument lines in the reactor water recirculation system and the shutdown cooling configuration of the residual heat removal system. The suppression pool may be sampled from the core spray pumps or via the suppression pool cooling mode of the residual heat removal system.

Provisions have been made to obtain gas samples from the drywell and suppression pool atmospheres and from the secondary containment (Reactor Building).

The gas sampling system is designed to operate at pressures from sub-atmospheric up to the design pressures of the primary and secondary containments. Heat-traced sample lines prevent precipitation and subsequent loss of iodine in the lines. Gas samples may be passed through a particulate filter and silver zeolite filter for the determination of particulate activity and total iodine by analysis of the samples in a gamma spectrometer system. The system provides for grab sampling to allow analysis of gaseous activity as well as the dilution of high activity samples.

- Main Steam Line Radiation Monitoring System

The objective of the main steam line monitoring system is to continuously monitor for the gross release of fission products from the fuel. Indication of such a failure will initiate an alarm condition. The monitoring system consists of four gamma sensitive ionization chambers, logarithmic radiation monitor and dual pen recorder.

- Off-Gas Radiation Monitoring System

The objective of the off-gas radiation monitoring system is to continuously monitor radioactive effluents from the main condenser to the environment via the off-gas treatment system. This radiation monitoring system initiates closure of the off-gas isolation valve after a time delay when off-gas radiation levels exceed a preset limit. This system consists of two identical channels each consisting of a gamma sensitive ionization chamber and logarithmic radiation monitor. Both channels provide input to a dual pen recorder. The off-gas system is also equipped with sampling sub-system to allow for periodic grab sampling for laboratory analysis.

- Main Stack (Off-Gas Vent Pipe) Radiation Monitor

This subsystem monitors the release of radioactive material to the environment via the main stack, which receives inputs from the off-gas system and the standby gas treatment system. Isokinetic probes in the stack provide a representative sample of the effluent to the detection system. This system consists of a pair of gamma sensitive scintillation detectors. The output of these detectors is displayed in the Control Room on logarithmic radiation monitors and multipen recorders.

The High Range Effluent Monitoring System consists of three noble gas monitoring units connected in line with existing effluent monitors. One unit each is connected upstream of the turbine building exhaust sampler, the radwaste building exhaust sampler, and main stack effluent monitor.

Each monitoring unit contains two redundant ion chamber detectors. Associated with each detector is a meter type readout module in the main Control Room panel 09-2, having a range of 1E-1 to 1E+7 mR/hr. In addition to meter readouts, these modules supply digital outputs for annunciation of failure, high radiation ("alert") and high-high radiation. They also supply analog outputs for trend recording and computer logging.

The monitoring units also supply analog and digital outputs to the plant process computer. Digital outputs indicate failure, high, or high-high radiation conditions.

- Service Water and Reactor Building Closed Loop Cooling Water System Monitors

Each of these systems provides cooling water to various heat exchangers for the cooling of systems which may contain radioactive material. These continuous monitoring systems are used to detect leakage and prevent an inadvertent release of radioactive material to the environment. Each of these monitors consists of a gamma-sensitive scintillation detector in a shielded sampling chamber. Activity above a preset level is annunciated in the Control Room.

- Radioactive Waste Effluent Radiation Monitor

This subsystem is used for the control of discharges of low activity liquids. It is similar in design to other water monitoring systems. In the event activity exceeds a predetermined level, the trip unit of this system sends an isolation signal to the discharge valve of the liquid radwaste system.

- Ventilation Monitoring Systems

Ventilation monitoring systems are used to continuously monitor releases from building ventilation systems, provide alarms when releases approach preset levels, isolate ventilation systems to protect the environment, and maintain habitability of the Control Room. The monitors for the radwaste building, turbine building and reactor building are similar. They consist of a sampling pump, sample chamber, GM radiation detector, and logarithmic display. The monitors also contain in-line particulate and activated charcoal filters which are analyzed to provide a precise determination of releases to the environment. Alarms for high activity and inoperable detectors are provided in the Control Room. The reactor building ventilation monitors have two channels.

If effluent activity exceeds a preset level on either channel, the normal reactor building ventilation system is isolated and the standby gas treatment system is initiated.

The Control Room air inlet is continuously monitored by an in-line GM-type radiation detector. Indication is provided in the Control Room and an alarm is received if activity in the Control Room ventilation intake approaches preset levels.

- Drywell Continuous Airborne Radioactivity Monitors

The drywell continuous airborne radioactivity monitor consists of two redundant systems. Each of these contain a sampling pump, sample chamber, gamma sensitive scintillation detector and filter chambers. Each system provides continuous indication of particulate and noble gas activity. The system also provides for sampling and analysis of halogens/iodine.

- Iodine Monitoring

Routine monitoring of ventilation exhausts for iodine is accomplished by the use of in-line activated charcoal filters. These filters are periodically changed and analyzed in a gamma spectrometer. Routine grab sampling is performed using portable sampling pumps fitted with particulate and activated charcoal filters and are similarly analyzed. Continuous air monitors are also located in various areas of the plant and monitor gross airborne activity, as well as halogen activity.

Monitoring during off-normal conditions can be accomplished by the use of portable sampling pumps equipped with particulate filter and silver zeolite cartridge. The silver zeolite cartridge can be analyzed in a low background area using a count rate meter for immediate determination of total iodine.

Cartridges can be analyzed using gamma spectrometry in either the JAFNPP counting laboratory, the environmental laboratory, or the adjacent NMPNS laboratory. The silver zeolite cartridges have an iodine retention in excess of 99% while retaining only traces of noble gases. Particulates are removed using a pre-filter. Thus gamma spectrometry is not necessarily required to make a rapid estimation of airborne radioiodine. The count rate obtained using the silver zeolite cartridge is then multiplied by a correction factor to determine the concentration of airborne radioiodine. Using this method it is possible to attain the required minumum detectable activity of 1E-7 μCi/cc.

- Containment Radiation Monitors

  Monitoring of radiation levels within the primary containment (drywell) is accomplished using two redundant high-range (1E+8 rem/hr) ionization chambers. These detectors are located in approximately opposite locations in the drywell. Indications of radiation levels and alarms for high radiation conditions are provided in the Control Room.

  As an aid in assessing the extent of potential core damage, plots have been developed which can be used to correlate containment radiation monitor reading versus time to varying percentages of fuel inventory in containment. The information obtained from these plots can also be correlated to the source term available for release and can thus be used in determining potential offsite protective action recommendation. These plots have been incorporated into EAP-4.1, RELEASE RATE DETERMINATION.

- Area Radiation Monitoring System

  The fixed area radiation monitoring system consists of thirty units located throughout the plant. Each unit consists of gamma-sensitive GM tube encased in a protective cylinder. Indication of radiation levels is provided in the Control Room on logarithmic radiation monitors and multi-point recorder. Local indication is provided at many locations. The most common ranges are 0.1 to 1000 mR/hr. Monitors in areas such as laboratories, offices and Control Room range from 0.01 to 100 mR/hr. A high range radiation monitor on the refueling floor ranges from 0.1 to 1000 R/hr.

- High Range Effluent Monitor (HREM)

  Three HREM systems have been installed at JAF. The systems were installed to monitor unusually high level stack, turbine building and radwaste building noble gas releases. Each system consists of a large volume sample chamber and two independent gamma sensitive instrument channels. The instrument readouts and recorders are located on a back panel in the main control room. Computer and annunciator alarms alert plant operators of unusual noble gas releases. A detailed HREM interpretation is contained in SP-03.08, GASEOUS EFFLUENT MONITORS.

7.3.3.2 Fire Protection Systems

Fire protection in the plant is provided by a complete network of fire suppression and extinguishing systems. These systems are associated with fire alarms and are activated by a variety of thermal and products of combustion fire detection devices located throughout the plant.

7.3.3.3 Geophysical Phenomena Monitoring System

Monitors are provided for detecting and recording natural phenomena events which could result in plant damage due to ground motion or structural vibration and stress.

Backup information can be obtained from the NMPNPS which also has seismic detectors or a local National Weather Service Station.

Hydrologic conditions (e.g., floods, low water, hurricanes) would be observed by the shift operating crew and / or information would be provided by the U.S. Coast Guard, or a local National Weather Service Station.

7.3.3.4 Environmental Radiological Monitoring Systems

There are 15 environmental radiological monitoring stations, as shown in Figure 7.2 and 7.3. The inner ring of monitoring stations, designated the onsite monitoring stations, surround the plant at a radius of approximately 2000 feet from the plant. The outer ring of monitoring stations, designated the offsite monitoring stations, surround the plant at a radius which varies from approximately 6 to 15 miles from the plant.

Each of the 15 monitoring stations continuously collects a particulate and iodine air sample. A continuously operating sample pump draws air through a two inch diameter glass fiber filter followed in the flow path by a two inch diameter by one inch thick charcoal cartridge.

The Technical Specification Environmental Monitoring Stations located at the site boundary, (R1, R2, R3 and R4), and the offsite Environmental Station (R5) each have a direct radiation monitor. The radiation monitor are Eberline Model ERM-2 which consist of a GM detector with an associated power supply and provides a digital dose rate readout. Historical (prior month) monitor readings may be obtained using a computer (PC) interface to access the monitors internal storage ROM. Each radiation monitor has an operating range of 1 μR / hr to 100 mR / hr. The radiation monitors are used to detect and measure dose rates resulting from possible plume releases of radioactive material from the plant. Each of the 15 monitoring stations has the capability for collecting precipitation samples, if required.

7.3.3.5 Environmental Dosimeter of Legal Record (TLD/DLR) Monitoring Systems

The environmental TLD/DLR monitoring system is comprised of TLD/DLR stations placed on and around the site as shown in Figures 7.2 and 7.3.

The first group of TLD/DLRs is located within the site boundary. This group consists of TLD/DLR stations ranging in distance from adjacent to the plant buildings to approximately 0.9 miles from the plant.

The second group of TLD/DLRs is located beyond the site boundary. This offsite set consists of TLD/DLR stations ranging in distance from approximately 0.6 to 12 miles from the plant.

The current placement of environmental TLD/DLRs is in accordance with the approved *Technical Specifications* for the site and conforms to the NRC Radiological Assessment Branch Technical Position.

Each environmental TLD/DLR station is comprised of TLD/DLRs sealed in a polyethylene package to ensure dosimeter integrity. The TLD/DLR packages are further protected by placement in plastic enclosures, or by tape sealing to supporting surfaces.

The TLD/DLRs are collected, replaced and evaluated quarterly.

7.3.3.6 Emergency TLD/DLR Monitoring System

In addition to the environmental TLD/DLR monitoring system, a second group of TLD/DLRs called emergency TLD/DLRs has been placed in various locations around the site (as described in procedure EAP-5.3). These TLD/DLRs are evaluated as necessary.

The TLD/DLR chips are renewed quarterly.

7.3.3.7 Meteorological Measuring System

Wind speed, wind direction and temperature sensors are installed on an isolated tower at elevations of approximately 30 feet, 100 feet and 200 feet above grade. The data collected by these sensors are telemetered to the JAFNPP Control Room and TSC and are continuously recorded on strip charts.

This data is also available in the CR, TSC and the EOF in digital form.

Joint frequency distributions of wind speed and direction by atmospheric stability class are maintained to aid in the evaluation of radiation doses which may result from the release of radioactive material from the plant.

As a backup to the primary meteorological measuring system, JAFNPP has an onsite atmospheric sensor with the ability to measure the wind speed and direction at the approximately 90 foot level. The recorders for the backup system are located on the same Control Room and TSC panel as the recorders for the primary system, thus permitting instantaneous, real time readings from two sources. A 30 foot inland tower is also an additional source of meteorological data. These sensors also have digital readouts in the CR, TSC and EOF.

