DAVIS-BESSE

NUCLEAR POWER STATION

EMERGENCY PLAN

FOREWORD

In accordance with the conditions of the Nuclear Regulatory Commission operating license for the Davis-Besse Nuclear Power Station, the management of the Company recognizes its responsibility and authority to operate and maintain the Davis-Besse Nuclear Power Station in such a manner as to provide for the safety of the public. The importance of Emergency Planning and Preparedness in contributing to this safety as well as contributing to Station reliability is also recognized.

In accordance with this philosophy, this Emergency Plan has been prepared. It establishes the procedures and practices for management control over unplanned or emergency events that may occur at the Davis-Besse Nuclear Power Station.

Revision 23 of the Emergency Plan meets the requirements of 10 CFR 50.54(q). Changes made in Revision 23 of the Emergency Plan do not decrease its effectiveness.

The issuance and control of this Emergency Plan and activities associated with Emergency Preparedness at the Davis-Besse Nuclear Power Station are the responsibility of the Vice President - Nuclear. Additions, deletions, or modifications to the Emergency Plan shall be approved by the Manager – Regulatory Affairs and the Plant Manager. It is intended that this Emergency Plan and the Emergency Plan Procedures be fully compatible with the applicable requirements for quality assurance set forth in the FENOC Nuclear Quality Assurance Program Manual.

The Manager – Regulatory Affairs is hereby assigned the responsibility for emergency planning operations with authority as established in this Emergency Plan and outlined above. Day-to-day maintenance and implementation of the Emergency Preparedness Program is the responsibility of the Supervisor - Emergency Preparedness and the Emergency Preparedness Unit.

GAD for

Manager – Regulatory Affairs — 02/10/04 — Date

Director – Support Services — 2/12/04 — Date

Plant Manager — 2/23/04 — Date

By Allen for M.B. Bezilla

Vice President - Nuclear — 2/23/04 — Date

Davis-Besse Nuclear Power Station
Emergency Plan
Revision 23

Summary of Plan Changes

Revision 23 of the DBNPS Emergency Plan represents the changes to the DBNPS Emergency Preparedness Program which have occurred since Revision 22.

All Sections	In order to allow the future adoption of the facility title "Emergency Operations Facility," the following changes are being made throughout Revision 23 of the DBNPS Emergency Plan: "Emergency Control Center" and "ECC" are replaced by "Emergency Operations Facility" and "EOF" respectively.
All Sections	The following Operations Section position titles have been changed to correspond to titles currently in use in the station: "Shift Manager " is now "Shift Engineer" "Shift Supervisor" is now "Shift Manager" "Assistant Shift Supervisor" is now "Unit/Field Supervisor"
1.3	Alternate Emergency Operations Facility definition added
1.35	Media Release definition added
1.37	News Release definition added
1.38	News Statement definition added
1.54	Public Information Hotline Operator definition added
1.61	Rumor Control definition added
1.17, 1.58	Emergency Control Center changed to Emergency Operations Facility
1.62	Shift Manager title change
1.68, 1.69	Added Vital Area and Vital Equipment definitions from 10 CFR 73.2
Table 1-1	Added AEOF, EOF, and OSHP to the acronym listing
Table 2-1	ECC changed to EOF

Summary of Plan Changes Cont'd

2.1	Figure numbers updated as needed to reflect the removal of Figure 2-2
2.2	Updated population numbers as needed
2.3	Figure numbers updated to reflect the removal of Figure 2-2
Former Figure 2-2	Site Arrangement – deleted as a security consideration
New Figure 2-2	Updated the wind rose with the current one
3.2	Shift Manager/Shift Engineer/Unit Supervisor/Field Supervisor title changed; ECC changed to EOF
3.2.1	ECC changed to EOF
3.2.2	ECC changed to EOF
3.2.3	ECC changed to EOF
4.1	Shift Manager title change
4.3.3	ECC changed to EOF
Table 4-1	Section 7 "Site specific credible threat" added
	Section 9 ECC changed to EOF
5.1.3	Shift Manager/Shift Engineer/Unit Supervisor/Field Supervisor title changes
5.2.1.a	ECC changed to EOF
5.7.1.a	Shift Manager/Shift Engineer/Unit Supervisor/Field Supervisor title changes
5.2.2	ECC changed to EOF
5.3.1,2,3, and 5	Shift Manager/Shift Engineer/Unit Supervisor/Field Supervisor title changes
5.4.1	Shift Manager Title change
5.4.1.b	ECC changed to EOF
5.4.4.a	Added "The Emergency Assistant Plant Manager interfaces with the Emergency Plant Manager..."

5.4.5.a	Added "The OSC Manager reports to and interfaces directly with..."
5.4.5.d	"RE" changed to "area radiation" to clarify what data is being transmitted
5.4.5.e	"...adequate warehouse staff is available..." changed to "...the warehouse is staffed..." for clarity
5.4.6	ECC changed to EOF
5.4.6.c.3	"...TSC/ECC emergency complex." Changed to "DBAB emergency complex." For clarity
5.4.6.c.4	"A Radiation Monitoring Team..." changed to "Each Radiation Monitoring Team..." for better grammar
5.4.6.d	ECC changed to EOF
5.6	"...located at an unaffected FirstEnergy nuclear station." added for clarity
5.7.2.b.5	Site tours removed
5.7.2.c	"...within the limits of 10CFR20..." changed to "...outside acceptable limits of 10CFR20..." to correct an error in wording
5.7.3.b.4	Shift Manager title change
5.7.3.d.2.c	Changed "Department of Welfare" to "Department of Jobs and Family Services" to reflect the current agency nomenclature
5.7.3.d.4.f(4)	Potassium Iodide (KI) added
5.7.3.e.1	The sample letter of agreement has been deleted at the direction of the Department of Energy (DOE) as requests for assistance must come from the State of Ohio; not Davis-Besse. The sentence describing the Emergency Offsite Manager requesting DOE assistance was removed for the same reason.
5.7.4.b	Several changes made in this section to reflect the current insurance carriers, and the notification requirements.
Table 5-1	ECC changed to EOF Shift Manager/Shift Engineer/Unit Supervisor/Field Supervisor title changes OSC RP & Chemistry Technicians clarified
Figure 5-1	Title Changes: Shift Manager/Shift Engineer/Unit Supervisor/Field Supervisor

Figure 5-2	Title Changes: Shift Manager/Shift Engineer/TSC Engineering Lead/TSC Operations Lead/EOF Administrative Assistant/EOF Operations Advisor/ EOF Communicator Equipment Operator/Technical Liaison – EOF Communicator/Media Release Coordinator/Public Inquiry Hotline Operator
6.1	Shift Manager title change
6.1.1	Shift Manager/Shift Engineer title changes
6.1.2.a	Shift Manager title change
6.1.2.d	ECC changed to EOF
6.2.1	Shift Manager title change "Load Dispatcher" changed to "System Dispatcher"
6.4.1.	References to Figures 6-4 and 6-5 deleted as these figures were removed due to security considerations
6.4.1.a	Shift Manager title change
6.4.1.b	"...or vehicle PA system." deleted Bullhorns have replaced vehicle-mounted PA systems
6.5.2	Potassium Iodide (KI) information added
6.5.3 & 6.5.5	St. Charles Hospital is now St. Charles Mercy Hospital
Former Figures 6-3 & Figure 6-4	(Site Evacuation Routes) deleted due to security considerations
7.1.1	Shift Manager/Unit Supervisor/Field Supervisor title changes
7.1.2	The location of the OSC was changed to reflect the current location
7.2	Reference to Figure 7-2 removed as the figure was deleted due to security considerations
7.2.1	ECC changed to EOF
7.2.2	Removed reference to closed Circuit Television (CCTV) The need for the system has been eliminated due to improvements in facility technologies.
7.2.3	ECC changed to EOF; The RTL location is now accurately described It has never been inside the "restricted portion" of the DBAB

Summary of Plan Changes Cont'd

7.5.1.f	Reworded to reflect actual configuration of the CANS.
7.5.2.b.1.c	ECC changed to EOF
7.5.3	Changed Manager – Regulatory Affairs to Supervisor – Emergency Preparedness
7.8.1	Substituted "USAR Tables 11.4-1 and 12.1-3" for the former Table 7-1. The two USAR tables contain the same information.
7.8.3	"...refueling..." changed to "...maintenance..." to reflect that these monitors are used for more than refueling activities
7.8.6	Capacity of the Fire Water Storage Tank and the distance between the fire hydrants was deleted. This level of detail is not required.
7.8.8	ECC changed to EOF "Port Clinton Water Works" replaced by "Marblehead Coast Guard Station" for backup lake level indication Port Clinton no longer operates a waterworks, and the Regional Water Treatment Plant has no indication of lake level
7.8.10.a	ECC changed to EOF
7.8.11	ECC changed to EOF
Former Table 7-1	Deleted and replaced in Section 7.8.1 text by two USAR tables.
New Table 7-1	Nameplate flow rates have been removed from the Portable Air Sampling Equipment data. Flow rates are dependent on sample media and calibration. The four field monitoring 12 VDC air samplers were added to the table.
Figure 7-1	Locations of the JPIC, AEOF, and OSC changed to reflect current locations of these facilities; ECC changed to EOF
Former Figure 7-2	Deleted due to security considerations
8.1.1.f	Wording changed to "may include an invitation for a site/plant tour." Security considerations currently limit tours of the site/plant.
8.1.2.a	Reworded discussion related to conduct of drill instruction and coaching to provide greater clarity.
8.3	Evacuation Time Estimate (ETE) added

8.3.2	Wording changed at the request of Nuclear Quality Assessment to clearly reflect the audit function.
Table 8-1	Shift Manager/Unit Supervisor/Field Supervisor title change Fire Protection Advisor title deleted. This function is now performed by the Fire Captains.
Appendix A	All older procedures with a designation of "HS-EP- " now have the designation "RA-EP-..." Added RA-EP-00420, Response to Prompt Notification System Malfunction Created the classification of "Public Information Emergency Response Procedures" and moved RA-EP-02950 to that classification
Appendix C	St. Charles Hospital is now St. Charles Mercy Hospital
Appendix D	Added "FirstEnergy Corporate Emergency Response Plan"

References

3.1 Davis-Besse Nuclear Power Station, Unit 1, Updated Safety Analysis Report.
3.2 Davis-Besse Nuclear Power Station, Unit 1, Technical Specifications.
3.3 NUREG-0654/FEMA REP-1, Rev. 1, Supplement 3.
3.4 NRC Branch Position on Acceptable Deviations to Appendix 1 to NUREG-0654/FEMA-REP-1, dated July 11, 1994.
3.5 10CFR50, Appendix E.

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APPENDICES

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C	Sample Letters of Agreement
D	Supporting Documents

LIST OF TABLES

LIST OF FIGURES

1.0 DEFINITIONS

Listed below are terms and their definitions as used in the Emergency Plan. Terms capitalized in the text of the definitions indicate that they are defined in this section.

1.1 Affected Person - Individual who has been physically injured and/or radiologically exposed to a degree requiring special attention, as a result of an accident (e.g., first aid, or decontamination).

1.2 Alert - Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of Davis-Besse Nuclear Power Station. Any releases of radioactive material are expected to be limited to small fractions of the Environmental Protection Agency Protective Action Guideline exposure levels.

1.3 Alternate Emergency Operations Facility (AEOF) – A conference area outside the 10-mile Emergency Planning Zone (EPZ), which is available to hold meetings between Davis-Besse senior emergency management personnel and offsite agency management personnel.

1.4 Assembly - A process during which personnel report to predetermined locations for the purposes of communication and crowd control. Assembly can occur within the protected area, the owner-controlled area, or at an offsite location.

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

1.6 Assessment Facility - A facility utilized for evaluation of instrumentation data, and other information, to assess the scope and severity of an emergency condition.

1.7 Available Personnel - Personnel who have not been assigned specific responsibilities or duties during an emergency situation.

1.8 Company - Licensee as described in the DBNPS NRC Operating License No. NPF-3.

1.9 Controlled Release - Any release of radioactive material from Davis-Besse Nuclear Power Station to the environment, which is planned, deliberate, monitored and regulated.

1.10 Control Room - The Davis-Besse Nuclear Power Station Control Room, located in the Auxiliary Building on elevation 623', is the area from which the reactor and its auxiliary systems are controlled.

1.11 Contaminated Area - An area where beta-gamma loose surface contamination levels are 1000 dpm/100cm^2 or greater, or alpha contamination levels are 100 dpm/100cm^2 or greater.

1.12 Corrective Actions - Emergency measures taken to mitigate or terminate a potential or uncontrolled release of radioactive material or to minimize the consequences of such a release (e.g., shutting down equipment, fighting fire, repair, or damage control).

1.13 Design Basis Accident - The maximum credible accident values that can be anticipated given specific physical parameters and which provides the basis for the design of a component or system.

1.14 Dose Projection - The calculated estimate of a radiation dose to individuals at a given distance from a potential or actual release (usually OFFSITE), determined from the quantity and type of radioactive material released, and the meteorological transport and dispersion parameters.

1.15 Drill - A supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation.

1.16 Emergency Action Levels - Radiological dose rates; specific contamination levels of airborne, waterborne, or surface-deposited concentrations of radioactive materials; or specific instrument readings and indications (including their rate of change) that may be used as thresholds for initiating such specific emergency measures as designating a particular classification of emergency, initiating a notification procedure, or initiating a particular PROTECTIVE ACTION.

1.17 Emergency Operations Facility (EOF) - An area located on the first floor of the Davis-Besse Administration Building, which is equipped to facilitate the control and coordination of emergency activities and assessments.

1.18 Emergency Core Cooling System - Engineered safety features system comprised of the Low Pressure Injection, High Pressure Injection, and Core Flood Systems.

1.19 Emergency Operations Center - An OFFSITE location used by State, County and other government agencies and organizations to perform radiological assessment and to coordinate OFFSITE activities.

1.20 Emergency Plan - The document, which describes the Company philosophy and organization for implementing of regulations dealing with a response to a radiological accident at the Davis-Besse Nuclear Power Station.

1.21 Emergency Plan Procedures - Those procedures which implement the Emergency Plan and are maintained by the Emergency Preparedness Unit. They include the Emergency Plan Implementing, Off-Normal Occurrence, and Administrative Procedures.

1.22 Emergency Planning Zones - Two zones established around a nuclear power station in which predetermined protective action plans are needed. One zone, with a radius of 10 miles (16090 meters) for a PLUME EXPOSURE PATHWAY; and the other, with a radius of 50 miles (80,450 meters) for an INGESTION EXPOSURE PATHWAY. In these zones, predetermined PROTECTIVE ACTION plans are needed.

1.23 Essential Personnel - Those assigned specific Emergency Response Duties as identified in the Emergency Plan.

1.24 Exclusion Area - The area surrounding the plant in which the licensee has the authority to determine all activities including the exclusion or removal of persons and property. At Davis-Besse Nuclear Power Station this area corresponds to the site boundary, a distance varying from 720 meters (approximately 1/2 mile) to approximately 1 mile.

1.25 Exercise - An event that tests the integrated capability and a major portion of the basic elements within the Emergency Plan.

1.26 Full Participation - when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite local and State authorities and licensee personnel physically and actively take part in testing their integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant. "Full Participation" includes testing major observable portions of the onsite and offsite emergency plans and mobilization of state, local and licensee personnel and other resources in sufficient numbers to verify the capability to respond to the accident scenario. (10CFR50 Appendix E, IV.F.2.a)

1.27 Functional - A system, subsystem, train, component or device, though degraded in condition or configuration is FUNCTIONAL if it is capable of maintaining respective system parameters within acceptable design limits.

1.28 General Emergency - Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with the potential for loss of containment integrity. Releases of radioactive material can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

1.29 High Radiation Area - Any area, accessible to individuals, in which radiation levels could result in an individual receiving in excess of 0.1 rem in one hour at 30 cm from the radiation source or from any surface the radiation penetrates.

1.30 Ingestion Exposure Pathway - The means by which contaminated water or foodstuffs can expose the POPULATION-AT-RISK to radiation. The time of potential exposure could range from hours to months. The principal exposure sources from this pathway are:

1.30.1 Ingestion of contaminated drinking supplies, such as water or milk

1.30.2 Ingestion of contaminated food, such as fresh vegetables or aquatic foodstuffs

1.31 International Great Lakes Datum - A place of reference datum set up for use on the Great Lakes. This datum refers to the mean water level at Father Point, Quebec as established in 1955. In 1988, the reference datum was revised upward by 0.57 feet.

1.32 Joint Public Information Center - A location for coordinating news releases and providing joint briefings to the news media during an emergency. It provides a central point for information to be disseminated to the public by the utility, and federal, state and local officials.

1.33 Low Population Zone - The unrestricted area outside the OWNER-CONTROLLED AREA, encompassed within a radius of 2 miles (approximately 3200 meters) from the site.

1.34 Loss - A state of inoperability in which FUNCTIONAL and OPERABLE status cannot be maintained.

1.35 Media Release – *SEE NEWS STATEMENT*

1.36 Modes of Discharge - Discharge of radioactivity to the ground surface, surface water, atmosphere, or any combination thereof.

1.37 News Release – *SEE NEWS STATEMENT*

1.38 News Statement – A detailed statement in printed format intended for public knowledge containing an announcement, supporting information, and usually some background information.

1.39 Non-essential Personnel - Personnel who are not preassigned specific Emergency Response Duties.

1.40 Nuclear Group - The functional area of the Company which operates and maintains all nuclear generating facilities owned by or licensed to the Company.

1.41 Offsite - Any area outside the OWNER-CONTROLLED AREA.

1.42 Onsite - The area within the OWNER-CONTROLLED AREA.

1.43 Operable/Operability - A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electric power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s), are also capable of performing their related support function(s).

1.44 Operations Support Center - A location within the PROTECTED AREA where emergency response teams are assembled, briefed and coordinated during an emergency.

1.45 Owner-Controlled Area - The area contiguous with the PROTECTED AREA, designated by the owner organization to be patrolled for security purposes.

1.46 Partial Participation - when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite authorities shall actively take part in the exercise sufficient to test direction and control functions: i.e., (a) protective action decision making related to emergency action levels, and (b) communication capabilities among affected State and local authorities and the licensee. (10CFR50 Appendix E, IV.F.2.c)

1.47 Personnel Dosimetry - Devices designed to be worn or carried by an individual for the purpose of measuring the radiation dose received (e.g., pocket dosimeters, electronic alarming dosimeters (EADs), thermoluminescent dosimeters (TLDs), etc.).

1.48 Plume Exposure Pathway - The means by which a radioactive cloud (plume) can expose the POPULATION-AT-RISK to radiation. The time of potential exposure could range from hours to days. The principal exposure sources for this pathway are:

1.48.1 Whole body external exposure to gamma radiation from the radioactive plume and from deposited material

1.48.2 Inhalation exposure from the passing radioactive plume.

1.49 Population At Risk - Those persons for whom PROTECTIVE ACTIONS are being or would be taken.

1.50 Projected Exposure Time - The estimated period of time that the population in the area surrounding Davis-Besse Nuclear Power Station may be exposed to radiation as a result of an uncontrolled airborne release. Projected Exposure Time starts when the airborne release is estimated to cross the OWNER-CONTROLLED AREA, and ends when the radiation levels OFFSITE are expected to return to normal.

1.51 Protected Area - An area within the OWNER-CONTROLLED AREA encompassed by physical barriers, and to which access is controlled for security purposes.

1.52 Protective Actions - Those emergency measures taken after an uncontrolled release has occurred, for the purpose of preventing or minimizing radiological dose to persons that would likely be exposed if the actions were not taken.

1.53 Protective Action Guide - A projected radiological dose or dose commitment value to individuals in the general population that warrants protective action.

1.54 Public Information Hotline – A telephone number provided to the public which is available to answer specific questions regarding an emergency. Public Information Hotlines are maintained by Davis-Besse, the State of Ohio, and both Ottawa and Lucas Counties, and are activated at a Site Area Emergency declaration.

1.55 Radiologically Restricted Area (RRA) - Any area to which access is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.

1.56 Radiation Area (RA) - Any area accessible to individuals in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem in 1 hour at 30 cm from the radiation source or from any surface the radiation penetrates.

1.57 Radiation Work Permit - A document which gives radiation protection requirements, authorization to enter the radiologically restricted area, and permission to receive radiation dose.

1.58 Radiological Testing Laboratory - A facility near the Technical Support Center and Emergency Operations Facility in the Davis-Besse Administration Building which serves as a staging location for Radiation Monitoring Teams, and where a limited amount of radiological counting and analysis of low-level environmental samples may be performed.

1.59 Recovery Actions - Those actions taken after an emergency to restore the station as nearly as possible to pre-emergency conditions.

1.60 Release - Any emission of radioactive material, airborne or liquid, including emissions within and in excess of Technical Specifications.

1.61 Rumor Control - - SEE PUBLIC INFORMATION HOTLINE.

1.62 Shift Manager's Office - A facility that is located within the Control Room envelope and is used by the Emergency Assistant Plant Manager during emergency conditions to observe and provide guidance to the Shift Manager for direction and control of in-plant activities.

1.63 Site Area Emergency - Events are in progress or have occurred which involve actual or likely major failures of Davis-Besse Nuclear Power Station functions needed for the protection of the public. Any releases of radioactive material are not expected to exceed Environmental Protection Agency Protective Action Guideline exposure levels except near the site boundary.

1.64 State - The State of Ohio.

1.65 Technical Support Center - An area within the OWNER-CONTROLLED AREA, which has the capability to display and transmit plant status information to individuals who are knowledgeable of, and responsible for engineering and management support of reactor operations in the event of an emergency situation.

1.66 Uncontrolled Release - Any RELEASE of radioactivity from DBNPS to the surrounding environs which can be described by any one or combination of the following terms: unplanned, unintentional, and unregulated.

1.67 Unusual Event - Event(s) are in progress or have occurred which indicate a potential degradation of the level of safety of DBNPS. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

1.68 Vital Area – Is any area which contains vital equipment.

1.69 Vital Equipment – Is any equipment, system, device and material, the failure, destruction or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect the public health and safety following such failure, destruction or release are also considered to be vital.

TABLE 1-1

ACRONYMS

AEOF	Alternate Emergency Operations Facility
ALARA	As low as is Reasonably Achievable
ARM	Area Radiation Monitor
CAM	Continuous Air Monitor
CANS	Computerized Automated Notification System
CAS	Central Alarm Station
CEI	Cleveland Electric Illuminating Company
CFR	Code of Federal Regulations
CNRB	Company Nuclear Review Board
CRA	Control Rod Assembly
CTRM	Control Room
CERO	Corporate Emergency Response Organization
cpm	counts per minute
DBAB	Davis-Besse Administration Building
DBABA	Davis-Besse Administration Building Annex
DBNPS	Davis-Besse Nuclear Power Station
DBTC	Davis-Besse Training Center
DOE	Department of Energy
DPM	Decades Per Minute
dpm	disintegration's per minute
E&C	Electrical and Controls
EAL	Emergency Action Level
EAS	Emergency Alert System
ECC	Emergency Control Center (see EOF)
ECCS	Emergency Core Cooling System
EEC	Energy Education Center
EMA	Emergency Management Agency
ENS	Emergency Notification System (NRC "red phone")
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ERO	Emergency Response Organization
FE	FirstEnergy Corporation
FENOC	FirstEnergy Nuclear Operating Company
FSAR	Final Safety Analysis Report
HPN	Health Physics Network
I&C	Instrument and Control
IGLD	International Great Lakes Datum
JPIC	Joint Public Information Center
LCEMA	Lucas County Emergency Management Agency
LDE	Lens Dose Equivalent
LOCA	Loss of Coolant Accident
LPZ	Low Population Zone
MSSV	Main Steam Safety Valve

TABLE 1-1 (Cont.)

ACRONYMS (Cont.)

MWe	Megawatt electric
MWt	Megawatt thermal
NOAA	National Oceanographic and Atmospheric Administration
NRC	Nuclear Regulatory Commission
OCA	Owner Controlled Area
OCEMA	Ottawa County Emergency Management Agency
OEMA	Ohio Emergency Management Agency
OSHP	Ohio State Highway Patrol
OSC	Operations Support Center
OTSG/SG	Steam Generator
PA	Protected Area
PAG	Protective Action Guide
PASS	Post Accident Sampling System
PNS	Prompt Notification System (siren system)
PPF	Personnel Processing Facility
RO	Reactor Operator
RP	Radiation Protection
RRA	Radiologically Restricted Area
REMP	Radiological Environmental Monitoring Program
RMT	Radiation Monitoring Team
RTL	Radiological Testing Lab
RWP	Radiation Work Permit
SAM	Severe Accident Management
SAS	Secondary Alarm Station
SDE	Shallow Dose Equivalent
SRO	Senior Reactor Operator
STA	Shift Technical Advisor
TE	Toledo Edison Company
TEDE	Total Effective Dose Equivalent
TSC	Technical Support Center
VPF	Visitor Processing Facility
USAR	Updated Safety Analysis Report

TABLE 1-2

COMMUNICATIONS TEST FREQUENCIES

Monthly - At least once per 31 days

Quarterly - At least once per 92 days

Semi-annual - At least once per 6 months

Annual - At least once per 12 months

2.0 SCOPE AND APPLICABILITY

The Davis-Besse Nuclear Power Station Emergency Plan has been developed to provide a description of the station's response during emergencies. The description includes organizational control, equipment, supplies, facilities, and protective actions that may be used in mitigating the consequences of an emergency. Emergency Preparedness exists to provide direction for emergencies varying in severity from relatively minor ones with no health and safety implications to events presenting an actual or potential offsite radiological hazard.

This Emergency Plan is a detailed expansion of the Updated Safety Analysis Report, Section 13.3. It is intended to satisfy the requirements of Title 10 Code of Federal Regulations, Section 50, Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities.

Furthermore, this document satisfies the requirements of NUREG 0654/FEMA REP. 1, Rev. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

This Emergency Plan is not the primary working document to be used during an emergency. The purpose of the Emergency Plan is to describe the program established at DBNPS to satisfy regulatory requirements and to safeguard the public and plant personnel in the event of an emergency.

2.1 Site Description

The DBNPS is located on the southwestern shore of Lake Erie in Ottawa County, Ohio, approximately six (6) miles northeast of Oak Harbor, Ohio.

DBNPS employs a pressurized light water reactor steam supply system furnished by the Babcock & Wilcox Co. (now Framatome Technologies, Inc.) to generate approximately 930 MWe. The reactor design core power is 2772 MWt.

The Station encompasses 954 acres, of which more than 700 acres is marsh land leased to the U.S. Government as a natural wildlife refuge. The land area surrounding the site is generally agricultural, with no major industry in the vicinity of the site. The topography in the vicinity of DBNPS is flat, with marsh areas bordering the lake and the upland area rising to only 10-15 feet above the lake low water datum level. The site itself varies in elevation from marsh bottom, below Lake Level, to approximately six feet above the lake low water datum level.

The site has been built up from 6 to 14 feet above the existing grade elevation to an elevation of 584 feet International Great Lakes Datum (IGLD). This provides flood protection from the maximum credible water level conditions of Lake Erie. The three sides of the station with exposure to the lake are provided with a dike to an elevation of 591 feet IGLD to protect the facility from wave effects during maximum credible water level conditions.

The Station structures are located approximately in the center of the site, 3000 feet from the shoreline. This provides a minimum exclusion distance of 2400 feet from any point of the site boundary.

Ohio Route 2 approaches the site from the city of Port Clinton, Ohio, to the southeast, and forms the west boundary of the site. At the north boundary of the site, Ohio Route 2 turns west and proceeds towards Oregon and Toledo, Ohio. Two (2) all-weather roads, the main access road and the Administration Building access road, provide access to the site from Ohio Route 2. Figure 2-1 shows the general site location.

Site meteorological data for 2000 through 2002 indicate that the prevailing winds at 10 meters above ground level are equally from the southwest and south southwest. The mean velocity at this level is 9.5 miles per hour (4.2 meters per second). At 75 meters above the ground the predominant winds are from the west southwest. The mean velocity at this level is 15.0 miles per hour (6.7 meters per second). Figure 2-2 shows the average wind distribution.

The primary source of potable water in the area is Lake Erie. The nearest offsite public potable water intake serves Camp Perry, the Erie Industrial Park, and surrounding residences; and is located approximately 2.8 miles from the site. Another potable water intake, which serves residents of Carroll Township, including Davis-Besse, is located approximately four miles west-northwest of the site. The Ottawa County Regional Water System's potable water intake is eight miles east of the site. This system serves Port Clinton, Oak Harbor and the eastern end of Ottawa County. The Toledo and Oregon intakes are 13 miles west of the site. Most of the residents in the vicinity of the site not serviced by the municipal water suppliers, either have their water trucked in, or utilize well water which is periodically tested for potability by local authorities. DBNPS personnel periodically test local water sources for radioactivity.

2.2 Population Distribution

NOTE: The following information regarding population distribution is for historical purposes only. For current population estimates refer to Development of Evacuation Time Estimates for the Davis-Besse Nuclear Power Station, Revision 5, which has been prepared in accordance with NUREG 0654/FEMA Rev.-1, Appendix 4.

The near-site population is distributed from the southeast to the west northwest. The total permanent population in the 10-mile area surrounding DBNPS, based on 2000 Census information is 20,807 people. Approximately 97% of these people live 5 to 10 miles from the site. The population varies seasonally due to tourism in the area and the summer home residents. Figures indicating the permanent and seasonal population distribution projections in the 0 to 2 mile, 2 to 10 mile, and 10 to 50 mile radii are included in Development of Evacuation Time Estimates for the Davis-Besse Nuclear Power Station, Revision 5, which has been prepared in accordance with NUREG 0654/FEMA Rev.-1, Appendix 4.

The nearest population center of 25,000 or more is Toledo, Ohio, 20 miles west-northwest of the site. Other population centers within a 50-mile radius in excess of 25,000 include Bowling Green (33 miles), Findlay (45 miles), Lorain (46 miles), and Sandusky (20 miles) in Ohio; Allen Park (40 miles), Dearborn (40 miles), Detroit (40 miles), Inkster (40 miles), Lincoln Park (40 miles), Monroe (26 miles), Southgate (40 miles), Westland (40 miles), and Wyandotte (41 miles), in Michigan; and Windsor (50 miles) in Ontario, Canada.

2.3 Emergency Planning Zones

In defining the Emergency Planning Zones (EPZs) for the DBNPS, factors such as organizational capabilities, method of implementing the emergency plan, and the availability of onsite and offsite emergency facilities and equipment have been taken into consideration.

Two primary zones have been identified for development of emergency planning and implementation of the Plan. One zone has a 10-mile radius. This EPZ is referred to as the Plume Exposure Planning Zone. Within this zone, evacuation may be recommended for the general public. The principal concern in the 10-mile EPZ is direct exposure from a passing plume and/or inhalation of radionuclides from the plume. This 10-mile EPZ is comprised of part of Ottawa County and part of Lucas County.

The second zone, the Ingestion Exposure Planning Zone, extends to a 50-mile radius. The principal concern in the 50-mile EPZ, or Ingestion Pathway EPZ, is long-term exposure from ingested material. Within the Ingestion Pathway EPZ, close monitoring of water, crops, dairy cows and farm animals may be necessary. It may also be necessary to segregate and/or remove contaminated items from the food chain (e.g., milk, fresh vegetables, etc.). This 50-mile EPZ is comprised of all of Ottawa, Lucas, Wood, Sandusky, Erie, Seneca, Huron, Lorain, Fulton, Henry, Crawford, Hancock, and Wyandot Counties in Ohio; and all of Monroe, Lenawee, Washtenaw and Wayne Counties in Michigan. Essex County and part of Kent County within the province of Ontario, Canada are also contained within this 50-mile Emergency Planning Zone.

Figures 2-3 and 2-4 show the 10-mile and 50-mile EPZs.

2.4 Regulatory Requirements

2.4.1 The Code of Federal Regulations contains requirements for emergency planning in the following sections:

a. 10 CFR 50.34 Contents of applications; technical information.
b. 10 CFR 50.33 Contents of applications; general information.
c. 10 CFR 50.47 Emergency Plans.
d. 10 CFR 50.54 Conditions of Licensee.
e. 10 CFR 50 Appendix E, Emergency Planning and Preparedness for Production and Utilization Facilities.

2.4.2 Supplemental guidance has been provided by the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) in NUREG-0654/FEMA-REP-1, REV. 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

These documents describe methods acceptable for compliance with regulations regarding nuclear power plant emergency plans.

2.5 Objectives of Emergency Preparedness

2.5.1 The objective of the Emergency Preparedness Unit is to provide for public protection in the event of an emergency at DBNPS by establishing a well-trained and technically competent emergency organization, and to provide that organization with the necessary facilities, equipment, supplies and communication links.

2.5.2 Objectives of the Emergency Plan

a. To outline the most effective course of action required to safeguard the public and station personnel in an emergency.
b. To establish an emergency organization.
c. To assign responsibilities for directing the response to an emergency condition or radiological incident.
d. To provide for procedures that will limit the consequences of the incident.
e. To provide for procedures that will terminate or mitigate the radiological consequences of an emergency, both onsite and offsite.
f. To control onsite and offsite surveillance activities.
g. To establish procedures to identify and classify the emergency condition.
h. To stipulate the necessity for public protection actions.
i. To establish procedures to implement any protective actions deemed appropriate.
j. To provide for the training of all emergency response personnel.
k. To describe emergency facilities and their use.
l. To describe emergency communication systems and their use.

2.6 Emergency Plan Interrelationships

Interrelationships of this plan with procedures, other plans, and emergency arrangements are summarized as follows:

2.6.1 Detailed actions to be taken by individuals in response to onsite emergency conditions are described in the Emergency Plan Implementing Procedures. These procedures provide the mechanisms for response as outlined in this plan.

2.6.2 The DBNPS Nuclear Security Plan and Procedures and this plan are coordinated to ensure that appropriate emergency actions can be taken. For example, the Nuclear Security Plan and Procedures contain provisions for emergency response personnel and vehicle access when required by the Emergency Plan Procedures.

2.6.3 Davis-Besse site contractors/vendors that develop emergency procedures for their personnel are tasked with coordinating their procedures and this plan.