Offsite backup for meteorological data is available from the National Weather Service by telephone.

An additional source of meteorological information is available through online information services. The information services collect weather information comprised of surface and upper air reports, satellite and radar information and other meteorological data on a continuous basis from sources around the world. Access to this data is available by JAF personnel through an internet computer link.

7.3.3.8 Emergency Radiological Survey Teams

Survey teams may be dispatched to provide immediate support for both onsite and offsite emergency condition assessment. Teams will be provided survey kits composed of adequate portable instrumentation and instruction packages to permit the monitoring of airborne gamma and radioiodine levels and the acquisition of environmental media samples. A listing of available equipment for use by the survey teams is contained in SAP-2, EMERGENCY EQUIPMENT INVENTORY.

The teams' activities will be controlled by the Emergency Director, Radiological Support Coordinator, or designee. Cellular phone and / or radio contact will be provided between the plant and survey teams.

Initial responsibilities for each team will include direct radiation measurements and the collection of airborne particulate and iodine samples. Following field evaluations, the collected samples will be individually packaged and identified to permit subsequent re-evaluation, if required. Monitoring locations for the initial surveys may be the locations identified in Figures 7.2, 7.3 and 7.6 and/or other locations as determined by the Rad Support Coordinator, Emergency Director, or designee.

The survey teams may participate in the collection of samples from the fixed assessment systems described in Sections 7.3.3.4, 7.3.3.5 and 7.3.3.6. The teams will also expand their sampling activities to include collection of environmental media as dictated by the Emergency Director, Rad Support Coordinator, or designee. Representative media referenced in the Site Radiological Environmental Monitoring Program will be sampled on an increased frequency commensurate with prevailing conditions. In addition to the airborne particulate samples, airborne iodine samples and the TLD/DLRs previously described, environmental media samples may include milk, soil, water and vegetation.

A full description of the radiological monitoring capabilities is described in Section 6, EMERGENCY MEASURES, 6.2.2 Field Radiological Assessment.

7.3.3.9 Process Monitors

Plant parameters such as reactor coolant system level and pressure, containment pressure and temperature and various system flow rates are indicated in the Control Room.

Such parameters are also available in the TSC and EOF via the Safety Parameter Display System(SPDS).

7.4 Protective Facilities

Facilities are provided which ensure adequate radiological protection for personnel assigned to emergency duties in the plant, and for the accommodation of other personnel evacuated from areas that may be affected by radiation and / or airborne radioactivity.

7.4.1 Plant Control Room

In addition to serving as the initial control location for emergency situations, the plant Control Room has the following features which provide protection for personnel who may have emergency or operational duties throughout the course of any emergency:

1. Adequate shielding by concrete walls to permit continuous occupancy under severe accident conditions.

2. An independent emergency air supply system, equipped with absolute and activated charcoal filters.

3. Continuous monitoring of radiation levels in the Control Room and throughout the plant by the ARM system, with readout in the Control Room.

4. Emergency lighting and power supplied by a 125V dc system and battery packs.

5. Communications system, as described in Section 7.2.

Additional details regarding the design and inherent protective capabilities of the plant Control Room are discussed in the JAFNPP FSAR.

7.4.2 Technical Support Center (TSC)

The TSC serves as the long range emergency control facility. To allow for long-term human occupancy during an emergency situation, the following personnel protective features have been incorporated into design.

1. Adequate shielding by concrete walls to permit continuous long-term occupancy under severe accident conditions. (Certain areas of the TSC may not be used under certain radiological conditions).

2. An air handling system equipped with HEPA filters to provide proper breathing air during a severe radiological accident.

3. Communications systems as described in Section 7.2.

4. Emergency lighting supplied by a 125V dc system and battery packs. Emergency power is supplied to some receptacles via a plant UPS.

5. Continuous monitoring of radiation and airborne activity levels in the TSC.

7.4.3 Primary Assembly Areas

Specific locations at the plant are designated for assembly of personnel in the event of a Protected Area Evacuation. These areas provide space to accommodate personnel who may be at the plant. They are located on the basis of logical access routes and physical separation from likely areas of radiation and / or airborne radioactivity. See Procedure EAP-10, PROTECTED AREA EVACUATION for a listing of primary assembly areas.

7.4.4 Remote Assembly Area

The Oswego County Airport is designated as a remote assembly area.

This facility is located approximately 11 miles from the site on County Route 176 in the Town of Volney (Fulton, N.Y.). It is adjacent to the EOF/JIC and is away from the prevailing downwind direction.

Employee vehicles shall be used to transport employees to the Remote Assembly Area. Backup bus transportation is available from the Oswego County Emergency Management Office upon the Emergency Director's request. Evacuated personnel and vehicles can be decontaminated at this site if necessary.

7.5 Onsite First Aid and Medical Facilities

First aid treatment facilities, equipped with industrial first aid supplies, are located on the first floor of the Administration / Support Building and the Training Building lobby area.

7.6 Decontamination Facilities for Emergency Personnel

The personnel decontamination facilities at the JAFNPP and/or the EOF will be the primary facilities for decontaminating emergency personnel. If those facilities are unavailable for any reason, emergency personnel may be decontaminated at the NMPNPS facility.

The liquid waste from each of these decontamination facilities would be disposed of in the respective plant or facility liquid radwaste system. Solid waste would be disposed of in containers provided for this purpose.

A typical listing of personnel decontamination equipment is contained in the Radiation Protection Procedures.

7.7 Damage Control Equipment

Damage control equipment consists of normal and special purpose tools and devices used for maintenance functions throughout the plant. Personnel assigned to damage control teams are trained and participate in drills and exercises in accordance with SAP-1, MAINTAINING EMERGENCY PREPAREDNESS. Guidance for damage control teams is contained in EAP-13, DAMAGE CONTROL.

7.8 Control of Emergency Equipment

A list of emergency equipment and kits is included in Appendix I, EMERGENCY EQUIPMENT KITS. The frequency of emergency equipment maintenance is specified in procedure SAP-2.

7.9 Federal Response Support

Information vital to Federal Response Support is contained in Appendix N, TYPICAL FEDERAL SUPPORT RESOURCES. Information on security access is presented in EAP-23, EMERGENCY ACCESS CONTROL.

7.10 Figures, Forms and Attachments

Figure 7.1 Emergency Communications Network

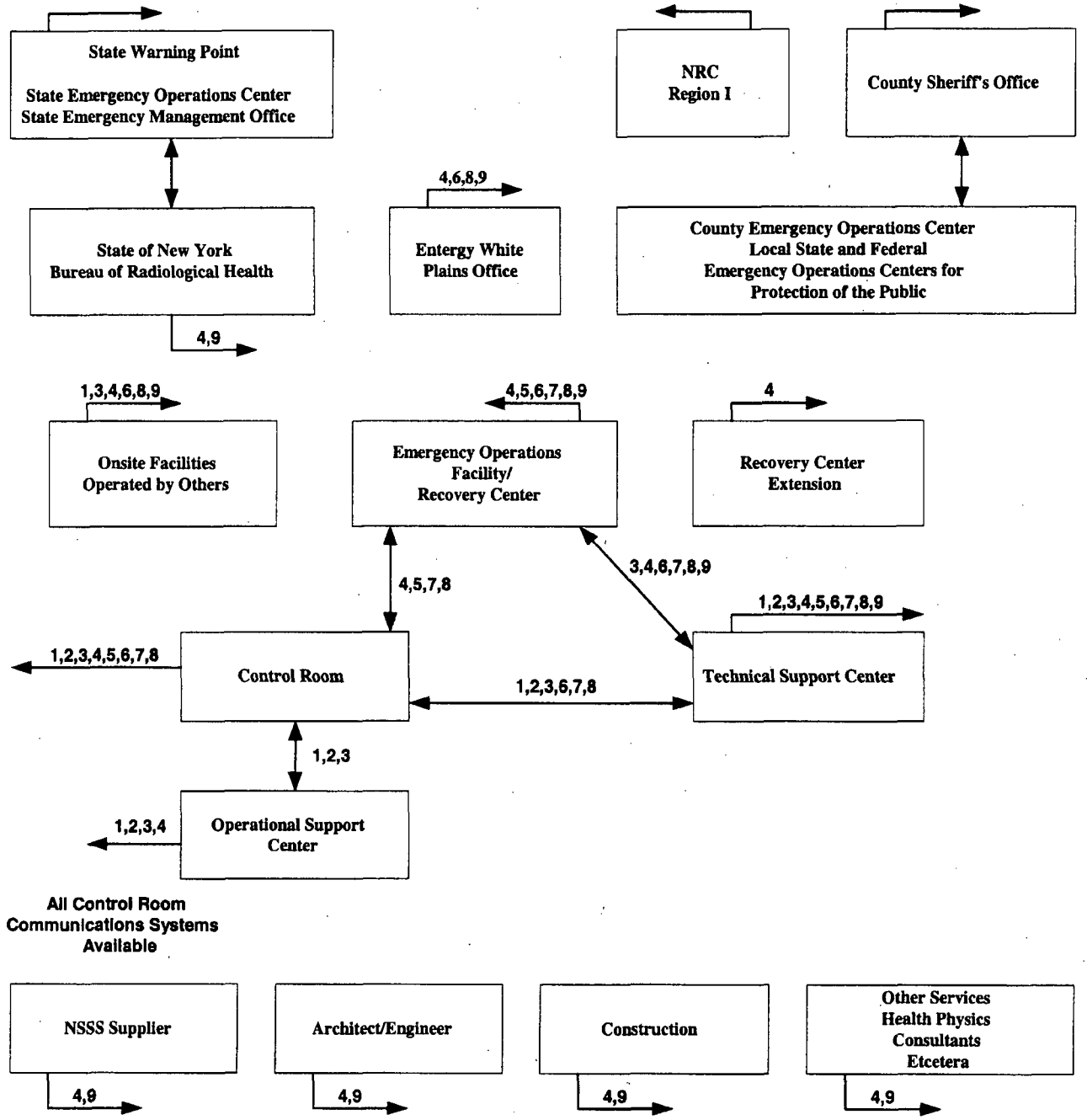
Figure 7.2 Onsite Environmental Station and TLD/DLR Locations

Figure 7.3 Offsite Environmental Station and TLD/DLR Locations

Figure 7.4 Siren Locations Map

Figure 7.5 Verbal Description of Siren Locations

Figure 7.6 Offsite Survey Locations Map



Communications Systems
(Corresponding Numbers)

1. Page/Party System (In-Plant)
2. Sound-Powered Phone System (In-Plant)
3. Telephone - In-Plant
4. Telephone - Outside/Normal Line
5. Telephone - Auto Dial
6. Telephone - Dedicated Line
7. Radio
8. Data Link
9. Hardcopy Transceiver (Telecopy)

NOTE: For actual services, see text

J.A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN
ENTERGY NUCLEAR NORTHEAST