2.6.4 The DBNPS Radiation Protection Administrative Procedures define administrative controls and procedures such as radiological control limits and precautions, use of personnel monitoring devices, use of protective clothing and equipment, personnel decontamination, etc. Additionally, Chemistry Procedures and Radiation Protection Procedures provide instructions for conducting surveys, analyzing samples, operating health physics/radiation protection equipment, etc. Information and details provided in these documents have either been incorporated into the Plan and/or Emergency Plan Procedures, or have been appropriately referenced.

2.6.5 The DBNPS has established Off Normal Occurrence Procedures, which discuss generic emergencies such as floods, icing, and severe weather conditions. The methods and equipment developed for such emergencies are available for use in responding to emergencies covered by this plan.

2.6.6 Formal agreements have been negotiated to define the coordination and interface with offsite organizations and agencies having related radiological emergency planning responsibilities. Continuing liaison with the offsite organizations ensures compatibility and proper interfacing with this plan. Refer to Table 2-1, "Functional Interrelationships of Response Organizations", for functional interrelationships of emergency response organizations.

2.6.7 Other offsite organizations, not within the immediate area, may also be requested to offer technical assistance (i.e., Institute of Nuclear Power Operations, Framatome, Bechtel, etc.).

2.7 Emergency Plan Procedures and Station Procedures

Detailed Emergency Plan Procedures direct the implementation of this Emergency Plan. Detailed Station procedures prescribe appropriate courses of action necessary to place the plant in a safe condition and limit the consequences for each classification of incident and/or emergency. Other Emergency Plan Procedures detail maintenance of the Emergency Preparedness Program, Off Normal Occurrence Procedures (i.e. floods, tornadoes, etc.), Corporate Emergency Response, and Public Relations. An index of these procedures is attached as Appendix A to this plan.

2.8 Participating Governmental Agencies

Participating governmental agencies whose emergency plans are interrelated with this plan for action include the following:

2.8.1 State of Ohio, The Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities

2.8.2 Ottawa County, The Ottawa County Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities

2.8.3 Lucas County, The Lucas County Radiological Emergency Response Plan

2.8.4 Erie County, Radiological Emergency Response Procedures Document

2.8.5 Sandusky County, Radiological Emergency Response Procedures Document

2.8.6 U.S. Department of Energy, Chicago Operations Office, Argonne, IL., Emergency Planning and Preparedness and Response Program

2.8.7 U.S. Nuclear Regulatory Commission, Region III, Lisle, IL

2.8.8 State of Michigan, Michigan Emergency Preparedness Plan

2.8.9 Federal Emergency Management Agency (FEMA) Plan, Region V.

The development of the State and County Plans and the DBNPS Emergency Plan have been closely coordinated. In addition, specific State requirements for reporting of emergencies, providing information and data, recommending protective actions, etc., have been integrated directly into the Emergency Plan Procedures.

Table 2-1
FUNCTIONAL INTERRELATIONSHIPS OF RESPONSE ORGANIZATIONS

RESPONSE FUNCTION	OTHER SUPPORT	LOCAL SUPPORT	STATE SUPPORT	FEDERAL SUPPORT	ENGINEERING SUPPORT	DAVIS-BESSE RESPONSE ORGANIZATION(S)
Plant Operation Control					R	Control Room / Technical Support Center
Engineering Assessment					R	Technical Support Center
Meteorological Data				A		Emergency Operations Facility
Protective Response		A	R	A		Emergency Operations Facility
Command & Control of Emergency Response		R	A			Emergency Operations Facility
Warning		R	A	A		Control Room
Notification & Communication	A	R	A	A		Control Room/EOF
Public Information		R	A	A		Joint Public Information Center
Accident Assessment				A	R	Technical Support Center
Public Health & Sanitation		A	R	A		Emergency Operations Facility
Social Services		R	A	A		Emergency Operations Facility
Fire & Rescue		R				Control Room
Emergency Medical Services	A	R				Control Room.
Traffic Control		R	A			Nuclear Security
Law Enforcement		R	A	A		Nuclear Security
Transportation			R			Emergency Operations Facility
Radiological Exposure Control		A	R	A		Emergency Operations Facility

LEGEND: R=Task Responsibility
A=Task Assistance

LOCAL
Ottawa County EMA
Ottawa County Sheriff
Ottawa County Health Department
Ottawa County Engineer
Carroll Township Fire & EMS
Lucas County EMA
Lucas County Sheriff
Lucas County Hearth Department
Lucas County Engineer
H.B.Magruder Hospital
Fremont Memorial Hospital
St.Charles Hospital

STATE
Ohio EMA
Ohio Department of Transportation
Ohio EPA
Ohio State Highway Patrol
Ohio National Guard
Ohio Department of Health
Ohio Department of Natural Resources

FEDERAL
US NRC Region III
US DOE
US EPA
FEMA
US Coast Guard
National Weather Service
Federal Radiological Monitoring and Assessment Center

ENGINEERING SUPPORT
Framatome Technologies Inc.
Bechtel Power Corp.

OTHER SUPPORT
American Nuclear Insurers
Nuclear Mutual Limited

Figure 2-1

General Site Location

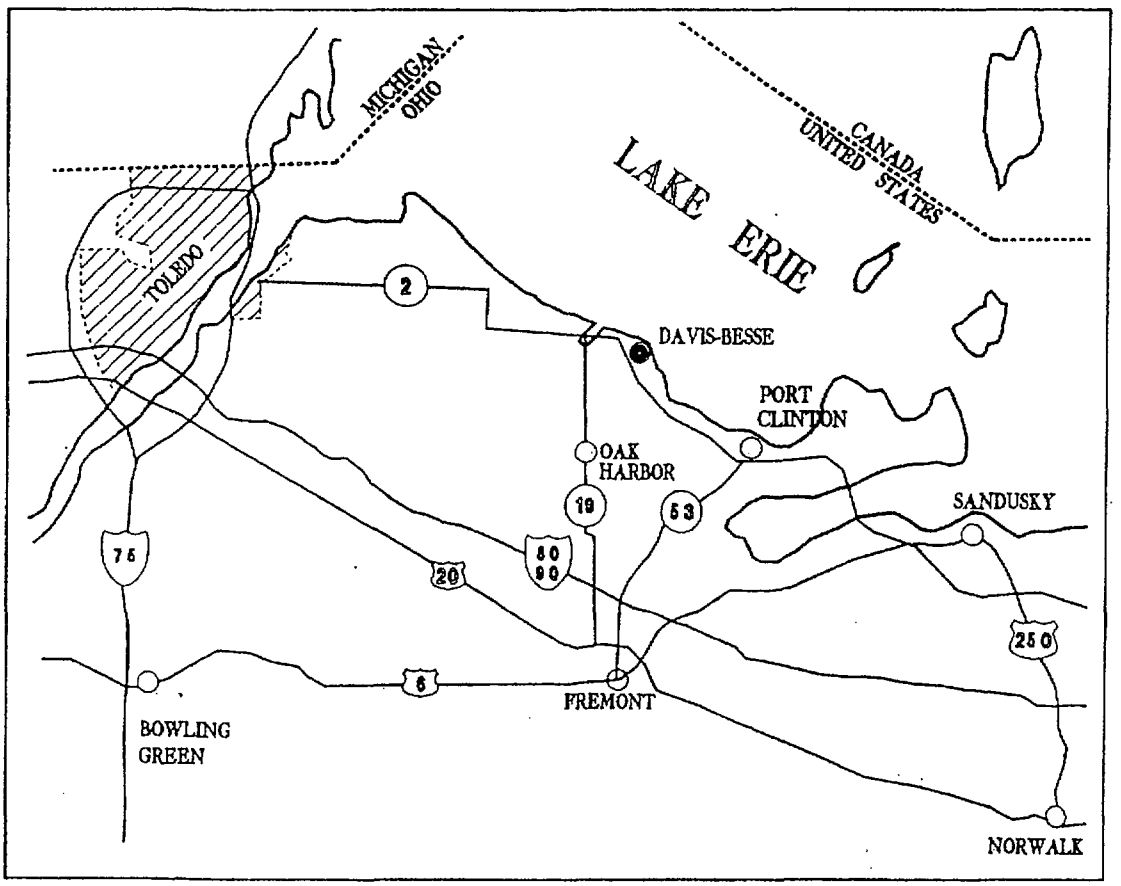
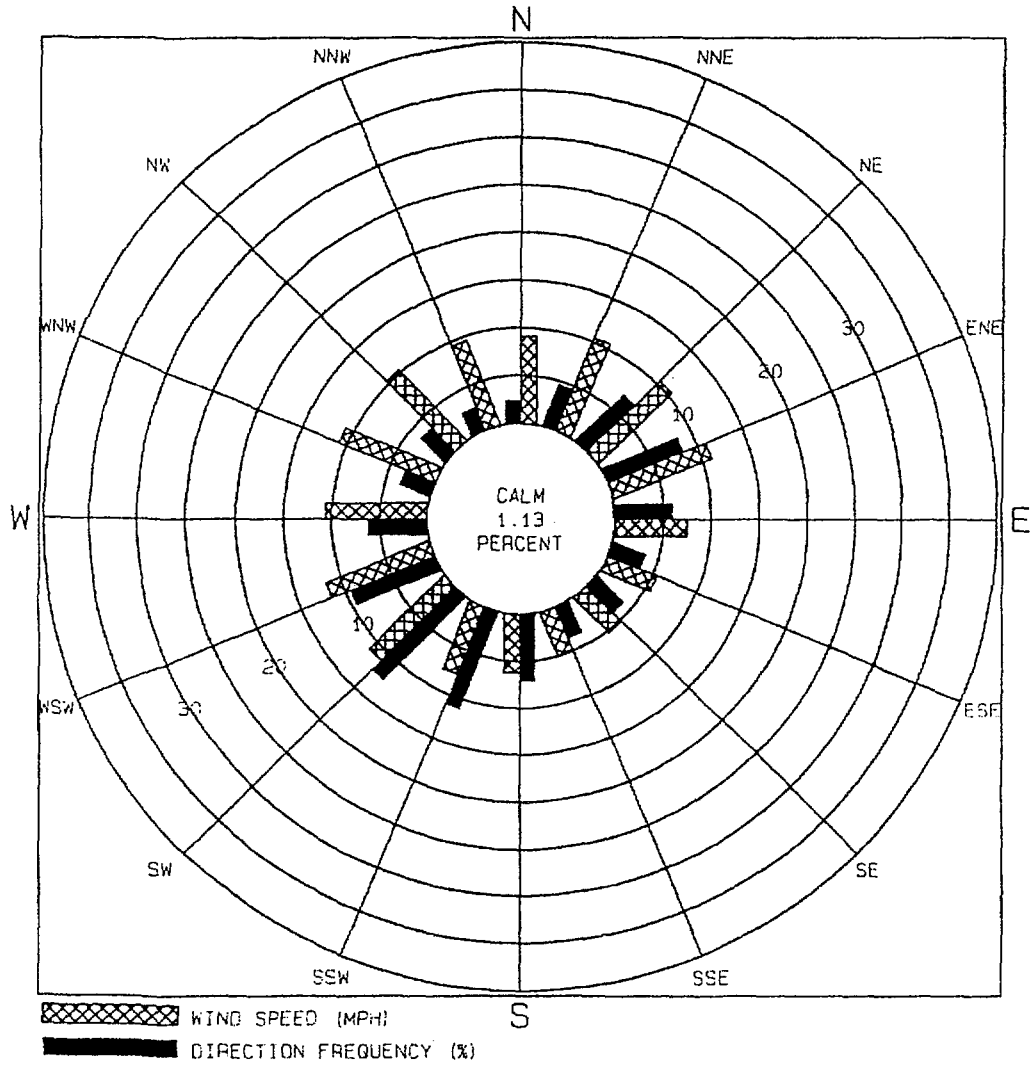


Figure 2-2

DBNPS Site
Annual Wind Distributions
At the 10 Meter Level



DAVIS-BESSE
ANNUAL 2003
10 M LEVEL

Figure 2-3

DBNPS 10-Mile Emergency Planning Zone

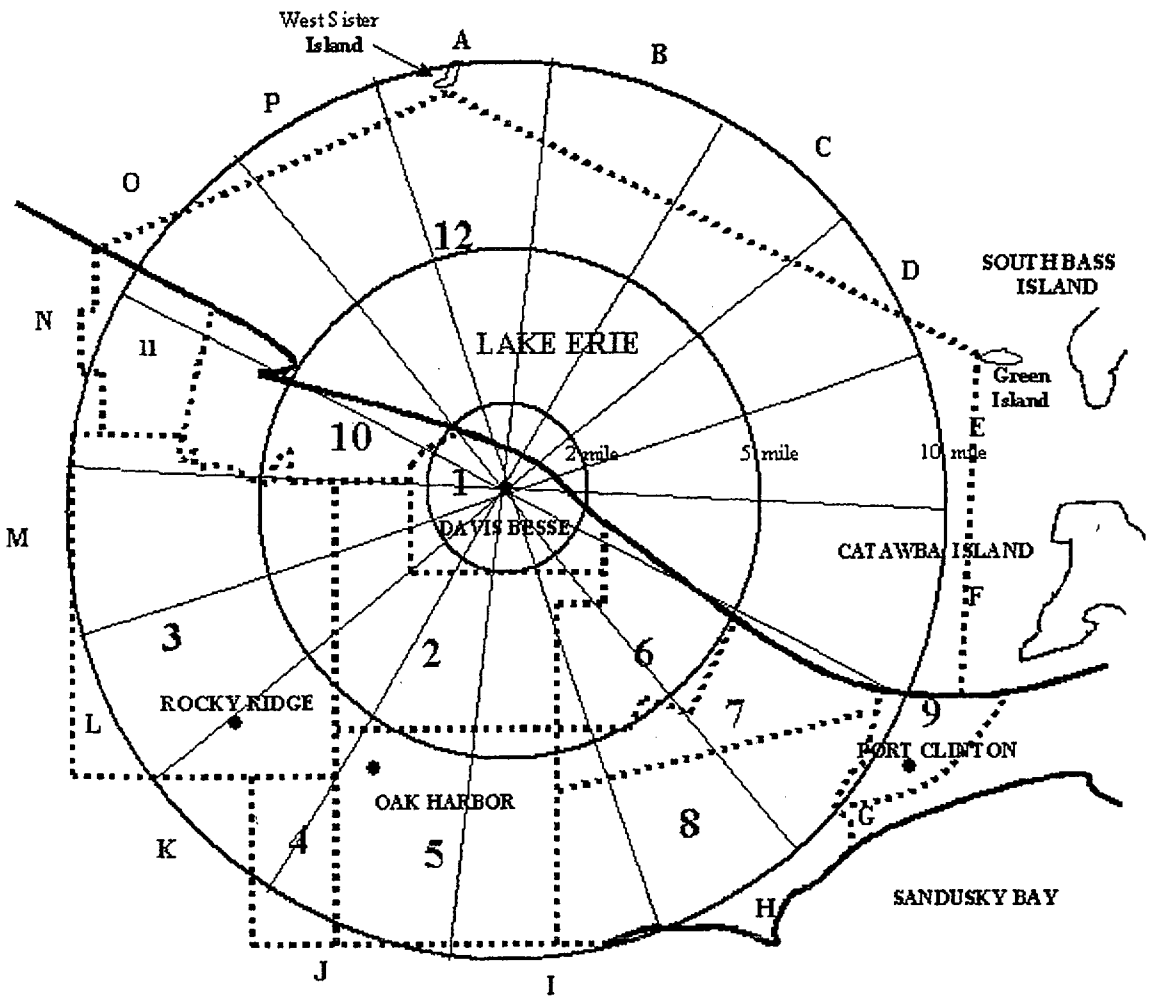
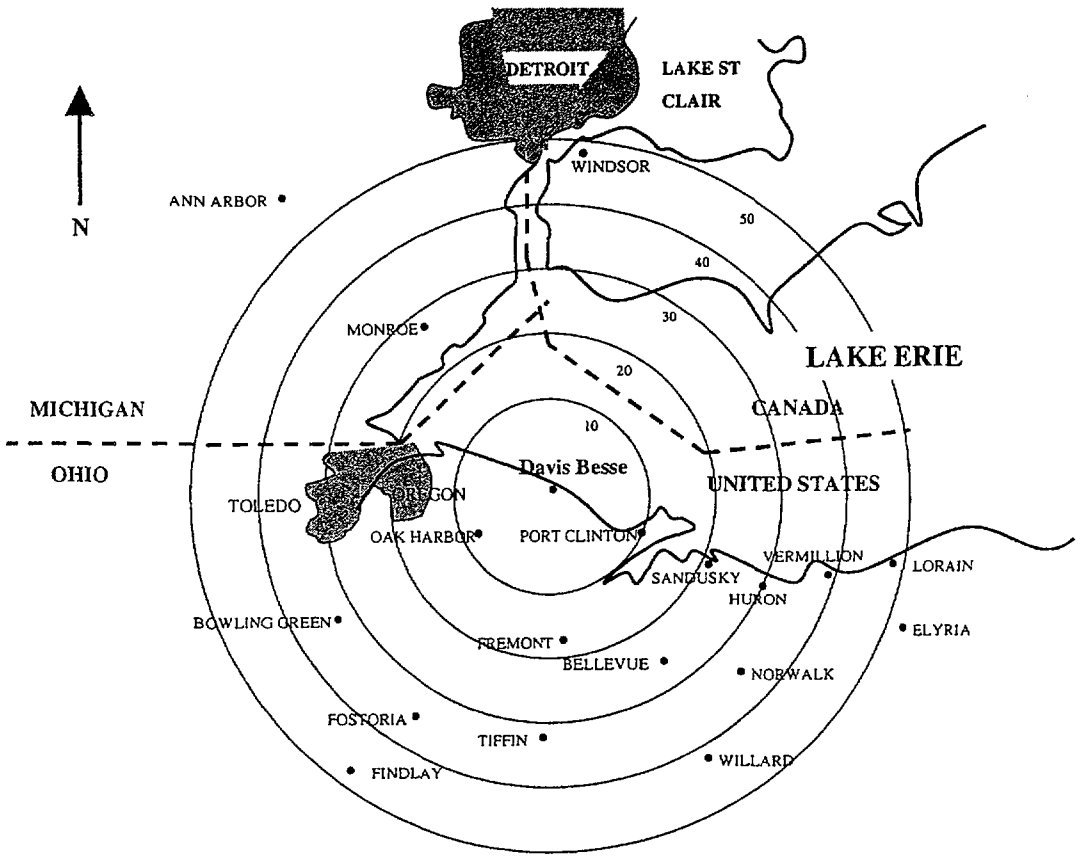


Figure 2-4

DBNPS 50-Mile Emergency Planning Zone



3.0 SUMMARY OF THE EMERGENCY PLAN

The DBNPS Emergency Plan has been established in accordance with the requirements of 10 CFR 50.47 and Appendix E to 10 CFR 50, supplemented by the guidance issued by the Nuclear Regulatory Commission in NUREG-0654/ FEMA-REP-1 and other documents.

The Emergency Plan will be put into effect whenever a radiological emergency or other potentially hazardous situation is identified. The details of the Emergency Plan Procedures are not included herein, but a description of the scope of the procedures demonstrates that appropriate actions can be taken by DBNPS and other support agencies to protect station personnel and the general public during emergencies.

The Emergency Plan establishes the concepts, evaluation and assessment criteria, and protective actions that are necessary in order to mitigate the consequences of radiological emergencies. The plan provides for the necessary prearrangements, directions, and organization needed to safeguard station personnel, and the property and safety of the general public.

3.1 Emergency Plan Steps

In general, the Emergency Plan encompasses the following basic steps:

a) Recognition of the emergency
b) Classification of the emergency
c) Required notifications and activation of the responding organization(s)
d) Ongoing assessment of the situation
e) Periodic dissemination of updated information
f) Determination and initiation of protective actions
g) Determination and initiation of corrective actions
h) Aid to affected persons
i) Reentry and Recovery

During response to an emergency, several of the steps may be performed concurrently.

3.2 Emergency Organizations

This document establishes an organization capable of responding to the complete range of incidents covered herein.

Provisions are made for rapid mobilization of the response organization and for expanding the response organization if the situation dictates.

An individual with the authority and responsibility to initiate any emergency actions under the provisions of this Emergency Plan, including the release of information to the public/media, is onsite at all times. The Shift Manager assumes this authority by becoming the Emergency Director upon initial classification of an emergency. If the Shift Manager cannot assume these duties, authority is delegated to the Unit/Field Supervisor or Shift Engineer (Shift Technical Advisor) in that order. The Emergency Plant Manager or Emergency Assistant Plant Manager may assume the Emergency Director position upon arrival in the Control Room. The Emergency Plant Manager

may also assume the Emergency Director duties from the Technical Support Center. The designated Emergency Director, upon arrival in the Emergency Operations Facility (EOF) or Technical Support Center (TSC), will assume this authority.

The operating shift crew is responsible for implementing emergency procedures in accordance with assigned response functions. Emergency response functions are also assigned to off-shift plant staff personnel who can be rapidly alerted and mobilized, to augment or relieve the operating shift personnel of emergency duties.

If required, additional support is provided by the Corporate Emergency Response Organization. Corporate management and their staff may provide technical, administrative, and logistical support to the onsite Emergency Organization. They may authorize emergency expenditures, coordinate the efforts of offsite support organizations, and maintain the flow of information to the public.

In addition, this plan includes the use of offsite agencies and organizations that have signed letters of agreement with the DBNPS. Their designated response functions include implementation of offsite protective actions, transportation and treatment of personnel, control of access to the station, fire fighting support, radiological sampling and assessment, technical consultation, and testing. These offsite agencies and organizations include the following:

3.2.1 State of Ohio

The Ohio Emergency Management Agency (OEMA), Department of Public Safety, State of Ohio, is the lead planning agency for developing state nuclear incident plans for licensed nuclear facilities contiguous to and within the State.

The specific tasks and responsibilities assigned to several departments and agencies of the State of Ohio are specified in The Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities.

The OEMA is notified at the declaration of an emergency via dedicated telephone from the Control Room or EOF. Once notified, the OEMA will implement its Nuclear Incident Accident Call List as specified in the State of Ohio Plan.

3.2.2 Ottawa County, Ohio

The lead agency for county-wide emergency planning is the Ottawa County Emergency Management Agency. Responsibilities for various county agencies and organizations are described in Section II, The Ottawa County Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities.

The Ottawa County EMA is notified at the declaration of an emergency via dedicated telephone in the Control Room or EOF. Once notified, Ottawa County will implement its emergency plan as appropriate.

3.2.3 Lucas County, Ohio

The lead agency for county-wide emergency planning is the Lucas County Emergency Management Agency. Responsibilities for various municipal and county agencies and organizations are delineated in The Lucas County Radiological Emergency Response Plan.

The Lucas County EMA is notified at the declaration of an emergency via dedicated telephone in the Control Room or EOF. Once notified, Lucas County will implement its emergency plan as appropriate.

3.2.4 Erie County, Ohio

The Erie County Emergency Management Agency acts as the lead agency within Erie County for evacuees from Ottawa County. Responsibilities for the individual agencies are contained in the Erie County Radiological Emergency Response Procedures Document.

The Erie County EMA is notified of an emergency by the Ottawa County EMA, and/or the Ottawa County Sheriff. Once notified, Erie County will implement its Standard Operating Procedures as appropriate.

3.2.5 Sandusky County, Ohio

The Sandusky County Emergency Management Agency acts as the lead agency within Sandusky County for evacuees from Ottawa County. Responsibilities for the individual agencies are contained in the Sandusky County Radiological Emergency Response Procedures Document.

The Sandusky County EMA is notified of an emergency by the Ottawa County EMA, and/or the Ottawa County Sheriff. Once notified, Sandusky County will implement its Standard Operating Procedures as appropriate.

3.2.6 State of Michigan

In Michigan, the Emergency Services Branch of the Department of State Police is the lead agency for the preparation, coordination, and implementation of the Michigan Emergency Preparedness Plan. As such, they are prepared to mitigate the effects of an incident at Davis-Besse, which may extend to the State of Michigan through the ingestion exposure pathway (50-mile EPZ).

The Ohio EMA will notify the State of Michigan should the need arise. Michigan, under conditions specified in a letter of agreement with the State of Ohio, will provide necessary emergency response within the State of Michigan.

3.2.7 Federal Agencies

a. U.S. Nuclear Regulatory Commission (NRC), Region III, Lisle, Illinois.
b. U.S. Department of Energy, Chicago Operations Office, Argonne, Illinois.
c. Federal Emergency Management Agency (FEMA), Region V, Main Office - Chicago, Illinois.

3.3 Emergency Categories

Emergencies are grouped into four categories. From least to most severe they are:

3.3.1 UNUSUAL EVENT
3.3.2 ALERT
3.3.3 SITE AREA EMERGENCY
3.3.4 GENERAL EMERGENCY

Section 4.0, Emergency Conditions, contains a more detailed discussion of the categories of emergencies. Table 3-1, depicts participation by onsite and offsite organizations for each category of emergency.

TABLE 3-1

EMERGENCY CATEGORIES AND THE DEGREE OF PARTICIPATION BY VARIOUS GROUPS

Emergency Category	Protective Actions		Necessity for Corrective Actions[1]	Participation By Various Organizations		
				DBNPS		Offsite Agencies
	Onsite	Offsite		Onsite	Corporate	
Unusual Event	Possible	None	Possible	Notification Status[2]	Notification Status	Notification Status
Alert	Possible	Possible	Possible	Action	Standby Status[3]	Standby Status
Site Area Emergency	Required	Possible	Probable	Action	Action	Action
General Emergency	Required	Required	Required	Action	Action	Action

[1]Action might include local fire support, ambulance service, medical assistance, or radiological assessment.

[2]Notification Status: Organization informed of situation onsite.

[3]Standby Status: Organization staffs preplanned centers, establishes communications, and assembles emergency teams, as required.

4.0 EMERGENCY CONDITIONS

4.1 DBNPS Classification System

The Emergency Plan provides four possible classifications for an emergency. These mutually exclusive emergency classifications cover the spectrum of emergency situations. Each emergency classification is associated with a particular set of immediate actions to be taken. Section 6.0, Emergency Measures, details these actions.

Classification of emergencies is based on potential or actual hazards present to the general public. Accidents may be classified at a lower category first, and then escalated to higher classification if the situation deteriorates.

Each emergency classification starts with the recognition, by the operating shift, that a potentially classifiable situation exists. The Shift Manager then determines, based upon procedural guidance, whether an emergency classification should be declared. Upon declaration of the emergency classification, the Shift Manager assumes the role of Emergency Director and implements the appropriate Emergency Plan Procedure(s). Among the initial activities performed are notification of offsite authorities, and notification/possible mobilization of the onsite emergency response organization. Section 6.0 summarizes the emergency measures to be taken by both the Onsite and Corporate emergency response organizations.

Each of the four emergency classifications is characterized by Emergency Action Levels (EALs). The EALs consist of specific plant parameters (e.g., instrument indications, system status, etc.) that indicate the need to declare one of the emergency classifications. EALs are used to ensure that the emergency classification is declared correctly and in a timely manner, so that emergency responders can assess the situation and determine any appropriate protective actions. Data used in deciding to recommend protective actions is forwarded to offsite authorities to assist in their decision to implement the recommendations.

A conservative philosophy for emergency classification is used to declare the highest category for which an EAL has been exceeded. For example, a SITE AREA EMERGENCY would be declared directly if a Site Area Emergency EAL is exceeded. This would be done without having first declared the UNUSUAL EVENT or ALERT emergency classifications.

The specific EALs described in this section are not intended to be all inclusive. The Emergency Director will declare an appropriate emergency classification when, in his judgment, plant status warrants such a declaration. Additional guidance is found for emergency classification within the Emergency Plan Procedures. In addition, the EALs described are not applicable in every operational mode, such as during maintenance and/or testing situations where abnormal temperature, pressure, equipment status, etc. is expected. The Emergency Plan Procedure provides specific guidance on EAL applicability and the classification of emergencies.

4.1.1 UNUSUAL EVENT

This classification is the least severe of the four emergency classification as defined by this plan.

The UNUSUAL EVENT Classification:

a. Assures that the first step has been carried out in any response that may be necessary at a later time if conditions worsen.

b. Brings the operating staff to a heightened state of readiness.

c. Provides systematic handling of UNUSUAL EVENT information and decision making.

An incident is classified as an UNUSUAL EVENT only if the incident is a minor one and has a potential to degenerate to a more severe situation. State and local authorities are notified in the event of any UNUSUAL EVENT.

4.1.2 ALERT

The ALERT Classification:

a. Assures that emergency personnel are readily available to respond if the situation becomes more serious or to perform confirmatory radiation monitoring if required.

b. Provides offsite authorities current status information.

As in the case of the UNUSUAL EVENT, the ALERT classification includes emergency situations that are expected to be minor, but where it has been deemed prudent to alert the offsite emergency participants and mobilize a large portion of the emergency response organization.

Broader assessment than necessary at the UNUSUAL EVENT level actions are initiated because of the nature of the ALERT classification (releases of radioactive material are possible).

A situation shall only be classified at the ALERT level if none of the EALs for a higher classification has been exceeded or is expected to be exceeded in the near term.

4.1.3 SITE AREA EMERGENCY

The SITE AREA EMERGENCY classification includes events in which actual or likely major failures of plant functions needed for protection of the public have occurred. Releases, if they occur, are not expected to exceed Environmental Protection Agency (EPA) Protective Action Guideline (PAG) dose levels except near the site boundary.

The SITE AREA EMERGENCY Classification:

a. Assures that response centers are manned.

b. Assures that Radiation Monitoring Teams (RMTs) are available for immediate dispatch.

c. Assures accountability for all personnel inside the Protected Area.

d. Assures that personnel required for evacuation of near-site areas are in position if the situation becomes more serious.

e. Provides current information to, and consultation with, offsite authorities and the public.

f. Provides updates for the public through offsite authorities.

Many of the events included in this classification have the potential for degradation to the GENERAL EMERGENCY classification. Although the EALs for this classification have been selected at values well below the EPA PAGs, offsite monitoring team reports and continuing assessment actions will influence any final decision on protective actions to be taken.

4.1.4 GENERAL EMERGENCY

This is the most severe emergency classification defined by this Emergency Plan. The GENERAL EMERGENCY classification includes accidents that involve actual or imminent substantial core degradation or melting with the potential for loss of containment integrity. Releases can reasonably be expected to exceed EPA Protective Action Guideline dose levels offsite.

The GENERAL EMERGENCY Classification:

a. Initiates predetermined protective actions for the public.

b. Provides continuous assessment of information from licensee and offsite monitoring groups.

c. Initiates additional measures as indicated by event releases or potential releases.

d. Provides current information for and consultation with offsite authorities and the public.

e. Provides updates for the public through offsite authorities.

Some preplanned protective actions will automatically be recommended upon declaration of the GENERAL EMERGENCY. EALs have been selected so that time should be available to make some confirmatory measurements in the field

prior to implementation of the more extensive protective action (i.e., evacuation). Some of the GENERAL EMERGENCY action levels require a dose projection calculation using actual meteorology. This assures that this most severe emergency classification will only be declared if warranted.

4.1.5 Table 4-1 summarizes the emergency action levels used to determine the four emergency classifications.

4.2 State and County Classification System

The Ohio Emergency Management Agency, Department of Public Safety, State of Ohio, has the responsibility to classify offsite emergencies that affect the general public. The Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities, has adopted a system based upon NUREG-0654, Appendix 1, and in accordance with EPA recommended PAGs.

There is a correlation between Protective Action Guidelines (PAGs) and Emergency Action Levels (EALs). PAGs apply to protective actions due to radiological conditions offsite, in serious emergencies (defined in the GENERAL EMERGENCY classification). EALs are actions based on abnormal plant conditions that may degrade, requiring actions from personnel and/or agencies offsite.

4.3 Spectrum of Postulated Accidents

This section of the DBNPS Emergency Plan contains a summary of events that have been postulated for the station and shows that each is encompassed within the preceding emergency classifications.

4.3.1 Classification of Postulated Accidents

The events postulated in Chapter 15, Davis-Besse Nuclear Power Station Updated Safety Analysis Report (USAR) may be categorized into one of the four emergency classifications. Table 4-2 lists each of these events and the emergency classification that most likely relates to the event.

Occurrence of some of the events may result in emergency classifications different than those noted. This would depend on circumstances existent at the time of occurrence. Additionally, the detection equipment and operational components assumed to be operable in the USAR have been assumed to be operable for this evaluation. Failures of any of the required detectors and equipment in any of these event scenarios may result in a higher emergency classification. A complete discussion of these events may be found in the USAR.

4.3.2 Instrumentation and Capability for Detection

Table 7.5-1 of the Updated Safety Analysis Report lists instrumentation that is utilized in the decision to classify the accidents.

4.3.3 Manpower and Timing Considerations

The manpower response and timing considerations for the four emergency classifications are discussed in Section 5.0, Organizational Control of Emergencies.

Shift personnel are considered to be immediately available to respond to the emergency by manning the Control Room and the Operations Support Center (OSC). Other station personnel, or their alternates, who are assigned to emergency response positions, may be offsite at the time of notification. The timing considerations noted reflect their anticipated reporting times.

The TSC and the EOF are manned by qualified individuals who may be offsite at the time of notification. These personnel are expected to arrive onsite within the times specified in Section 5.0, Organizational Control of Emergencies.

During normal working hours, most emergency response personnel would be onsite and able to staff the TSC, EOF, and OSC within approximately 30 minutes.

During adverse weather conditions, personnel who are required to respond to the emergency are expected to do so as quickly as possible (consistent with safety). Approved procedures are available which anticipate personnel transportation during adverse weather conditions.

The Joint Public Information Center (JPIC) is activated by the Public Information Emergency Response Procedure. Personnel requirements for the JPIC are contained in this procedure. Minimum staffing of positions for the JPIC are expected to be filled within approximately two hours.

The Corporate Emergency Response Plan contains information regarding the activation of the Corporate Emergency Response Organization (CERO) during a declared emergency at DBNPS. The corporate plan identifies personnel in the CERO who would be contacted and utilized to support the Davis-Besse onsite emergency organization.

NRC personnel, other than the Resident Inspectors, may arrive at Davis-Besse from various remote locations. Their arrival times will vary depending upon distance from the plant and availability of transportation.