FIGURE 7.1
EMERGENCY COMMUNICATIONS NETWORK

g:\eplanprocedures\volume1\fig7-22.vds

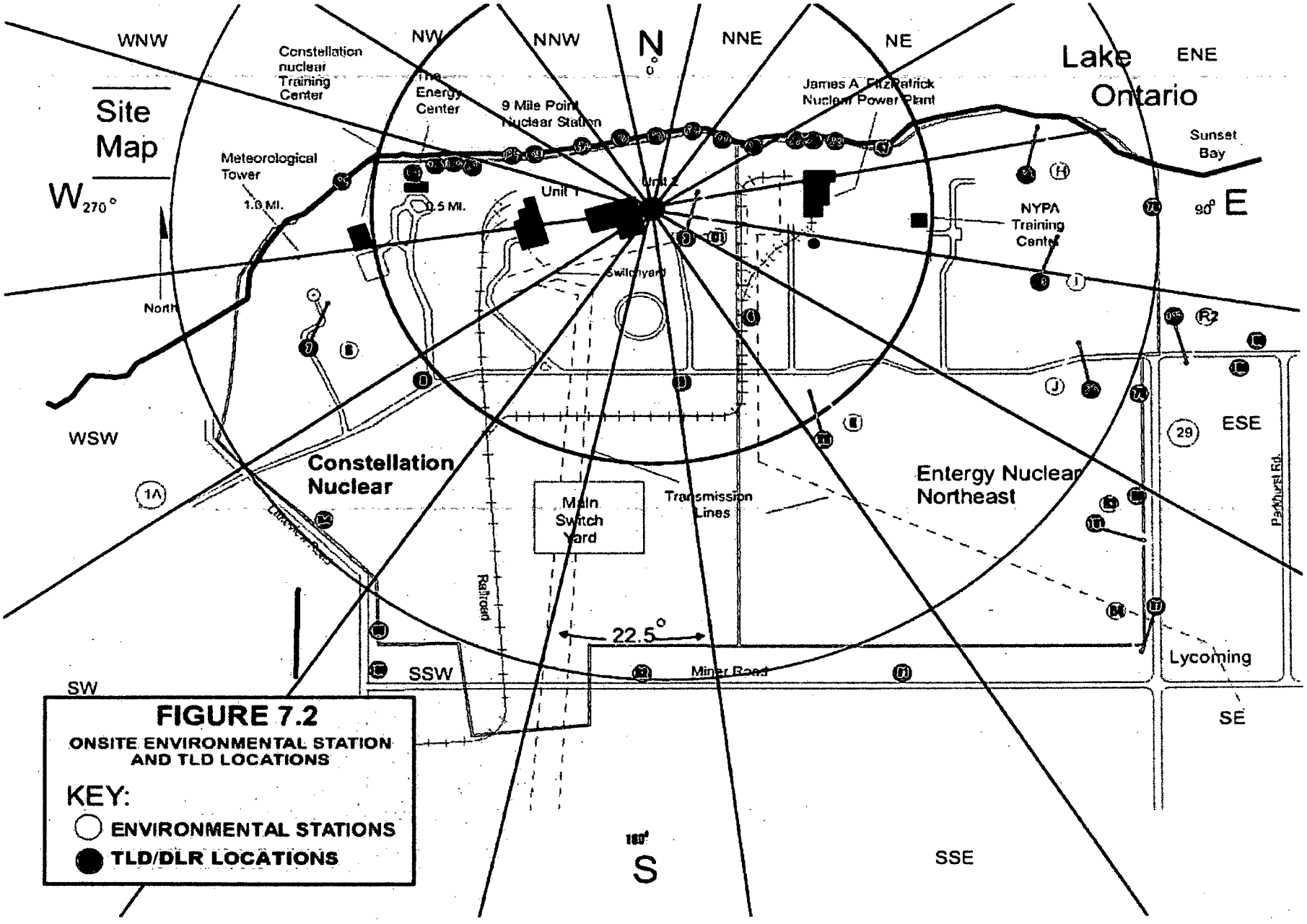


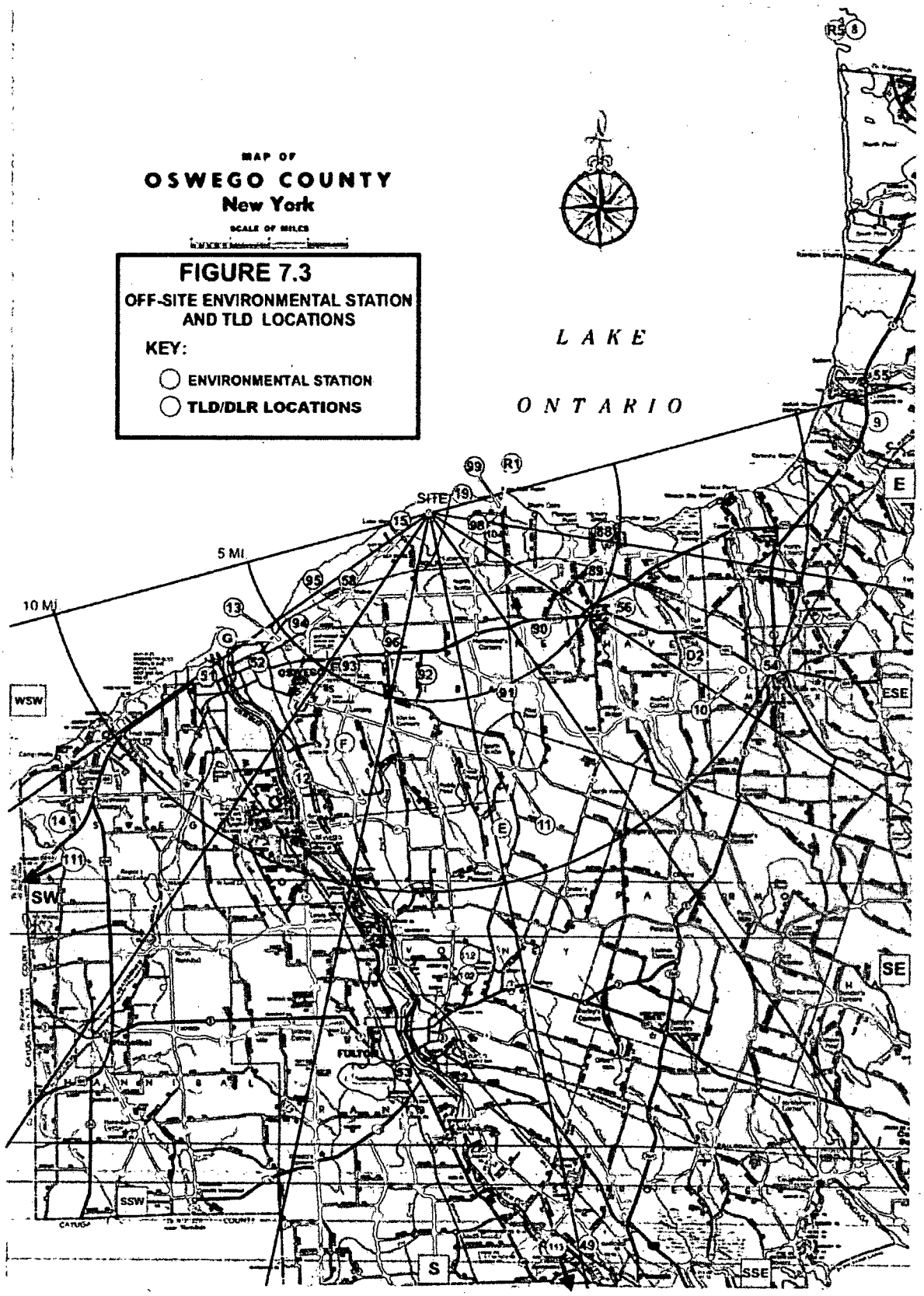
FIGURE 7.2

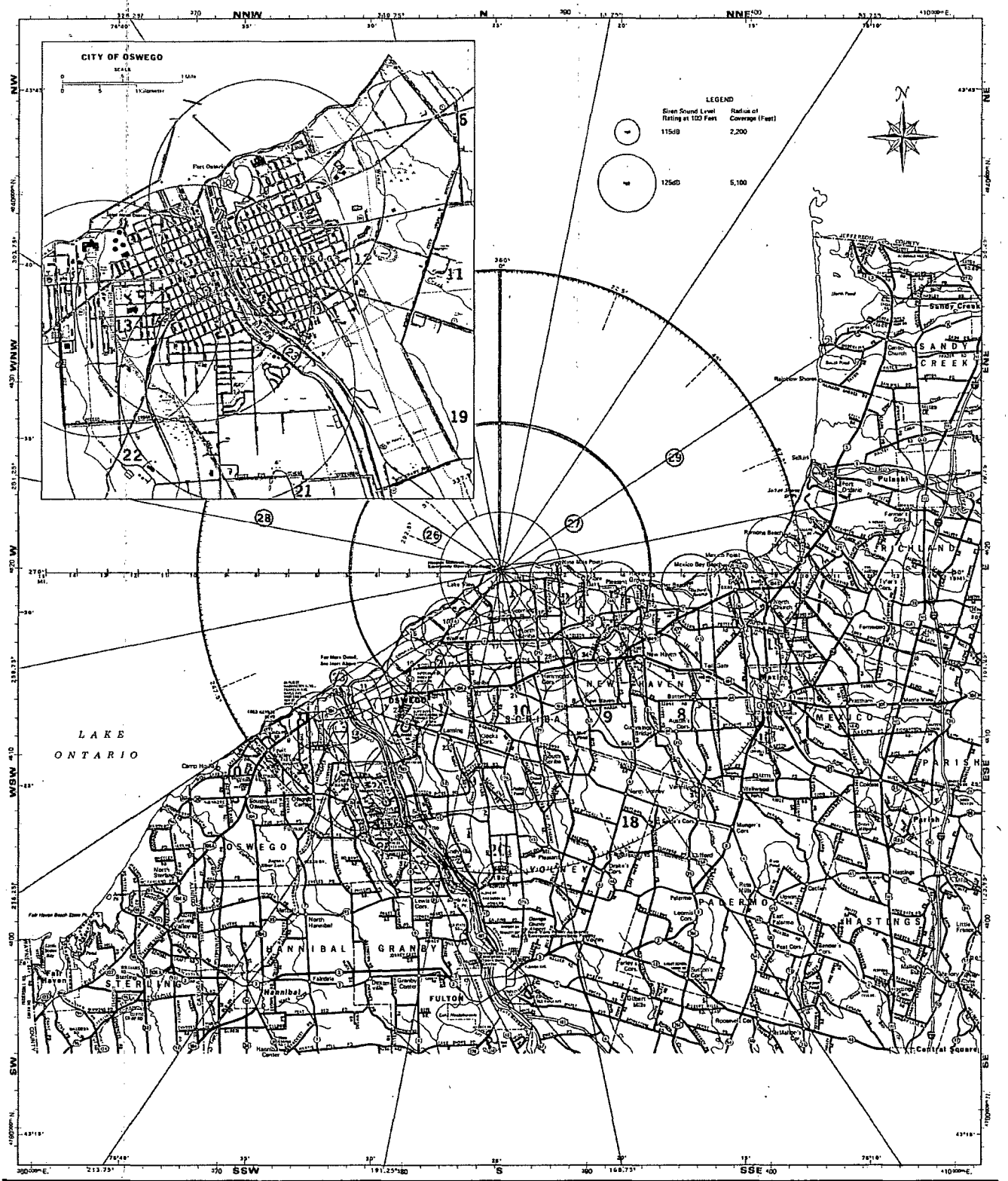
ONSITE ENVIRONMENTAL STATION AND TLD LOCATIONS

KEY:

○ ENVIRONMENTAL STATIONS

● TLD/DLR LOCATIONS


MAP OF
OSWEGO COUNTY
New York
SCALE OF MILES
FIGURE 7.3
OFF-SITE ENVIRONMENTAL STATION AND TLD LOCATIONS
KEY:
ENVIRONMENTAL STATION
TLD/DLR LOCATIONS
LAKE
ONTARIO
SITE
5 MI
10 MI
WSW
SW
SSW
S
SSE
SE
ESE
E



Siren Locations

LEGEND

Interstate Highways
U.S. & State Highways
County Roads
Town Roads
County Boundaries
Township Boundaries
City & Village Boundaries
Railroads
Emergency Response Planning Areas (ERPA) & Number — 22
ERPA – Water Area Nos. — (27)

Copyright, THE NATIONAL SURVEY, 1984
Chester, Vermont 05143

SCALE
0 1 2 3 4 5 Miles
0 1 2 3 4 5 Kilometers

James A. FitzPatrick/Nine Mile Point
Radiological Emergency Plans and Procedures

MAP NUMBER 6

FIGURE 7-4

FIGURE 7.4 STICKER

To search for the map do the following in Merlin:

1.) Log onto Merlin Reference Library via the intranet
2.) Type in your user name, pass word, and group is general
3.) Click on general records
4.) Type in Section 7 in search area then hit enter
5.) To the right you will see your search results, check the box for emergency plan maps
6.) Click on view
7.) Another screen comes – click open from current location
8.) The map will appear in Adobe Reader

FIGURE 7.5

VERBAL DESCRIPTION OF SIREN LOCATIONS

Siren Number	Description of Siren Locations
1.	West of Nine Mile #1 on Lake Road by staging area. Approximately 0.9 miles west of EIC driveway.
2.	East end of Lake Road just west of junction of Nine Mile Point Road.
3.	Pleasant Point Road off North Road (Co. Rt. 1) toward lake 0.5 miles. Access is by wooden gate on east side of road.
4.	Intersection of North Road (Co. Rt. 1) and Dempster Beach Road.
5.	Butterfly Road off - North Road (Co. Rt. 1) where North Road and Rt. 104B meet. Turn toward lake next to trailer (white sign says Butterfly Shores). Proceed down dirt road for 0.9 miles. Siren is on west side of road.
6.	Mexico Point Drive off Rt. 104B in Texas. Siren is 0.5 miles from Rt. 104B on right side of road, just North of boat marina.
7.	Hagar Road off Rt. 3 just before The Pines Golf Course. Go to end of paved road (1.1 miles) then turn left on dirt road. Siren is 0.3 mile on left side of dirt road.
8.	Co. Rt. 51A, 1.3 miles east of Co. Rt. 29.
9.	Corner of Rt. 104 West and Fred Haynes Blvd.
10.	Intersection of West Utica St. and Third Avenue.
11.	Off East 9th St. - by East Side Pool behind City Garage: behind Fort Ontario (Crisafulli) Skating Rink. Do not drive on grass behind skating rink.
12.	End of Burt St. past West Third St. at dead end. Next to National Grid Substation.
13.	Gardenier Road - bottom of hill before from Johnson Road.
14.	Maple Avenue (Co. Rt. 20) - top of hill from West Fifth St. Rd. across from Galletta's Greenhouse.
15.	Use Novelis entrance off Lake Rd. (Co. Rt. 1) marked "Shipping and Central Receiving". Proceed 0.5 miles down entrance road, this will take you past the parking lot to a dirt road on the left. Take dirt road for approximately 0.4 miles and turn left at sign marked "Private Road - Keep Out". Siren is less than 0.1 miles on right.

FIGURE 7.5
(continued)

Siren Number	Description of Siren Locations
16.	Lake Road (Co. Rt. 1A) 0.5 miles east of Novelis main entrance and intersection of Co. Rt. 1 and 1A.
17.	On North Road (Co. Rt. 1) 0.5 miles east of Lakeview Road (between Lakeview Rd. and Co. Rt. 29) near transmission lines.
18.	Co. Rt. 29 at the Lycoming Fire House (intersection of Miner Road and Co. Rt. 29).
19.	Middle Road ¼ mile east of Kocher Road (Co. Rt. 63)
20.	Old Scriba Fire Barn / new recreation facility - intersection of Creamery Road / Klocks Corner Rd and Rt. 104 West.
21.	On Duke Road near the intersection of Co. Rt. 51A.
22.	City Line Road behind Oswego Community Christian School at top - south of Speedway.
23.	Dutch Ridge Road, just South of Hall Road (Co. Rt. 4).
24.	Old Rt. 57 across from Riverside Cemetery (1.9 miles north of Minetto bridge - 0.5 miles south of Sheriff's office).
25.	Benson Avenue (Co. Rt. 25) at Minetto Fire House.
26.	Old Rt. 57, 1.3 miles south of Minetto bridge and 1.0 mile north of Rt. 481.
27.	March Road between Kingdom Road and Rt. 481.
28.	Middle Road, 0.2 miles east of Co. Rt. 29.
29.	North Road (Co. Rt. 1) 0.2 miles east of Shore Oaks Drive.
30.	Rt. 104B just north of the intersection of Rt. 104 East.
31.	Sundown Road just West of Co. Rt. 35 in Vermillion.
32.	Co. Rt. 16 by Flat Rock Campsite. (1.1 miles from Rt. 104B on Co. Rt. 16) (1.8 miles from Rt. 104 in Mexico).
33.	Rt. 104 and Lincoln Avenue, Mexico. At National Grid Substation East Side of Mexico past Co. Rt. 69 heading east - just before second bridge on Rt. 104.

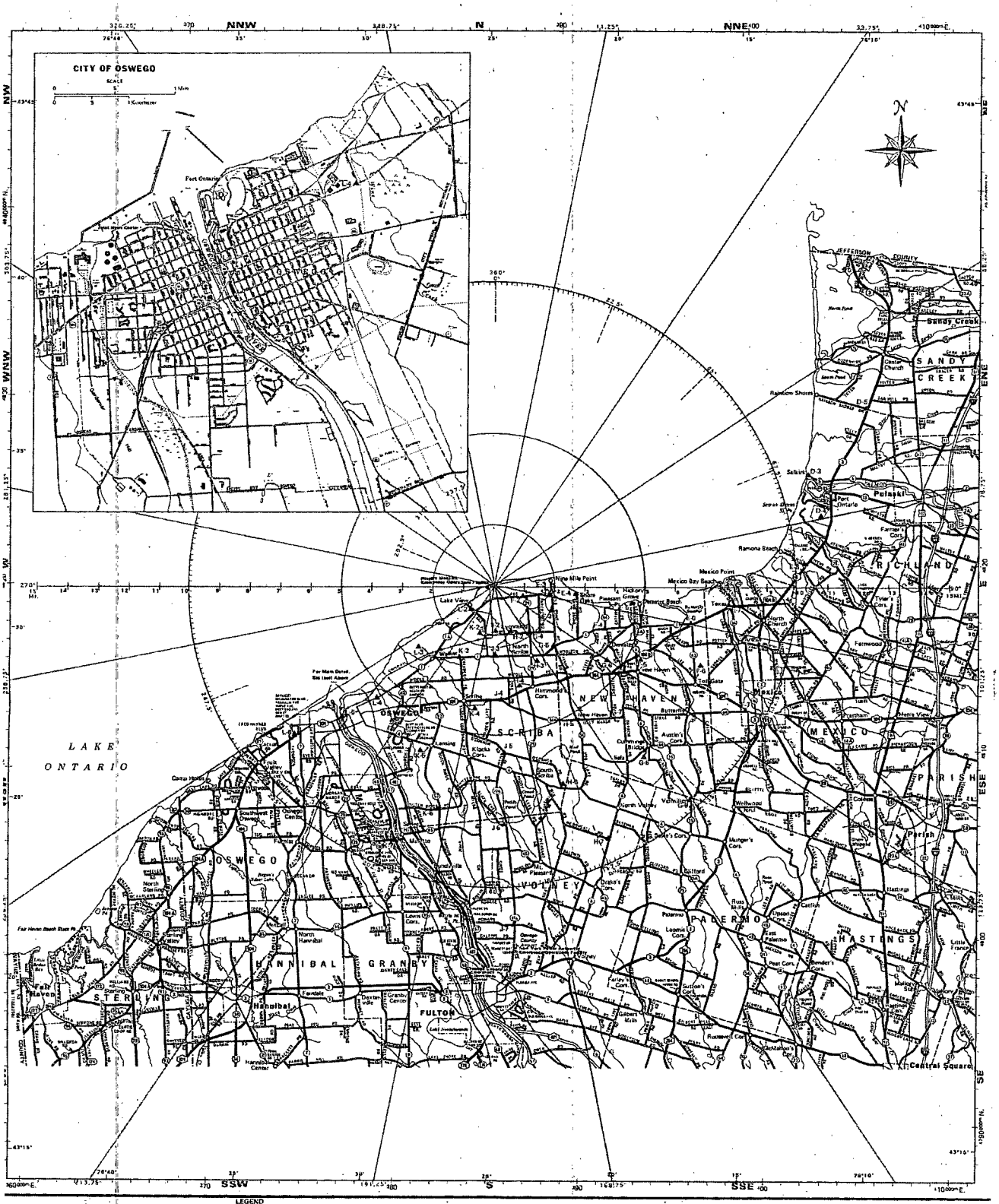
FIGURE 7.5
(continued)

Siren Number	Description of Siren Locations
34.	Rt. 104 east between Middle Road and Keefe Road near Leatherstocking Club Shooting Range.
35.	O'Conner Road - 0.4 miles east of Co. Rt. 29, next to power lines.
36.	Corner of West Utica and Sixth Streets.
37.	Corner of Doolittle Road and Co. Rt. 8, Minetto.

FIGURE 7.6 STICKERS

To search for the map do the following in Merlin:

9.) Log onto Merlin Reference Library via the intranet
10.) Type in your user name, pass word, and group is general
11.) Click on general records
12.) Type in Section 7 in search area then hit enter
13.) To the right you will see your search results, check the box for emergency plan maps
14.) Click on view
15.) Another screen comes – click open from current location
16.) The map will appear in Adobe Reader



Offsite Survey Locations

LEGEND

Interstate Highways
U.S. & State Highways
County Roads
Town Roads
County Boundaries
Township Boundaries
City & Village Boundaries
Railroads
Emergency Response Planning Areas (ERPA) & Number
ERPA – Water Area Nos.
Offsite Survey Locations . . . AEG

Copyright, THE NATIONAL SURVEY, 1994
Chester, Vermont 05143

SCALE

James A. FitzPatrick/Nine Mile Point
Radiological Emergency Plans and Procedures

MAP NUMBER 4

CONTROLLED COPY # 34

ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO: SECTION 9

TITLE: RECOVERY

APPROVED BY: _____
Director of Safety Assurance

APPROVED BY: _____ P. Cullinan
Emergency Planning Manager

EFFECTIVE DATE: 12/28/2007

PERIODIC REVIEW DUE DATE: 12/08

Rev. No. 19

SECTION 9

RECOVERY

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9.3	Recovery Activities	9-7
9.4	Recovery Action Plan	9-8
9.5	Recovery Facilities	9-8
9.6	Temporary Assistance to ENTERGY Employees	9-9
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SECTION 9

RECOVERY

9.0 EMERGENCY CONDITIONS

Actions taken during an emergency situation can be categorized into two general phases: response and recovery. Response actions are the corrective and protective actions taken to mitigate the consequences of an emergency event and to place the emergency under control.

Recovery is defined as that phase of the emergency response which occurs after the emergency conditions have been controlled and / or corrected, and the emergency terminated. Recovery consists of those actions required to restore the plant and its impact on public health and safety as closely as possible to pre-accident status; or to a safe, long-term shutdown.

The extent and nature of the corrective and protective measures and the extent of the recovery operations will depend on the emergency conditions at hand and the status of plant area and equipment. In many emergency situations, the emergency condition may not involve significant plant damage, and thus the plant can be restored to normal operation without assistance. In the event of more extensive damage, a long-term recovery effort may be necessary, and the manpower and resources needed by a long-term recovery will require the establishment of a recovery organization.