TABLE 4-1

SUMMARY OF EMERGENCY ACTION LEVELS

This table summarizes the specific occurrences which will lead to an emergency classification. Specific values for the indications listed are contained in the appropriate Emergency Plan Procedure. Operational modes are as follows, and as defined in Davis-Besse Technical Specifications.

Mode	Condition
1	Power Operations
2	Startup
3	Hot Standby
4	Hot Shutdown
5	Cold Shutdown
6	Refueling

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
1. Primary System Events	Failure of Safety Related Safety Valve or Relief Valve to Close Following a Pressure Reduction Indication of flow through Pressurizer reliefs, and a continuing drop in reactor coolant system pressure	Unusual Event All Modes
	High Reactor Coolant Activity Sample Requiring Plant Shutdown per Technical Specifications Confirmed sample results indicate activity greater than that allowed by Technical Specifications, and requiring a plant shutdown.	Unusual Event Modes 1 & 2
	Very High Coolant Activity: Confirmed sample results indicate >300 μCi/gram dose equivalent I-131.	Alert All Modes

TABLE 4-1

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
1. Primary System Events (Cont.)	Core Damage with Inadequate Core Cooling Determined 1. Primary Coolant sample results indicate: a. Dose equivalent I-131 greater than allowed by Technical Specifications, OR b. >100/E μCi/gram specific activity, AND 2. The incore thermocouples indicate superheated conditions the core.	Site Area Emergency All Modes
	Core Damage with Other Plant Conditions Making a Release of Large Amounts of Radioactivity Possible 1. Confirmed Primary Coolant sample sample results indicate >300 μCi/gram dose equivalent I-131, AND 2. Excessive incore thermocouple temperatures, AND 3. a. Containment radiation level is $>10^4$ rad/hr, OR b. Containment high pressure condition.	General Emergency All Modes
	Core Melt Situations 1. Any sequence of events has occurred in which severe core damage (such as core melting) has taken place, AND 2. A failure of containment is about to take place (imminent).	General Emergency All Modes

TABLE 4-1

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
1. Primary System Events (Cont.)	Loss of 2 of 3 Fission Product Barriers with a Potential Loss of the 3rd Barrier 1. Fuel clad is ruptured. 2. A rupture of the RCS has occurred. 3. Containment integrity has been breached and cannot be restored.	General Emergency All Modes
	Abnormal Containment Radiation, Pressure and Temperature 1. Containment radiation level correlates to an Alert, AND 2. High containment average air temperature.	Alert All Modes
	High Containment Radiation, Pressure and Temperature 1. Containment radiation level correlates to a Site Area Emergency, AND a. High Containment average air temperature indicated, OR b. Safety Features Actuation System (SFAS) functions have activated.	Site Area Emergency All Modes
	Very High Containment Radiation and Pressure 1. Containment radiation level correlates to a General Emergency, AND 2. Very High Containment pressure indicated.	General Emergency All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
2. Abnormal Reactor Coolant System Leak Rate	Reactor Coolant System Leak Rate Requiring Plant Shutdown per Technical Specifications Reactor Coolant System water inventory balance indicates excessive leakage.	Unusual Event Modes 1, 2, 3 & 4
	Reactor Coolant System Leak Rate >50 gpm But Within High Pressure Injection Capacity 1. Makeup Tank level is decreasing at a rate greater than 2 inches per minute while RCS temperature remains steady, OR 2. RCS water inventory balance indicates >50 gpm leakage.	Alert All Modes
	Reactor Coolant System Leak Rate >50 gpm But Within High Pressure Injection Capacity AND a Loss of Offsite Power 1. a. Makeup Tank level is decreasing at a rate greater than 2 inches per minute while RCS temperature remains steady, OR b. RCS water inventory balance indicates >50 gpm leakage, AND 2. Loss of offsite power.	Site Area Emergency All Modes

TABLE 4-1

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
2. Abnormal Reactor Coolant System Leak Rate (Cont.)	Loss of Coolant Accident > High Pressure Injection Capacity 1. HPI system running, AND 2. a. RCS pressure/pressurizer level continues to decrease, OR b. RCS temperature/pressure reach saturation.	Site Area Emergency All Modes
3. Safety System Functions	Uncontrolled Control Rod Withdrawl from a Subcritical Reactor 1. Outward control rod motion without a command, AND 2. Reactor initially shutdown.	Unusual Event Modes 2, 3, 4 & 5
	Failure of Reactor Protection System to Initiate and Complete a Trip Which Brings the Reactor Subcritical	Alert Modes 1 & 2
	Transient Requiring Operation of Shutdown Systems with Failure to Trip the Reactor (Continued power generation but no core damage immediately evident.)	Site Area Emergency Modes 1 & 2
	Complete Loss of Any Functions Needed for Plant Cold Shutdown	Alert Modes 1, 2, 3 & 4
	Inability to Maintain Plant in Cold Shutdown	Alert Modes 5 & 6

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
3. Safety System Functions (Cont)	Complete Loss of Any Function Needed for Plant Hot Shutdown	Site Area Emergency Modes 1, 2, 3 & 4
	Loss of Water Level in the Reactor Vessel That Has or Will Uncover Fuel in the Reactor Vessel	Site Area Emergency Modes 5 & 6
	Communication Capability Lost to an Extent Requiring Plant Shutdown or Other Significant Loss of Assessment	Unusual Event All Modes
	Most or All Alarms (Annunciator) Lost	Alert Modes 1 & 2
	Most or All Alarms (Annunciator) Lost and Plant Transient Initiated or In Progress	Site Area Emergency Modes 1 & 2
4. Electrical Failures	Loss of Offsite Power or Loss of Onsite AC Power Capability	Unusual Event All Modes
	AC Power Capability to Vital Busses Reduced to a Single Power Source for Greater than 15 Minutes such that any Additional Failure Would Result in a Station Blackout	Alert Modes 1, 2, 3 & 4
	Loss of Offsite Power AND Loss of All Onsite AC Power	Alert All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
4. Electrical Failures (Cont.)	Loss of Offsite Power AND Loss of Onsite AC Power for More Than 15 Minutes	Site Area Emergency All Modes
	Prolonged Loss of all Offsite Power AND Prolonged Loss of all Onsite AC Power	General Emergency Modes 1, 2, 3 & 4
	Loss of All Onsite DC Power	Alert All Modes
	Loss of All Vital Onsite DC Power for More Than 15 Minutes	Site Area Emergency All Modes
5. Secondary System Events	Rapid Depressurization of the Secondary Side 1. Increasing Containment pressure (if leak is inside containment) or unusually loud noise or visual sighting outside Containment, AND 2. Valid Steam and Feedwater Rupture Control System (SFRCS) initiation automatically or manually on low Main Steam Line pressure.	Unusual Event Modes 1, 2, 3 & 4
	Steam Line Break With >10 gpm Primary to Secondary Leak Rate 1. Indication of a major steam leak, AND 2. Main Steam line radiation monitor(s) indicating increased activity, AND 3. RCS leak rate >10 gpm primary to secondary leakage.	Alert Modes 1, 2, 3 & 4

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
5. Secondary System Events (Cont.)	Steam Line Break With >50 gpm Primary to Secondary Leak Rate AND Indication of Fuel Damage 1. Indication of a major steam leak, AND 2. Main Steam line radiation monitor(s) indicating increased activity, AND 3. RCS leak rate indicates >50 gpm primary to secondary leakage, AND 4. Confirmed primary coolant sample results indicate activity above acceptable limits of Technical Specifications.	Site Area Emergency Modes 1, 2, 3 & 4
	Failure of Safety-Related Safety Valves or Relief Valves to Close Following a Pressure Reduction Main Steam System: 1. Rapid and continuing decrease in Steam Generator pressure, AND 2. Visual or audible observation of a safety valve being open.	Unusual Event Modes 1, 2, 3 & 4
6. Radiation Release Events	Radiation Levels or Airborne Contamination Which Indicates a Severe Degradation in the Control of Radioactive Materials (such as an increase of a factor of 1000 in direct radiation readings) 1. An airborne radioactivity sample or area radiation survey indicates activity levels >1000 times normal, OR 2. Local radiation monitoring reading indicate, radiation levels >1000 times normal	Alert All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
6. Radiation Release Events (Cont.)	Fuel Handling Accident Which Results in the Release of Radioactivity to Containment or Fuel Handling Area	Alert All Modes
	Major Damage to Spent Fuel in Containment or Fuel Handling Area (e.g. large object damages fuel or water loss below fuel level)	Site Area Emergency All Modes
	Effluent Release > Limits Allowed by Davis-Besse Offsite Dose Calculation Manual	Unusual Event All Modes
	Effluent Release >10 Times Limits Allowed by Davis-Besse Offsite Dose Calculation Manual	Alert All Modes
	Projected or Measured Site Boundary Radiation Levels that Indicate a Potential Dose of 1 mrem at the Site Boundary if Continued Over Two Hours, Using Average Meteorological Conditions	Alert All Modes
	Projected or Measured Site Boundary Radiation Levels of >50 mrem/hr TEDE rate for 1/2-hour Using Adverse Meteorology	Site Area Emergency All Modes
	Projected or Measured Site Boundary Radiation Levels of >500 mrem/hr TEDE rate for 2 minutes Using Adverse Meteorology	Site Area Emergency All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
6. Radiation Release Events (Cont.)	Projected or Measured Site Boundary Thyroid Dose Rate ≥ 250 mrem/hr for ½ hour Using Adverse Meteorology	Site Area Emergency All Modes
	Projected or Measured Site Boundary Thyroid Dose Rate ≥ 2500 mrem/hr for 2 minutes Using Adverse Meteorology	Site Area Emergency All Modes
	Projected or Measured Site Boundary Radiation Levels of ≥ 1 rem/hr TEDE rate Using Adverse Meteorology	General Emergency All Modes
	Projected or Measured Site Boundary Thyroid Dose Rate ≥ 5 rem/hr Using Adverse Meteorology	General Emergency All Modes
7. Hazards to Station Operations	Fire Within the Plant Lasting More Than 10 Minutes, or Any Fire Requiring Offsite Assistance	Unusual Event All Modes
	Fire Potentially Affecting Safety Systems	Alert All Modes
	Fire Resulting in the Loss of Redundant Trains of a Safety System	Site Area Emergency All Modes

TABLE 4-1

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
7. Hazards to Station Operations (Cont.)	Aircraft Crash Onsite or Unusual Aircraft Activity Over Facility	Unusual Event All Modes
	Aircraft Crash Affecting Plant Structures	Alert All Modes
	Aircraft Crash Damaging Vital Plant Structures by Impact or Fire	Site Area Emergency Modes 1, 2, 3, & 4
	Train Derailment Onsite 1. Control Room informed by Station personnel who have made a visual sighting, AND 2. Station Structures have been damaged, OR 3. Danger to Station personnel exists.	Unusual Event All Modes
	Near or Onsite Explosion Control Room informed by Station personnel who have made a visual sighting.	Unusual Event All Modes
	Near or Onsite Explosion Control Room informed by Station personnel who have made a visual sighting.	Unusual Event All Modes

TABLE 4-1

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
7. Hazards to Station Operations (Cont.)	Onsite Explosion Affecting Plant Operations 1. Control Room informed by Station personnel who have made a visual sighting, AND 2. Instrumentation readings on plant systems indicate equipment problems.	Alert All Modes
	Explosion Causing Severe Damage to Safe Shutdown Equipment	Site Area Emergency Modes 1, 2, 3, & 4
	Near or Onsite Toxic or Flammable Gas Release	Unusual Event All Modes
	Entry Into Facility Environs of Uncontrolled Toxic or Flammable Gas	Alert All Modes
	Entry of Uncontrolled Flammable Gas Into Vital Areas. Entry of Uncontrolled Toxic Gases into Vital Areas Where Lack of Access to the Area Constitutes a Safety Problem (Plant NOT in cold shutdown.)	Site Area Emergency Modes 1, 2, 3 & 4
	Turbine Rotating Component Failure Causing Rapid Plant Shutdown	Unusual Event Modes 1 & 2
	Turbine Failure Causing Casing Penetration	Alert Modes 1 & 2
	Missile Impact from Whatever Source on the Facility	Alert All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
7. Hazards to Station Operations (Cont.)	Missile Impact Causing Severe Damage to Safe Shutdown Equipment	Site Area Emergency Modes 1, 2, 3 & 4
	Evacuation of Control Room Anticipated or Required	Alert All Modes
	Evacuation of Control Room and Control of Shutdown Systems Not Established From Local Stations In 15 minutes	Site Area Emergency All Modes
	Security Threat or Attempted Entry or Attempted Sabotage or Site Specific Credible Threat	Unusual Event All Modes
	Ongoing Security Compromise	Alert All Modes
	Loss of Physical Control of the Plant is Ready to Take Place (imminent)	Site Area Emergency All Modes
	Loss of Physical Control of the Facility	General Emergency All Modes
8. Natural Events (Within Ottawa County)	Any Earthquake Felt In Plant or Detected on Station Seismic Instrumentation	Unusual Event All Modes
	Earthquake > Operating Basis Earthquake (OBE) Levels	Alert All Modes
	Earthquake > Safe Shutdown Earthquake (SSE) Levels	Site Area Emergency Modes 1, 2, 3 & 4

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
8. Natural Events (Within Ottawa County)(Cont.)	Any Tornado Onsite Control Room informed by Station personnel who have made visual sighting of a tornado crossing the site boundary.	Unusual Event All Modes
	Any Tornado Striking the Facility Control Room informed by Station personnel who have made a visual sighting.	Alert All Modes
	Hurricane Force Winds (> 74 mph) Control Room informed of hurricane force winds forecast for Ottawa County.	Unusual Event All Modes
	Hurricane Force Winds Near Design Basis Levels (> 74 mph, but < 90 mph)	Alert All Modes
	Hurricane Force Winds > Design Basis Levels (> 90 mph)	Site Area Emergency Modes 1, 2, 3 & 4
	50-Year Flood or Low Water, Surge or Seiche Lake levels >580 feet IGLD OR <562 feet IGLD	Unusual Event All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
8. Natural Events (Within Ottawa County)(Cont.)	Flood, Low Water, Surge, or Seiche Near Design Levels Lake levels at 584 feet IGLD OR <560 feet IGLD.	Alert All Modes
	Flood, Low Water, Surge, or Seiche ≥ Design Levels With Plant Not in Cold Shutdown Lake levels >584 feet IGLD OR <558 feet IGLD.	Site Area Emergency Modes 1, 2, 3 & 4
9. Miscellaneous	Miscellaneous Plant is NOT brought to a required operating mode within Technical Specification Limiting Condition for Operation (LCO) Action Statement time limit.	Unusual Event Modes 1, 2, 3 & 4
	Miscellaneous Other plant conditions exist that warrant increased awareness on the part of the plant operations staff or State and/or local offsite authorities which are not covered under any other existing station procedures.	Unusual Event All Modes
	Miscellaneous Other plant conditions exist that warrant precautionary activation of the Technical Support Center and Emergency Operations Facility and placing other key emergency personnel on standby.	Alert All Modes

SUMMARY OF EMERGENCY ACTION LEVELS

Condition	Indication(s) Requiring Declaration of the Listed Classification	Emergency Classifications
9. Miscellaneous (Cont.)	Miscellaneous Other plant conditions exist that warrant activation of emergency centers and monitoring teams or a precautionary notification to the public near the site.	Site Area Emergency All Modes
	Miscellaneous Other plant conditions exist, from whatever source, that make release of large amounts of radioactivity in a short time period possible, e.g., any core melt situation.	General Emergency All Modes

TABLE 4-2

CLASSIFICATION OF HYPOTHESIZED ACCIDENTS

These events are based upon the worst case conditions described in the DBNPS USAR, Chapter 15. To fully understand the event, the USAR must be consulted.

EVENT	CLASSIFICATION
1. Uncontrolled Control Rod Assembly Group withdrawal from a subcritical condition (Startup Accident)	Unusual Event
2. Uncontrolled Control Rod Assembly Group withdrawal at power	*
3. Control Rod Assembly misalignment (Stuck-out, stuck-in, or dropped CRA)	*
4. Makeup and Purification System malfunction	Unusual Event
5. Loss of forced Reactor Coolant flow	Unusual Event
6. Startup of inactive Reactor Coolant loop	*
7. Loss of external load and/or Main Turbine trip	*
8. Loss of normal Feedwater	*
9. Loss of all AC power to station auxiliaries	Unusual Event
10. Excessive heat removal due to Feedwater system malfunctions	*
11. Excessive load increases	*
12. Anticipated variations in the reactivity of the reactor	*
13. Failure of regulating instrumentation	Unusual Event
14. External causes (Natural disasters, etc.)	Unusual Event
15. Loss of Reactor Coolant from small ruptured pipes or from cracks in large pipes which actuate ECCS	Alert
16. Minor secondary pipe break	Unusual Event

*The results of these events do not meet the criteria for an Unusual Event.

CLASSIFICATION OF HYPOTHESIZED ACCIDENTS

EVENT	CLASSIFICATION
17. Inadvertent loading of a fuel assembly into an improper position	Alert
18. Steam Generator tube rupture	Site Area Emergency
19. Control Rod Assembly ejection accident	Alert
20. Steam line break	Site Area Emergency
21. Break in instrument lines or lines from Reactor Coolant System that penetrate containment	Site Area Emergency
22. Loss of Coolant Accident	Site Area Emergency
23. Fuel Handling Accident	Site Area Emergency
24. Design Basis Accident	General Emergency
25. Waste Gas Tank Rupture	Alert
26. Effects of Toxic Material Releases on the Control Room (Note: Chlorine gas was the only toxic material onsite which could affect the Control Room. This material is no longer used onsite, and the chlorine tank has been removed.)	Alert

5.0 ORGANIZATIONAL CONTROL OF EMERGENCIES

In planning for emergencies the availability of the normally present operating staff, augmented by support from other utility personnel and offsite support agencies, is considered. The initial phase of an emergency at DBNPS will involve a relatively small number of individuals. These individuals will be capable of: (1) determining that an emergency exists, (2) providing initial classification and assessment, (3) promptly notifying other groups and individuals in the emergency organization, and (4) performing actions immediately necessary to protect site personnel and the public. The follow-on phases of an emergency situation may require an increasing augmentation of the emergency organization. In the case of a SITE AREA EMERGENCY or a GENERAL EMERGENCY, this will result in the mobilization of all personnel resources of the Company, under the direction of a Senior Company Officer.

This section of the Emergency Plan addresses the assignment of personnel and the establishment of responsibilities and authority for the:

5.1 DBNPS Organization
5.2 DBNPS Emergency Management
5.3 Onshift Emergency Response Organization
5.4 Onsite Emergency Response Organization
5.5 Joint Public Information Center (JPIC)
5.6 Corporate Emergency Response Organization (CERO)
5.7 Supporting Emergency Organizations

5.1 DBNPS Organization

Daily operating and engineering activities at DBNPS are under the control of the Vice President - Nuclear.

DBNPS has engineering service contracts with the Nuclear Steam Supply System (NSSS) supplier and the Architect-Engineer. Organizational structure and communication arrangements exist to assure that these services are available and can be obtained in a timely manner.

5.1.1 Plant Management and Administrative Organization

The Plant Manager directs and supervises all operating, administrative, technical and maintenance activities in connection with the continuous, efficient and safe operation of the DBNPS.

To support the Plant Manager, an administrative organization has been established. Responsibilities have been assigned for the various aspects of station operation.

5.1.2 Onshift Operations Group

The Normal Onshift Operations Group at the Davis-Besse Nuclear Power Station maintains the capability at all times to perform the emergency detection, classification, and notification functions required in the early phases of an incident. These capabilities are augmented, as required, by the Onsite Emergency Response Organization and the Corporate Emergency Response Organization.

The Onshift Operations Group conforms with ANSI N18.1, and includes both management and operating personnel. Figure 5-1, Onshift Emergency Organization, shows the functional levels. The Onshift Maintenance Support Organization maintains a 24-hour shift rotation. The shift includes persons from the Mechanical, Electrical, and Instrument and Control Maintenance Sections. These personnel form the initial nucleus staff of the OSC. Other continuous duty, 24 hours-per-day organizations include Plant Operations, Chemistry, Radiation Protection and Security. Additional Maintenance personnel and the various Engineering organizations are onsite during normal work hours, Monday through Friday, excluding holidays.

5.1.3 Normal Plant Shift Staffing

The plant's operating staff meets or exceeds the requirements of Technical Specifications:

MINIMUM SHIFT CREW COMPOSITION #
(Tech. Specs. Table 6.2-1, Amendment 175)

LICENSE CATEGORY	APPLICABLE MODES	
	1,2,3 & 4	5 & 6
Senior Reactor Operator License (SRO)	2**	1*
Reactor Operator License (RO)	2	1
Non-Licensed	2	1
Shift Engineer (Shift Technical Advisor) (STA)	1**	None

\# Shift crew composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absences of on duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

* Does not include the licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling supervising CORE ALTERATIONS.

** One of the two required individuals filling the SRO positions may also assume the STA function provided the individual meets the qualifications for the combined SRO/STA position specified in Option 1 of the Commission's Policy Statement on Engineering Expertise on Shift. If the option is used for a shift, then the separate STA position may be eliminated for that shift.

In addition, the plant is continuously manned with a minimum shift complement consisting of the following:

1	Chemistry Tester
1	Radiation Protection Tester
5	Fire Brigade Members (may have other assignments)
*	Nuclear Security Force

*safeguards information

An established duty roster system provides access to plant management 24 hours a day.

Table 5-1 specifies minimum shift requirements as prescribed by NUREG-0654, Table B-1.

The Shift Manager directs the onshift personnel operating the station and verifies that their work is performed according to approved procedures. Ultimate authority for directing all phases of plant operations always lies with the Shift Manager. The Shift Manager becomes the Emergency Director upon classification of an emergency at DBNPS.

A Unit/Field Supervisor, who is assigned to each shift during power modes, assists the Shift Manager by following his directives in supervising employees engaged in controlling the operations of the Nuclear Steam Supply System, Turbine Generator, and other station equipment. During an emergency, the Unit/Field Supervisor may also direct employees to function as emergency maintenance personnel or to assist fire brigade team members. The Unit/Field Supervisor assumes the role of Shift Manager, including Emergency Director duties, should the Shift Manager become incapacitated.

A Shift Engineer (Shift Technical Advisor) is normally assigned to the shift to relieve the Shift Manager of administrative responsibilities, such as coordination of maintenance schedules, establishment of short term objectives for plant operation and review of documentation. In addition, the Shift Engineer (Shift Technical Advisor) also provides the additional technical and analytical capability needed in the Control Room, during all operating modes except refueling and cold shutdown, to support the diagnosis of off-normal events. If available, the Shift Engineer (Shift Technical Advisor) serves as the technical assistant to the Shift Manager in analyzing and mitigating such events, and may perform dose assessment calculations during emergencies. The Shift Engineer (Shift Technical Advisor) may serve as the Emergency Director if both the Shift Manager and the Unit/Field Supervisor are incapacitated. Under certain circumstances, the Shift Engineer (Shift Technical Advisor) position may be filled by an onshift Senior Reactor Operator assigned another function, such as Shift Manager.

The Supervisor - Security Shift is responsible for coordinating the functions of the station security forces, and the operation and testing of security-related equipment. A Supervisor - Security Shift will be onsite at all times.

5.2 DBNPS Emergency Management

In the event of a declared ALERT or higher level emergency, the Onsite Emergency Response Organization (ERO) shall be activated. The individuals responsible for managing the emergency are the Emergency Director, Emergency Offsite Manager, Emergency Plant Manager and the Company Spokesperson.

5.2.1 Emergency Director

a. The Emergency Director is the senior individual in the onsite ERO responsible for the coordination of the overall response to any emergency at the DBNPS. During such an emergency, the Emergency Director will coordinate and direct the emergency response from the Control Room, the Technical Support Center (TSC), or the Emergency Operations Facility (EOF) in the Davis-Besse Administration Building (DBAB).

The following are non-delegable responsibilities of the Emergency Director:

1. Emergency Classification
2. Offsite Protective Action Recommendation
3. Compliance with station procedures
4. Safety and well being of station personnel
5. Ordering a station general evacuation

Responsibilities that the Emergency Director may delegate to the Emergency Plant Manager only are:

1. Emergency dose authorizations in excess of 10 CFR 20 limits, and
2. Onsite administration of Potassium Iodide (KI).

b. Reporting directly to the Emergency Director are:

1. Emergency Offsite Manager
2. Emergency Plant Manager
3. Company Spokesperson
4. Emergency Director Advisor

c. In the absence of the Emergency Director, one of the following positions will assume the duties and responsibilities of the Emergency Director:

1. Emergency Plant Manager
2. Emergency Assistant Plant Manager
3. Shift Manager
4. Unit/Field Supervisor
5. Shift Engineer (Shift Technical Advisor)

During the initial phase of the emergency, the Shift Manager will be the Emergency Director until relieved by the designated Emergency Director or the Emergency Plant Manager. The Emergency Plant Manager may assume

the Emergency Director duties from the TSC, in the absence of the designated Emergency Director. In the absence of the Emergency Plant Manager and the Emergency Director, the Shift Manager may be relieved by the Emergency Assistant Plant Manager upon arrival in the Control Room. However, to relieve the Shift Manager of the Emergency Director's duties, the Emergency Assistant Plant Manager must be in the Control Room.

5.2.2 Emergency Offsite Manager

The Emergency Offsite Manager reports directly to the Emergency Director. The Emergency Offsite Manager's primary responsibility is the overall operation of the EOF including:

a. Coordination of radiological dose assessment activities and protective action recommendations.

b. Control and coordination of communication and interface with corporate, offsite and regulatory agencies.

c. Tracking parameters associated with EALs for radiological releases.

d. Making recommendations to the Emergency Director concerning appropriate offsite protective actions, and/or changes to the emergency classification level.

e. Interfacing with the Emergency Plant Manager, Company Spokesperson, and regulatory and governmental officials.

5.2.3 Emergency Plant Manager

The Emergency Plant Manager is the senior individual responsible for the coordination and conduct of all activities associated with plant operations, plant assessment, emergency classification associated with plant parameters, and onsite actions taken to mitigate the emergency situation. The Emergency Plant Manager reports to and advises the Emergency Director on plant status and provides recommendations for emergency reclassification based upon technical information and indications recorded in the TSC. The Emergency Director may delegate the responsibilities of authorizing the use of Potassium Iodide, and emergency doses in excess of 10 CFR 20-dose limits, to the Emergency Plant Manager. Once tasked with these responsibilities, the Emergency Plant Manager cannot delegate them.

The Emergency Plant Manager reports directly to the Emergency Director and interfaces with the Emergency Offsite Manager.

5.2.4 Company Spokesperson

The Company Spokesperson is responsible for the overall operation of the Joint Public Information Center (JPIC), conferring with the Emergency Director concerning plant status, reviewing news releases with the Emergency Director,

concerning plant status, reviewing news releases with the Emergency Director, conferring with the JPIC Manager concerning media response status, and acting as company spokesperson during media briefings.

The Company Spokesperson is normally located at the JPIC during an emergency.

5.2.5 Emergency Director Advisor

The Emergency Director Advisor is responsible for accompanying the Emergency Director during performance of emergency duties; and maintaining an awareness of the present emergency situation, while anticipating possible changes. Personal knowledge of the Emergency Plan and associated procedures enable the Emergency Director Advisor to respond to specific questions, as well as brief the Emergency Director on possible courses of action and required procedural responses.

5.3 Onshift Emergency Response Organization

Onshift Emergency Response Organization personnel are adequately trained to recognize, classify, notify, and take appropriate action to terminate or mitigate any emergency situation at the Davis-Besse Station, and shall do so until relieved by the Onsite Emergency Response Organization. The Onshift Emergency Response Organization is depicted in Figure 5-1. Key positions within the Onshift Emergency Response Organization are briefly outlined below.

5.3.1 Shift Manager

The Shift Manager is responsible for assuming the role of the Emergency Director. The Shift Manager supervises the following activities:

a. The timely assessment of plant status.
b. Recognition and appropriate classification of the given situation.
c. Augmentation of the Onshift Emergency Response Organization, as appropriate.
d. Initial notification of offsite agencies.
e. Termination or mitigation of the emergency situation.
f. Protective action recommendations for the general public and Station personnel.
g. Authorization of emergency radiation doses.

5.3.2 Unit/Field Supervisor

During power operations, the Unit/Field Supervisor is responsible for assisting the Shift Manager in the supervision of Operations personnel.

The Unit/Field Supervisor will immediately assume the duties and authorities of the Shift Manager, including Emergency Director duties, if the Shift Manager becomes incapacitated.

5.3.3 Shift Engineer (Shift Technical Advisor)

During an emergency, the Shift Engineer (Shift Technical Advisor), if available, is primarily responsible for the assessment of reactor thermal dynamics. The Shift Engineer (Shift Technical Advisor) is trained to advise the Shift Manager as to level of emergency classification, and actions necessary to terminate or mitigate the consequences of the given situation.

The Shift Engineer (Shift Technical Advisor) will assume the role of Emergency Director if the Shift Manager and the Unit/Field Supervisor become incapacitated. The Shift Engineer (Shift Technical Advisor) is normally assigned to the onshift operating crew during operational modes 1, 2, 3, and 4. Under certain circumstances, this position may be filled by an onshift SRO assigned another function.

5.3.4 Supervisor - Security Shift

The Supervisor - Security Shift is responsible for the activities of the Nuclear Security Force in controlling access to the Protected Area, assisting during medical emergencies and conducting accountability, if necessary.

The Supervisor - Security Shift reports directly to the Emergency Security Manager and interfaces with the OSC Manager and the OSC RP Coordinator.

5.3.5 Onshift Maintenance Support

During normal power operations, the Onshift Maintenance personnel report to the Shift Engineer. Upon declaration of an emergency, the Onshift Maintenance personnel report directly to the Shift Manager and implement the functions of the OSC until the facility is fully activated by the Onsite Emergency Response Organization. During the initial stages of an emergency, the Onshift Maintenance personnel are responsible for performing Mechanical Maintenance, and Electrical and Controls Maintenance support functions.

5.4 Onsite Emergency Response Organization

5.4.1 Overview

During an emergency, an Onsite Emergency Response Organization will be activated. The assignment of responsibilities in the Onsite Emergency Response Organization is ultimately the responsibility of the Vice President, Nuclear. However, the Manager – Regulatory Affairs is responsible for establishing and maintaining a predefined Onsite Emergency Response Organization. Alternate assignments to various positions are specified to provide for timely, automatic, and unambiguous manning to satisfy emergency response requirements.

In general, the Onsite Emergency Response Organization will be housed in four onsite centers. These centers are briefly described below:

a. Control Room

Control Room staff will control the operation of the power plant during both normal and emergency operations.

b. Emergency Operations Facility (EOF)

The EOF will serve as the primary point of interface between the Company and outside organizations responsible for the protection of the general public. The EOF staff will also analyze and track parameters relating to the radiological EALs, and will advise the Emergency Director of the need to reclassify the emergency. The EOF staff will also conduct dose assessment operations and generate protective action recommendations for both Station personnel and the general public.

c. Technical Support Center (TSC)

TSC staff will assess plant conditions, and provide management and technical assistance to the Control Room, as required, to mitigate the effects of the emergency event. The TSC staff will analyze and track parameters relating to the technical EALs, and will advise the Emergency Director of the need to reclassify the emergency.

d. Operations Support Center (OSC)

OSC staff will provide emergency maintenance and radiation monitoring support, as requested by the Control Room; and provide emergency support, as required, for onsite material acquisition, fire fighting, and first aid.

5.4.2 Direction and Coordination

Procedurally, the Onsite Emergency Response Organization is activated when an emergency is classified at the ALERT level or higher. The response times for the various emergency positions within the organization are specified in Table 5-1. The primary function of the Onsite Emergency Response Organization is to relieve the Control Room staff of those duties and responsibilities not directly related to the operation of the primary and secondary plant systems.

5.4.3 Control Room

In the Control Room, the Onsite Emergency Response Organization is the same as the Onshift Emergency Response Organization. At the ALERT level or greater, additional operators will be assigned to assist in the OSC, under the direction of the OSC Manager.

5.4.4 Technical Support Center (TSC) Organization

The TSC Organization is composed of individuals housed in two separate and distinct facilities: the Technical Support Center, in the Davis-Besse Administration Building; or Shift Manager's office, which is in the Control Room envelope. Personnel and activities in these facilities are directed by the Emergency Plant Manager.

The following individuals report directly to the Emergency Plant Manager:

a. Emergency Assistant Plant Manager

The Emergency Assistant Plant Manager is the senior Company representative within the Control Room. The Emergency Assistant Plant Manager is responsible for coordination and interface between the TSC emergency organization and the plant. The Emergency Assistant Plant Manager advises the Emergency Plant Manager on plant status and trends, and their potential impact on protective action recommendations and emergency classification.

The Emergency Assistant Plant Manager interfaces with the Emergency Plant Manager, TSC Engineering Manager, Emergency Radiation Protection Manager, and the OSC Manager.

Reporting to the Emergency Assistant Plant Manager is the Shift Manager and the Operations staff, in the Control Room.

b. Emergency Radiation Protection Manager

The Emergency Radiation Protection Manager is located in the TSC and is responsible for ensuring radiological assessments, and surveys are conducted within the Protected Area. The Emergency Radiation Protection Manager coordinates plant protective action and health physics support for emergency activities, and interprets data to provide health physics and chemistry input to engineering assessments. The Emergency Radiation Protection Manager interfaces with the Dose Assessment Coordinator to provide data on plant radiological status and trends. In addition, the Emergency Radiation Protection Manager provides recommendations to the Emergency Plant Manager for emergency personnel doses, and the issuance of Potassium Iodide to plant personnel.

The Emergency Radiation Protection Manager interfaces with the TSC Engineering Manager, the Emergency Security Manager, the OSC Manager, the OSC RP Coordinator, the Dose Assessment Coordinator and staff.

c. Technical Support Center (TSC) Engineering Manager

The TSC Engineering Manager is responsible for the coordination and supervision of TSC engineering activities associated with development of emergency procedures to terminate or mitigate the emergency situation. The TSC Engineering Manager ensures that the Technical Support Center is operated with attention to such detail as timely updating, accurate record-keeping, and complete documentation of the event for historical purposes. The TSC Engineering Manager advises the Emergency Plant Manager on information pertinent to emergency classification, from the technical standpoint.

The TSC Engineering Manager interfaces with the Emergency Assistant Plant Manager, OSC Manager and the Emergency Radiation Protection Manager.

Reporting to the TSC Engineering Manager are the TSC Engineering Lead, and the TSC Operations Lead.

d. TSC Engineering Lead

The TSC Engineering Lead is responsible for coordinating the TSC Engineers.

The TSC Engineering Lead reports to the TSC Engineering Manager and interfaces with the TSC Operations Lead, and the Emergency Radiation Protection Manager.

Reporting to the TSC Engineering Lead are engineers with expertise in the following disciplines:

1. Core/Thermal Hydraulics
2. Electrical
3. Mechanical
4. Instrument and Control

e. TSC Operations Lead

The TSC Operations Lead is responsible for coordinating and supervising the TSC Operations Engineering group. The TSC Operations Lead coordinates engineering tasks assigned to the TSC and Operations Engineering staff.

The TSC Operations Lead reports to the TSC Engineering Manager, and interfaces with the TSC Engineering Lead and the Emergency Radiation Protection Manager.

Reporting to the TSC Operations Lead are personnel with expertise in various aspects of plant operations and computer technology.

f. Emergency Security Manager

The Emergency Security Manager is responsible for the overall direction of the Emergency Security Organization in controlling access to the site, assisting in medical emergencies, and assembly and accountability.

The Emergency Security Manager reports to the Emergency Plant Manager and interfaces with the Emergency Radiation Protection Manager, and the OSC Manager.

g. Owner Controlled Area Security Supervisor

The Owner Controlled Area Security Supervisor is responsible for controlling access to the emergency facilities, and ensuring that all ERO personnel in the DBAB have received emergency dosimetry. The Owner Controlled Area Security Supervisor also directs the action of the security force when controlling access to the Owner Controlled Area (OCA).

The Owner Controlled Area Security Supervisor reports to the Emergency Security Manager.

5.4.5 Operations Support Center (OSC) Organization

a. OSC Manager

The OSC Manager is responsible for the supervision of OSC personnel and their associated activities. The OSC Manager will assess the manpower requirements and technical skill level required by the given emergency situation, and provide for augmentation as appropriate. At a minimum, the OSC Manager will provide personnel to staff the following OSC teams:

1. Emergency Repair
2. Search and Rescue
3. First Aid
4. Fire Brigade

The OSC Manager reports to and interfaces directly with the Emergency Plant Manager and interfaces with the Emergency Assistant Plant Manager and the Emergency Radiation Protection Manager. Reporting to the OSC Manager are the Assistant OSC Manager, the OSC Materials Manager, and the OSC Radiation Protection Coordinator.

b. Assistant OSC Manager

The Assistant OSC Manager reports to and assists the OSC Manager as directed. He is responsible for the OSC personnel pool, and assumes the duties and responsibilities of the OSC Manager in his absence.

c. The OSC Radiation Protection Coordinator

The OSC Radiation Protection Coordinator dispatches RP and Chemistry technicians, within the protected area to survey, sample, and analyze various systems and/or areas to determine the emergency radiological conditions. The OSC Radiation Protection Coordinator also provides radiological support for emergency repair teams, the fire brigade, and first aid teams.

The OSC Radiation Protection Coordinator reports to the OSC Manager, and informs and is advised by the Emergency RP Manager.

Reporting to the OSC Radiation Protection Coordinator are all RP and Chemistry testers not specifically assigned other responsibilities within the emergency organization.

d. Rad Data Technician

The Rad Data Technician is an RP tester who obtains area radiation data from the Control Room back panels and transmits it by fax, or verbally by telephone, to the OSC RP Coordinator and Emergency RP Manager.

e. OSC Materials Manager

The OSC Materials Manager is responsible for supervision and coordination of onsite procurement of spare parts and equipment. The OSC Materials Manager is responsible for ensuring the warehouse is staffed to support the given situation.

The OSC Materials Manager reports to the OSC Manager, and interfaces with those components of the emergency organization seeking onsite spare parts or equipment.

Reporting to the OSC Materials Manager are personnel retained from the warehouse staff(s) to support the emergency situation.

f. OSC Personnel Pool

The OSC Personnel Pool will be comprised of Maintenance, RP, Chemistry, and Operations personnel who are not assigned other roles and responsibilities within the emergency response organization. OSC personnel will be trained to staff one or more of the following OSC emergency teams:

1. Emergency Repair
2. Search and Rescue
3. First Aid
4. Fire Brigade

Members of the OSC Personnel Pool report to the Assistant OSC Manager.

g. OSC Systems Engineers

A minimum of three OSC Systems Engineers will be called out to support OSC activities. The disciplines represented will include primary systems, secondary systems, and electrical and controls.

The OSC Systems Engineers will report to the OSC Manager, and interface with the various emergency repair teams, and the TSC engineers.

5.4.6 Emergency Operations Facility (EOF) Organization

Under the direction of the Emergency Offsite Manager, the following positions staff the EOF.

a. NRC Liaison

The NRC Liaison is responsible for establishing and maintaining communications with the Nuclear Regulatory Commission (NRC): The NRC Liaison will be present at meetings between the Onsite Emergency Organization and the NRC.

The NRC Liaison Communicator reports directly to the NRC Liaison.

b. EOF Operations Advisor

The EOF Operations Advisor is responsible for gathering, interpreting, and advising the Emergency Offsite Manager with respect to current or potential plant situations; and for providing key plant parameters to the dose assessment group to support their evaluation efforts.

c. Dose Assessment Coordinator

The Dose Assessment Coordinator has the overall responsibility for evaluation and computation of projected dose rates and doses, for areas outside of the Protected Area.

The Dose Assessment Coordinator interfaces with the EOF Operations Advisor and the Emergency RP Manager.

The following individuals report directly to the Dose Assessment Coordinator:

1. Dose Assessment Staff

The Dose Assessment Staff is responsible for evaluating plant and meteorological parameters associated with a potential or ongoing radiological release. A quantitative evaluation of the collected data is performed by the Dose Assessment Staff and the results are provided to the Dose Assessment Coordinator for review. The Dose Assessment Staff interfaces with the RMT Coordinator and Rad Data Technician.

2. Radiation Monitoring Team (RMT) Coordinator

The RMT Coordinator is responsible for coordinating the activities of the RMTs, while they are in the field. Under the direction of the Dose Assessment Coordinator, the RMT Coordinator assesses current and projected meteorological conditions and positions the RMTs to track the radiological release. Data gathered in the field by the RMTs is provided to the Dose Assessment Staff for evaluation. The RMT Coordinator coordinates radiological surveys of the owner-controlled area, contiguous to the DBAB, but outside of the Protected Area.

The RMT Coordinator interfaces with the RTL Coordinator and the Dose Assessment Staff.

Reporting to the RMT Coordinator are the Radiation Monitoring Teams.

3. Radiation Testing Lab (RTL) Coordinator

The RTL Coordinator is located in the RTL and is responsible for:

a) Set up of contamination survey equipment at points of entry and exit to the DBAB emergency complex.
b) Routine habitability surveys of the DBAB.
c) Decontamination of individuals and equipment within the DBAB.
d) Preliminary analyses of environmental samples gathered by the RMTs.

4. Radiation Monitoring Team (RMT)

Each Radiation Monitoring Team is comprised of two individuals who have been trained in radiological and environmental sampling techniques.

The RMT members are responsible for taking air, water and soil samples, performing radiation surveys, and using associated survey equipment.

d. Emergency Planning Advisor

The Emergency Planning Advisor is responsible for the coordination of the Emergency Operations Facility (EOF) physical operating requirements. The Emergency Planning Advisor assesses facility readiness, supervises offsite communication, and provides for around-the-clock staffing during extended emergency situations.

The Emergency Planning Advisor interfaces with the Emergency Facility Services Manager for the procurement of personnel and equipment.

Reporting to the Emergency Planning Advisor are the EOF Communications Staff, EOF Administrative Assistant, and the DBAB Log and Status Board Keepers (EOF).

The EOF communications staff is comprised, at a minimum, of two communicators who are responsible for communications with the Ottawa County Emergency Operations Center, the Lucas County Emergency Operations Center, the State of Ohio, and the Corporate Emergency Response Organization. The EOF Communications staff may be augmented by additional personnel to assist in communications, Nuclear Network transmissions, and operations of support equipment.

e. Emergency Facilities Services Manager

1. The Emergency Facilities Services Manager is responsible for coordinating with emergency response facility management to ensure the sufficient availability of personnel to support the operations of the DBAB. This personnel pool includes:

a) Communicators
b) Logkeepers
c) Status Board Keepers
d) Clerical
e) Maintenance
f) Laborers

2. The Emergency Facilities Services Manager is also responsible for the procurement of the following equipment in support of DBAB operations during an emergency:

a) Food and sleeping supplies.
b) Road maintenance, (e.g., snow removal).
c) Phone service.
d) Onsite transportation.
e) Support as requested by the Emergency Offsite Manager.

3. The Emergency Facilities Services Manager is responsible for the communications with the Assembly Areas.

The Emergency Facilities Services Manager interfaces with the Emergency Planning Advisor and Emergency Offsite Manager.

f. County and State Technical Liaisons

One technical liaison is dispatched to Ottawa and Lucas County and the State Emergency Operations Center, respectively at the declaration of a Site Area Emergency. The technical liaisons provide interpretation of events that occur at the station. They report to the Emergency Offsite Manager and will communicate with station personnel to obtain information, as necessary, and report offsite activities.

5.5 Joint Public Information Center (JPIC)

The Emergency Public Information staff is activated by call tree notification, and operates the Joint Public Information Center (JPIC). Coordination of the JPIC is the responsibility of the JPIC Manager, who reports to the Company Spokesperson.

5.6 Corporate Emergency Response Organization (CERO)

The CERO has been established to ensure that the full capabilities and resources of the Company can be effectively utilized to respond to any postulated emergency condition at Davis-Besse. The CERO is staffed by designated personnel who coordinate and provide various technical, logistical, and liaison support services to the Emergency Director. This support could include public relations, engineering, technical assistance, security services, and procurement.

Notification and activation of the CERO will depend upon the classification of the emergency event. At the ALERT level, key CERO members are notified and provide support as necessary. At SITE AREA EMERGENCY and GENERAL EMERGENCY levels, the CERO is activated.

Coordination of the CERO is the responsibility of a senior company officer located at an unaffected FirstEnergy nuclear station. The Senior Company Officer oversees the operation of the CERO and ensures that CERO activities are carried out in a manner that supports the requests made from the Emergency Director.

5.7 Supporting Emergency Organizations

5.7.1 Letters of Agreement

Since an emergency may require augmenting the onsite ERO, it may become necessary to request and utilize assistance furnished by local personnel, organizations, and activities.

Since it is essential that support from local law enforcement agencies, fire departments, hospitals, and ambulance services be available on relatively short notice, letters of agreement have been signed with many of these personnel, organizations, agencies and support groups.

Sample letters of agreement are contained in Appendix C.

a. Medical Support Organizations and Personnel

The following medical support organizations and personnel have signed letters of agreement to furnish necessary services upon request:

1. H. B. Magruder Memorial Hospital
2. St. Charles Hospital
3. Carroll Township Emergency Medical Services
4. Fremont Memorial Hospital

b. Fire-Fighting Organizations

The Carroll Township Fire Department will provide fire fighting assistance, as requested by Davis-Besse Nuclear Power Station.

When local fire support is required within the Protected Area, local fire department personnel will function in conjunction with, and under the direction of, the DBNPS Fire Brigade.

5.7.2 Medical Emergency Response Organization

a. Medical support for the DBNPS is a three-tiered system consisting of:

1. First Aid and evaluation at the station.
2. Emergency treatment at H. B. Magruder Memorial Hospital, Port Clinton, Ohio; St. Charles Hospital, Oregon, Ohio; or Fremont Memorial Hospital, Fremont, Ohio (noncontaminated injuries may receive routine medical treatment at other area hospitals).
3. Consultative or direct medical and radiological assistance is provided by the radiological emergency assistance provider.

b. Emergency Medical Responsibilities

1. Plant Manager:

The Plant Manager is notified in all cases of serious personnel injury or illness.

2. First Aid Teams:

First Aid Teams consisting of station personnel have been established along with a continuous training program. These teams provide first aid for both radiation and nonradiation injuries in a manner outlined below:

a) Injuries Involving Radiological Complications:

1) Injured personnel, whose injuries are known or suspected to have been complicated by excessive internal or external exposure to radioactive materials or ionizing radiation, shall be given first aid and shall be medically evacuated to the hospital for further treatment if their injuries warrant. Decontamination and treatment of excessive dose will be rendered on a second priority basis.

2) First Aid Team members will work with Radiation Protection personnel to ensure radioactive contamination is removed or contained as much as possible prior to the patient's medical treatment if the injuries allow.

b) Non-Radiological Injuries:

1) Any injury requiring medical assistance at DBNPS shall be given first aid by the First Aid Team.
2) A minor injury is an injury that can be treated by the First Aid Team.
3) Major injuries are injuries that require offsite assistance, in addition to treatment by the first Aid Team.

3. Radiation Protection Personnel:

a) Shall respond to injuries involving radioactive contamination and shall control radiological aspects of the scene as much as possible.

b) Shall remove or contain the injured person's contamination as much as possible prior to medical treatment or transportation if injuries allow.

c) Shall accompany the potentially contaminated injured person(s) to the hospital and render assistance to the attending physicians as required.

d) Shall provide the attending physicians with prompt evaluations of the internal and/or external doses incurred by injured personnel. The services of the radiological emergency assistance provider are available for assistance in this matter.

4. Davis-Besse Security:

Shall notify the appropriate hospital as soon as it is suspected that a potentially contaminated injured person may be sent to Magruder Memorial, St. Charles, or Fremont Memorial Hospital, so that they may prepare their Radiation Emergency Area.

5. Ambulance Service:

Carroll Township Emergency Medical Services (EMS), located four (4) miles from DBNPS, has agreed to provide ambulance service to DBNPS. Backup ambulance service is provided in accordance with the Ottawa County Mutual Aid Agreement, which all EMS services in the county have signed.

All personnel involved with this service have received extensive first aid training and have been certified by the Ohio Department of Education as Emergency Medical Technicians (EMT). Periodic

training is given to the members of the Carroll Township Emergency Medical Services (EMS) and Mid-County EMS at which time discussions are held on the handling of contaminated injured personnel and standard health physics practices.

6. Radiological Emergency Assistance Provider:

In the event of radiation/medical emergencies, the Radiological Emergency Assistance Provider will provide medical assistance.

The Radiological Emergency Assistance Provider has expertise and is equipped to conduct:

a) Medical and radiological triage
b) Decontamination procedures and therapies for external contamination and internally deposited radionuclides
c) Diagnostic and prognostic assessments of radiation induced injuries
d) Radiation dose estimates by methods that include cytogenetic analysis, bioassay and invivo counting

c. Over-Exposure/Internal Contamination:

If it is known, or suspected, that an individual has been exposed in excess of the limits specified by 10 CFR 20.1201, an immediate investigation shall be conducted by Radiation Protection personnel, and such reports or notifications required by 10 CFR20 shall be submitted.

If a dose falls outside the acceptable limits of 10 CFR 20.2202(a)(1), the Plant Manager shall immediately obtain medical consultation from the radiological emergency assistance provider. The radiological emergency assistance provider, in turn, will assure that the exposed individual(s) are promptly evaluated and appropriately treated.

5.7.3 Government Agency Support

a. Agreements with Government Agencies

1. Discussions have been held with appropriate government agencies, which have emergency preparedness responsibilities. The responsibility for overall management of response to accidental off-site releases of radioactivity resulting from either a nuclear power plant, or a transportation accident, rests with the State of Ohio and local governments. Through the provisions of the Atomic Energy Development and Radiation Control Act, P.L. 1625 (1965), as amended, the following State agencies have prime responsibilities in matters of radiation hazards:

a) Ohio Department of Agriculture
b) Ohio Department of Health
c) Ohio Department of Highway Safety
d) Ohio Department of Natural Resources
e) Ohio Department of Public Safety
f) Ohio Department of Transportation
g) Ohio Emergency Management Agency (OEMA)
h) Ohio Environmental Protection Agency

2. The Emergency Plans for DBNPS, State of Ohio, Ottawa County and Lucas County, have been formulated to provide timely notification and close coordination with these agencies.

3. In addition, arrangements have been made for timely notification of the NRC in an emergency. Emergency support will be provided by the NRC, Region III, Office of Inspection and Enforcement; and the Department of Energy, Chicago Operations Office, Radiological Assistance Program. Other arrangements include police protection, fire-fighting support, and ambulance support.

b. Criteria for Notification of Government Agencies

1. Federal regulations require timely notification of local and state emergency response agencies. Additionally, notifications are made to the NRC and the Onsite Emergency Response Organization and other key company personnel.

Upon declaration of an emergency, and periodically throughout the emergency, notifications are made to the following:

a) Station Personnel
b) Onsite Emergency Response Personnel and other Key Company Personnel
c) Ottawa County Sheriff's Office or the OCEMA
d) Lucas County Sheriff's Office or the LCEMA
e) Ohio Emergency Management Agency or Ohio Highway Patrol
f) NRC, Emergency Incident Response Center

2. In the event of personnel injury/illness, which require transportation to an offsite medical facility, the Ottawa County Sheriff's Office will be notified so that local authorities may prepare to answer public/media inquiries.

3. Section 6.0 discusses the radiological incident notification order.

4. Notification will take place as soon as the emergency is declared. Notification will normally be in the order noted above. The Shift Manager/ Emergency Director will ensure that the Ottawa and Lucas

County Sheriff's Offices, and the State of Ohio, are notified within 15 minutes of the declaration. The NRC will be notified as soon thereafter as possible, but in no case more than one hour after declaration.

5. The Emergency Notification System (ENS) (red phone) will be used for notifying the NRC. In the event that the ENS is unavailable, the NRC commercial number will be used. If radiological concerns arise, the NRC Health Physics Network should be utilized.

c. Local Agencies

1. Ottawa County Sheriff's Office

The Ottawa County Sheriff's Office is experienced in providing area control, communications assistance, and direct handling of the local population; including evacuation, should it become necessary. The Sheriff's Office provides 24-hour radio communication coverage with the Central Alarm Station at DBNPS. Until the Ottawa County Emergency Management Agency (OCEMA) is activated, the Ottawa County Sheriff's Office is the lead Ottawa County agency contacted in the event of an emergency at DBNPS.

2. Lucas County Sheriff's Office

The Lucas County Sheriff's Office is experienced in providing area control, communications assistance, and direct handling of the local population; including evacuation, should it become necessary. Until Lucas County Emergency Management Agency (LCEMA) is activated, the Lucas County Sheriff's Office is the lead Lucas County agency contacted in the event of an emergency at the site.

d. State of Ohio Agencies

As outlined in the State of Ohio Emergency Plan, the following State Departments/Agencies are prepared for and will respond to radiological incidents involving licensed nuclear facilities:

1. Department of Public Safety will:

a) Act as the lead-planning agency for developing the State of Ohio Nuclear Incident Plans for Licensed Nuclear Facilities.
b) Determine which State agencies should perform specific tasks within their capabilities and ensure assignment of responsibility.
c) Coordinate preparation of annexes by other State agencies having response capability/ responsibility.

d) Assist, if needed, in the preparation of plans by other state agencies and counties. Coordinate agreements in local plans between nuclear power utility operators and the county Radiological Emergency Response Plans for disasters as identified by the Ohio Emergency Management Agency.

e) Establish additional or alternate radiological field monitoring stations, as necessary for data acquisition.

f) Develop notification methods and procedures, which will include communication with the nuclear facility licensee.

g) Coordinate with adjacent states in matters pertaining to radiological emergency planning.

h) Instruct National Guard units located in the vicinity of the nuclear power station to prepare plans to provide access control and other general assistance with local government officials and the licensee.

i) Be prepared to support the evacuation process, with the assistance of the National Guard, for residents near the nuclear site unable to transport themselves.

j) Make provisions for the alerting of boaters on Lake Erie inside the 10-mile EPZ. In coordination with the United States Coast Guard, Ohio Department of Natural Resources and Ohio Department of Transportation make provisions to close the portion of Lake Erie inside the 10 mile EPZ when directed by Ohio EMA.

2. State Department of Agriculture shall:

a) Plan and direct a statewide program for protection against radiological damage to animals, foodstuffs, and crops.

b) Coordinate with the U.S. Department of Agriculture in making estimates of crop and animal damage from radiation incidents.

c) Coordinate with the Department of Jobs and Family Services in matters pertaining to feeding and housing evacuees.

d) Control, through quarantine, isolation, or confiscation, crops and foodstuffs, on the stalk or harvested, that might be contaminated.

3. Ohio Environmental Protection Agency shall:

a) Assist the Ohio Department of Health in establishing protective actions based on projected radiation dose levels, which might result from a nuclear incident. Due consideration will be given to protective action guidelines established by the U.S. Environmental Protection Agency.

b) Provide assistance to the Ohio Department of Health and Ohio Emergency Management Agency in the development of radiological emergency response plans.

c) Cooperate with the Ohio Department of Health in recommending protective measures to mitigate the effects of a nuclear incident.
d) Review emergency contingency plans for all proposed and existing Licensed Nuclear Facilities with either the facility operators, or sponsors, and the U.S. Nuclear Regulatory Commission.
e) Ensure that an adequate supply of safe, potable water is maintained.

4. Ohio Department of Health shall:

a) Coordinate Department of Health planning for radiation emergencies at licensed nuclear facilities.
b) Provide guidance and support to other State agencies and local health services with regard to the assessment of radiological hazards and protective actions.
c) Formulate protective action guides to be used in the assessment of radiological hazards, which would be used as the basis for protective action decisions.
d) Act as the chief State agency in evaluating the extent of the hazard and recommending protective actions.
e) Make arrangements for emergency medical supplies and health service to the affected areas.
f) Develop plans for:

1) Relocation of hospitalized persons.
2) Utilization of hospitals and other medical facilities during radiation incidents.
3) Assuring environmental sanitation.
4) Stockpiling and distribution of Potassium Iodide (KI)

5. Ohio Department of Highway Safety shall:

a) Develop a system for implementing emergency traffic control measures within areas affected by radiological incidents.
b) The Ohio Highway Patrol shall:

1) Operate the National Warning System (NAWAS) for warning and emergency communication services insofar as it relates to the State Plan.
2) Obtain information about the radiological incident and resultant damage, and report it to the State Emergency Operations Center (EOC).
3) Provide a mobile radiological monitoring capability, consistent with the capabilities and limitations of the equipment, which is provided.

4) Operate, through the statewide Law Enforcement Emergency Radio Network, a notification system for State Highway Patrol Posts to disseminate nuclear incident information to local authorities as required.

6. Ohio Department of Natural Resources shall:

a) Maintain inventories of primary and secondary sources for water, and prescribe methods of use for such sources, in areas affected by radiological incidents.
b) Cooperate with the Ohio Department of Human Services in providing for the use of departmental land and facilities as evacuation centers or mass care areas.
c) Make provisions for the alerting of persons on state property (e.g., campers and vacationers) to possible radiological dangers, and provide for marine emergency access to the Lake Erie Islands, for possible evacuation in cooperation with the Ohio National Guard.
d) Make available the departments radio communications system for use in the state Emergency Operations Center, if needed.

7. Ohio Department of Transportation (ODOT):

ODOT supports the Ottawa County Engineer's Office with traffic and perimeter control assistance, impediment removal, and evacuation route maintenance.

The Division of Aviation will provide air transportation and aerial radiological monitoring in case of an incident at a licensed facility.

e. Federal Agencies

1. Department of Energy (DOE), Chicago Operations Office, Radiological Assistance Program (RAP)

Upon notification of a hazard to public health and safety, the DOE, Chicago Operations Office, will dispatch a Radiological Assistance Program (RAP) Team to the scene to advise and assist, as necessary, and to minimize the public radiation exposure. This advice and assistance will take the form of technical advice and environmental monitoring assistance, and will support the efforts of the Ohio Emergency Management Agency.

2. U.S. Environmental Protection Agency (USEPA)

Region V, USEPA, Chicago, will provide support to the DOE, Chicago Operations Office, upon request. This support consist of qualified radiation monitoring teams.

3. Nuclear Regulatory Commission, Region III, Office of Inspection and Enforcement.

The Office of Inspection and Enforcement Region III, NRC, will dispatch personnel to the scene in the event of an emergency, and will lend support in the areas of observation and accident evaluation.

4. U.S. Coast Guard (USCG)

Upon request, the USCG will broadcast an emergency notice to mariners. In addition, the Ninth District USCG stations will provide available resources (i.e., vessels, aircraft, and personnel) to begin notifying boaters on Lake Erie.

5.7.4 Other Support Organizations

Assistance in response to an emergency is provided to DBNPS by several organizations which specialize in various areas of emergency response, or are structured to provide timely and effective mobilization of resources when the need exists. These organizations are:

a. Institute of Nuclear Power Operations (INPO)

1. One of the roles of INPO is to assist the affected utility in quickly applying resources throughout the nuclear industry to meet the needs of the emergency.

2. INPO, when notified of an emergency situation at a nuclear plant, will provide emergency response as requested. Such situations are equivalent to the ALERT, SITE AREA EMERGENCY and GENERAL EMERGENCY conditions as defined by NRC.

3. INPO is able to provide the following emergency support functions:

a) Assistance in locating sources of emergency manpower and equipment.
b) Analysis of the operational aspects of the incident.
c) Dissemination to member utilities, of information concerning the incident, that is applicable to their operations.

d) Organization of industry experts who could advise the utility on technical matters.

4. To support these functions, INPO maintains the following emergency support capabilities:

a) Twenty-four hour-a-day operation of an Emergency Response Center.
b) Designated INPO representative(s) who can be quickly dispatched to the utility emergency response organization to coordinate INPO support activities and information flow.

5. If requested by DBNPS, one or more suitably qualified members of the INPO technical staff will report to the Recovery Manager, and will assist his staff in coordinating INPO's response to the emergency as follows:

a) Staff a liaison to the appropriate utility manager.
b) Work with the INPO Duty Person, in Atlanta, to coordinate all requests for assistance, INPO response, and related communications.
c) Assist the utility, as requested, in initiating and updating entries into industry information systems (such as NUCLEAR NETWORK).
d) Ensure that all information concerning the emergency, which is released by the INPO liaison, is properly and formally cleared through appropriate utility channels.

6. The president of INPO will direct an analysis of operational factors relating to the incident.

Onsite activities, when undertaken, will be coordinated with the onsite INPO Representative.

b. Davis-Besse's Insurance Carriers

1. There are three occasions that require interfacing with the insurance carriers:

a) Nuclear Emergencies (Alert, Site Area Emergency, General Emergency).
b) Fire Protection impairment.
c) Accidents involving damage to insured property (e.g., fire, smoke, explosion, sprinkler leakage, damage to property by vehicles, lightning, windstorm, materials handling, losses.)

2. American Nuclear Insurers (ANI) will be notified in accordance with the Emergency Plan Implementing Procedures.

3. In the event of an extraordinary nuclear occurrence (as defined in the Price-Anderson Law), ANI has plans prepared to provide prompt emergency funding to affected members of the public.

4. The provisions of the Price-Anderson Law facilitate providing prompt assistance to members of the public who may be adversely affected in the event of a nuclear incident at an ANI indemnified facility. This arrangement is intended to alleviate the immediate financial burden which may be incurred by members of the public due, for example, to evacuation and relocation activities initiated as a consequence of the nuclear occurrence.

5. In providing emergency assistance to members of the public, representatives will be promptly dispatched to commence the distribution of emergency assistance funds. Such emergency assistance enables members of the public to cope with and to otherwise defray the reasonable immediate expenses incurred by a nuclear occurrence.

6. Nuclear Electric Insurance Limited is the Station's property damage carrier and is notified of situations requiring their attention by appropriate Station procedures.

c. Nuclear Steam Supply System (NSSS) Vendor and Architect/Engineer Support

The NSSS vendor for the Davis-Besse plant was the Babcock and Wilcox (B&W) Company. Babcock & Wilcox later became B&W Nuclear Technology (BWNT) and is currently known as Framatome Technologies Inc. (FTI). The Architect/ Engineer (A/E) for construction of the Davis-Besse plant was the Bechtel Power Corporation.

These two firms can be called on during emergency situations to provide the technical analysis and engineering support necessary to mitigate abnormal plant conditions.

d. Bordering Counties and Contiguous States

Davis-Besse notifies Ottawa and Lucas Counties, and the Ohio Emergency Management Agency.

Ottawa County, in turn, notifies Sandusky County, Ohio; and Erie County, Ohio; of the emergency.

The Ohio Emergency Management Agency notifies the State of Michigan of emergencies at Davis-Besse.

TABLE 5-1

MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES

	UNUSUAL EVENT			ALERT			
	PERSONNEL		TIME	PERSONNEL			TIME
ONSITE	CONTROL ROOM			CONTROL ROOM			
	Shift Manager (ED)	(1)		Shift Manager (ED)	(1)		
	Unit/Field Supervisor	(1)		Unit/Field Supervisor	(1)		
	Control Room Operator	(2)	Immediately	Control Room Operator	(2)		Immediately
	Shift Engineer (Shift Technical Advisor)	(1)*		Shift Engineer (Shift Technical Advisor)	(1)*		
	Non-Licensed Operators	(2)		Non-Licensed Operators	(2)		
	Emergency Assistant Plant Manager	(1)	Alerted	Emergency Assistant Plant Manager	(1)		Normal Hours: 30 minutes Off Hours: 60 minutes
	OPERATIONS SUPPORT CENTER			OPERATIONS SUPPORT CENTER			
	First Aid	(1)		First Aid	(1)		
	Fire Brigade	(5)	As Required:	Fire Brigade	(5)		As Required:
	RP Technician	(1)	Immediately	RP Technician	(1)		Immediately
	Chemistry Technician	(1)		Chemistry Technician	(1)		
	OSC Manager	(1)	Alerted	OSC Manager	(1)		
	OSC RP Coordinator			OSC RP Coordinator	(1)		Normal Hours:
				Mechanical Maintenance	(2)		30 minutes
				Instrument & controls	(2)		
				Electrical Maintenance	(2)		
					Add	Total	Off Hours:
				RP Technician	(1)	(2)	60 minutes
				Chemistry Technician	(0)	(1)	
				RP Technician	(3)	(5)	1-2 hours
				Chemistry Technician	(1)	(2)	
	TECHNICAL SUPPORT CENTER			TECHNICAL SUPPORT CENTER			As Required:
	TSC Engineering Manager		Alerted	TSC Engineering Manager	(1)		Normal Hours:
				Core/Thermal Hydraulic Engineer	(1)		30 minutes
							Off Hours: 60 minutes
				TSC I&C Engineer	(1)		
				TSC Electrical Engineer	(1)		1-2 hours
				TSC Mechanical Engineer	(1)		
				Other NRC Personnel			Variable
	EMERGENCY OPERATIONS FACILITY			EMERGENCY OPERATIONS FACILITY			As Required:
	Emergency Director		Alerted	Emergency Offsite Manager	(1)		Normal Hours:
	Emergency Offsite Manager			Dose Assessment Coordinator	(1)		30 minutes
				RMTs	(3)		Off Hours:
				Emergency Planning Advisor	(1)		60 minutes
				Emergency Director	(1)		
				NRC Liaison	(1)		1-2 hours
				State/County Communicator	(1)		

NOTE: All time requirements are based on optimum response conditions.

* This position may be filled by a shift SRO assigned another function.

TABLE 5-1

MANPOWER, LOCATION, AND RESPONSE CONSIDERATIONS FOR EMERGENCIES

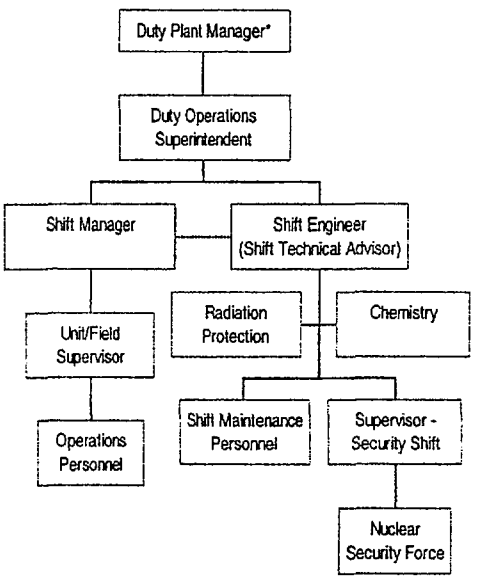
	SITE AREA EMERGENCY				GENERAL EMERGENCY			
	PERSONNEL			TIME	PERSONNEL			TIME
ONSITE	CONTROL ROOM				CONTROL ROOM			
	Shift Manager (ED)		(1)		Shift Manager (ED)		(1)	
	Unit/Field Supervisor		(1)		Unit/Field Supervisor		(1)	
	Control Room Operator		(2)	Immediately	Control Room Operator		(2)	Immediately
	Shift Engineer (Shift Technical Advisor)		(1)*		Shift Engineer (Shift Technical Advisor)		(1)*	
	Non-Licensed Operators		(2)		Non-Licensed Operators		(2)	
	Emergency Assistant Plant Manager		(1)	Normal Hours: 30 minutes Off Hours: 60 minutes	Emergency Assistant Plant Manager		(1)	Normal Hours: 30 minutes Off Hours: 60 minutes
	OPERATIONS SUPPORT CENTER				OPERATIONS SUPPORT CENTER			
	First Aid		(1)		First Aid		(1)	
	Fire Brigade		(5)	As Required:	Fire Brigade		(5)	As Required:
	RP Technician		(1)	Immediately	RP Technician		(1)	Immediately
	Chemistry Technician		(1)		Chemistry Technician		(1)	
	OSC Manager		(1)		OSC Manager		(1)	
	OSC RP Coordinator		(1)	Normal Hours:	OSC RP Coordinator		(1)	Normal Hours:
	Mechanical Maintenance		(2)	30 minutes	Mechanical Maintenance		(2)	30 minutes
	Instrument & controls		(2)		Instrument & controls		(2)	
	Electrical Maintenance		(2)	Off Hours:	Electrical Maintenance		(2)	
		Add	Total			Add	Total	Off Hours:
	RP Technician	(1)	(2)	60 minutes	RP Technician	(1)	(2)	60 minutes
	Chemistry Technician	(0)	(1)		Chemistry Technician	(0)	(1)	
	RP Technician	(3)	(5)	1-2 hours	RP Technician	(3)	(5)	1-2 hours
	Chemistry Technician	(1)	(2)		Chemistry Technician	(1)	(2)	
	TECHNICAL SUPPORT CENTER			As Required:	TECHNICAL SUPPORT CENTER			As Required:
	TSC Engineering Manager		(1)	Normal Hours:	TSC Engineering Manager		(1)	Normal Hours:
	Core/Thermal Hydraulic Engineer		(1)	30 minutes Off Hours: 60 minutes	Core/Thermal Hydraulic Engineer		(1)	30 minutes Off Hours: 60 minutes
	TSC I&C Engineer		(1)		TSC I&C Engineer		(1)	
	TSC Electrical Engineer		(1)	1-2 hours	TSC Electrical Engineer		(1)	1-2 hours
	TSC Mechanical Engineer		(1)		TSC Mechanical Engineer		(1)	
	Other NRC Personnel			Variable	Other NRC Personnel			Variable
	EMERGENCY OPERATIONS FACILITY			As Required:	EMERGENCY OPERATIONS FACILITY			As Required:
	Emergency Offsite Manager		(1)	Normal Hours:	Emergency Offsite Manager		(1)	Normal Hours:
	Dose Assessment Coordinator		(1)	30 minutes	Dose Assessment Coordinator		(1)	30 minutes
	RMTs		(3)	Off Hours:	RMTs		(3)	Off Hours:
	Emergency Planning Advisor		(1)	60 minutes	Emergency Planning Advisor		(1)	60 minutes
	Emergency Director		(1)		Emergency Director		(1)	
	NRC Liaison		(1)	1-2 hours	NRC Liaison		(1)	1-2 hours
	State/County Communicator		(1)		State/County Communicator		(1)	

NOTE: All time requirements are based on optimum response conditions.