At the onset of an emergency condition, response actions to mitigate the consequences of the accident take precedence over recovery actions. The Emergency Director may initiate some limited recovery operations during the response phase. When the emergency conditions are met to commence termination of the emergency, the Recovery Organization may be implemented.

The emergency shall be considered under control and in the Recovery phase only when the following general guidelines have been met:

- Reactor and associated systems are considered to be in a safe, stable condition;
- Radiation levels in all in-plant areas are stable or decreasing with time;
- Release of radioactive materials to the environment from the plant are under control or have ceased;
- Fire, flooding, or similar emergency conditions are controlled or have ceased.

The Emergency Director will make the determination of when an emergency condition is resolved and declare the termination of the emergency and initiation of Recovery.

If, following termination, the emergency situation recurs; the Emergency Director will reactivate the onsite emergency organization. Recovery efforts will be suspended until the Emergency Director and Recovery Manager direct them to resume.

9.1 RECOVERY ORGANIZATION

A Recovery Organization will be activated when a long-term recovery effort is required. Before entering the Recovery phase, the Emergency Director should establish a Recovery organization that is appropriate for the existing on-site and off-site conditions. Recovery organization members should be selected based on availability and expertise. Figure 9.1, Typical Recovery Organization, is representative of a typical organization that may be designated by the Recovery Manager. The Recovery Director directs the organization from the Recovery Center. It may be modified or supplemented as necessary to fit the particular circumstances. In some situations, the normal plant organization may be adequate and a Recovery Organization may not be needed.

The Recovery activities would be managed much like a normal outage, except certain activities unique to the post accident situation may be managed by the Recovery Organization. The organization would function as a matrix management organization to coordinate activities with the normal company organization.

The primary positions / groups in the Recovery Organization are described below:

Site Recovery Director (RD) - The designated plant senior manager who has the requisite authority, experience, and technical expertise to manage the recovery operations. The Site Recovery Director will oversee the operations of the various groups and ensure all activities proposed courses of action and contingency plans receive proper analysis, review, and coordination.

Emergency Director (ED) - The designated plant senior manager responsible for all operations, technical, radiation protection, and scheduling support for restart of the plant. This person reports directly to the Recovery Manager.

Entergy Spokesperson - The Entergy Nuclear Northeast Manager of Communications or designated alternate Spokesperson who functions as the official spokesperson for the Company on all matters relating to the Recovery. The Spokesperson will manage all communications relating to Recovery activities and inform the news media, employees, etc. on such activities.

Corporate Support Group - A group of Entergy personnel assembled to provide assistance and support with the Recovery effort (see Section 9.2). The members of this group will be determined by the Corporate Support Manager based on their areas of expertise.

Corporate Support Center Coordinator - Coordinates requests for personnel, Federal, State, and local agencies and industry groups to augment the Recovery objectives. Organizations which may be requested to provide assistance are listed in Appendix F.

Onsite Recovery Manager - The designated plant individual responsible for coordinating all onsite recovery actions including but not limited to: identification of equipment needing repair, initiation of damage assessment, isolation, control, and minimization of hazards, and initiation of a comprehensive radiological surveillance plan. This person reports to the Emergency Director and utilizes the normal plant organization to accomplish his responsibilities.

Offsite Recovery Manager - The designated plant individual responsible for overseeing the development of offsite (state and county) recovery issues and keeping the Site Recovery Director apprised of offsite activities and requirements.

9.2 CORPORATE SUPPORT CENTER

The Corporate Support Center is a group of Entergy personnel assembled by the Corporate Support Manager to provide assistance to the site organization in the Recovery effort. The makeup of this group will be determined by the Corporate Support Manager based on individual or collective areas of expertise. Other Federal, State and local agencies and industry groups may augment the Recovery Organization and participate in accomplishing recovery objectives.

A Corporate Support Center Coordinator designated by the Corporate Support Manager will coordinate requests for personnel, equipment and materials, and support services.

In the event of an emergency situation at the plant, selected individuals in various company departments may be notified and requested to provide support. This support may be provided at the Recovery Center or from another location. Listed below are the functional capabilities available to the Corporate Support Manager from the corporate organization:

Radiological Support - provides specialized expertise in the areas of radiation safety, radioactive waste management, radiological environmental monitoring, radiochemistry and meteorology.

Engineering Support - provides analytical engineering and operational experience support and engineering scheduling support.

Licensing Support - provides licensing support and direction.

Fuel Management Support - provides expertise in nuclear fuel and fuel configuration.

Quality Assurance Support - provides assistance and direction to plant QA staff to monitor activities of other organizations and maintain Quality Records generated during the emergency.

Public Relations Support - coordinate all outgoing information, on behalf of Entergy, to public officials, news media and the public.

Legal Support - provides legal counsel and advice.

Materials, Purchasing and Contract MP&C) - make arrangement for supplies, services and additional personnel and establish contracts with contractors to supply equipment and services.

Financial Support - provides emergency petty cash and checks as well as budget support.

Risk Management Support - provides assistance in matters pertaining to: nuclear insurance, property loss, cost accumulation, claims and personal compensation.

Offsite Security Support - provides security for offsite emergency facilities and personnel.

The Corporate Support Center Coordinator will coordinate requests for corporate support through the normal Entergy corporate organization. The functions listed above fall under the normal expertise of corporate departments.

Additionally, the Corporate Support Center Coordinator will facilitate requests from the plant staff for other personnel, equipment and materials and logistical support services with the corporate organization.

Long-term emergency recovery activities may require additional personnel and equipment. Normally, personnel will be obtained from those industrial support service organizations which are currently contracted to supply them, and from within the company. Typically, these contracted services include:

- Health Physics
- Decontamination

Most of the necessary equipment and material will be supplied by vendors and others who have a current contract to supply them, and from similar nearby plants. Organizations which may provide equipment and material include:

- Nuclear Steam Supply System Suppliers
- Plant Supply Vendors
- Plant System Supplies
- Nine Mile Point Nuclear Station
- Robert E. Ginna Nuclear Power Station
- Indian Point Energy Center
- Vermont Yankee
- Pilgrim Nuclear Power Station

Other organizations may be requested to provide assistance to augment the recovery organization.

The Institute of Nuclear Power Operations (INPO) has developed a list of technical resources and skills within the nuclear industry, which will be available to a utility during an emergency situation. These can be found in the INPO Emergency Resource Manual.

Logistical support services may be necessary to support a large influx of personnel from Entergy Headquarters, contractors, vendors, news media and government support organizations. These services include:

- Lodging
- Food and drink
- Transportation
- Communication

There are sufficient facilities, in the vicinity of the plant, to supply these basic services. Individual contracts will be negotiated, as necessary.

9.3 RECOVERY ACTIVITIES

Recovery from an emergency is guided by the following principles:

- The protection of public health and safety is the foremost consideration in formulating recovery plans.
- Public officials should be kept informed of recovery plans so they can properly carry out responsibilities to the public.
- Periodic information should be provided to the news media so they can provide information to the public, regarding recovery plans and progress made.
- Periodic status reports should be given to company employees and to government and industry representatives.
- Radiation doses to employees and other radiation workers should be kept as low as reasonably achievable. (ALARA)

Normal plant practices will be followed to the furthest extent possible with regard to maintenance, repair, modification, decontamination, and radiation exposure control activities.

Plant recovery activities shall be in accordance with plant technical specifications and other license conditions or restrictions. Specifically, during recovery operations, the radiation exposure limits of 10 CFR 20 will apply.

Specific recovery activity areas include, but are not limited to, the following:

- Corrective Actions
- Engineering
- Radiological (To include total population exposure)
- Logistics
- Administration

Recovery activities shall be pre-planned. Procedures detailing performance of the above activities will be developed, if required, during the Recovery phase.

9.4 RECOVERY ACTION PLAN

A Recovery Action Plan is designed to expedite plant damage assessment, accommodate requests for assistance in offsite recovery activities by state and local agencies and initiate efforts to return the plant to an operational status.

A Recovery Action Plan will be developed to address both short and long term recovery actions. The Recovery Manager is responsible for the development of the Recovery Action Plan.

Specific instructions related to the development of a Recovery Action Plan are maintained in Emergency Plan Implementing Procedures.

9.5 RECOVERY FACILITIES

The Emergency Operations Facility may function as the initial Recovery Center. For recovery of longer duration, efforts will be directed from an appropriate facility.

9.6 TEMPORARY ASSISTANCE TO ENTERGY EMPLOYEES

An emergency situation may have a widespread negative impact on employees and their families. The need to provide for the families of essential employees, so those employees may return to work knowing their families are cared for, is of prime concern when Recovery has begun. The following is a basic framework for the development of a support program for employees and their families. This support program will be coordinated by the Recovery Support Group.

Housing

Employees may have lost their housing or access to their housing. Portable housing, in the form of trailers or mobile homes, may be provided. Agreements are in place to provide portable office trailers and may be expanded as needed. Arrangements may be made with local motels / hotels whenever possible.

Financial Assistance

Employee access to Federal or State assistance programs will be facilitated. The company may provide transportation to assistance centers or encourage authorities to establish these centers nearby. Employees will be encouraged to seek all forms of financial assistance.

Locator Service

The American Red Cross operates a message locator service so friends and family members, outside of the affected area, can make contact with victims of a disaster. The company will assist employees with registration for this service by providing the Red Cross with a list of employees onsite or housed in accordance with this plan.

Medical

The company will assist its employees with meeting their immediate medical needs wherever possible. When the company cannot provide this assistance through normal first aid channels, then medical assistance will be arranged through outside providers.

Recognizing the stress placed on victims of any disaster, the company may make personnel available to its employees and families to deal with the stress caused by the disaster. Services may include counseling in stress management, substance abuse and trauma recovery.

9.7 TERMINATION OF RECOVERY

In order to complete and terminate Recovery, the Recovery Manager will ensure the following:

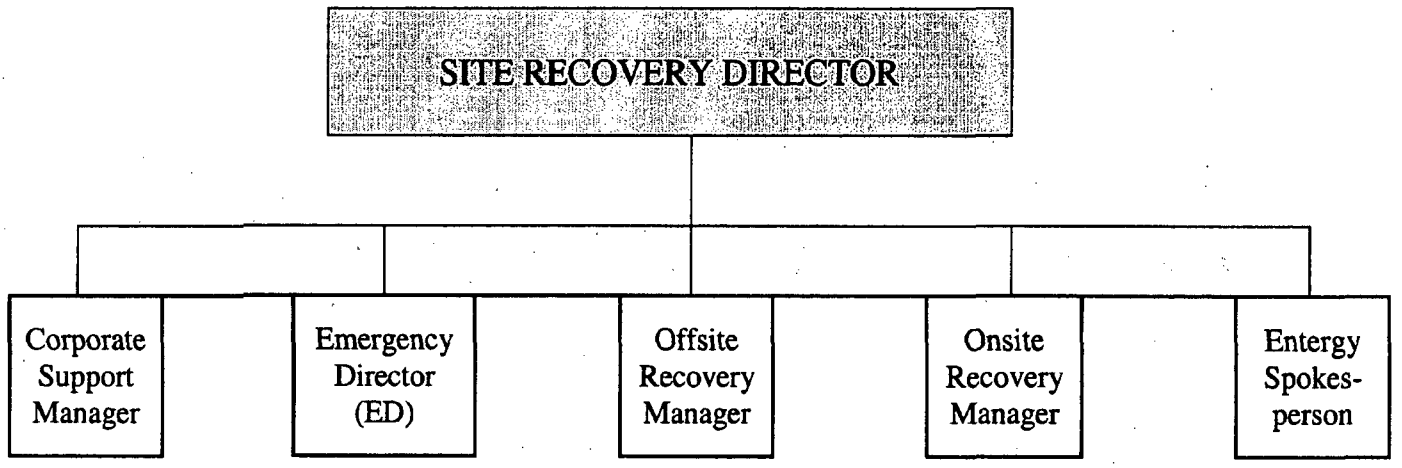
- Actions outlined in the Recovery Action Plan are typically completed or dispositioned, including;
- Appropriate offsite agencies have been contacted and have concurred with the termination of recovery actions;
- Onsite and offsite organizations involved with Recovery have been apprised of the termination of activities;
- News media organizations have received a final status report on recovery operations;
- Recovery actions have been reviewed and documented.