* This position may be filled by a shift SRO assigned another function.

FIGURE 5-1

ONSHIFT EMERGENCY ORGANIZATION Page 1 of 1



*This position may be filled by an onshift SRO assigned another function.

FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 1 of 10

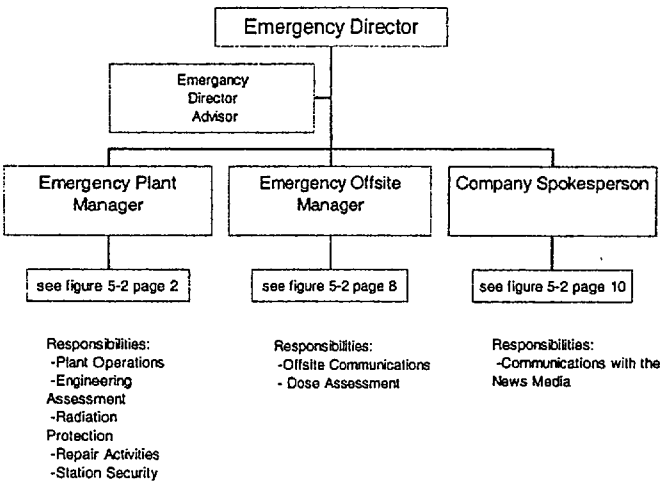


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 2 of 10

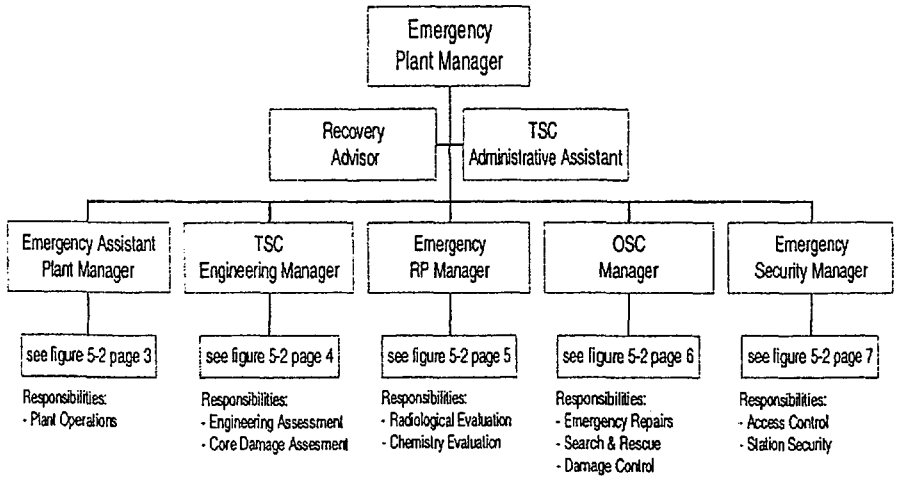


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 3 of 10

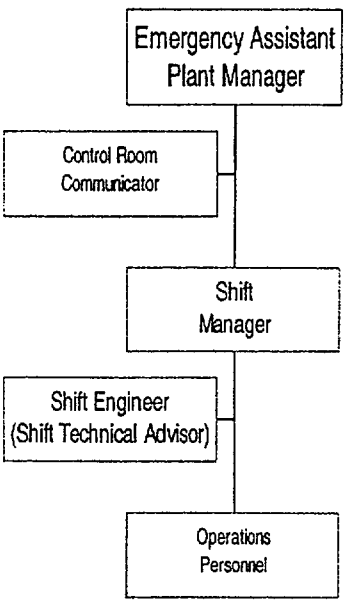


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 4 of 10

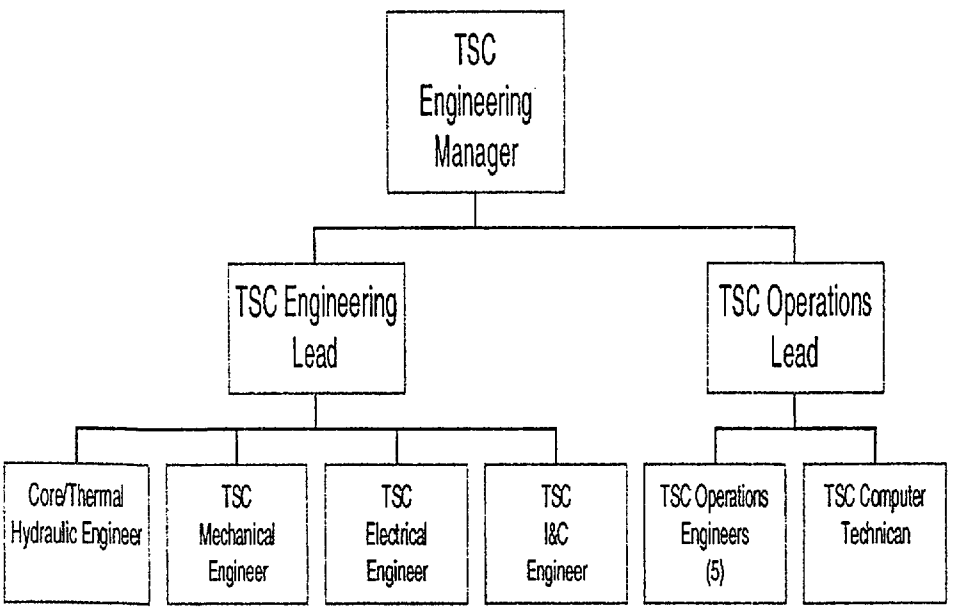


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 5 of 10

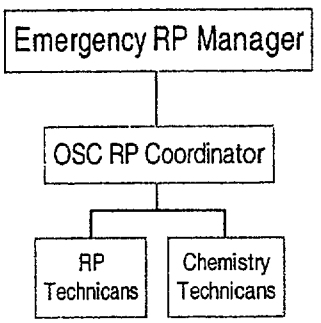


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 6 of 10

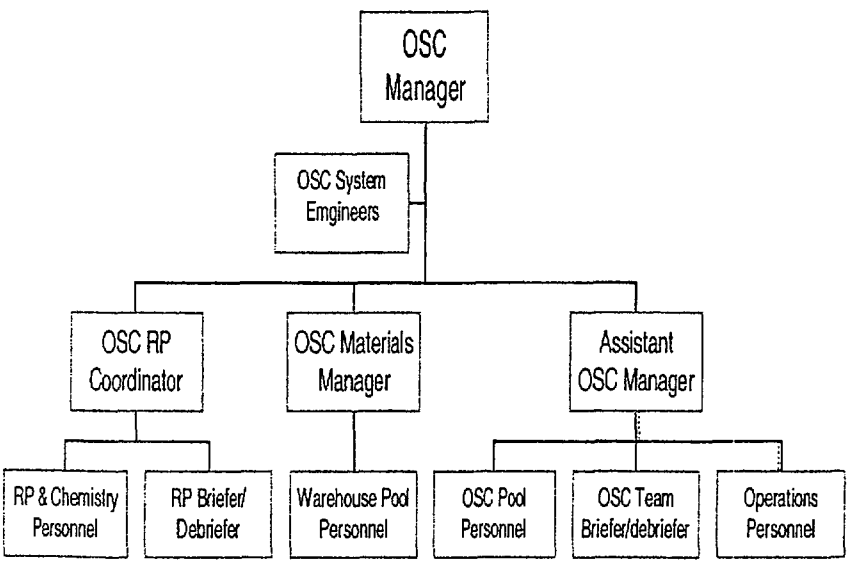


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 7 of 10

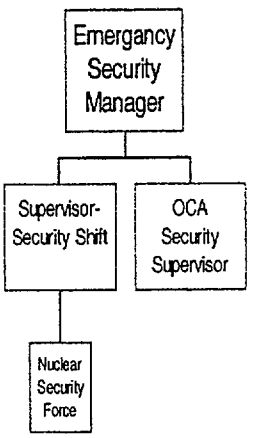


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 8 of 10

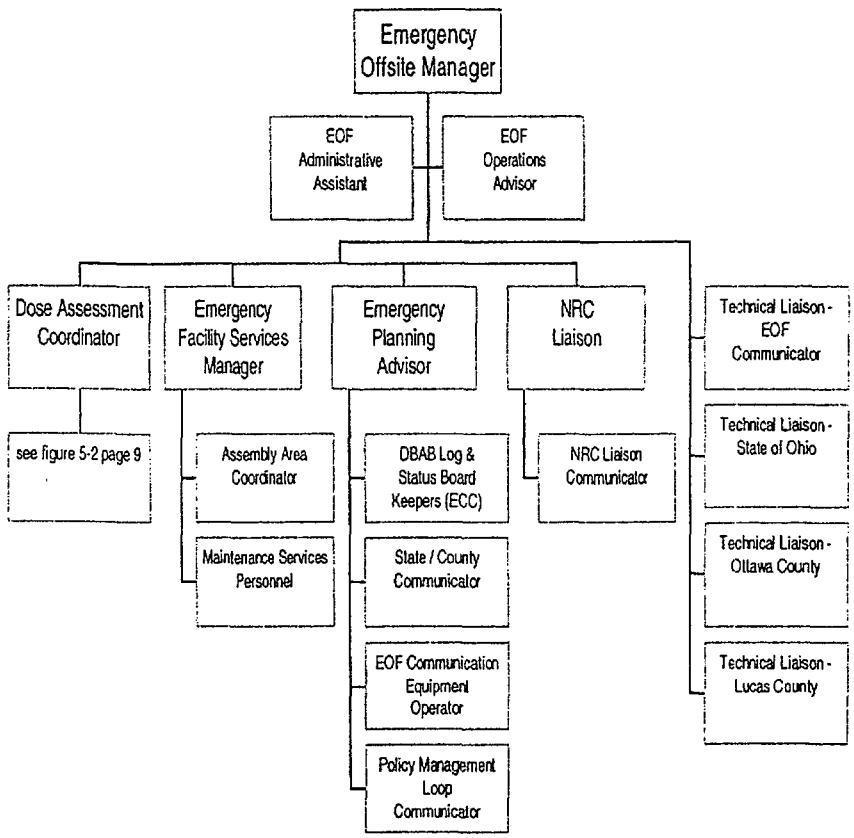


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 9 of 10

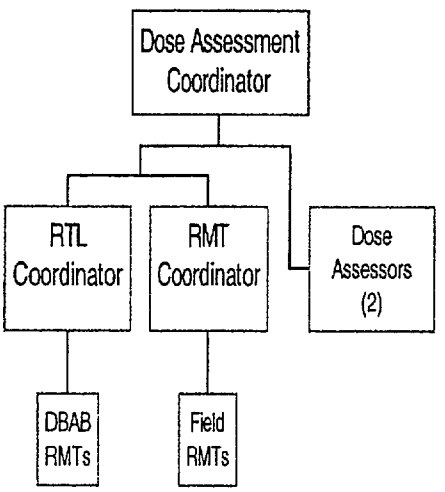
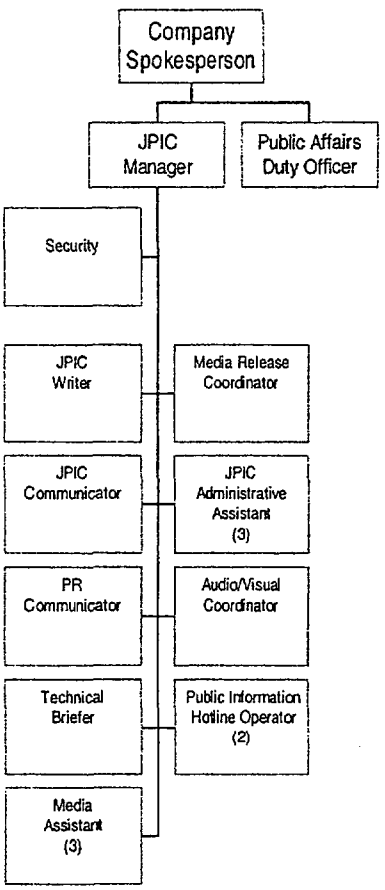


FIGURE 5-2

ONSITE EMERGENCY ORGANIZATION Page 10 of 10



6.0 EMERGENCY MEASURES

This section identifies the specific measures that are taken for each class of emergency defined in Section 4.0, "Emergency Conditions", of this Plan. The logic presented in this section is the basis for detailed Emergency Plan Procedures which define the emergency actions to be taken for each emergency category. Emergency measures begin with the following:

a. The recognition and declaration of an emergency.
b. Notification of the applicable agencies for each emergency classification.
c. Mobilization of the appropriate portions of the emergency response organization.

Emergency measures can be classified as falling into one of the following categories:

a. Assessment Actions
b. Corrective Actions
c. Protective Actions

Figure 6-1 is a summary of typical emergency measures, which may be appropriate for each classification of emergency. Figure 6-2 indicates the groups and organizations that will be notified at each emergency classification.

6.1 ACTIVATION OF THE EMERGENCY RESPONSE ORGANIZATIONS

If conditions at Davis-Besse meet or exceed a predetermined value or condition specified as an EAL in the emergency classification procedure, the provisions of this plan, and those of the specific procedures shall be implemented.

Specific emergency action levels for each emergency category are defined in Section 4.0. The Shift Manager, acting as Emergency Director, will implement this plan by initially classifying the emergency and ensuring that required notifications are made. Notification will be made to the counties, state, and NRC; the Plant Manager, the Manager of Operations, and the Emergency Director, or their designated alternates. The Emergency Assistant Plant Manager, working closely with the Shift Manager, will continually assess the emergency to verify that the most appropriate classification is made.

Depending on the level of the emergency and its severity, portions or all of the onsite and offsite EROs and the CERO will be mobilized as detailed below:

6.1.1 Shift Manager/Control Room Operations

a. Should emergency conditions arise, it is expected that the Control Room Operator(s) and/or the Shift Manager will be made aware of the situation by alarms, instrument readings, reports, etc. The Control Room Operator(s) will ensure that the Shift Manager is immediately informed of the situation. The Shift Manager will direct the Control Room staff to inform the Emergency Director and Station Management immediately.

b. The Shift Manager, when informed of an emergency situation, is responsible for assessing the emergency (e.g., plant systems and reactor core status, radiological conditions, etc.) in the following manner:

1. Determine the immediate actions to be taken (e.g., use of Abnormal Procedures and the Emergency Operating Procedure) to ensure the safe and proper operation of the plant. The Shift Engineer acting as Shift Technical Advisor (STA) will advise and assist the Shift Manager on matters pertaining to the safety and proper operation of the plant, with regards to nuclear safety.

2. If the situation requires implementation of the DBNPS Emergency Plan, the Emergency Director will:

   a) Classify the emergency. Classification of emergencies is a non-delegable responsibility of the Emergency Director.
   b) Ensure that the appropriate alarm (Fire, Access Evacuation, or Initiate Emergency Procedures) is sounded.
   c) Announce the location, type and classification of the emergency on the station public address system (twice).
   d) Implement the applicable Emergency Plan Procedure.
   e) Notify the following personnel and organizations of the emergency conditions:

      1) Nuclear Security Supervision.
      2) Station Management.
      3) Ottawa County Sheriff/EMA (within 15 minutes).
      4) Lucas County Sheriff/EMA (within 15 minutes).
      5) Ohio State Highway Patrol/EMA (within 15 minutes).
      6) Key Emergency Response Personnel.
      7) NRC, Emergency Operations Center, Bethesda, Maryland (within one hour).

   f) Provide periodic follow-up notifications.
   g) Recommend protective actions for public protection, as needed. Recommending public protective actions is a non-delegable responsibility of the Emergency Director.

3. Due to the numerous responsibilities assigned to the Shift Manager at the onset of an emergency, he will perform the following actions in their listed priority.

   a) Ensure the safe operation of the plant.
   b) Ensure that immediate notification requirements are met.
   c) Dispatch, in the event of radiological emergencies, Radiation Protection (RP) personnel to appropriate locations within the protected area.
   d) Perform additional emergency actions as time and conditions permit.

6.1.2 Emergency Director

The designated Emergency Director, upon being informed that an emergency exists and has been declared by the Emergency Director on-shift will:

a. Review information, data, and methods used by the on-shift Emergency Director (Shift Manager) in making the emergency classification. The Emergency Director may NOT delegate the responsibility of classifying emergencies.
b. Determine, to what extent the Emergency Response Organization (ERO) will be activated, using the following guidelines:

   1. For an UNUSUAL EVENT, key individuals in the ERO will be alerted or mobilized at the discretion of the Emergency Director.
   2. For an ALERT, all of the ERO will be activated. Key individuals in the CERO will be alerted.
   3. For a SITE AREA EMERGENCY or GENERAL EMERGENCY, the entire ERO, and the CERO will be activated.

c. Ensure that the Emergency Response Organizations have been activated as indicated above. (If not already performed by Control Room staff.)
d. Report to the TSC/EOF and relieve the Emergency Director.
e. Ensure that the Periodic Update Form, as provided in the Emergency Plan Procedures, is completed and supplied to the state and county Emergency Management Agencies. Protective action recommendations, for the Plume Exposure EPZ, is a non-delegable responsibility of the Emergency Director.
f. Ensure that dose rate calculations, in accordance with the Emergency Plan Procedures, are performed periodically. A total population dose estimation may also be performed.

6.1.3 Ottawa and Lucas County Sheriffs' Offices

Dispatchers at the Sheriffs' Office for both counties, will notify key county officials and organizations, according to established procedures.

6.1.4 Ottawa County and Lucas County Emergency Management Agency Directors

The County EMA Directors will ensure that their county EROs are activated when necessary, and will notify municipalities near DBNPS.

6.1.5 Ohio Emergency Management Agency (OEMA)

The OEMA will ensure that applicable state agencies and organizations are notified and will ensure the State Emergency Operations Center is activated when necessary. Additional state agencies are contacted depending on the severity of the emergency classifications. These notifications are made in accordance with the State of Ohio emergency plan.

The OEMA will have Radiological Monitoring Teams and an accident assessment team respond to an emergency at DBNPS. The accident assessment team will set up an operations center at the local governmental Emergency Operations Center. Using estimates from utility and offsite monitoring teams; and local governmental official's input, the accident assessment team will perform independent accident assessment activities to determine:

a. Protective measures including evacuation.
b. Actions to control exposure to radioactivity.
c. What further sampling of milk, food chain, water and air will be required.

If deemed appropriate, the accident assessment team will request assistance from responding federal agencies in accordance with the State of Ohio emergency plan.

6.1.6 Federal Agencies (Other than NRC)

The NRC, as the cognizant federal agency, will request assistance from other federal agencies when and if deemed appropriate.

Station management may also request assistance and/or information from federal agencies (other than the Department of Energy Radiological Assistance Program) as appropriate to the circumstances.

State organizations and agencies may consult with their federal counterparts if appropriate.

If required, the Department of Energy Radiological Assistance Program teams can be expected to begin arriving at the site in 4 to 6 hours following notification. The first teams to arrive will have some survey instruments and air samplers. A mobile environmental monitoring lab can be expected to arrive at the site in 6 to 8 hours. Appendix B contains a more detailed description of the DOE monitoring teams, support provided and the equipment available.

6.1.7 Ohio Department of Health

The Ohio Department of Health, Radiological Health Unit, maintains a communications link with the U.S. NRC, Region III Office, from which assistance and support may be requested.

6.2 ASSESSMENT ACTIONS

Effective coordination and direction of all elements of the emergency organization requires continuing accident assessment throughout an emergency situation. Each emergency class invokes similar assessment methods; however each classification imposes a different magnitude of assessment effort. In the following sections, assessment actions taken for each emergency classification are outlined.

6.2.1 Assessment Actions for an UNUSUAL EVENT

The declaration of an UNUSUAL EVENT arises when a specific Emergency Action Level for this classification has been met.

Recognition of the need to declare the event will result from alarms, instrument readings, severe weather warnings, operating experience, or any combination thereof.

Continuing assessment actions to be performed for this category of emergency will be in accordance with the Emergency Plan Procedures and consist of the normal monitoring of Control Room and plant instrumentation and status, until the situation is resolved. Tornado and severe weather assessment actions consist of keeping in contact with the system dispatcher and the appropriate public authorities. If a fire prompted the declaration of an UNUSUAL EVENT, the Fire Brigade Captain will go to the fire location, make continuing assessments, and report to the Shift Manager on whether offsite fire fighting support is required.

6.2.2 Assessment Actions for an ALERT

Once an incident has been classified as an ALERT, assessment actions will be performed in accordance with the Emergency Plan Procedure for an ALERT. These actions include:

a. Increased surveillance of in-plant instrumentation.
b. If possible, the dispatching of shift personnel to the identified problem area to confirm and visually assess the problem.
c. The dispatching of personnel to monitor for possible releases, and to confirm the correct classification.
d. If a radiological incident is occurring, surveillance of the in-plant instrumentation necessary to obtain meteorological and radiological data required for calculating or estimating projected doses. Dose assessment activity will continue until termination of the emergency, so that assessment updates may be provided to all concerned offsite agencies and to the Emergency Director. Emergency Plan Procedures are provided to allow a rapid, consistent projection of dose.

6.2.3 Assessment Actions for a SITE AREA EMERGENCY

Assessment actions for the SITE AREA EMERGENCY category are similar to the actions for an ALERT. However, due to the increased potential for a possible release, assessment activity of greater scope will occur. The personnel necessary for this assessment effort will be provided by mobilization of the onsite and offsite EROs.

These actions include:

a. An increased amount of plant instrumentation will be monitored. (In particular, indications of core status, e.g., incore thermocouple readings, etc.)
b. Radiation monitoring efforts will be greatly increased. Radiation Monitoring Teams will be available for immediate dispatch. Beta-gamma field measurements may be performed; air sampling, environmental thermoluminescent dosimeter (TLD) change out, and collection of environmental media for assessment of material transport and deposition will be performed as necessary.
c. Dose assessment activities will be performed more frequently, with an increased emphasis on dose projection for use as a factor in determining necessary protective actions. Radiological and meteorological instrumentation readings will be used to project the dose rate at predetermined distances from the station, and to the potential integrated dose.

   In reporting the dose projections to the Emergency Director or to offsite agencies, the dose rate, dose, and basis for the time used for the dose estimate will always be provided. Confirmation of dose rates by RMTs will be reflected in reports and/or revised dose estimate information provided to offsite agencies.

   All dose projections will be performed in accordance with the Emergency Plan Procedures which incorporate recommendations found in EPA-400-R-92-001 Manual of Protective Action Guides and Protective Actions for Nuclear Incidents. Reports to offsite authorities will include the relationship of dose to these guidelines. Emergency Plan Procedures are provided for recording pertinent information.

6.2.4 Assessment Actions for a GENERAL EMERGENCY

Assessment actions for the GENERAL EMERGENCY category are the same as for the SITE AREA EMERGENCY, with some possible increase in the scope of dose assessment/projection activities. Additionally, since projected doses are likely to be much closer to EPA Protective Action Guidelines (PAGs), greater emphasis will be placed on the assessment of release duration. Judgments and assumptions used for dose assessment will be documented.

6.3 CORRECTIVE ACTIONS

Detailed operating procedures are available for use during emergencies, as well as during normal operations. Specific Emergency Operating Procedures and Abnormal Procedures are provided to assist the operators in placing the plant in a safe condition, and taking necessary supplemental corrective actions. In addition, operations personnel are trained in the operation of the plant systems and their associated procedures, and are therefore capable of taking appropriate corrective actions based on their training, knowledge, and experience.

Selected DBNPS Staff personnel, including Operations, Radiation Protection, Chemistry, and Maintenance personnel are trained and assigned to emergency teams. These teams are capable of responding to situations as set forth in the Emergency Plan Procedures, to assess conditions and take appropriate corrective actions. Maintenance personnel will provide the necessary expertise to effect damage control and repair activities.

Corrective actions will normally be planned events that are taken to gain control of, or terminate the emergency situation. Planned radioactive releases, or corrective actions that may result in a radioactive release will be evaluated by the Emergency Director and staff as far in advance of the event as is possible. Such events and data pertaining to the release, will be reported to the appropriate offsite organizations and/or agencies. DBNPS recommendations to authorities regarding the Plume Exposure EPZ are the non-delegable responsibility of the Emergency Director.

6.4 PROTECTIVE ACTIONS

Protective actions are emergency measures taken during or after an emergency situation to minimize or eliminate the hazard to the health and safety of the general public and/or station personnel. Such actions taken onsite are the responsibility of Company management, while those taken offsite fall under the jurisdiction of the State of Ohio and other offsite response agencies. All visitors to the Protected Area will be either escorted by an employee or receive training on actions required by them during an emergency.

6.4.1 Protective Cover, Evacuation, Personnel Accountability

During an emergency, sheltering or evacuation of personnel may be required to prevent or minimize exposure to radiation and radioactive materials. The following sub-sections present information on policies concerning such situations. Figure 6-3 illustrates the routes to be taken from the site if evacuation becomes necessary.

a. Plant Site (within the protected area):

All personnel within the site protected area at the time of the declaration of an emergency, will be notified of the emergency by audible or visual alarms and verbal announcement over the public address system (Gai-Tronics). Personnel may be instructed to report to assembly areas. Personnel will be trained as to the location of assembly areas and the suggested routes to each. Visitors will assemble with their escorts, or be escorted offsite. At the assembly areas, members of the emergency organization will conduct personnel assembly and evacuation (if required).

Accountability within the protected area is coordinated by the OSC Manager and Security. The goal for completion of personnel accountability is 30 minutes. Results are forwarded to the Emergency Director. Once established, accountability within the protected area will be maintained throughout the course of the event. Specific guidance for performing accountability can be found in the Emergency Plan Procedures. Search for and rescue of missing persons will be performed in accordance with Emergency Plan Procedures.

Sheltering at onsite locations will be ordered when the projected dose would be less than or equal to that received during evacuation. For essential personnel who must remain within the protected area following an evacuation (e.g., Operations and Security personnel), particular attention will be paid to their radiation dose for ALARA purposes.

If a localized emergency exists, evacuation of the affected facility or area can be performed. Access to this area should then be restricted. The Protected Area will be evacuated if a SITE AREA EMERGENCY has been declared or if, at the discretion of the Emergency Director/Shift Manager, a personnel hazard exists. Nonessential personnel shall be evacuated from the site if a GENERAL EMERGENCY has been declared, or if, at the discretion of the Emergency Director/Shift Manager, site evacuation is warranted for personnel safety reasons. Access control will be established by Security to prohibit the entry of unauthorized personnel to the protected area.

Personal vehicles will be used for site evacuation. Nonessential personnel may be evacuated to the designated offsite assembly area; the Lindsey Service Center, or other company facilities as appropriate. Personnel and vehicles will be monitored for contamination at the offsite assembly area, if necessary, prior to release.

b. Plant Site (Outside the Protected Area):

All personnel onsite, but outside the protected area will be notified, at the declaration of an emergency, of conditions that may affect them. Personnel outside of the range of the Gai-Tronics system will be notified via bullhorn. Additionally, site personnel who are assigned pagers will automatically receive notification of the emergency condition. Personnel may be instructed to report to the nearest assembly area as described below. At other site locations (i.e., DBTC, DBAB, DBABA, Warehouse, PPF), key personnel have been delegated responsibility for receiving emergency information and disseminating such information to personnel in these areas. If assembly becomes necessary, Assembly Area Coordinators will perform these functions and report the results to the Emergency Director.

c. Offsite Areas:

Responsibility for implementing actions to protect personnel in offsite areas rests with State and local officials, and is described in detail in the The Ohio Plan for Response to Radiation Emergencies at Licensed Power Facilities (under a separate cover), and is implemented in conjunction with The Ottawa County Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities, and The Lucas County Radiological Emergency Response Plan (under separate covers).

Davis-Besse, through the Emergency Director, shall make protective action recommendations to state and local authorities, based on the emergency conditions. Table 6-1 summarizes typical protective action recommendations for the general public and emergency workers. Tables 6-2, 6-3, 6-4, and 6-5 provide guidelines for the expected local protection against direct and inhalation exposure afforded by structures.

The means to warn or advise persons involved in taking protective actions is the responsibility of the Ottawa County EMA Director, Lucas County EMA Director, and the Ottawa and Lucas County emergency organizations. These counties are responsible for the preparation and dissemination of public information material related to implementation of protective actions for the general public. The Ottawa County Sheriff's Office and Lucas County Sheriff's Office will authorize the broadcast of appropriate Emergency Alert System messages to the public, when necessary. The general content of these messages is contained in the Ottawa County Plan, the Lucas County Plan, and the State of Ohio Plan.

6.4.2 Use of Onsite Protective Equipment and Supplies

The following onsite locations have been designated for assembly and dispatch of emergency teams:

a. Operations Support Center
b. Radiological Testing Laboratory.

The exact location, type, and quantity of emergency equipment and supplies is specified in the Emergency Plan Procedures.

6.4.3 Contamination Control Measures

a. Station Area:

Access to the owner-controlled area will be limited. Contamination control within the station shall be exercised in accordance with approved Radiation Protection procedures.

b. Offsite Areas:

It is the responsibility of the State Department of Agriculture, in conjunction with the Department of Health and the Ohio Environmental Protection Agency, to issue guidance and coordinate actions to control the use and transport of contaminated agricultural products.

6.4.4 Ingestion Pathway Control Measures

The Ingestion Pathway EPZ (50-mile radius) has been established to address the additional concern for ingestion of contamination. There are two levels at which protective actions may be recommended by the State (i.e., preventive and emergency levels) for food and water contamination. Suggested action levels for ground, food, and water contamination are given in Table 6-6.

6.5 AID TO AFFECTED PERSONNEL

6.5.1 Emergency Personnel Exposure

Under emergency conditions, it may not be possible to perform corrective/protective actions, while maintaining exposure (i.e., radiation doses) below limits specified in 10CFR20. Saving a life, measures to circumvent substantial doses to population groups, or preservation of safety related equipment, may be sufficient cause for above normal doses.

The following are the exposure limits based on EPA-400-R-92-001 guidance for these emergency activities:

a. Corrective/protective actions:

Limit doses to the following when protecting valuable property and lower doses are not practicable:

1. 10,000 mrem Total Effective Dose Equivalent (TEDE)
2. 30,000 mrem Lens Dose Equivalent (LDE)
3. 100,000 mrem:

   - Total Organ Dose Equivalent (TODE)
   - Shallow Dose Equivalent (SDE) to the skin of the whole body or to any extremity

b. Lifesaving actions:

Limit doses to the following when protecting large populations or performing life saving activities and lower doses are not practicable:

1. 25,000 mrem TEDE
2. 75,000 mrem LDE
3. 250,000 mrem

- Total Organ Dose Equivalent (TODE)
- Shallow Dose Equivalent (SDE) to the skin of the whole body or to any extremity

The Emergency Director has the authority to permit the above exposures in excess of the 10 CFR 20 occupational dose limits. This responsibility may be delegated to the Emergency Plant Manager.

Personnel involved in any of the above actions must be volunteers, and cognizant of the effects of such doses.

Emergency worker dose records shall be maintained in accordance with Davis-Besse RP Procedures.

Although doses in excess of the normal legal limits may be authorized, the Emergency Director will ensure that all doses are kept ALARA.

6.5.2 Thyroid Blocking

A ready supply of suitable thyroid blocking agent is maintained and available for use by emergency workers. Guidance for administration of the blocking agent will be provided by medical advisors, and is specified in emergency plan procedures.

The Emergency Director or, when designated, the Emergency Plant Manager shall authorize the use of the thyroid blocking agent, e.g., potassium iodide (KI).

The State of Ohio has elected to distribute and stockpile potassium iodide (KI) for the general public. At a General Emergency the Ohio Department of Health in coordination with the local Health Departments may elect to recommend that the general public take potassium iodide.

6.5.3 Decontamination and First Aid

Decontamination materials, including specialized equipment and supplies are available in station decontamination areas. Portable instruments for personnel monitoring and portal monitors are available at the RRA entrance. Decontamination showers and sinks, both of which drain to the radwaste system, are also located in the Decontamination Area.

Action levels for determining the need for decontamination of personnel and equipment are specified in the Davis-Besse RP Procedures.

Personnel found to be contaminated will be decontaminated by Radiation Protection personnel (or other qualified personnel, as specified in RP Procedures). It is preferred that personnel decontamination be performed by trained RP personnel.

Measures shall be taken to prevent the spread of contamination. Such measures may include isolating the affected areas, placing contaminated personnel in "clean" clothing before moving them, and decontaminating affected personnel, their clothing, and equipment prior to release.

Emergency first aid and medical treatment will be given to injured personnel who are contaminated. Station personnel trained in first aid are available onsite, on a 24-hour basis, and will assist injured personnel. Provisions have been made to ensure contaminated and injured personnel receive specialized medical treatment, if necessary. H. B. Magruder Memorial Hospital, Fremont Memorial Hospital, and St. Charles Mercy Hospital have agreed to accept contaminated patients for emergency medical and surgical treatment. If affected personnel must be transported, measures will be taken to limit the spread of contamination.

Any contaminated patient moved to an offsite facility will be accompanied by a member of the RP staff. If during the same incident, more than one victim is involved, the first victim will be accompanied by a member of the RP staff who will remain at the receiving facility during transport of the remaining patients. If more than one offsite facility is involved, then a member of the RP staff shall be present at each offsite facility. If necessary, a physician may be requested to provide onsite medical assistance.

6.5.4 Medical Transportation

Ambulance service for Davis-Besse is provided for by a letter of agreement with Carroll Township Emergency Medical Service.

6.5.5 Medical Treatment

Arrangements for hospital and medical services for injured and/or contaminated/over-exposed personnel are provided for by letters of agreement with the H. B. Magruder Memorial Hospital; Fremont Memorial Hospital; St. Charles Mercy Hospital.

The services of the radiological emergency assistance provider assures personnel providing services are prepared and qualified to handle radiological emergencies.

TABLE 6-1

PAGs for the Early Phase of a Nuclear Incident

Protective Action	PAG (Projected Dose)	Comments
Evacuation (or sheltering[1])	1-5 rem[2]	Evacuation (or for some situations, sheltering[1]) should normally be initiated at 1 rem.
Administration of stable iodine	25 rem[3]	Requires approval of State medical officials

[1]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.

[2]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 equivalent to the thyroid and to the skin may be 5 and 50 times larger, respectively.

[3]Committed dose equivalent to the thyroid from radioiodine.

Guidance on Dose Limits for Workers Performing Emergency Services

Dose Limit[1] (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

[1]Sum or 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.

Reference: Manual of Protective Action Guides and Protective Actions for Nuclear Incidents. (EPA-400-R-92-001) U.S. Environmental Protection Agency, Washington, D.C., May 1992.

TABLE 6-2

RECOMMENDED PROTECTIVE ACTIONS

Accident Phase	Exposure Pathway	Examples Of Actions To Be Recommended
Emergency Phase[1] (0 to 4 hours)	Inhalation of gases, radio-iodine, or particulate	Evacuation, shelter, access control, respiratory protection, prophylaxis (thyroid protection)
	Direct whole body dose	Evacuation, shelter, access control
INTERMEDIATE PHASE[2]	Ingestion of milk	Take cows off pasture, prevent cows from drinking surface water, discard contaminated milk, or divert to stored products such as cheese
	Ingestion of fruits and vegetables	Wash all produce, or impound produce, delay harvest until approved, substitute uncontaminated produce
	Ingestion of water	Cut off contaminated supplies, substitute from other sources, filter, demineralize
(4 to 48 hours)	Whole body exposure and inhalation	Relocation, decontamination, access control
LONG TERM PHASE[3]	Ingestion of food and water contaminated from the soil either by resuspension or uptake through roots	Decontamination, condemnation, or destruction of food; deep plowing, condemnation, or alternate use of land
(2 to 14 days)	Whole body exposure from deposition material or inhalation of resuspended material.	Relocation, access control, decontamination, fixing of contamination, deep plowing

[1]Emergency phase - Time period of major release and subsequent plume exposure.

[2]Intermediate phase - Time period of moderate continuous release with plume exposure and contamination of environment.

[3]Long Term Phase - Recovery period.

TABLE 6-3

REPRESENTATIVE SHIELDING FACTORS FROM GAMMA CLOUD SOURCE

Structure or Location	Shielding[1] Factor	Representative Range
Outside	1.0	--
Vehicles	1.0	--
Wood-frame house[2] (no basement)	0.9	--
Basement of wood house	0.6	0.1 to 0.7[3]
Masonry House (no basement)	0.6	0.4 to 0.7[3]
Basement of masonry house	0.4	0.1 to 0.5[3]
Large office or industrial building	0.2	0.1 to 0.3[3,4]

[1]The ratio of the dose received inside the structure to the dose that would be received outside the structure.

[2]A wood frame house with brick or stone veneer is approximately equivalent to a masonry house for shielding purposes.

[3]This range is mainly due to different wall materials and different geometries.

[4]The shielding factor depends on where the personnel are located within the building (e.g., the basement or an inside room).

Reference: Aldrich, D.C., D.M. Ericson, Jr., and T. D. Johnson. Public Protection Strategies for Potential Nuclear Reactor Accidents: Sheltering Concepts with Existing Public and Private Structures. Sandia Laboratories Report SAND 77-1725 (February 1978).

TABLE 6-4

SELECTED SHIELDING FACTORS FOR AIRBORNE RADIONUCLIDES

Wood house, no basement	0.9
Wood house, basement	0.6
Brick house, no basement	0.6
Brick house, basement	0.4
Large office or industrial building	0.2
Outside	1.0

Reference: Aldrich, D.C., D.M. Ericson, Jr., and T. D. Johnson. Public Protection Strategies for Potential Nuclear Reactor Accidents: Sheltering Concepts with Existing Public and Private Structures. Sandia Laboratories Report SAND 77-1725 (February 1978).

TABLE 6-5

REPRESENTATIVE SHIELDING FACTORS FOR SURFACE DEPOSITED RADIONUCLIDES

Structure or Location	Representative[1] Shielding Factor	Representative Range
1 m above an infinite smooth surface	1.00	--
1 m above ordinary ground	0.70	0.47-0.85
1 m above center of 50-ft roadways, 50% decontaminated	0.55	0.4-0.6
Cars on 50-ft road:		
Road fully contaminated	0.50	0.4-0.7
Road 50% decontaminated	0.50	0.4-0.6
Road fully decontaminated	0.25	0.2-0.5
Trains	0.40	0.3-0.5
One and two-story wood-frame house (no basement)	0.4[2]	0.2-0.5
One and two-story block and brick house (no basement)	0.2[2]	0.04-0.40
House basement, one or two walls fully exposed	0.1[2]	0.03-0.15
One story, less than 2 ft of basement, walls exposed	0.05[2]	0.03-0.07
Two stories, less than 2 ft of basement, walls exposed	0.03[2]	0.02-0.05
Three- or four-story structures, 5000 to 10,000 ft^2 per floor		
First and second floors	0.05[2]	0.01-0.08
Basement	0.01[2]	0.001-0.07
Multistory structures, >10,000 sq. ft. per floor:		
Upper floors	0.01[2]	0.001-0.02
Basement	0.005[2]	0.001-0.015

[1]The ratio of dose received inside the structure to the dose that would be received outside the structure.

[2]Away from doors and windows.

Reference: Aldrich, D.C., D.M. Ericson, Jr., and T. D. Johnson. Public Protection Strategies for Potential Nuclear Reactor Accidents: Sheltering Concepts with Existing Public and Private Structures. Sandia Laboratories Report SAND 77-1725 (February 1978).

TABLE 6-6 Page 1 of 2

GUIDELINES FOR PROTECTION AGAINST INGESTION OF CONTAMINATION

A. Response Levels for Preventive PAG

A "Preventive PAG" is the projected dose commitment value at which responsible officials should take protective actions with minimal impact, to prevent or reduce the radioactive contamination of human food or animal feeds.

Sample Media	I-131[1]	Cs-134[2]	Cs-137[2]	Sr-90	Sr-89
Initial Activity Area Deposition (μCi/m2)	0.13	2.0	3.0	0.5	8.0
Forage Concentration[3] (μCi/kg)	0.05	0.8	1.3	0.18	3.0
Peak Milk Activity (μCi/l)	0.015	0.15	0.24	0.009	0.14
Total Intake (μCi)	0.09	4.0	7.0	0.2	2.6

[1]The cumulative intake of Iodine-133 via milk is about 2 percent of Iodine-131 assuming equivalent deposition.

[2]Intake of Cesium via the meat/person pathway for adults may exceed that of the milk pathway; therefore, such levels in milk should cause surveilance and protective actions for meat as appropriate. If both Cesium-134 and Cesium-137 are equally present, the response levels should be reduced by a factor of two.

[3]Fresh weight.

Reference: Federal Radiation Council. Radiation Protection Guidance for Federal Agencies. Federal Register (May 22, 1965).

TABLE 6-6 Page 2 of 2

GUIDELINES FOR PROTECTION AGAINST INGESTION OF CONTAMINATION

B. Response Levels for Emergency PAG

An "Emergency PAG" is the projected dose commitment value at which responsible officials should isolate food containing radioactivity, to prevent its introduction into commerce, and at which responsible officials should determine whether condemnation or another method of disposal is appropriate. At the Emergency PAG, higher impact actions are justified because of the projected health hazards.

Sample Media	I-131 Infant[3]/Adult	Cs-134[2] Infant[4]/Adult	Cs-137 Infant[4]/Adult	Sr-90 Infant[4]/Adult	Sr-89 Infant[4]/Adult
Initial Activity Area Deposition (μCi/m2)	1.3/18	20/40	30/50	5.0/20	80/1600
Forage Concentration[5] (μCi/kg)	0.5/7.0	8.0/17	13/19	1.8/8.0	30/700
Peak Milk Activity (μCi/l)	0.015/2.0	1.5/3.0	2.4/4.0	0.09/0.4	1.4/30
Total Intake (μCi)	0.9/10	40/70	70/80	2.0/7.0	26/400

[1]The cumulative intake of Iodine-133 via milk is about 2 percent of Iodine-131 assuming equivalent deposition.

[2]Intake of cesium via the meat/person pathway for adults may exceed that of the milk pathway; therefore, such levels in milk should cause surveillance and protective actions for meat as appropriate. If both Cesium-134 and Cesium-137 are equally present, the response levels should be reduced by a factor of 2.

[3]Newborn infant, includes fetus (pregnant woman) as critical segment of population for Iodine-131.

[4]"Infant" refers to child less than 1 year of age.

[5]Fresh weight.

Reference: Federal Radiation Council. Radiation Protection Guidance for Federal Agencies. Federal Register (May 22, 1965).

Figure 6-1

SUMMARY OF TYPICAL EMERGENCY MEASURES

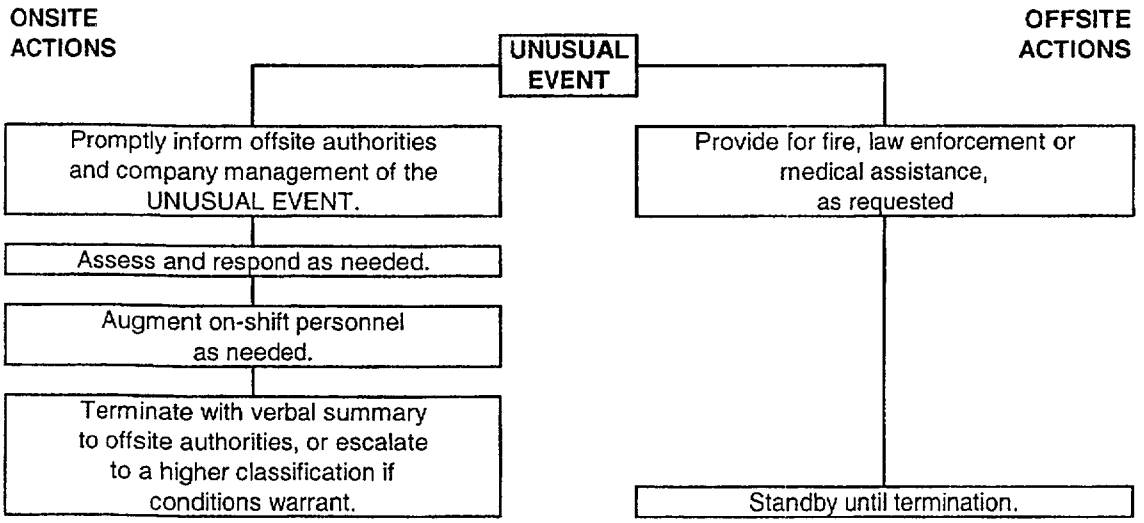


Figure 6-1 Page 2 of 4

SUMMARY OF TYPICAL EMERGENCY MEASURES

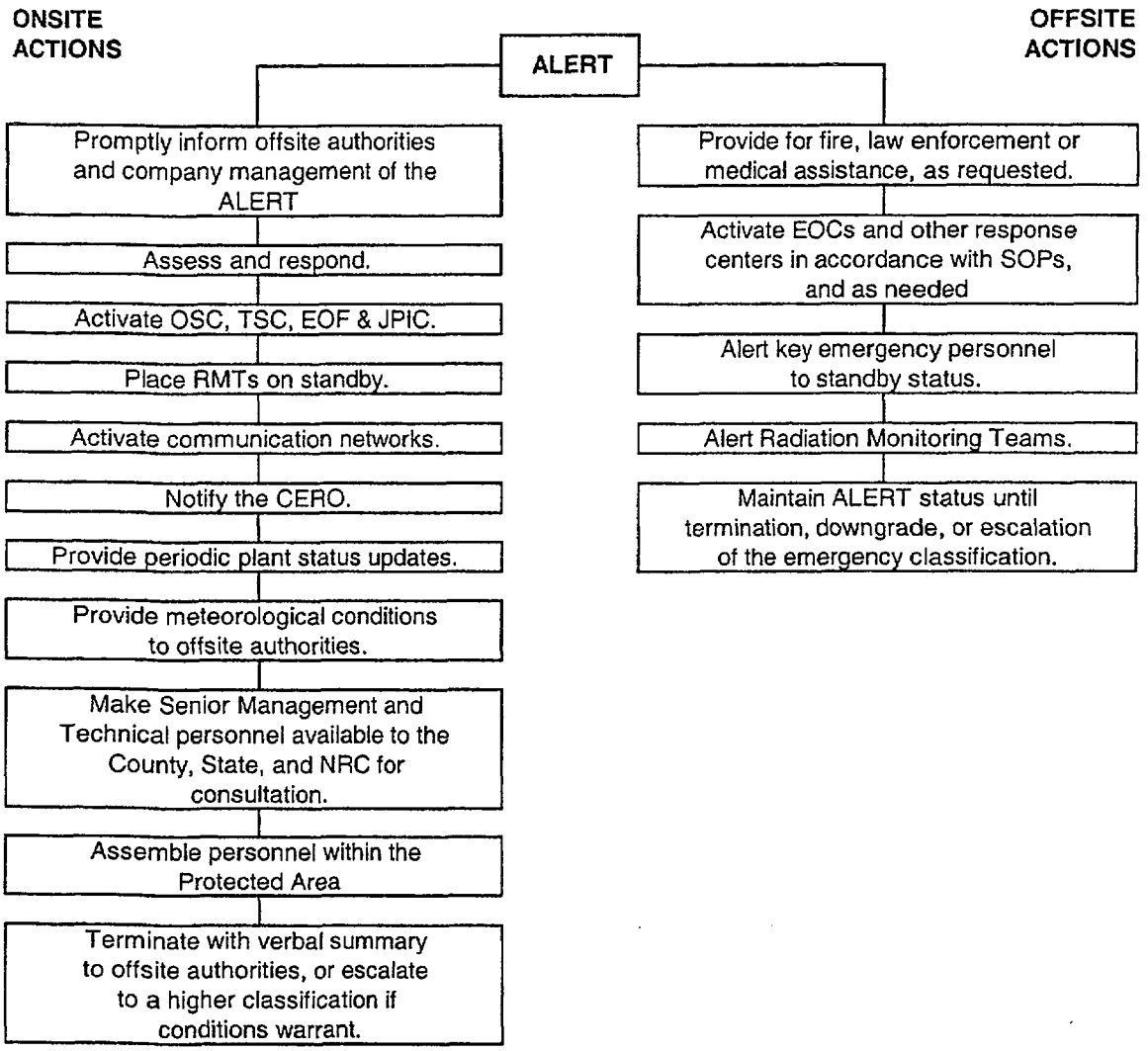


Figure 6-1 Page 3 of 4

SUMMARY OF TYPICAL EMERGENCY MEASURES

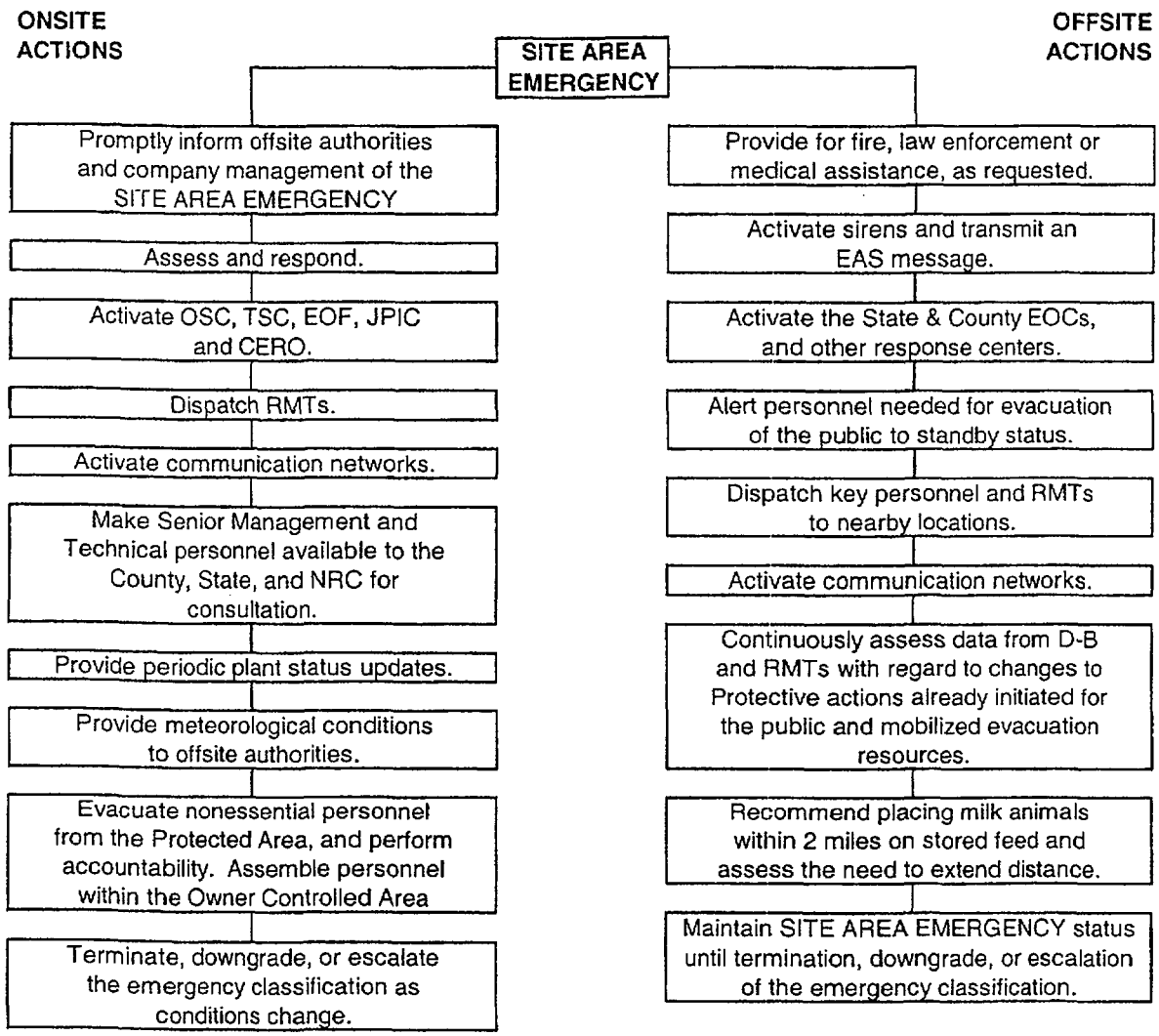


Figure 6-1 Page 4 of 4

SUMMARY OF TYPICAL EMERGENCY MEASURES

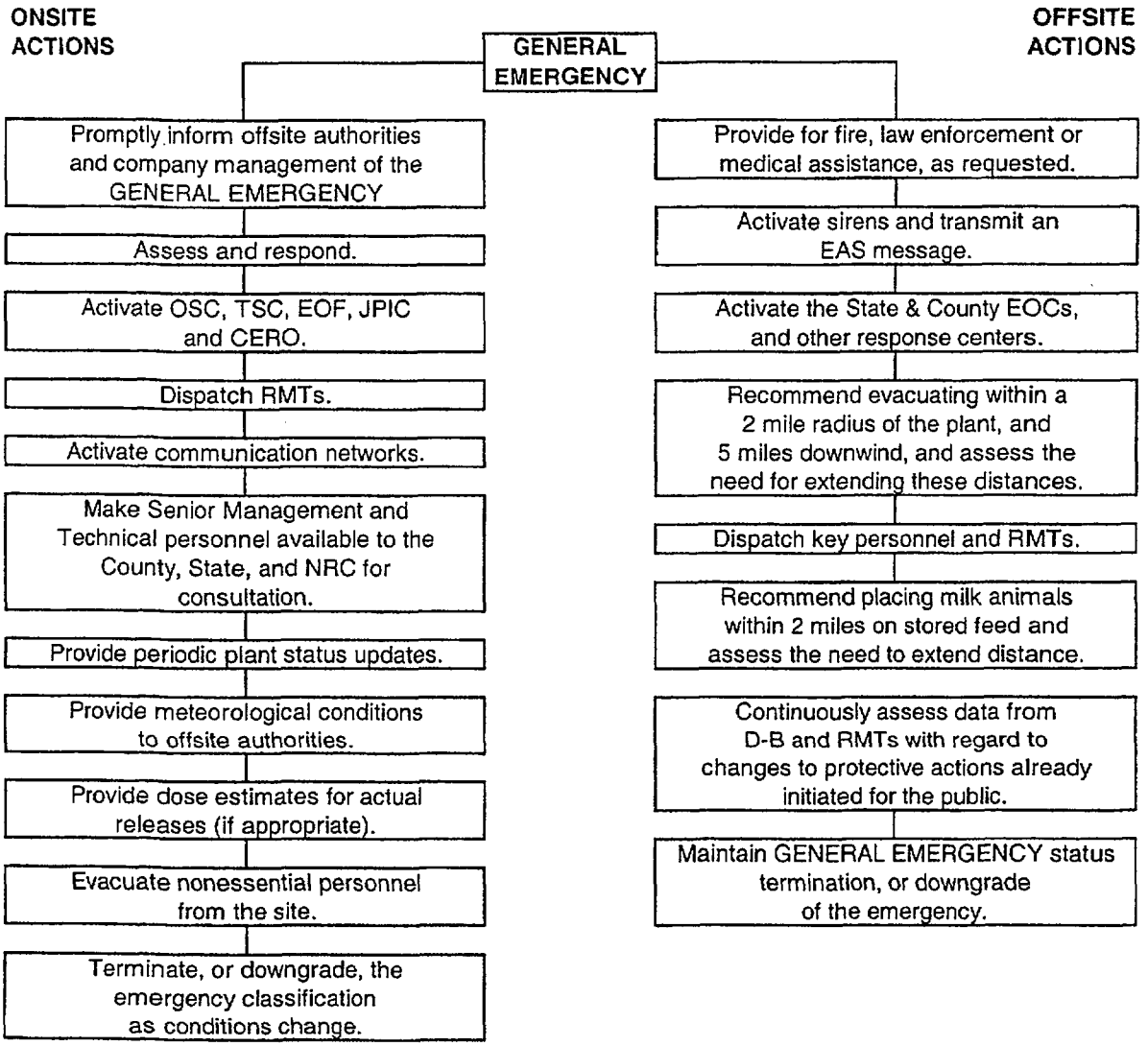


Figure 6-2 Page 1 of 2

EMERGENCY NOTIFICATION:
UNUSUAL EVENT

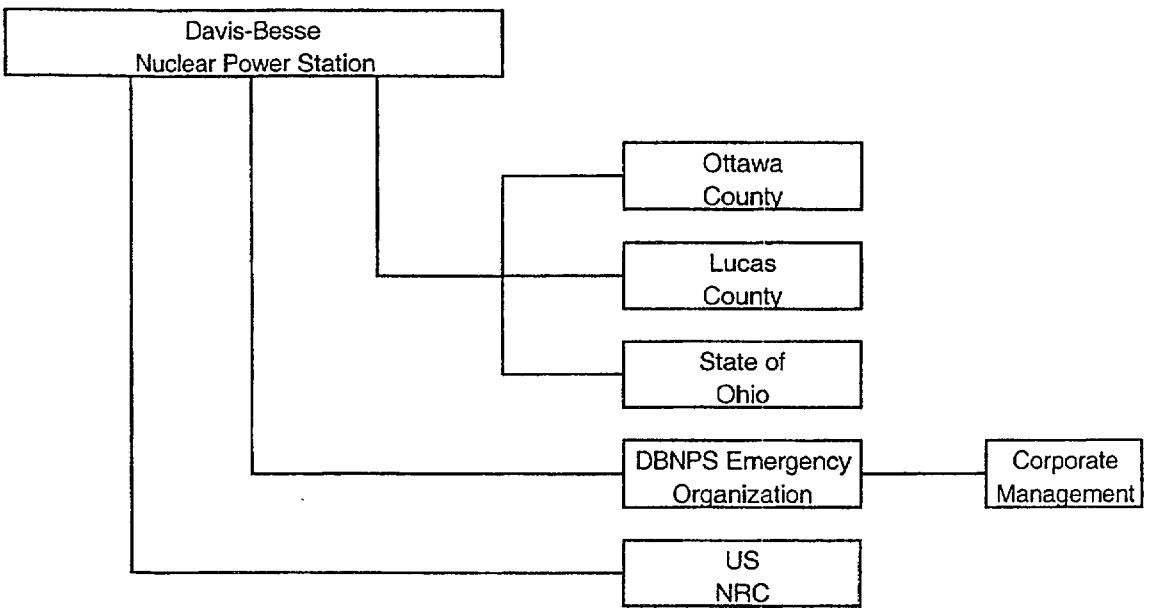


Figure 6-2 Page 2 of 2

EMERGENCY NOTIFICATION: ALERT, SITE AREA EMERGENCY, GENERAL EMERGENCY

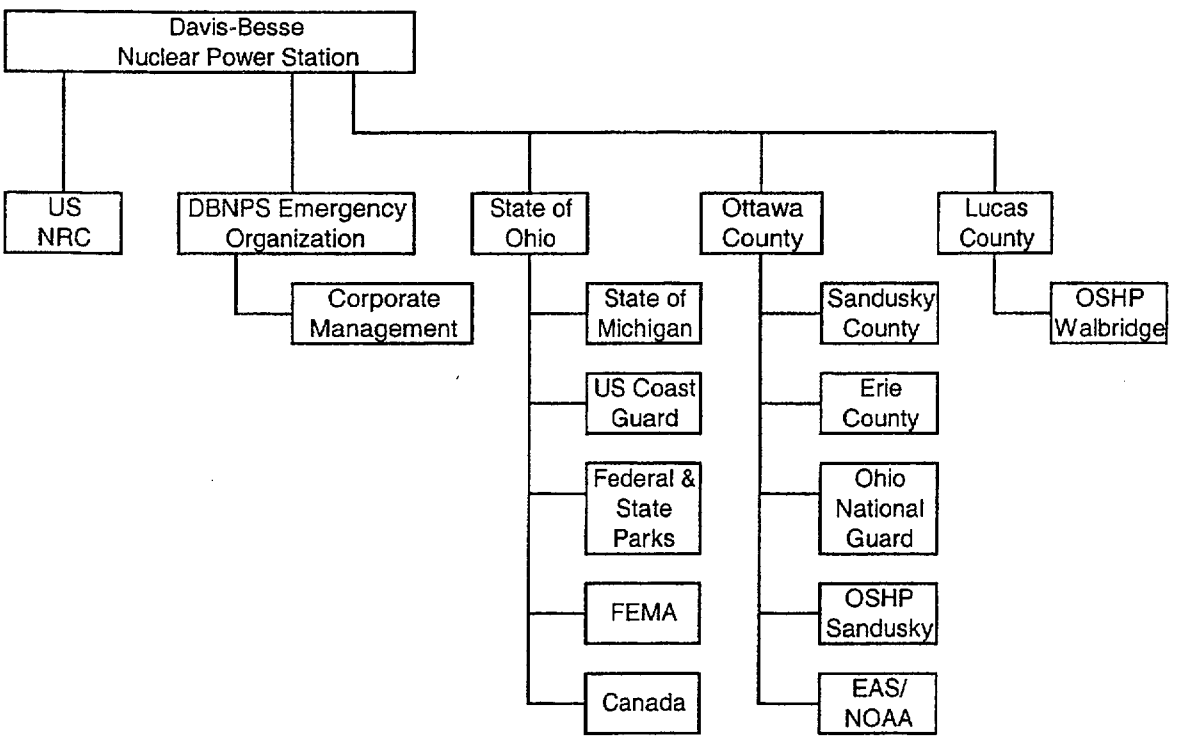
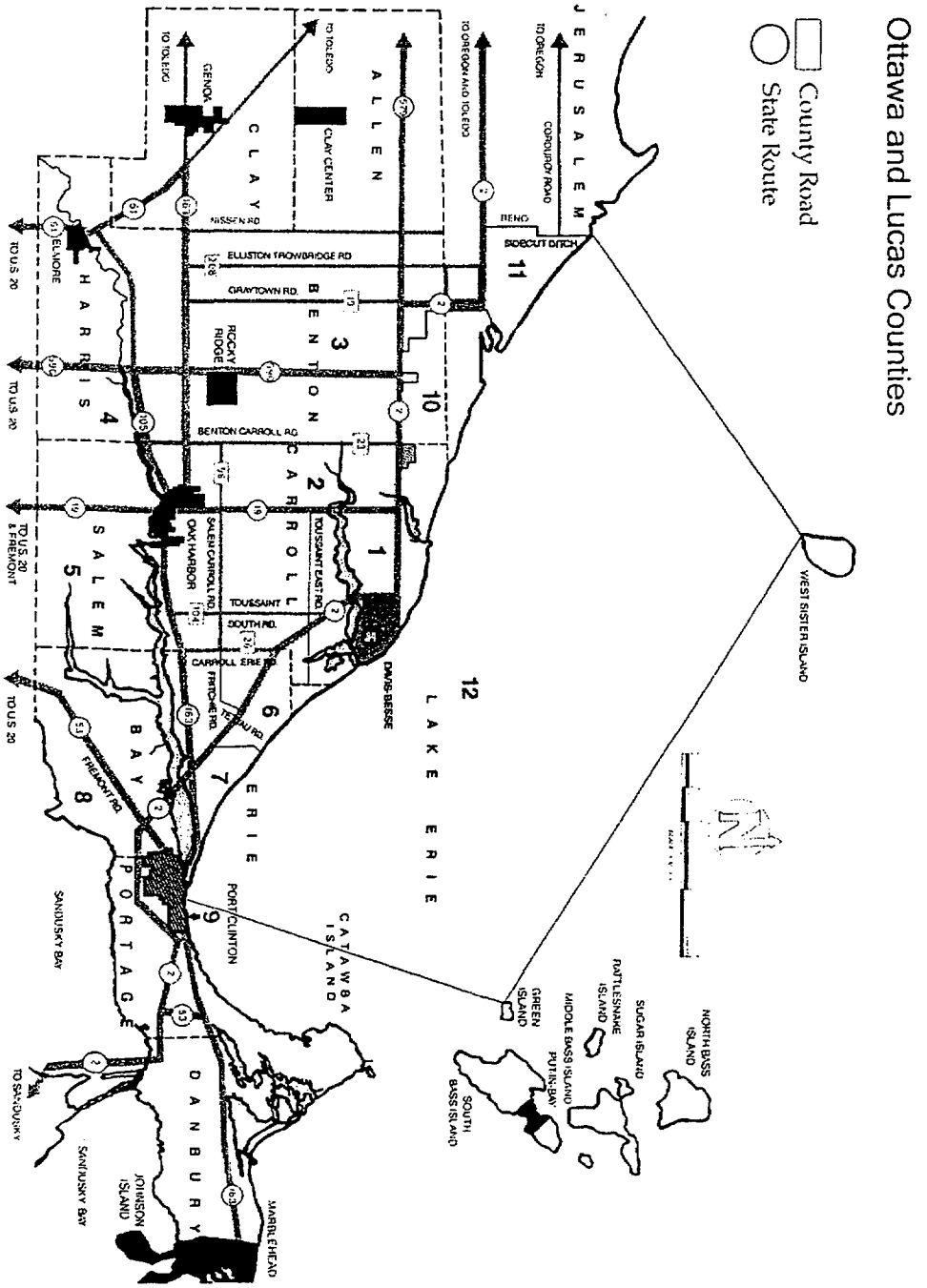


Figure 6-3

OFFSITE EMERGENCY EVACUATION ROUTES



7.0 EMERGENCY FACILITIES AND EQUIPMENT

This section describes the equipment and facilities used at DBNPS to:

- Assess the extent of accident hazards.
- Mitigate the consequences of an accident.
- Provide protection to station personnel.
- Support accident mitigation operations.
- Provide immediate care for injured personnel.

A diagram identifying the emergency facilities and their general location relative to each other, is included as Figure 7-1, "Emergency Facilities by General Location". Many of the DBNPS facilities and much of the equipment is normally used for routine plant operations. Other items are reserved for use only on an "as needed" basis.

7.1 DBNPS IN-PLANT EMERGENCY FACILITIES

7.1.1 Control Room

a. The Control Room is the location from which the plant is operated. It contains the instrumentation, controls, and displays for:

1. Nuclear systems
2. Reactor coolant systems
3. Steam systems
4. Electrical systems
5. Safety systems (including engineered safety features)
6. Accident monitoring systems.