9.8 FIGURES, FORMS AND ATTACHMENTS

Figure 9.1 RECOVERY ORGANIZATION

Figure 9.1

TYPICAL RECOVERY ORGANIZATION



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ENTERGY NUCLEAR NORTHEAST
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO.: APPENDIX C

TITLE: LETTERS OF AGREEMENT

Approved By: _____
Director of Safety Assurance

Approved By: _____ P. Cullinan 12/14/7
Emergency Planning Manager

Effective Date: 12/28/2007

PERIODIC REVIEW DUE DATE: 12/08

Rev. No. 29

NAME/AGENCY	LETTER OF AGREEMENT	DATE	PAGE

APPENDIX C

LETTERS OF AGREEMENT

Table of Contents

1.	Ms. Joyce Mackessy, MBA Associate Administrator STATE UNIVERSITY OF NY UPSTATE MEDICAL UNIVERSITY University Hospital 750 East Adams Street Syracuse, NY 13210 315/464-4253	January 25, 2007	C-1
2.	Mr. Reuel A. Todd, Sheriff Oswego County Sheriff's Office 39 Churchill Road Oswego, NY 13126 315/349-3307	January 25, 2007	C-2
3.	Mr. Bruce Bisbo Airport Manager Oswego County Airport 40 Airport Drive Fulton, NY 13093 315/591-9130	April 27, 2007	C-3
4.	Mr. Jerry W. Hiatt, CHP Chief Technical Officer Bartlett Nuclear, Inc. (Previously NUMANCO, L.L.C.) 60 Industrial Park Road Plymouth, MA 02360 800/225-0385 ext. 1244	February 1, 2007	C-4

NAME/AGENCY	LETTER OF AGREEMENT	DATE	PAGE
5.	Mr. Edward J. Hubner Vice President SHAW STONE and WEBSTER, Inc. 3 Executive Campus Cherry Hill, NJ 08002 856/482-3000	January 26, 2007	C-5
6.	Mr. Christopher J. Canonica, P.E. New York Operations Manager EA ENGINEERING, P.C. EA SCIENCE and TECHNOLOGY 3 Washington Center Newburgh, NY 12550 845/565-8100 315/342-1419 (site manager)	January 11, 2007	C-6
7.	Mr. Dan Davis Vice President, Business Development Energy Solutions (Duratek) P.O. Box 2205 Joliet, IL 60434-2205 815/439-2717	February 21, 2007	C-7
8.	Ms. Gail D. Greenwood, RN, MSN Expectative VP and Chief Operating Officer OSWEGO HOSPITAL 110 West 6th Street Oswego, NY 13126 315/349-5511	May 1, 2007	C-8
9.	Mr. John R. Gibb Director NEW YORK STATE EMERGENCY MANAGEMENT OFFICE 1220 Washington Avenue Building 22, Suite 101 Albany, NY 12226-2251 518/292-2301	January 30, 2007	C-9

NAME/AGENCY	LETTER OF AGREEMENT	DATE	PAGE
10.	Mr. Jeff D. Isakson Key Account Manager AREVA NP Inc. 3954 Charter Club Dr. Doylestown, PA 18902 215/340-5003	January 31, 2007	C-10
11.	Mr. John R. Hinds Fire Coordinator OSWEGO COUNTY FIRE CONTROL 200 North Second Street Fulton, NY 13069 315/591-9142	January 1, 2007	C-11
12.	Mr. Jeffrey J. Place Manager, Radiological Protection and Emergency Preparedness INSTITUTE OF NUCLEAR POWER OPERATIONS (INPO) Suite 100 700 Galleria Parkway, SE Atlanta, GA 30339-5943 770/644-8000		C-12
13.	David D. O'Brien, Jr., M.D., P.C. 22 West Oneida Street Oswego, NY 13126 315/343-4348	March 8, 2007	C-13
14.	Mr. Edward J. Geers Chief OSWEGO, FIRE DEPARTMENT 35 E. Cayuga St. Oswego, NY 13126 315/343-2161	February 29, 2007	C-14
15.	Ms. Deanna McCombs PIM Program Manager POOLED EQUIPMENT INVENTORY CO. PEICO. 42 Inverness Center Parkway Bin 243 Birmingham, AL 35242 205/992-7347	August 2, 2007	C-15

NAME/AGENCY	LETTER OF AGREEMENT	DATE	PAGE
16.	Ms. Patricia E. Egan Director OSWEGO COUNTY EMERGENCY MANAGEMENT OFFICE 200 North 2nd Street Fulton, NY 13069 315/591-9150	January 26, 2007	C-16
17.	Mr. Gregory A. Mills Contracting Officer's Representative (Alternate) DEPARTMENT OF ENERGY Oak Ridge Operations Office P.O. Box 2001 Oak Ridge, Tennessee 37831 865/576-3131	January 8, 2007	C-17
NOTE:	Joint Agreement: JAFNPP, Nine Mile Point Nuclear Power Station, R.E. Ginna Nuclear Power Plant	August 8, 2006	C-19-21
18.	Mr. Kevin Mulligan General Manager Plant Operations Entergy Nuclear Northeast James A. FitzPatrick P. O. Box 110 Lycoming, NY 13093		
19.	Mr. James Hutton Plant General Manager NINE MILE POINT NUCLEAR POWER STATIONS Nos. 1 & 2 P. O. Box 32 Lycoming, NY 13093		
20.	Mr. David Holm Plant General Manager R.E. Ginna Nuclear Power Plant ROCHESTER GAS & ELECTRIC PLANT 89 East Avenue Rochester, NY 14649		

750 East Adams Street
Syracuse, NY 13210

www.universityhospital.org

SUNY Upstate Medical University

UniversityHospital

MEDICINE AT ITS BEST®

January 25, 2007

Nicholas Avrakotos
Emergency Planning Coordinator
Entergy Nuclear Northeast/
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, NY 13093

Subject: Primary Referral Hospital

Dear Mr. Avrakotos:

Please update your files to note that I am currently the Chair of the University Hospital Safety Committee and Jason Sciarro is no longer at University Hospital. Please accept this letter as confirmation that University Hospital will continue to serve as the primary referral hospital in the event of an emergency at the James A. Fitzpatrick Nuclear Plant.

Please contact my office at 315-464-4253 if you have any questions or require additional information.

Respectfully,

Joyce Mackessy, MBA
Associate Administrator

cc:
Phillip Schaengold, Executive VP for Hospital Affairs, CEO
Paul Seale, COO
Gerald Connck, Radiation Safety Officer
Anne Ryan, Emergency Preparedness Coordinator

OSWEGO COUNTY SHERIFF'S OFFICE

ADMINISTRATION
(315) 349-3307
Fax (315) 349-3483
ROAD PATROL
(315) 349-3411
FAX (315) 349-3303
CRIMINAL INVESTIGATION
(315) 349-3301

REUEL A. TODD
SHERIFF

ROBERT J. LIGHTHALL
UNDERSHERIFF

CIVIL DIVISION
(315) 349-3302
1-800-582-7583
JAIL DIVISION
(315) 349-3300
FAX (315) 349-3349

39 Churchill Road, Oswego, New York 13126-6613

January 25, 2007

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, New York 13093

Attention: Nicholas Avrakotos
Emergency Planning Coordinator

Dear Sir:

Reference is made to your letter of January 10, 2007 requesting an annual updating of our letter of agreement regarding emergency assistance availability of the Oswego County Sheriff's Office.

Our organization's assistance will continue to be available for an emergency at the plant. We are willing to cooperate fully implementing any and all law enforcement functions necessary for security measures such as traffic or crowd control, with the existing emergency procedure plans.

Since the primary function of this office is law enforcement, it is out intent to assist, in any way possible, Entergy Nuclear Northeast and its officials, at the James A. FitzPatrick Nuclear Power Plant in the event of a mock or actual emergency.

If necessary, to contact me personally, feel free to call me at 349-3307.

Sincerely,

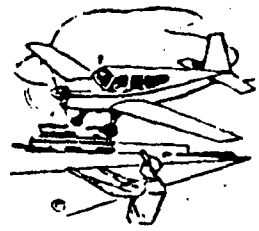
Reuel A. Todd
Sheriff

RT:lsb

Bruce G. Bisbo
MANAGER

Oswego County Airport

40 Airport Drive
Fulton, New York 13069
(315) 591-9130
Fax (315) 591-9131



April 27, 2007

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. Fitzpatrick NPP
Mr. Nicholas Avrakotos
Emergency Planning Coordinator
PO Box 110
Lycoming, New York 13093

RE: Emergency Planning Annual Agreement for 2007

Dear Mr. Avrakotos:

This is to inform you that the Oswego County Airport will be made available for use by the James A. Fitzpatrick Nuclear Power Plant in the event of an emergency. It is understood that the airport may be used to monitor and/or decontaminate personnel and vehicles if needed.

Sincerely,

Bruce Bisbo

Bruce Bisbo
Airport Manager

BARTLETT
NUCLEAR, INC.

www.bartlettinc.com

60 Industrial Park Road
Plymouth, MA 02360
800.225.0385

February 1, 2007

Entergy Nuclear Operations Inc.
James A. Fitzpatrick Nuclear Power Plant
Nicholas Avrakotos
Emergency Planning Manager
P.O. Box 110
Lycoming, NY 13093

Dear Mr. Avrakotos:

In response to your request letter dated January 10, 2007, Bartlett Nuclear, Inc. is pleased to offer our support during emergency situations as follows:

1. Bartlett Nuclear, Inc. will provide contract services to JAFNP during an Emergency situation as personnel availability permits.

2. Bartlett Nuclear, Inc. will assist JAFNP personnel in 24 hours per day scheduling for personnel in Health Physics support positions.

Bartlett Nuclear, Inc. understands the need to develop and maintain effective contingency plans in the event of an unforeseen emergency at JAFNP, and we are available to support your organization if the need arises.

I understand this agreement is binding only upon receipt of an acknowledgement letter from JAFNP. Upon receipt of the acknowledgement letter, Bartlett Nuclear, Inc. will forward appropriate insurance documents.

If you require additional information please contact either Bob Decensi, President - Bartlett Nuclear, Inc. at (800) 225-0385, ext. 1244 or Nicholas J. DiMascio, Chief Operating Officer at 800-225-0385, ext. 1267.

Sincerely,

Jerry W. Hiatt, CHP
Chief Technical Officer
Bartlett Nuclear, Inc.

Stone & Webster, Inc.
3 Executive Campus
Cherry Hill, NJ 08002
856.482.3000
Fax: 856.482.4028

Shaw™ Stone & Webster, Inc.