The operating shift is staffed in accordance with Technical Specifications. Control manipulations and the safe operation of the plant are directed by the Senior Reactor Operator licensed Shift Manager and Unit/Field Supervisor, and are performed by licensed Reactor Operators.

b. During abnormal operating conditions, the complexity of Station responsibilities increase significantly and the Control Room transforms into an emergency response center. These responsibilities include the following:

1. Diagnosing the abnormal conditions.
2. Performing corrective actions.
3. Mitigation of abnormal conditions.
4. Management of plant operations.
5. Management of emergency response.
6. Informing Federal, State, and local officials.
7. Recommendations for public protective measures to State and local officials.
8. Restoring the plant to a safe condition.
9. Recovering from the abnormal conditions.

Initially, Control Room personnel will assume all of these responsibilities. However, by activating other emergency response facilities, much of this responsibility is turned over to other personnel.

During emergencies, the Emergency Assistant Plant Manager uses the Shift Manager's Office, which is within the Control Room envelope, to observe and provide guidance to the Shift Manager for direction and control of in-plant activities.

7.1.2 Operations Support Center (OSC)

The OSC is on the fourth floor of the Personnel Shop Facility (PSF). The area designated for the OSC consists of a conference room and an adjacent storage room. The OSC is the assembly and dispatch point for damage control and repair teams.

7.2 DAVIS-BESSE ADMINISTRATION BUILDING (DBAB) FACILITIES

The DBAB contains the Emergency Response Facilities (ERFs) necessary to assist Control Room personnel in accident assessment and abnormal operating conditions. The ERF area of the DBAB has been designed to provide radiological habitability for approximately 30 days during a design basis accident, as described in Chapter 15 of the Davis-Besse Updated Safety Analysis Report. Within this protected environment, the ERFs function to:

1. Help the Control Room staff determine the plant safety status.
2. Relieve the Control Room staff of peripheral duties and communications not directly related to reactor system manipulations.
3. Prevent congestion in the Control Room.
4. Provide assistance to the operators from technical personnel who have comprehensive plant data at their disposal.
5. Provide a coordinated emergency response by both technical and management personnel.
6. Provide reliable communications between onsite and offsite emergency response personnel.
7. Provide a focal point for development of recommendations for offsite actions.
8. Provide relevant plant data to the NRC for its analysis of abnormal plant operating conditions.

The DBAB Annex and the second floor of the DBAB provide general administrative office space for the Station. The ERFs are on the first floor and are either in the restricted (north end) or unrestricted areas (south end).

The restricted area consists of two mechanical equipment rooms, a computer equipment room, telephone equipment room, Emergency Operations Facility (EOF), Technical Support Center (TSC), TSC Library, Radiological Testing Laboratory (RTL), badging area, kitchen, and two areas designated as private office space.

The unrestricted area consists of the Energy Education Center (EEC), a Site Emergency Operations Center (SEOC) and several work/conference rooms. The DBAB is approximately 2100 feet from the Control Room. They are linked by a paved road which is completely contained within the site security boundary.

The water supply to the DBAB can store up to 4,000 gallons within the buildings, if necessary. Electrical power for the DBAB is supplied by the grid through a power structure approximately 200 feet east of the building. Backup power is provided by a diesel generator and vital loads are protected by an uninterruptible power supply.

The electrical and mechanical systems within the DBAB are computer controlled and activated using the Central Control and Monitoring System (CCMS). This system maintains building temperature and ventilation, and provides security alarms, trouble alarms, and fire protection, as conditions may warrant. For fires, an alarm on the CCMS can automatically activate the dry main sprinkler system in the records management vault; or a wet main sprinkler system in any other area. To minimize radiation exposure, two emergency ventilation air handling units are provided; one for the restricted area (north end) and one for the remaining areas (south end). By design, either unit can supply the restricted area, should the primary unit fail. Upon local activation, the units will switch to the recirculation mode employing high efficiency filters to minimize the introduction of airborne radiation sources into the emergency facilities.

7.2.1 Emergency Operations Facility (EOF)

The EOF provides a central location for the development of protective action recommendations by DBNPS and for representatives from offsite organizations. The EOF staff evaluates the magnitude and effects of actual or potential radioactive releases, and provides management assistance in the decision-making process to protect the public health and safety. Recommendations are based on station conditions with radiological and meteorological data obtained, through the Data Acquisition and Display System (DADS). The EOF utilizes various communication systems to establish and maintain communications with State, Federal, and local officials, and mobile Radiation Monitoring Teams (RMTs).

The EOF is in the restricted side of the DBAB.

The EOF provides space for at least 22 people.

Activation and operation of the EOF is described in the Emergency Plan Procedures.

7.2.2 Technical Support Center (TSC)

The TSC serves as the workplace for key ERO personnel who, during emergencies, assist the Control Room staff, perform accident assessment, and determine appropriate protective actions. The TSC provides for direct voice and data communication with the Control Room. The TSC also contains the Data Acquisition and Display computer system (DADS).

The DADS computer was designed to provide sufficient Station information and data communication for operations personnel to evaluate and diagnose station conditions and activities so as to conduct emergency operations in an orderly manner. The DADS provides data communication to the EOF, TSC, and Control Room. Because DADS aids in the detection and monitoring of plant transients and accidents, the DADS is capable of functioning during and following most events expected to occur during the life of the station.

The TSC is in the restricted side of the DBAB.

The TSC contains workspace for up to 25 people, within a main work area and three conference areas.

A detailed description of the activation and operation of the TSC is contained in the Emergency Plan Procedures.

7.2.3 Radiological Testing Laboratory (RTL)

The RTL is a facility near the EOF and TSC for equipping and dispatching Radiological Monitoring Teams; and for the receipt, counting, and disposition of potentially contaminated environmental samples.

The RTL is on the ground floor of the DBAB.

7.2.4 Site Emergency Operations Center (SEOC)

Located in the unrestricted side of the DBAB, the SEOC provides protected accommodations for those state and local officials who will coordinate with their respective emergency response agencies offsite.

7.2.5. Private Office Areas

Two areas are available as private office space for the NRC Site Director and other key emergency response officials. These office areas are in the restricted area of the DBAB.

7.2.6 Equipment Rooms

The telephone equipment room contains communications equipment necessary to connect the site telephone system into the Centrex System.

Two mechanical equipment rooms contain redundant systems for electrical distribution, heating and ventilation, and compressed air. Both mechanical equipment rooms are in the restricted side of the DBAB.

7.3 OTHER COMPANY EMERGENCY FACILITIES

7.3.1. Joint Public Information Center (JPIC)

The Joint Public Information Center (JPIC) is the emergency facility for coordinating news releases and providing joint media briefings during an event at Davis-Besse. The Company, state, local and federal agencies represented at the JPIC jointly prepare news information for release to the public via the news media. Equipment and work spaces for Public Information Officers and their staffs are provided to support timely communications on plant status and emergency response actions. JPIC facilities include news briefing areas for electronic and print media representatives. JPIC support is available for any plant emergency. However, facility activation is mandatory at (and above) the Alert emergency classification level. The JPIC is located at a FirstEnergy Corporation facility outside the 10-mile EPZ.

7.3.2. Alternate Emergency Operating Facility (AEOF)

The AEOF is a predesignated conference area outside the 10 mile Emergency Planning Zone (EPZ) which is available to hold meetings between Davis-Besse emergency management personnel and offsite agency management personnel. The AEOF is located in a FirstEnergy facility and has access to current plant status through a communicator.

The AEOF may be activated only under extreme conditions when travel to the Davis-Besse Nuclear Power Station has become hazardous.

7.3.3. Corporate Emergency Facilities

Company facilities located throughout the service districts are available to provide support for the Corporate Emergency Response Organization (CERO). Certain Company facilities have been designated to support coordination of CERO activities and centralized management of Company resources. The primary company facility identified for CERO Management support is the Corporate Planning Center (CPC), at a FirstEnergy office facility.

7.4 COUNTY AND STATE EMERGENCY OPERATIONS CENTERS

7.4.1 Ottawa County Emergency Operations Center

Potential or actual emergencies at Davis-Besse could impact those persons who reside in Ottawa County within the 10-mile Emergency Planning Zone. To aid in protecting these residents, Ottawa County has constructed an Emergency Operating Center (EOC) which meets the minimum federal criteria for space, communications, warning systems, and supplies.

The EOC is in the basement of the Ottawa County Courthouse Annex, in Port Clinton, Ohio. Communications during an emergency at Davis-Besse are coordinated through this facility, and the Ottawa County Sheriff's Office.

Davis-Besse dispatches a technical liaison to the EOC to help to aid offsite officials in understanding the event.

7.4.2 Lucas County Emergency Operations Center

Potential or actual emergencies at Davis-Besse could impact those persons who reside in the eastern portion of Lucas County within the 10-mile Emergency Planning Zone. To aid in protecting these residents, Lucas County has constructed an Emergency Operating Center (EOC) which meets the minimum federal criteria for space, communications, warning systems, and supplies.

The EOC is in the subbasement of the Lucas County Corrections Center, in Toledo, Ohio. Communications during an emergency at Davis-Besse are coordinated through this facility, and the Lucas County Sheriff's Office.

Davis-Besse dispatches a technical liaison to the EOC to help to aid offsite officials in understanding the event.

7.4.3 State of Ohio Emergency Operations Center

The State Emergency Operations Center is operated by the Ohio Emergency Management Agency, in Worthington, Ohio. During an emergency, representatives from all State agencies assemble at the State EOC to manage the response efforts. A technical liaison will also be sent to the State EOC, to help coordinate communications and provide technical advice.

A reliable communications system, utilizing the Fixed Monitor Station Network of the State Highway Patrol, ties all areas, and both the Ottawa and Lucas County Emergency Operations Centers into the State EOC.

7.5 COMMUNICATIONS SYSTEMS

7.5.1 Normal Communications Systems

A comprehensive communications network with backup capabilities has been provided to assure reliable communications among the various emergency facilities and agencies. The network is composed of the following systems:

a. Commercial telephone systems:

1. DBNPS Centrex lines (on uninterruptible power source).
2. Microwave connections for selected telephone lines.
3. Port Clinton and Oak Harbor connections (includes backup power for some lines).

b. A public address system (Gai-tronics), which is totally separate from the telephone system, includes handset stations, loud speakers, and portable station jacks. It provides five normal plant channels, five maintenance channels, two switchyard maintenance channels, and four fuel handling channels.

c. A radio system capable of transmitting and receiving the following types of voice communications:

1. A two-way mobile channel is normally used by service dispatchers in various locations to mobile units.
2. A channel for direct radio communications with the Ottawa County Sheriff's dispatcher.
3. A channel used exclusively by Security.
4. A channel used by the Maintenance Department for normal day-to-day transmissions.

d. Radiation Monitoring Teams communicate on a five-channel trunked 800 megahertz radio system. Cellular telephones are also available if needed.

e. Alphanumeric pagers, are carried by key emergency responders to provide 24-hour a day coverage. These pagers display an emergency classification code, and can be used to communicate with other key personnel.

f. A Computerized Automated Notification System (CANS) is available to facilitate the notification process. The system is composed of at least 16 phone lines. One telephone line is dedicated to the Control Room, and the others are connected to the telephone network. The CANS will initiate a group page, an individual page, and individually call all emergency response personnel carrying pagers, as well as calling out non-pager carrying responders. The system transmits a code specific to the classification and logs personnel response times.

7.5.2 Emergency Communications Systems

a. The following phone systems are dedicated for emergency communications:

1. The Davis-Besse 4-way ring down circuit including the State and County EOCs, the Ohio Highway Patrol Office, the Lucas County and Ottawa County Sheriff's dispatcher offices, the Emergency Control Center/Emergency Operations Facility, and the Control Room.

2. A diverse network of commercial telephones, on uninterruptable power has been installed to provide:

a. NRC Emergency Notification System (ENS) telephone ("red phone").
b. NRC Health Physics Network (HPN) telephones.
c. Emergency Response Data System (ERDS) data lines.

3. Media charge-call lines.

b. DBNPS has also established two separate communication loops between various ERFs to ensure reliable and timely exchange of information between the emergency organizations. These loops consist of the following:

1. Technical Data Loop

Provides a technical data link for the following:

a) Control Room
b) Technical Support Center
c) Emergency Operations Facility
d) Operations Support Center

2. Radiation Management Loop

Provides dedicated communications for radiological conditions and radiation protection management information among the following:

a) Control Room
b) Technical Support Center
c) Operations Support Center
d) Dose Assessment Center

7.5.3 Maintenance of Emergency Telephone Numbers

The communication system which has been provided assures reliable onsite and offsite communications in any emergency. DBNPS maintains an Emergency Plan Telephone Directory, which is kept current by the Supervisor - Emergency Preparedness. This directory is reviewed quarterly and includes ERO personnel, the radiological emergency assistance provider, hospitals, local, state, and federal agencies, and others with special qualifications for emergency support.

7.6 ALARMS

There are three station alarms as follows:

7.6.1 FIRE - Rise and Fall Siren
7.6.2 ACCESS EVACUATION - Pulsed Tone Burst
7.6.3 INITIATE EMERGENCY PROCEDURES - Warbled Tone

The alarms are activated from the Control Room. The FIRE, INITIATE EMERGENCY PROCEDURES, and ACCESS EVACUATION alarms sound in all plant areas (i.e., station office building, personnel shop facility, radiologically restricted area, fuel handling area, outdoor areas, personnel processing facility, etc.)

7.7 PROMPT NOTIFICATION SYSTEM

Early warning of, and instructions to the population-at-risk are done under the direction of the Ohio Emergency Management Agency (OEMA) in conjunction with local officials, the Ottawa County Emergency Management Agency, and the Lucas County Emergency Management Agency. Prompt notification by the DBNPS is the vital first link in this process.

Once local and state authorities have been notified, several methods to warn the population-at-risk can be utilized. The method used and the time required will depend upon the severity of the situation. The methods available are:

7.7.1. Prompt Notification System (PNS) - Fifty-four high powered rotating sirens have been installed to provide an acoustic alerting signal for the residents and transients within the 10-mile radius of the Davis-Besse Station. The sirens have been located to meet the design objectives of Appendix 3 in NUREG-0654/ FEMA-REP-1, REV. 1. Local authorities activate the warning sirens from the Ottawa County Sheriff's Office. The sounding of the Prompt Notification System alerts the public to tune to local radio stations for EAS messages.

7.7.2 Emergency Alert System (EAS) - State and local authorities can broadcast information, instructions, and necessary bulletins to the general public over the EAS (e.g., from the local Sheriff's offices or their Emergency Operations Centers).

7.7.3 NOAA National Weather Service alert monitors can be pulsed, and automatically turned on to disseminate emergency information.

7.7.4 Central Dispatching - The Ottawa and Lucas County Sheriff's Offices have central dispatches, manned 24 hours a day, to communicate with the police, fire, medical responders, and the OEMA.

7.7.5 Commercial Paging System - A paging system, backed up by the local telephone service, is used to permit immediate contact of local officials.

7.7.6 Emergency Vehicles - Vehicles with loudspeakers can be dispatched to various remote locations to broadcast warning messages.

7.7.7 House-To-House Notification - Local fire and police departments can perform house-to-house notification of residents in the affected areas around the plant.

Notification times have been included in the Evacuation Time Estimate. Information and appropriate advisories developed for the public, including transient areas, concerning the actions to be taken during an emergency, are available. Pertinent information can also be found in the local telephone directories.

Additional information regarding warning capability and information to transient areas around the plant can be found in The Ottawa County Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities, Section II Part D; The Lucas County Radiological Emergency Response Plan, Section II Part E; and The Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities, Parts E and F.

7.8 ASSESSMENT FACILITIES

The systems and equipment described in the following sections ensure that the capability and resources are available to provide valid and continuing assessment throughout the course of an incident.

7.8.1 Radiation Monitoring System

The onsite Radiation Monitoring System contributes to personnel radiological protection within the plant, in accordance with regulatory guidelines. The Radiation Monitoring System detects, alarms, and initiates emergency actions when radiation levels or radionuclide concentrations exceed predetermined levels. To perform these functions, area, liquid, and atmospheric monitoring subsystems are employed.

The data from these subsystems are displayed by readouts in the Control Room. Additionally, certain monitors sound an alarm and are displayed on the Fire Detection System/Radiation Monitoring System (FDS/RMS) Console in the Control Room. A summary description of individual radiation monitor channels, described below, is provided in the Updated Safety Analysis Report (USAR) Table 11.4-1, Liquid Gas, and Airborne Radiation Monitors, and Table 12.1-3, Area Radiation Monitors.

In general the radiation monitoring equipment is designed in accordance with the following specifications:

a. Each monitoring station has adjustable, high level, low level, and power supply failure alarms.
b. Solid-state circuitry is used except for primary detectors.
c. The safety-related radiation monitors are powered from the essential instrument distribution panels. The non-essential radiation monitors are powered from the uninterruptible instrument distribution panels.
d. With the exception of the Kaman monitors, each radiation monitor is capable of being checked periodically with solenoid actuated check sources.
e. A pulse generator or current source is used for electrically checking each monitor or subsystem. Electrical input tests measure the functional operation of the monitoring system from the detector output through the readout devices.
f. The modules are designed so that an alarm and/or indication is initiated when failure occurs anywhere in the channel.

7.8.2. Area Radiation Monitoring

The Area Radiation Monitoring subsystem is comprised of area monitors located throughout the plant. Under normal operating conditions, the area monitors warn personnel of increasing radiation level, which may result in a radiation health hazard.

There are a total of 40 area monitors consisting of two types, Geiger-Mueller detectors and Ionization Chamber detectors. The detectors are housed in weather-proof containers and equipped with a remote controlled check source. The local alarm and readout for each of these channels is separate from the detector and is also housed in a weatherproof container.

These detectors can also monitor the high level of radiation that would be characteristic of the post-accident atmosphere in the containment. The detectors are desensitized by a lead shield.

The Control Room readout modules are located in the radiation monitoring panel in the Control Room.

7.8.3. Atmospheric Radiation Monitoring

Atmospheric Radiation Monitoring measures radioactive material contained in the air.

The atmospheric radiation monitoring subsystem is comprised of monitors of the fixed and movable type. Each fixed atmospheric monitor is comprised of a particulate measuring channel, iodine measuring channel, and a gaseous measuring channel. The air sample that passes through each of these channels is obtained by means of a sampler and a pump assembly. Samples are obtained by means of a sampling head placed in a ventilation duct.

Movable atmospheric monitors on carts are available for use during maintenance operations. These monitors are supplemented by various portable radiation monitoring equipment. Each monitor contains three channels for particulate, iodine, and gaseous monitoring, respectively.

Visual high-radiation alert/low-level alarms are provided for each channel at the local monitor sampling station for all atmospheric monitors. Each channel shares an audible alarm at the local monitor sampling station.

7.8.4. Process Radiation Monitoring

Process radiation monitoring measures radiation given off radioactive material contained in process fluids within systems.

The process radiation monitoring subsystem consists of monitors each of which consists of a sampler, scintillation detector, and Control Room ratemeter module. The monitors readout in the Control Room on the individual ratemeter and two common recorders.

7.8.5 Portable Radiation Monitoring Equipment

Portable radiation monitoring equipment includes those pieces of equipment which may be taken into the field (both on and offsite) to determine the presence of gaseous, particulate or airborne radioactive material. This includes general survey instruments. Portable radiation survey instruments and personnel monitoring devices are shown in Table 7-1.

7.8.6 Fire Protection and Detection Devices

Fire protection at Davis-Besse is provided by (1) the Fire Protection Water System, and (2) the Fire Detection System.

a. Fire Protection Water System

The Fire Protection Water System is a full-loop, piped system that supplies water for (1) sprinklers, (2) deluge water spray, (3) fire hydrants, and (4) hose connections that are located such that they provide fire protection for all major areas of the plant and site.

A Fire Water Storage Tank provides a source of water via the Electric Driven Fire Pump. A jockey pump maintains system piping full and pressurized.

The Diesel Driven Fire Pump takes suction from the intake forebay. In the event that a fire occurs, and either an automatic or manual system is initiated, the Fire Protection Water System piping pressure will decrease and cause the electric (120 psig) and the diesel (100 psig) fire pumps to start at their respective pressure setpoint, to meet system flow requirements.

Sprinkler systems provide a coverage of 0.3 gpm per square foot of floor area, for any (including the most remote) 3,000 square foot area; and 0.2 gpm per square foot, for any 10,000 square foot of floor area under the turbine operating and intermediate floors, and in all areas to which oil may spread in the event of an oil line break. This protection is also provided below major steel grating floor whether or not sprinklers are installed above.

Fire hydrants are connected to the main fire yard loop around the periphery of the station. A distribution header loop is provided within the turbine building, with four branch feeders from the underground fire yard loop. Each section of the header loop and each branch line are provided with isolation valves. The headers supply readily accessible, mounted, fire hose stations located throughout the turbine and auxiliary buildings.

Hose cabinets are provided throughout the auxiliary building. Each hose cabinet contains 50-75 feet of 1½ inch hose, with an adjustable fog nozzle, and a separate 2½-inch hose connection for local fire department use. Fire extinguishers are provided throughout the building.

Hose reel units are provided in the turbine building. Each reel is provided with 50-75 feet of 1½ inch fire hose, and an adjustable fog and stream hose nozzle. Adjacent to each hose reel is a separate 2½-inch hose connection for local fire department use. Portable fire extinguishers are located throughout the building.

Fire suppression to the Administration Building, Warehouse, Training Center, Personnel Processing Facility, and Service Building #3 consists of sprinkler systems and hose stations.

b. Fire Detection System

The fire detection system is comprised of detectors located throughout Davis-Besse, especially in those areas not protected by sprinkler systems.

1. Temperature Rise Detectors

Temperature rise detectors monitor the protected area and will send a signal to a local control cabinet and Control Room alarm if the rise in temperature reaches a setpoint.

2. Smoke and Vapor Detectors

Ionization type smoke detectors monitor the area, and when activated, send a signal to a local control cabinet and Control Room alarm.

The Fire Detection Panels receive their inputs from the various detectors, and in turn send an alarm to the Control Room.

An alarm initiates when any of the following conditions occur within the Fire Detection System:

a) Fire
b) Trouble
c) Ground Fault

If any of the above occur, a line printer, fed by the Fire Detection System/Radiation Monitoring System (FDS/RMS), will print out the alarm in the Control Room.

Upon receipt of an alarm, the Control Room operator acknowledges the alarm on the FDS/RMS console printer, and identifies the specific cause of the alarm.

7.8.7 Seismic Monitoring System

The Seismic Monitoring System records (on magnetic tape) vibrations in the earth due to a local earthquake. In addition, the system will record the vibrations on man-made structures caused by the earthquake. The data acquired will contribute to the assessment of damage and the determination of cause of damage. The data is useful in confirming the design and analysis of the structure. To aid decision making, six alarm lights are provided at the system rack, in the cabinet area of the Control Room. These lights show the exceedance of Operating Basis Earthquake (OBE) or Safe Shutdown Earthquake (SSE) at the containment foundation.

The sensors and seismic triggers are installed remotely from the system rack, and are connected by cables to the rack. (See the Technical Requirements Manual (TRM) for location of the sensors and trigger.)

One low-level triaxial seismic trigger is used to turn on the system automatically during the buildup of the event vibrations. The seismic trigger is adjustable from approximately 0.005g to 0.02g (g=acceleration due to gravity). The recording system is in full operation within 0.1 second after a low-level trigger signal. Recording continues with out interruption for approximately 10 seconds after the last low-level trigger signal. Upon completion of the seismic event recording, the Control Room operator removes the magnetic tape cassette from the recording machine. The recording cassette tape is placed in a playback unit which converts to strip-chart form, the longitudinal, transverse, and vertical axes of vibration. The time domain tape recording can be transferred to other available data analysis or acquisition equipment for more detailed analysis.

In keeping with the purposes of the system, the power is supplied by rechargeable batteries so that loss of site power will not prevent system operation. Continuous float charging of the batteries is provided by a battery charger module.

In addition to the components associated with the system rack, there are three peak recording accelerometers as listed in the TRM, Table 3.3-7, which require no electrical power to operate. After a seismic event operators can remove the three tape strips from each recorder, develop the strips, and determine the peak values recorded at the associated location.

7.8.8 Onsite Meteorological Measurement Programs

Data collection from the current onsite meteorological monitoring system began at DBNPS on August 4, 1974. The location of both meteorological towers is such that the meteorological data from the towers are representative of the DBNPS site. The system includes two levels of instrumentation on a 340-foot freestanding tower and one level of instrumentation on a 35-foot satellite tower. Both towers are located in the southwest corner of the site approximately 2800 feet from DBNPS.

Wind direction and speed are measured at the 250 and 340-foot levels on the freestanding tower and at 35 feet on the satellite tower. Differential temperature measurements (ΔT) are made between 35 and 250 feet and between 35 and 340 feet on the free standing tower.

The Control Room, Emergency Operations Facility (EOF), and Technical Support Center (TSC) can obtain meteorological data through the Data Acquisition and Display System (DADS). All meteorological data are recorded on strip chart recorders. Dual-channel strip chart recorders are used for recording wind speed and direction; one recorder for each tower level. Ambient temperature, dewpoint, delta T, and precipitation are recorded on one multipoint strip chart recorder; each parameter is recorded on an individual channel. The data recording and signal conditioning equipment is housed in an environmentally controlled out structure located near the base of the tower.

The meteorological instruments at DBNPS are calibrated at least semiannually. The instrumentation and records are checked on a nominal daily basis for proper functioning of equipment. All maintenance and calibrations are performed in accordance with written procedures.

Backup meteorological data (i.e., wind speed and direction) are available from the National Weather Service. Arrangements have also been made to obtain complete backup meteorological information from the Enrico Fermi Nuclear Power Station at Newport, Michigan. Backup hydrological data can be obtained from the Marblehead Coast Guard Station, and the Port Clinton Sewage treatment plant (lake level and precipitation respectively).

7.8.9 Control Room Instrumentation

Control Room Instrumentation measures appropriate parameters that are indicative of the status of various plant systems and the reactor itself.

The Post Accident Monitoring System (PAMS) is also available to follow the course of an accident with wide range instrumentation. This system will provide to the plant operators, the essential safety status information necessary to allow them to return the plant to a maintained, safe, shutdown condition.

USAR Table 7.5-1 provides a listing and a description of Control Room instrumentation, including PAMS that would be used in performing continued assessment of plant conditions.

7.8.10 Laboratory Facilities

The Davis-Besse laboratory facilities are equipped to provide the water chemistry and radiochemical analysis support required during normal plant operations. This equipment can also be utilized in the analysis of abnormal events to assist in the diagnosis of plant operation when conditions permit.

If an accident occurs which would make normal sampling and counting methods impractical, the following measures can be taken:

a. A Radiological Testing Laboratory (RTL) is located in the DBAB in the restricted area near the TSC and EOF. Its primary functions are to act as a staging area for Radiation Monitoring Teams and provide a handling area for environmental samples.

b. For reactor coolant system sampling, a shielded, high-pressure sampler is available for pressurized samples. These samples are obtained using the Post Accident Sampling System (PASS) which was designed specifically for this purpose.

c. For containment atmosphere sampling, the normal sampling procedure is used. If any channel of the RE 4597 series monitor is off scale or an independent sample and analysis is required, a grab sample can be obtained from the Emergency Grab Sample System.

d. For station vent sampling, normal sampling procedures can be followed except that silver zeolite filters can be used for iodine. Also if RE 4598 series Channel 1, 2 or 3 is off scale, a portable survey instrument on the sample line can be used and dose rate is then converted to μCi/cc.

7.8.11 Facilities and Equipment for Offsite Monitoring

A complete Radiological Environmental Monitoring Program (REMP) for effluent control has been established at the DBNPS. The program has been in effect since August 1972.

The REMP employs fixed radiation/radionuclide detection and measurement instruments at various locations within a 25 mile radius from DBNPS. Samples of vegetation, water, soil, milk, and produce are routinely collected and analyzed. Figures 7-2 and 7-3 show the sampling/monitoring locations in the DBNPS area.

During emergencies at DBNPS, baseline data from the REMP will be used in assessing the radiological effects of any possible releases on the environment.

DBNPS has three, four-wheel drive vehicles, equipped to perform field monitoring during emergencies. These vehicles are available within about 30 minutes after declaration of an emergency. Radiation Monitoring Teams (RMTs), dispatched at an ALERT or higher, will conduct emergency field monitoring of radiation and airborne activity levels throughout the EPZ, under direction from the Dose Assessment Center, in the EOF. Monitoring results will be used to verify plume boundaries and to adjust dose projections for more correct protective action recommendations.

7.8.12 Offsite Analysis

Offsite analysis of post accident samples are performed by Framatome in accordance with the contract established for DBNPS participation in the post accident sampling program.

7.9 PROTECTIVE FACILITIES AND EQUIPMENT

Personnel protective action at DBNPS is a function of the nature of the hazards, for instance, preparing for a hurricane is somewhat different from preparing for radiological hazards. Preplanned responses to the basic hazards, such as high winds, flooding, earthquakes, and radiation exposures are an integral part of the DBNPS Emergency Plan and are therefore discussed separately. A fundamental concept in personnel protection is the immediate release and removal of all individuals not essential to the operation, safety, security, and damage control of the plant. Obviously some hazards can occur before any protective action can be taken. When the situation permits, the appropriate alarms are sounded and all personnel on site either assume their assigned emergency responsibilities, or are assembled at the designated points for accountability prior to release from the site or reassignment to an emergency team.

Protected facilities include the DBNPS Control Room and the emergency facilities on the first floor of the Administration Building. These areas are located in seismically rated structures and have adequate shielding to permit safe occupation for extended periods of time without exceeding a dose limit. The ventilation systems in these facilities have redundant fans and chillers and are provided with appropriate alarms and interlocks. Provisions have also been made for the air to be recirculated through high efficiency particulate (HEPA), and activated charcoal filters when necessary.

Self contained breathing apparatus (SCBA) and respirators are located in the Control Room to permit continued occupancy if ventilation systems fail. Additional SCBAs, protective clothing, and respirators are available at, or near, each onsite ERF, and are listed in applicable Emergency Plan Procedures.

Parts for the respirators and SCBAs, as well as additional bundles of protective clothing are available at the warehouse.

7.10 FIRST AID AND MEDICAL FACILITIES

First aid facilities at DBNPS are designed to support immediate care ranging from simple first aid to procedures requiring a physician. The most readily available first aid is provided by the small kits placed throughout the plant. These kits contain items typically needed to care for minor injuries.

More complete medical cabinets are located throughout the site and contain medical supplies needed to care for more serious injuries.

7.11 DAMAGE CONTROL EQUIPMENT

The DBNPS is extensively equipped to conduct preventive and corrective maintenance and repairs on mechanical, structural, electrical and instrumentation and control equipment found in the station.

Each maintenance crew is qualified and, when required, certified to perform the tasks associated with their craft in the working environment of a nuclear plant.

In addition to the equipment and materials required for normal maintenance, other items are available to handle extraordinary maintenance jobs that might arise in damage control. Refer to the appropriate system procedure or Emergency Plan Procedure for equipment lists.