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Attn: Nicholas Avrakotos
Emergency Planning Coordinator
P.O. Box 110
Lycoming, NY 13093

January 26, 2007

Site Emergency Support
James A. FitzPatrick Nuclear Power Plant

Stone and Webster, as the original plant designer, has provided varying levels of support to the James A. FitzPatrick Nuclear Power Plant for many years. We appreciate Mr. Ted A. Sullivan's letter requesting our interest in continuing to offer our support should an emergency situation occur at the plant. We offer this letter as our positive response to Mr. Sullivan's letter no. JAFP-07-0005f, dated January 10, 2007 and our continued commitment to the successful operation of JAFNPP.

The primary contact for this support would be as follows:

Mr. Edward J. Hubner
Vice President, Stone and Webster, Inc.
3 Executive Campus
Suite 300
Cherry Hill, NJ 08002

Telephone Number: 856-482-4178
Cell Phone Number: 609-876-4777
E-Mail Address: edward.hubner@shawgrp.com

I thank you for your request and pledge our commitment to support your needs, if necessary.

Very truly yours,

Edward J. Hubner
Vice President, Stone and Webster, Inc.

EA Engineering, P.C.
EA Science and Technology

3 Washington Center
Newburgh, NY 12550
Telephone: 845-565-8100
Fax: 845-565-8203
www.eaest.com

11 January 2007

Mr. Nicholas Avrakotos
Emergency Planning Coordinator
Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, New York 13093

RE: Emergency Response
EA Project No. 61869.01

Dear Mr. Avrakotos:

EA Science and Technology wishes to confirm the availability of its onsite personnel to assist Entergy Nuclear Operations in the event of an emergency at the James A. FitzPatrick Nuclear Power Plant. EA has two full-time staff members available to provide assistance consistent with their training, capabilities, and experience. Their time would be billed at the overtime labor rate schedule established in our contract.

It is EA's understanding that our staff will receive appropriate technical support for Entergy. Also, Entergy will assume full responsibility for the protection of EA's workers from radiological exposures/releases, and all other safety and health risks/hazards, and indemnify EA against any and all claims that might result.

If you have any questions, or need our services, please do not hesitate to contact Gary Prye, Site Manager, at (315) 342-1419, or Paul Muessig, Project Manager, at (845) 565-8100, Ext. 1006.

Sincerely yours,

Christopher J. Canonica, P.E.
New York Operations Manager

CJC/mkp

cc: G. Prye
P. Muessig

ENERGY*SOLUTIONS*

February 21, 2007
CSR-2007-022107

Mr. Nicholas Avrakotos
Emergency Planning Coordinator
Entergy Nuclear Operations, Inc.
James A. FitzPatrick NPP
P.O. Box 110
Lycoming, NY 13093

Dear Mr. Avrakotos:

In response to Mr. Peter Dietrich's letter dated January 10, 2007, Duratek, Inc., a wholly owned subsidiary of Energy*Solutions*, will continue to make our resources available in response to an emergency at your plant.

We currently provide a technician on a demand basis to operate out radwaste processing systems at your site. We also have a Project Manager in the Northeast who is available to respond to an emergency, should the need arise. In addition, Duratek has two technicians and equipment located at Nine Mile Point 1 and 2. These resources are also available to respond to an emergency at your facility.

We are pleased to be the radwaste contractor at your facility. Duratek will cooperate in any way we can to support your plant needs.

Also, please note that our Avon, CT office has been closed. Your radwaste needs are being handled by Becky Gray at 815-439-2717 and her fax is 815-609-1392.

Sincerely,

Dan Davis

Dan Davis
Vice President, Business Development

:bg

C: Peter Dietrich – Site VP FitzPatrick

P.O. Box 2205
Joliet, IL 60434-2205

Oswego Hospital

An Affiliate of Oswego Health

May 1, 2007

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Attn: Nicholas Avrakotos
Emergency Planning Coordinator
P.O. Box 110
Lycoming, New York 13093

Dear Mr. Avrakotos:

This letter is to renew the agreement between Oswego Hospital and Entergy Nuclear Northeast / James A. FitzPatrick Nuclear Power Plant. The Hospital will continue to plan and work cooperatively for the care of persons who become ill or injured at your Plant. We understand that some of these patients may be radioactively contaminated and we are prepared to provide appropriate care for them.

Our response will continue to be in accordance with the guidelines established by Oswego Hospital and Entergy Nuclear Northeast / James A. FitzPatrick Nuclear Power Plant. We appreciate your assistance in helping to prepare and maintain this document.

We are pleased that this cooperative effort will continue to satisfy the requirements for the Joint Commission on Accreditation of Health Care Organizations and the Nuclear Regulatory Commission.

Sincerely,

Gail D. Greenwood

Gail D. Greenwood, RN, MSN
Executive VP and Chief Operating Officer

/jmq

315-349-5511
110 West Sixth Street, Oswego, N.Y. 13126
www.oswegohealth.org

New York State Emergency Management Office
1220 Washington Avenue
Building 22, Suite 101
Albany, NY 12226-2251

Eliot Spitzer, Governor

John R. Gibb, Director

January 30, 2007

Mr. Nicholas Avrakotos
Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
Emergency Planning Coordinator
P.O. Box 110, James A. FitzPatrick Nuclear Power Plant
Lycoming, NY 13093

Dear Mr. Avrakotos:

This serves to update the annual agreement between Entergy Nuclear Northeast (ENN) and the State Emergency Management Office for the Radiological Emergency Preparedness program.

In the event of an emergency at ENN's James A. FitzPatrick Nuclear Power Plant, New York State will respond in accordance with procedures contained within the State Radiological Emergency Preparedness Plan. Notification to New York State of the emergency should be initiated via the Radiological Emergency Communications System hotline. The State will also continue to participate in necessary training exercises and drills.

Please contact me at (518) 292-2301 if I can be of further assistance.

Sincerely,

John R. Gibb
Director

State Emergency
Coordination Center: (518) 292-2200

Fax: (518) 322-4982

Executive Offices: (518) 292-2275

AREVA

January 31, 2007

Entergy Nuclear Northeast
Entergy Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Attn: Nicholas Avrakotos, Emergency Planning Coordinator
PO Box 110
Lycoming, NY 13093

Subject: **AREVA NP Inc**
Reference: **Entergy letter JAFP-07-005g, Peter Dietrich to Jeff Isakson, dated January 10, 2007.**

Dear Nicholas:

This agreement letter is between AREVA NP Inc. and Entergy Nuclear Northeast James A. FitzPatrick (JAF) Nuclear Power Plant to work cooperatively in efforts for emergency preparedness at JAF.

If requested by Entergy to support events at JAF, AREVA will respond consistent with our capabilities at that time and perform any work in accordance with the Entergy - AREVA NP GSA No. 4600500841. It is our understanding that besides the accidents typical of other industrial activities, an emergency at JAF could involve radiological exposures and releases; and in such a situation, trained Entergy employees would provide technical support and radiation protection services.

The designated point of contract at AREVA NP Inc. is myself, the alternate is Dr. Andrew Cook. The third option would be to contact our main office number in Lynchburg, Virginia that is answered 24x7.

The phone numbers are as follows:

Primary Contact Mr. Jeff Isakson	(215) 340-5003 (office), (215) 534-2336 (mobile)
Alternate Dr. Andrew Cook	(434) 832-3045 (office), (434) 841-4073 (mobile)
24x7 AREVA NP Inc,	(434) 832-3000

Sincerely,

J. D Isakson
Key Account Manager
AREVA NP, Inc

AREVA NP INC.
3954 Charter Club Dr, Doylestown, PA 18902
Phone : (215) 340-5003 - Fax : (215) 340-7973 - www.areva.com

OFFICE OF THE OSWEGO COUNTY FIRE COORDINATOR

200 North Second Street • Fulton, New York 13069

John R. Hinds
Fire Coordinator

Office: (315) 591-9142
Fax: (315) 591-9146

January 1, 2007

Mr. Nicholas Avrakotos
Entergy Nuclear Northeast
James A. FitzPatrick Nuclear Power Plant
PO Box 110
Lycoming, New York 13093

Dear Mr. Avrakotos:

This letter is to renew the agreement between Oswego County's volunteer fire departments and the James A. FitzPatrick Nuclear Power Plant to plan and work cooperatively for fire prevention and firefighting at the site.

Firefighting assistance will be available during an emergency at the plant as outlined in the Oswego County Mutual Aid Plan which is registered with the New York State Office of Fire Prevention and Control, and was adopted by the Oswego County Legislature in November 1984.

It is our understanding that besides the accidents typical of industrial activities, an emergency at your facility could involve radiological exposures and releases, and in such a situation, trained plant employees would provide technical support to our firefighters.

Sincerely,

John R. Hinds
Oswego County Fire Coordinator

:kmr
nypaltr.wpd

INPO®

Institute of
Nuclear Power
Operations

Suite 100
700 Galleria Parkway, SE
Atlanta, GA 30339-5943
770-644-8000
FAX 770-644-8549

September 30, 2007

Dear Ladies and Gentlemen:

This letter certifies that the plant emergency assistance agreement between INPO and its member utilities remains in effect. In the event of an emergency at your utility, INPO will assist you in acquiring the help of other organizations in the industry, as described in Section 1 of the *Emergency Resources Manual*, INPO 03-001. If requested, INPO will provide the following assistance:

- Facilitate technical information flow from the affected utility to the nuclear industry.
- Locate replacement equipment and personnel with technical expertise.
- Obtain technical information and industry experience regarding plant component and systems.
- Provide an INPO liaison to facilitate interface.

This agreement will remain in effect until terminated in writing. Should you have questions, please call me at (770) 644-8212 or e-mail placejj@inpo.org.

Sincerely,

Jeffrey J. Place
Manager
Radiological Protection &
Emergency Preparedness

JJP:jkm

Cardiology

David D. O'Brien Jr., M.D., P.C.

Internal medicine

22 West Oneida Street
Oswego, New York 13126

Telephone: (315) 343-4348 Fax: (315) 343-0137

March 8, 2007

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, NY 13093

Attn: Nicholas Avrakotos
Emergency Planning Coordinator

Dear Mr. Avrakotos,

This letter is to renew the agreement between Dr. David D. O'Brien Jr., M.D., P.C. and the Entergy Nuclear Northeast's Nuclear Power Plant to work cooperatively in medical emergencies.

The response will be in accordance with the guidelines established by my medical practice and the Entergy Nuclear Northeast. It is my understanding that I shall be available for emergencies at the Oswego Hospital Emergency room, which involve radiological exposures and releases and the contamination of employees at such times that I am present in the community. In such a situation I also understand that trained employees will be available to provide technical support.

Sincerely,

David D. O'Brien Jr., M.D., P.C.

THE CITY OF OSWEGO
35 East Cayuga Street
Oswego, New York 13126
315-343-2161 • Fax: 315-343-0243

Est. 1876
DEPARTMENT OF PUBLIC SAFETY

BUREAU OF FIRE
EDWARD J. GEERS
FIRE CHIEF

February 29, 2007

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. Fitzpatrick Nuclear Power Plant
P.O. Box 110
Lycoming, New York 13093

Attn: Nicholas Avrakotos
Emergency Planning Coordinator

Dear Mr. Avrakotos:

This letter is to confirm the agreement between the City of Oswego Fire Department and Entergy Nuclear Northeast, James A. Fitzpatrick NPP to provide our services in an emergency situation.

Respectfully,

Edward J. Geers
Chief
Oswego Fire Department

EJG/smw

Pooled Equipment Inventory Co. (PEICo)
42 Inverness Center Parkway (Bin. 243)
Birmingham, Alabama 35242
Phone 205.992.7347
Fax 205.992.5271

August 2, 2007

Mr. Nicholas Avrakotos
Emergency Planning Coordinator
Entergy Nuclear Operations, Inc.
James A. Fitzpatrick Nuclear Power Plant
P. O. Box 110
Lycoming, NY 13093

Re: Annual Updating of Agreement Letters

Dear Mr. Avrakotos:

Pooled Equipment Inventory Company (PEICo) and Southern Nuclear Services (SNS) would be available for services identified in Peter Dietrich's letter of January 10, 2007, under the terms of the Management Contract between PEICO and SNS.

I am enclosing a copy of my letter of August 2, 2007, on PASS Cask Emergency Planning that is distributed annually to Equipment Committee members. Fitzpatrick's designated PIM representative is Charles King.

If you have any questions or comments, please do not hesitate to call me.

Sincerely,

Deanna L. McCombs
PIM Program Manager

DLM/jf

cc: Peter Dietrich

Attachment

FILE: NYPA

OSWEGO COUNTY
EMERGENCY MANAGEMENT OFFICE
PATRICIA E. EGAN, DIRECTOR

200 NORTH 2ND STREET
FULTON, NEW YORK 13069
(315) 591-9150
FAX: (315) 591-9176

January 26, 2007

Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Attn: Nicholas Avrakotos
Emergency Planning Coordinator
PO Box 110
Lycoming, New York 13093

Dear Mr. Avrakotos:

The cooperation and assistance that Oswego County has received in the past from the personnel of Entergy Nuclear Northeast has been outstanding and we in Emergency Management look forward to continuing this mutual relationship.

Be assured that this office will continue to participate in all emergency planning endeavors and provide whatever assistance that may be required in the event of an accident and/or incident at the James A. FitzPatrick Nuclear Power Plant.

Sincerely,

Patricia Egan

Patricia Egan
Director

Department of Energy

Oak Ridge Office
P.O. Box 2001
Oak Ridge, Tennessee 37831

January 8, 2007

Mr. Nicholas Avrakotos
Emergency Planning Coordinator
Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Post Office Box 110
Lycoming, New York 13093

Dear Mr. Avrakotos:

LETTER OF AGREEMENT - RADIATION EMERGENCY ASSISTANCE CENTER/TRAINING SITE (REAC/TS) SUPPORT

Please reference a letter by facsimile of January 4, 2007, from Kathy Izyk, requesting that the Department of Energy (DOE) REAC/TS facilities and team continue to be available to provide back-up capability and assistance to the James A. FitzPatrick Nuclear Power Plant in the event of a radiological emergency. This response constitutes our agreement to provide this service upon your request.

We wish to remind you that our REAC/TS facilities in the Oak Ridge Institute for Science and Education (ORISE) are government controlled and operated by the Oak Ridge Associated Universities under contract with DOE. Therefore, REAC/TS is prohibited from competing with commercial firms, which can provide radiological emergency services. Only if the magnitude or uniqueness of a radiological emergency exceeds your in-house and commercially available capabilities would REAC/TS be authorized to provide back-up services.

Since these facilities are government controlled, no fee or retainer is required to assure the availability of back-up services by REAC/TS. However, if you utilize the services of REAC/TS, we should expect to recover those costs, which could reasonably be related to handling such an incident, including all charges billed to DOE or ORISE by hospitals and physicians. Information concerning the REAC/TS facilities, staff, services available, and procedures for seeking REAC/TS assistance can be obtained by direct contact with the REAC/TS Director, Dr. Albert L. Wiley, ORISE, Post Office Box 117, Oak Ridge, Tennessee 37831, or telephone number (865) 576-3131.

Sincerely,

Gregory A. Mills

Gregory A. Mills
Contracting Officer's
Representative (Alt.)

cc:
A. L. Wiley, MS 39, ORISE
R. M. Kennard, MS 48, ORISE

AGREEMENT BY AND BETWEEN
ENTERGY NUCLEAR NORTHEAST OPERATIONS, INC.
JAMES A. FITZPATRICK NPP, NINE MILE POINT NUCLEAR STATION LLC,
AND R.E. GINNA NUCLEAR POWER PLANT, LLC
REGARDING EMERGENCY PLAN SUPPORT

This Agreement, effective 8/8/06, by and between Entergy Nuclear Northeast Operations Inc., James A. FitzPatrick NPP ("Entergy"), Nine Mile Point Nuclear Station LLC ("Constellation") and R.E. Ginna Nuclear Power Plant, LLC ("Constellation")

WITNESSETH THAT:

WHEREAS, Entergy and Constellation own and operate nuclear generating stations in Wayne and Oswego Counties in the State of New York, and

WHEREAS, Entergy and Constellation also desire to cooperate with respect to a prompt notification system and UHF radio channels, and

WHEREAS, the aforementioned stations are sufficiently near to one another to allow for mutual aid and support in the event of an emergency, and

WHEREAS, the parties desire to set forth some of the ways assistance will be provided in such event;

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, the parties agree as follows:

1. Upon receipt of notification that an emergency has occurred requiring any of the services identified below, those parties (or the party) not experiencing the emergency condition shall use their (or its) best efforts, subject to their (or its) own obligations to operate their (or its) station (or stations) in a safe and reliable manner, to:

   A. Assist with equipment and personnel in monitoring and evaluation of onsite and offsite radiological situations

   B. Provide personnel to assist at offsite emergency centers.

   C. Assist in communications between emergency centers, the control room, and off-duty plant personnel or outside agencies.

   D. Allow use of laboratory and counting room.

   E. Allow use of environmental laboratory facilities.

   F. Allow use of whole body counting facilities.

G. Provide personnel for in-plant recovery operations.

H. Provide personnel to assist in the Joint news Center.

I. Allow use of personnel decontamination facilities and equipment.

J. Allow use of specific assets (eg heli-pad at NMPS, pumper truck at JAF) that may assist in mitigating the event.

It is understood and agreed that these services would constitute a back-up capability and would not serve as a primary response force.

2. Constellation will maintain and provide Entergy with access to the Prompt Notification System (sirens) used by Oswego County in support of the plans and commitments associated with the emergency planning efforts and declarations made by Entergy or Constellation in the event of a site emergency. Entergy shall reimburse Constellation for one-third (1/3) of the total cost associated with the maintenance and operation of the prompt notification system.

3. Constellation will permit Energy to utilize at no charge to the "Offsite Admin" and "Offsite Rad Teams" UHF radio channels for emergency preparedness purpose. Entergy shall have sole responsibility for equipment purchase and maintenance of Entergy radio equipment used on these frequencies.

4. Except as provided below, this Agreement may not be assigned or transferred by any party without the written consent of the other parties. Any such purported assignment or transferred without such consent shall be void. Notwithstanding the foregoing two sentences, any party may assign this agreement to an entity acquiring such party's upstate nuclear generating station, provided such entity assumes and agrees to perform the obligations imposed by this Agreement on the assigning party.

5. This Agreement, as the same may be amended or modified from time to time in writing, constitutes the entire agreement relating to the subject matter hereof and supercedes any and all prior and contemporaneous agreements, commitments, understandings and discussions, whether oral or written relating to the Agreement.

6. Any party's participation in this Agreement is expressly conditioned upon its receipt, in a form satisfactory to that party in its sole discretion, of all relevant consents, approvals, authorizations, determinations or declarations from federal, state and local governmental authorities including, but not limited to, the receipt by a party of a determination from the Federal Energy Regulatory Commission, or any successor thereto, of "exempt wholesale generator" status under Section 32 of the Public Utility Holding Company Act of 1935, as amended.

This agreement may be executed in counterparts.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date set forth below.

ENTERGY NUCLEAR NORTHEAST OPERATIONS, INC.
JAMES A. FITZPARTICK NPP

By: _____ Date: 3-16-06
Kevin Mulligan
General Manager Plant Operations

CONSTELLATION ENERGY
NINE MILE POINT NUCLEAR POWER STATION

By: _____ Date: 4/7/06
James Hutton
Plant General Manager

RE GINNA STATION
ROCHESTER GAS AND ELECTRIC CORPORATION

By: _____ Date: 4/8/06
Dave Holm
Plant General Manager

CONTROLLED COPY # 34

ENTERGY NUCLEAR OPERATIONS, INC.
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

EMERGENCY PLAN VOLUME 1

PROCEDURE NO.: APPENDIX N

TITLE: TYPICAL FEDERAL SUPPORT RESOURCES

APPROVED BY: Brian M. Fenn
Director of Safety Assurance

APPROVED BY: Pat Kathan P. Cullinan 12/19/7
Emergency Planning Manager

EFFECTIVE DATE: 12/28/2007

PERIODIC REVIEW DUE DATE: 12/08

Rev. No. 15

APPENDIX N

TYPICAL FEDERAL SUPPORT RESOURCES

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APPENDIX N

TYPICAL FEDERAL SUPPORT RESOURCES

1. AIRFIELDS

a. County Airport
1200 Brooks Avenue
Rochester, NY 14624
Tel. 585/464-6001

b. Oswego County Airport
40 Airport Drive
Fulton, NY 13069
Tel. 315/591-9130

c. Oneida County Airport
Terminal Building
Oriskany, NY 13424
Tel. 315/736-4171

d. Syracuse Hancock International Airport
Hancock Field
Syracuse, NY 13212
Tel. 315/454-3263 (Commissioner of Aviation)
Tel. 315/455-3800 (Air Traffic Control)

e. Watertown International Airport
Building 22529
Airport Drive
Dexter, NY 13634
Tel. 315/639-3809
Fax: 315/639-6247

2. COMMAND POST

a. JAFNPP Emergency Operations Facility
2262 State Route 176
Fulton, NY 13069
Tel. 315/593-5700

b. JAFNPP Technical Support Center
JAFNPP
268 Lake Road East
Lycoming, NY 13093
Tel. 315/349-6710

c. Joint Information Center
10 Airport Drive
Fulton, NY 13069
Tel. 315-592-3700

d. New York State Emergency Operations Center
New York State Emergency management Office
Public Security Building, State Campus
Albany, NY 12232
Tel. 518/457-2200

e. Oswego County Emergency Operations Center
Oswego County Office Building Annex
200 North Second Street
Fulton, NY 13069
Tel. 315/591-9150

3. TELEPHONE SYSTEMS IN PLANT VICINITY

a. ALLTEL New York, Inc.
108 South 2nd St.
Fulton, NY 13069
Tel. 800/542-6204 (Repair)

b. Verizon
Syracuse, NY
Tel. 315/890-7711 (Repair)

c. AT&T
Albany, NY
Tel. 800/222-0400
800/222-3000 (Repair)
Fax: 518/432-4599

4. RADIO FREQUENCIES

ORGANIZATION/FUNCTION		FREQUENCY
a.	JAFNPP Security Force	153.635
b.	JAFNPP Radiological Survey Teams	153.560
c.	Oswego County Sheriff / Police agencies 39 Churchill Road, Oswego, NY	155.250 155.370 155.130 155.490
d.	E-911 Center Trunk Radio 800 MgHz System 39 Churchill Road, Oswego, NY	46.220 46.220
e.	Oswego County Highway Department Airport Road, Town of Scriba, NY	45.920 155.340 155.280 155.220
f.	Nine Mile Point Nuclear Stations Rad	37.900
	Offsite Administration B/U Rad	451.575 456.575 452.750 457.750

5. OTHER SUPPORT ORGANIZATIONS

a.	FBI Syracuse On-Call	315/422-0141
b.	FEMA Regional Director	212/680-3621
c.	FAA, Boston, MA	603/879-6655
d.	FAA, Hancock, Syracuse, NY	315/455-3840
e.	Fort Drum Radar	315/772-8711 or 315/772-7999
f.	Buffalo Flight Services Station	716/631-3756