TABLE 7-1

PORTABLE RADIATION SURVEY INSTRUMENTS

Portable Survey Instruments	Range	Type Detector	Quantity	Location
High Range Survey Instruments	0-1000 mrad/hr-10^3 rem/hr	GM	3	RP Area
		Ion Chamber	3	RP Area
	0-5 rem/hr		6	RTL
Low Range Survey Instrument	0-5 rem/hr	Ion Chamber	2	RP Area
	0-5 x 10^5 cpm	GM	4	RTL
Alpha Survey Meter	0-5 x 10^5 cpm	Scintillator	1	RP Area
Neutron	0-5000 mrem/hr	BF_3	2	RP Area

PORTABLE AIR SAMPLING EQUIPMENT

	Type	Quantity	Location
Offsite	Air Sample	10	Environmental Survey Stations
Low Volume	12 volt D.C.	4	RTL
	Battery Power	4	RTL
Onsite	High Volume	1	
	Low Volume	2	RP Area

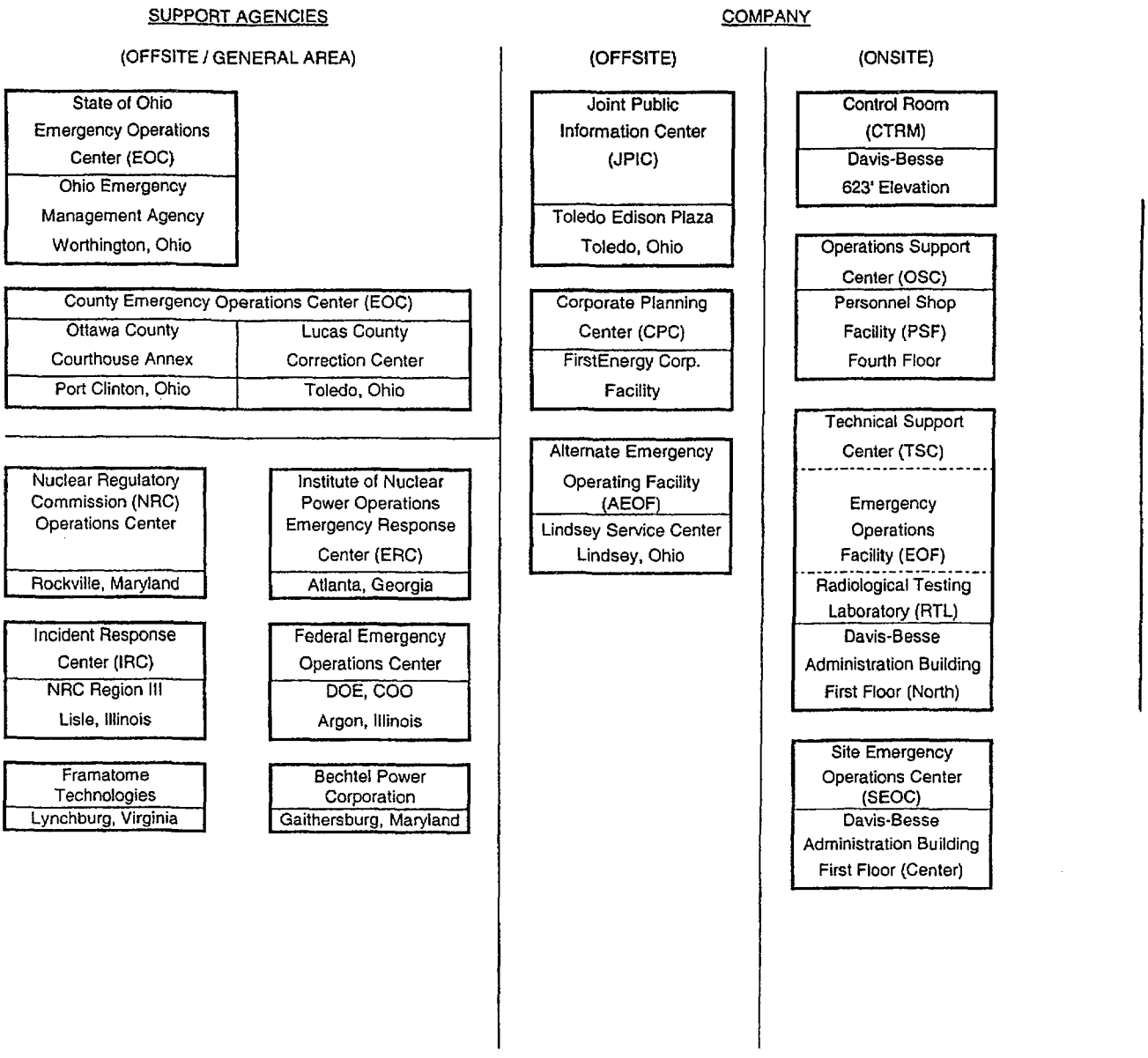
TABLE 7-1

PERSONNEL MONITORING DEVICES

	Range
Self-Reading Dosimeters	0-10 rem or 0-100 rem 0-1.5 rem or 0-5 rem 0 - 200 mrem or 0-500 mrem
OR	
Electronic Alarming Dosimeters	
Dosimeter Charger	All ranges
Broad Spectrum TLD	All ranges
Radiation Monitor (Frisker)	0-50 kcpm
Eberline PCM-1	N/A

Figure 7-1

EMERGENCY FACILITIES BY GENERAL LOCATION



DAVIS-BESSE NUCLEAR POWER STATION
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
SAMPLING LOCATIONS — 5 MILES RADIUS

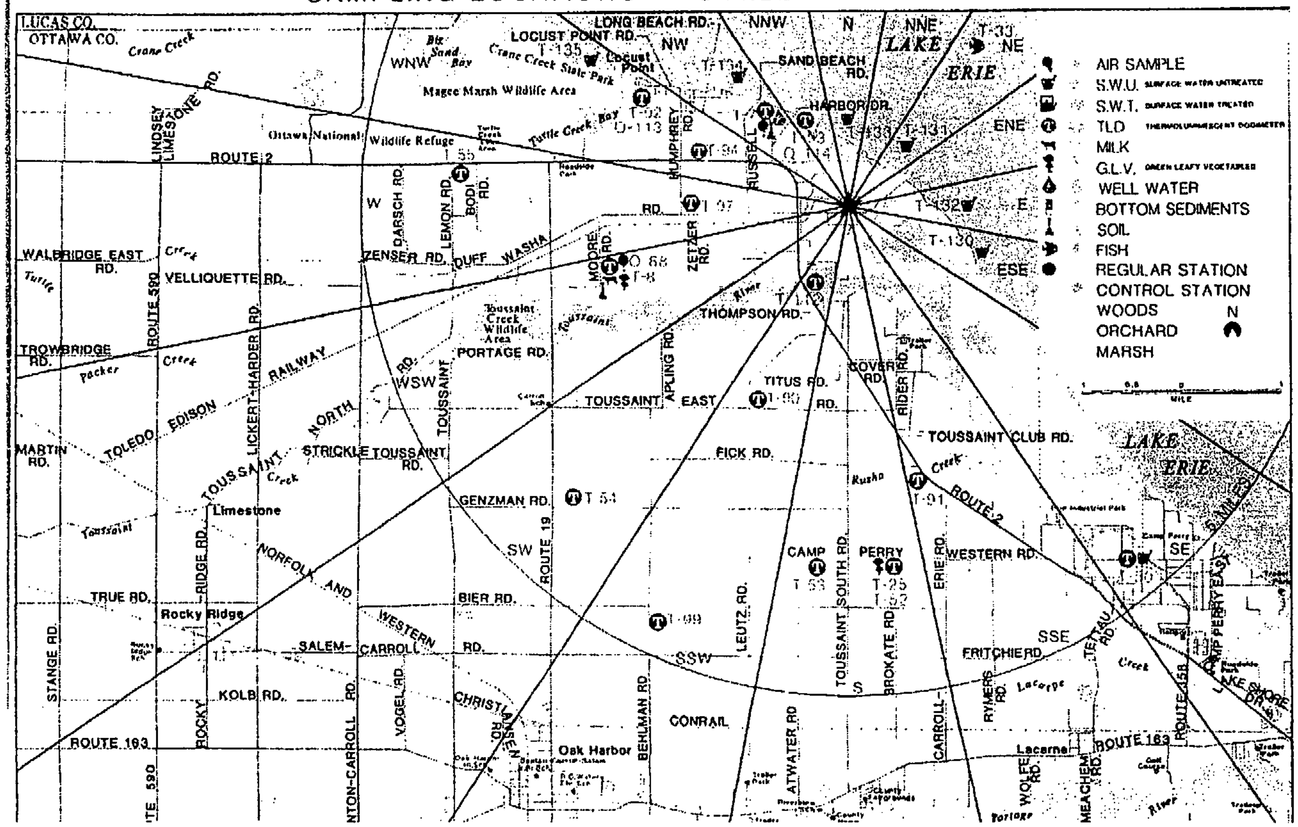
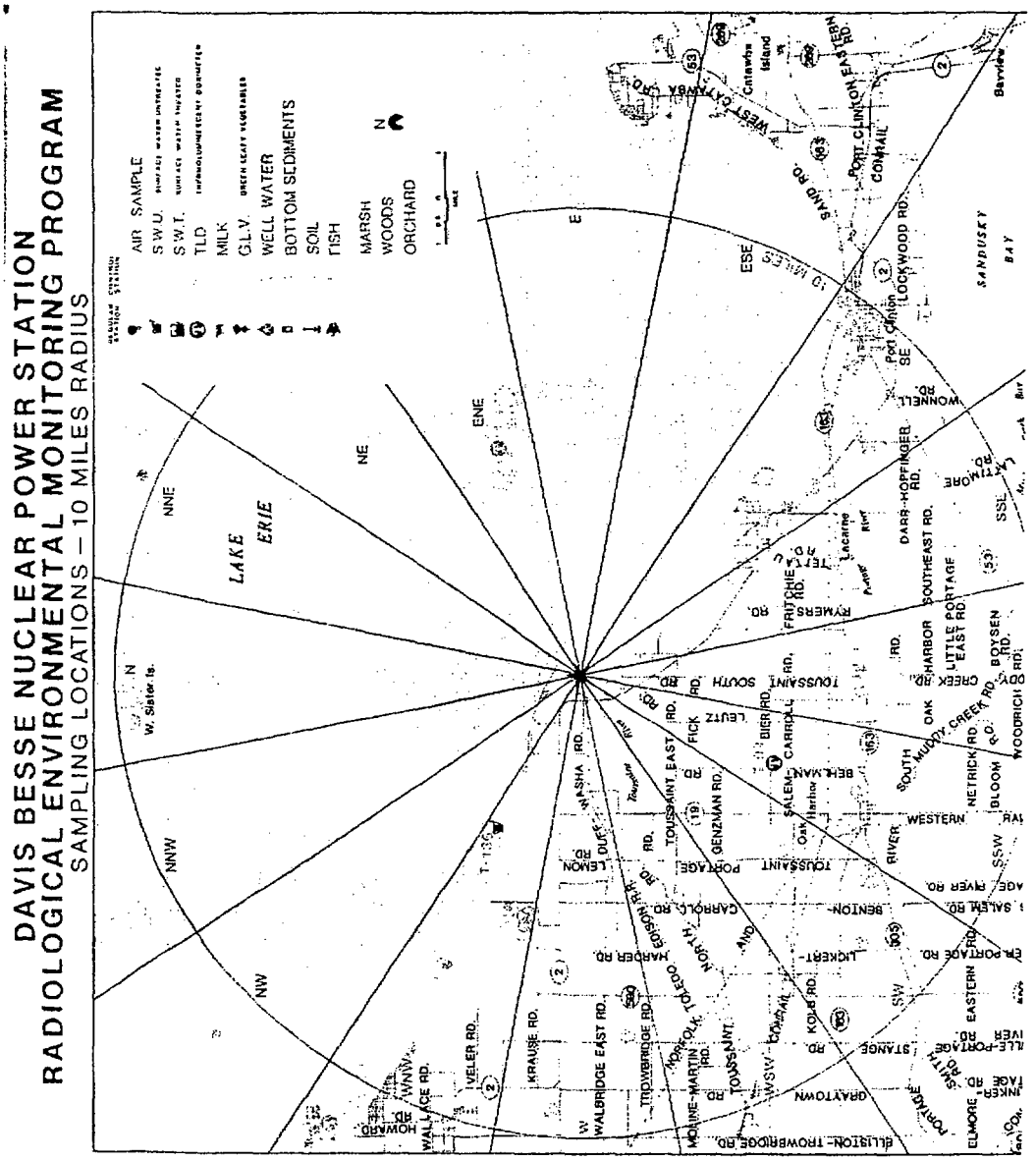


Figure 7-2

DBNPS Sampling Locations - 5-mile Radius

Figure 7-3

DBNPS Sampling Locations - 10-mile Radius



8.0 MAINTENANCE OF EMERGENCY PREPAREDNESS

Efforts will be made to assure continuous emergency preparedness and operational readiness among Company personnel and the offsite response agencies and organizations. The Vice President - Nuclear has been assigned the overall responsibility for emergency preparedness as related to the DBNPS. This responsibility includes not only maintenance of the DBNPS Emergency Plan and Emergency Plan Procedures, but also its interrelationships with state, federal and county plans; agreement letters; corporate policy and plans; and other related plans, programs, and procedures. The Vice President - Nuclear is also responsible for training of personnel who implement the Plan and Procedures. To assist the Vice President - Nuclear in meeting these assigned responsibilities, a Manager – Regulatory Affairs has been designated. The specific responsibilities of the Manager – Regulatory Affairs are described in the following subsections; and in particular, subsection 8.1.3.

8.1 ORGANIZATIONAL PREPAREDNESS

8.1.1 Training

All personnel permitted access to the DBNPS protected area will take part in a formal training program under the direction of the Vice President - Nuclear. This training program provides for the indoctrination of Company employees and contractors. In addition it provides specialized training for licensed operators, chemistry personnel, radiation protection personnel, and personnel assigned specific responsibilities in the ERO.

The Vice President - Nuclear is responsible for ensuring that personnel in each department receive the appropriate training. The Nuclear Group Department Directors are responsible for identifying training required for each individual's job specialty. Training in support of the Emergency Plan, includes the following:

a. All DBNPS staff personnel requiring unescorted access into the protected and certain vital areas will initially qualify in Plant Access and, requalify annually.

   With regard to Emergency Preparedness, the following objectives have been established for the Plant Access Training Program:

   1. State the purpose of the Emergency Plan, and associated procedures.
   2. State the classifications of station emergencies.
   3. Recognize the emergency alarms and state the proper response for each.
   4. State the actions required during Emergency Plan implementation.
   5. State the purpose and importance of accountability.
   6. Identify the location of emergency facilities and assembly areas inside the Protected Area and Owner Controlled Area.
   7. Discuss evacuation plans, including identification of evacuation routes.
   8. State the company's policy concerning the release of information to the public and news media regarding an emergency.

9. State the function of the Prompt Notification System.
10. Identify the appropriate communication system to be used for reporting emergencies, locating an individual in the Plant, and conducting lengthy discussions.
11. Identify and discuss operation of the radiation exposure control criteria for personnel during an emergency for the persons who have access to Radiation Restricted Areas.

b. Personnel assigned to the DBNPS ERO with specific Emergency Plan duties and responsibilities will receive specialized training for their respective assignments. Table 8-1 delineates which personnel shall receive specialized training, the type of training, and the minimum required frequency for each type of training.

c. Training for offsite organizations and personnel involved in emergency preparedness for DBNPS is the responsibility of the State of Ohio and Ottawa and Lucas County Emergency Management Agencies. Training programs for these agencies are controlled and conducted in accordance with existing radiological emergency plans and procedures. Davis-Besse coordinates with the State of Ohio, county emergency management agency directors, and local authorities to ensure consistency and continuity of the above-mentioned plans and procedures with the DBNPS Emergency Plan and Emergency Plan Procedures. Davis-Besse financially supports the State of Ohio and the county agencies to ensure continued program maintenance and training support of the Radiological Emergency Preparedness (REP) program.

d. The local fire departments will be invited to participate in a training program, which, as a minimum, will include the following topics:

1. Interface with the nuclear security force during emergencies.
2. Basic health physics indoctrination and training.
3. The DBNPS facility layout.
4. Onsite fire protection system equipment (permanent and portable).
5. Differences between onsite fire fighting equipment and fire company supplied equipment.
6. Communications systems.
7. Review of applicable parts of the DBNPS Emergency Plan and Emergency Plan Procedures.
8. The onsite emergency organization, with specific emphasis on the interface between the DBNPS Fire Brigade and local fire department personnel. (Included in this training will be the understanding that when local fire support is required within the protected area, local fire department personnel will function in conjunction with, and under the direction of, the DBNPS Fire Brigade.)

e. A joint review of the DBNPS EALs will be performed annually, by the Emergency Preparedness Unit, with state and local governmental agencies. This EAL review is directed toward offsite senior management personnel.

f. A coordinated program shall be conducted annually to acquaint the news media with the Emergency Plan, information concerning radiation, and points of contact for release of public information in an emergency. Normally, this information will be presented through a mailing, which may include an invitation for a site/plant tour.

8.1.2 Drills and Exercises

a. Periodic drills and exercises will be conducted in order to test the overall state of emergency preparedness. The prime objective of this form of training is to determine the level of emergency preparedness of all participating personnel, organizations, and agencies. More specifically, each drill or exercise will be conducted to meet the following objectives:

1. Ensure that the participants are familiar with their duties and responsibilities.
2. Verify the adequacy of the DBNPS Emergency Plan and Emergency Plan Procedures.
3. Test communications networks and systems.
4. Check the availability of emergency supplies and equipment.
5. Verify the operability of emergency equipment.

The Manager – Regulatory Affairs is responsible for the planning, scheduling, and coordination of all emergency preparedness related drills and exercises.

All drills and exercises are subject to the approval of the Plant Manager. In addition, the Vice President, Nuclear will approve the Biennial Exercise.

Each drill requirement will be performed within the specified time interval, with a maximum allowable extension not to exceed 25% of the drill interval. An exercise will be conducted once every other calendar year to demonstrate the overall effectiveness of the Davis-Besse Emergency Preparedness Program. The scope and content of the biennial exercise will be consistent with established departmental procedures and regulatory requirements.

Instructions and coaching may be given to participants during a drill. Such actions are prohibited during a biennial exercise. Therefore, in order to take credit for specific drill objectives during an exercise, no instructions or coaching may occur.

b. When a major drill or exercise is to be conducted, the Manager – Regulatory Affairs will:

1. Assign personnel to prepare a scenario.
2. Coordinate efforts with other participating emergency personnel, organizations, and agencies.
3. Obtain the approval of the Plant Manager, and the Vice President-Nuclear (for the Biennial Exercise).

4. Schedule a date for drill execution and assign controllers.
5. Critique the results of the drill.
6. Assign personnel to correct any deficiencies.
7. Ensure that deficiencies are corrected.
8. Prepare and submit documentation to the Nuclear Records Management for record keeping of training conducted.

Scheduled drills and exercises will involve onsite as well as offsite emergency personnel, organizations, and agencies. These drills and exercises will be conducted simulating, as closely as possible, actual emergency conditions; and may be scheduled such that one or more drills or exercises are held simultaneously. Drill scenarios will be prepared that involve the participation of several emergency teams and all or specific parts of the onsite and offsite emergency organizations. This may include varying degrees of participation of state, county, and federal organizations and agencies, and local service support personnel and organizations. The Manager – Regulatory Affairs will notify the offsite emergency response organizations and agencies at least thirty days in advance of the scheduled date of the drill or exercise. Collection and analysis of all sample media (e.g., water, grass, soil and air) should be included in the drills. Drills will involve on-the-spot correction of erroneous performance, and a demonstration of the proper performance by the controller, if necessary.

During the conduct of exercises, the controllers are restricted in their ability to correct erroneous performance, and may only intercede to assure safety of personnel, or prevent damage to equipment.

Recommendations for revisions to the DBNPS Emergency Plan, Emergency Plan Procedures, and/or the upgrading of emergency equipment and supplies, as a result of a drill or exercise, are forwarded to the Manager – Regulatory Affairs by observers or participants. The Manager - Regulatory Affairs will submit such procedure revisions for review in accordance with Emergency Plan Administrative Procedure. Approved changes will be incorporated into the Emergency Preparedness Program under the direction of the Manager – Regulatory Affairs.

c. Records will be maintained on each drill/exercise listed below.

1. Medical Emergency Drill:

   At least one drill per calendar year will be conducted.

   The drill will involve the participation of some, if not all, of the local medical support personnel and organizations (e.g., local physicians, ambulance services, hospitals, etc.), and will involve cases of radiation overexposure and/or contaminated personnel and/or contaminated/injured personnel.

2. Fire Emergency Drill:

   Fire drills will be conducted in accordance with DB-FP-00005, Fire Brigade.

3. Communications Links Test:

   The communication links used for notification (e.g., DBNPS Control Room to Ottawa and Lucas County Sheriffs' Offices, OEMA, Ottawa County EMA and Lucas County EMA) will be tested at least monthly.

   Communications between the Nuclear Regulatory Commission (i.e., NRC Headquarters) and the TSC, EOF and Control Room will be tested at least monthly.

   The communications links used for contacting federal agencies (i.e., NRC and the DOE Radiological Assistance Program personnel) and the State of Michigan will be tested at least quarterly.

   The communications links between emergency centers and Field Assessment Teams (i.e., DBNPS EOF to RMTs) will be tested at least annually. Table 1-2, Communication Test Frequencies, defines the above time periods.

4. Exercise and Drills:

   Emergency Preparedness exercises shall test the adequacy of timing, the content of implementing procedures and methods, test emergency equipment and communication networks, test the public notification system, and ensure that emergency organization personnel are familiar with their duties.

   a) DBNPS shall conduct an exercise of its onsite emergency plan every two years. This biennial exercise will include full participation by Ottawa and Lucas counties, and either full or partial participation by the State of Ohio. Federal agencies may also elect to participate.

   b) In those years between biennial exercises, at least one drill involving a combination of some of the principal functional areas of the onsite emergency capabilities shall be conducted. The principal areas of emergency response include activities such as management and coordination of emergency response, accident assessment, protective action decision-making, and plant system repair and corrective actions. During these drills, activation of all of the emergency response facilities is not necessary. State and local agencies within the plume exposure pathway EPZ may participate in these drills at their request.

5. Health Physics Drills:

   a) Semiannual Health Physics drills will be conducted which involve response to, and analysis of, simulated elevated airborne samples and direct radiation measurements in the environment.

   b) Radiation Monitoring Team (RMT) drills will be conducted semiannually which involve simulated elevated airborne samples and direct radiation measurements in the offsite environment.

   c) An annual Post Accident Sampling System (PASS) drill will be conducted which includes an analysis of actual in-plant liquid samples (Reactor Coolant System) with simulated elevated radiation levels.

6. One exercise/drill in a six-year cycle will start between 6:00 p.m. and 4:00 a.m. Drills should be conducted under various weather conditions. Some drills may be unannounced.

7. Staff Augmentation Drills

   Off-hours augmentation drills will be conducted semiannually to test and document the response times of the station emergency response staff personnel.

8.1.3 Manager – Regulatory Affairs

The Manager – Regulatory Affairs shall ensure that:

a. Information, data, and procedures detailed in the Emergency Plan Procedures are consistent with the DBNPS Emergency Plan.

b. Emergency Plan Procedures and other procedures are coordinated and interface properly (e.g., Administrative Procedures, Security Procedures, Radiation Protection Procedures, Training Procedures, etc.).

c. Coordination of the DBNPS Emergency Plan and Emergency Plan Procedures with the:

   1. State Plans
   2. County Plans
   3. Davis-Besse Nuclear Security Plan

d. Adequate staffing of the ERO is maintained.

e. Emergency preparedness related training documentation is sent to Nuclear Records Management.

f. Emergency preparedness related drills and exercises are coordinated as described in this Plan.

g. Periodic reviews and updates of the DBNPS Emergency Plan and Emergency Plan Procedures occur as described in this Plan.

h. Maintenance and inventory of emergency equipment and supplies is as described in this Plan.

i. Changes in the federal regulations and guidance that impact emergency preparedness activities are incorporated into the program as applicable.

8.1.4 Ottawa County EMA and Lucas County EMA Directors

Emergency planning coordination among all Ottawa County and Lucas County agencies is the responsibility of the EMA Directors for each county. The Directors for these counties have the following responsibilities:

a. Ensure that a sufficient number of preparatory courses are scheduled in the areas of radiological monitoring and decontamination procedures. These courses will assist radiological monitors and local officials in fulfilling their assigned functions in an emergency.

b. In coordination with the American Red Cross, determine that a sufficient number of care centers will be available to house evacuees.

c. Ensure a complete evacuation education program is available for residents and transients within the risk area.

d. Work with state and local authorities to complete, test, and improve upon the Countywide Emergency Warning Plans, Emergency Communications Development Plans and Countywide Resource Manuals.

8.2 EDUCATIONAL INFORMATION FOR THE PUBLIC

For those members of the public residing within the 10-mile Emergency Planning Zone, DBNPS will provide written information on the following topics:

a) Educational information on radiation;
b) Contact for additional information;
c) Protective measures, e.g., evacuation routes and relocation centers, sheltering, respiratory protection, radioprotective drugs; and
d) Special needs of the handicapped.

Methods of providing this information may include direct mail, billing statement inserts, and/or telephone book inserts.

At least annually, in cooperation with the EMAs of Ottawa and Lucas Counties and the State of Ohio, DBNPS will update the information provided to members of the public within the 10-mile Emergency Planning Zone.

8.3 REVIEW AND UPDATE OF THE EMERGENCY PLAN AND EMERGENCY PLAN PROCEDURES

DBNPS maintains, as separate documents; this Emergency Plan, the Emergency Plan Implementing Procedures, Off-Normal Occurrence Procedures, the Emergency Plan Administrative Procedures, a Corporate Emergency Response Plan, a Public Information Emergency Response Procedure, the Emergency Plan Telephone Directory, and the Evacuation Time Estime (ETE). It is intended that this plan, although considered as part of the Davis-Besse Nuclear Power Station (DBNPS), Unit 1, Final Safety Analysis Report (FSAR), will be maintained as a separate document. This is more clearly defined in the Updated Safety Analysis Report (USAR), Section 13.3.

8.3.1 The DBNPS Emergency Plan, including appended letters of agreement and plans of offsite organizations and agencies will be reviewed and updated biennially by the Emergency Preparedness Unit, under the direction of the Manager – Regulatory Affairs.

8.3.2 The DBNPS Emergency Plan will be reviewed annually by an independent group with no immediate responsibility for the emergency preparedness program. This group is the Nuclear Quality Assessment organization . Results and recommendations from the review will be documented and sent to appropriate corporate and plant management. A report on the adequacy of the interfaces between the DBNPS Emergency Plan and the state and local governments will be sent to the respective government agencies by the Emergency Preparedness Unit, and retained on file for at least five years.

Nuclear Quality Assessment is responsible for auditing the DBNPS Emergency Plan at least annually to verify compliance with the company's fire protection program, internal rules and procedures, federal regulations, and operating license provisions. Personnel performing audits of the DBNPS Emergency Plan and/or Emergency Plan Procedures will take into account corporate policy, state policy and plans, county plans, and the various agreements and understandings with federal, state, county and local support groups, agencies and organizations.

Results of each annual and biennial review and update (if needed) of the Davis-Besse Nuclear Power Station Emergency Plan and Emergency Plan procedures will be reported to the Vice President-Nuclear.

8.3.3 The Manager – Regulatory Affairs will provide an ongoing review of the Emergency Plan and Procedures.

a. The DBNPS Emergency Plan Procedures will be incorporated into the DBNPS procedures program. As such, procedures will be prepared, reviewed, approved, controlled, distributed, and revised in accordance with DBNPS administrative procedures. Document holders (e.g., DBNPS, state, county, and federal agencies, etc.,) will receive revisions to the Emergency Plan Procedures in a controlled manner, as they are issued. In addition, these Emergency Plan Procedures will provide guidance to document holders on how to make comments and recommendations concerning the Emergency Preparedness Program to DBNPS. Revisions to the DBNPS Emergency Plan will be similarly controlled.

b. The Manager – Regulatory Affairs is responsible for coordinating the periodic review and audit of the DBNPS Emergency Plan and Emergency Plan Procedures. In addition, the Manager – Regulatory Affairs will, through letters, meetings, seminars, or other means available; ensure that appropriate elements of the emergency organization are informed of the DBNPS Emergency Plan and amendments thereto, and the Emergency Plan Procedures and revisions thereto.

8.4 MAINTENANCE AND INVENTORY OF EMERGENCY EQUIPMENT AND SUPPLIES

The Manager – Regulatory Affairs is responsible for planning and scheduling the quarterly inventory and inspection of designated emergency supplies and equipment.

Designated emergency equipment and supplies, and their storage locations, will be listed in the Emergency Plan Administrative Procedures.

Such equipment and supplies will be maintained in accordance with approved DBNPS procedures. Equipment, supplies, and parts having shelf lives shall be checked and replaced as necessary.

TABLE 8-1 Sheet 1 of 3

PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL

Personnel Category	Involved Personnel	Training and Frequency
Emergency Assistant Plant Manager	Station personnel designated as Emergency Assistant Plant Manager	Emergency Assistant Plant Manager shall periodically receive training on DBNPS Emergency and Abnormal Operating Procedures and reactor thermal shock considerations equivalent to that received by SRO licensed individuals.
Licensed Operators	Shift Managers Unit/Field Supervisors Other licensed staff members	Reactor Operators and Senior Reactor Operators receive extensive on-the-job and formal training as scheduled and conducted by the operator requalification training program. This program shall include a comprehensive review of the DBNPS Emergency Plan and the Emergency Plan Procedures.
Personnel responsible for assessment of emergencies	Emergency Director, Emergency Plant Manager, Emergency Offsite Manager, Shift Managers, Shift Technical Advisors (STAs), Key Emergency Response Personnel Staff personnel designated by the Plant Manager who may act as OSC and TSC Managers Other members of the Nuclear Group staff as designated by the Vice President - Nuclear.	Training will include the Emergency Plan, Emergency Plan Procedures, Technical Specifications (that are referenced in the Emergency Action Levels), and other station programs, plans, and procedures. The listed individuals attend at least one meeting per year to receive training on the Emergency Plan and Procedures. Detailed instructions with special attention given to the use of either dose assessment or engineering assessment techniques is provided based on the role they are expected to play during an emergency. Personnel shall participate in scheduled exercise and drills depending on availability.
Radiological Monitoring Personnel	Station personnel designated as Radiation Monitoring Team Members	On an annual basis, detailed instructions are provided on such topics as classification of emergencies, interfaces and responsibilities of the radiological monitoring and assessment personnel, personnel protection during emergencies, location and use of emergency equipment, monitoring techniques, and communications.

TABLE 8-1 Sheet 2 of 3

PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL

Personnel Category	Involved Personnel	Training and Frequency
Post Accident Sampling Personnel	Chemistry personnel designated by the Chemistry Supervisor to perform PASS samples	On an annual basis, detailed training shall be provided on the purpose and applications of the Post Accident Sampling System with both a detailed review of applicable system procedures and a walkdown of the system equipment.
First Aid Team(s)	Station personnel as designated by station management	Each member of the First Aid Team(s) shall receive a standard accredited first aid course, including cardiopulmonary resuscitation (CPR). Satisfactory completion of this course certifies them as members of the First Aid Team(s). Recertification training shall be provided at the frequency required by the certifying organization. Annually, a refresher course shall be made available for the team members which shall include a review of CPR, portions of the standard first aid course and handling of contaminated injured victims. In addition, after completing the standard first aid course, and during each of the annual refresher courses, each member shall be instructed on the availability of onsite medical treatment facilities, equipment, and supplies; communication systems; radiological hazards existing during personnel-related emergencies; and interfaces and responsibilities with local medical support personnel (e.g., local physicians, ambulance personnel, etc.).
Security Force	Nuclear Security Management	The listed individuals will receive training on at least an annual basis. The training program shall include the following subjects: a review of the applicable parts of the Emergency Plan, and Emergency Plan Procedures with emphasis on the classification of emergencies, communications, and specific areas of responsibility; personnel accountability; personnel and vehicle access control during emergencies; evacuation control; and interfaces with offsite support organizations and agencies.

TABLE 8-1 Sheet 3 of 3

PERIODIC TRAINING OF EMERGENCY RESPONSE PERSONNEL

Personnel Category	Involved Personnel	Training and Frequency
Fire Brigade	Fire Captains Designated shift personnel Other station personnel as designated by station management as Fire Brigade Members	This training which is provided to each person involved, is given by instructors trained in fire fighting. The program shall include, but not be limited to, the types of fires and their particular hazards, equipment to be used on each type of fire, the installed fire detection and protection systems, portable firefighting equipment and locations, respiratory protection devices, and radiological hazards existing during fire emergencies. In addition, a review of fire fighting procedures and techniques shall be included in the training program. Practical demonstrations of firefighting shall also be given. Fire Brigade training frequency is defined by the Fire Protection Program.
Corporate Emergency Response Organization Personnel	All Company personnel assigned duties and responsibilities in the Corporate Emergency Response Organization to support the DBNPS Emergency Plan	These personnel shall receive training at least on an annual basis. The program shall include a comprehensive review of the Corporate Emergency Response Organization and applicable procedures with specific attention and instruction given to their support role, responsibilities and duties.
Emergency Preparedness Personnel	Manager – Regulatory Affairs and designated staff	Periodic classroom training and seminars on Emergency Preparedness shall be provided on an as-needed basis and at the discretion of the Manager – Regulatory Affairs to these individuals from qualified outside organizations and documentation of this training maintained by the Emergency Preparedness Unit.

9.0 REENTRY AND RECOVERY

9.1 REENTRY

During an emergency, immediate actions are directed toward limiting the consequences of the accident, so as to afford maximum protection to Station personnel and the general public. Once corrective measures have been taken and effective control reestablished, the response efforts shift towards reentry and recovery. Reentry is made to perform certain essential actions which could not be performed coincident with the immediate response to the emergency.

Offsite Reentry is the responsibility of state and local authorities. It typically consists of environmental monitoring and assessment of the actions required to support return of the public to evacuated areas and residences. Additional details regarding plans and procedures for offsite reentry are found in The Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities. DBNPS will provide support and assistance to offsite agencies as requested to facilitate these efforts.

Onsite reentry is made when the emergency situation is under control and more deliberate planning can be made for the activities to be performed. These activities may occur prior to termination of the emergency, or they may be conducted as part of the Recovery phase of the response. All reentry actions conducted prior to the termination of the emergency will be authorized by the Emergency Plant Manager, and coordinated by the Operations Support Center (OSC) Manager and the Emergency Radiation Protection (RP) Manager. Reentry conducted during Recovery will be authorized by the Plant Recovery Manager. When preplanning these initial onsite reentries, the following items will typically be considered:

9.1.1 Review available radiation surveillance data to determine plant areas potentially affected by radiation and/or contamination.

9.1.2 Review radiation dose histories of personnel required to participate in the recovery operations.

9.1.3 Determine the need for additional personnel and the source of these additional personnel.

9.1.4 Review adequacy of radiation survey instrumentation and equipment (i.e., types, ranges, number, calibration).

9.1.5 Pre-plan survey team activities to include:

a. Areas to be surveyed
b. Anticipated radiation and contamination levels
c. Radiation survey equipment required
d. Shielding requirements and availability
e. Protective clothing and equipment required
f. Access control procedures (issuance of new RWPs) including exposure control limits and personnel dosimetry required
g. Decontamination requirement
h. Communications requirements

9.1.6 Review and revise security access lists to prevent unauthorized or unintentional entry into hazardous areas.

9.1.7 Reentry teams should be tasked with as many of the following as possible:

a. Determination of the initial required recovery operations.
b. Observation of hazards or potential hazards associated with the recovery operations.
c. Conducting comprehensive surveillance of plant facilities.
d. Isolating and posting of areas in the plant with appropriate warning signs and rope barriers, such as Radiation Areas, High Radiation Areas, High Airborne Activity Areas, and Contaminated Areas, etc.
e. Assessing the conditions of station equipment and areas.

In the period immediately following an accident, initial radiation monitoring functions involve only gross hazard evaluations, isolation of the hazard, and the definition of radiological problem areas. This immediate radiation surveillance activity is used to provide the basic information for recovery operations.

9.2 RECOVERY

The Emergency Director and Emergency Plant Manager have the joint responsibility for determining when an emergency situation is stable and the Station is ready to enter the recovery phase. The Recovery Organization will develop and coordinate plans and schedules for recovery operations. Following a SITE AREA or GENERAL EMERGENCY, the Company Nuclear Review Board (CNRB) will participate in the recovery planning effort to assure that all nuclear safety aspects of the recovery are satisfied. The CNRB will report their findings to the Recovery Director, who shall take the actions that he deems appropriate for safe recovery operations.

The Emergency Plant Manager, under the direction of the Emergency Director, will be responsible at the site for coordinating onsite recovery activities and the return to normal operations.

At the time that an emergency has been terminated, and Recovery has been initiated, the Emergency Offsite Manager will be responsible for providing notification to all applicable agencies (federal, state, county, etc.).

9.2.1 Prior to terminating an emergency and entering the Recovery phase, the Emergency Director will coordinate with the Emergency Plant Manager and the Emergency Offsite Manager to ensure that the following criteria have been considered:

a. The conditions which caused the emergency have stabilized, are under control, and are unlikely to deteriorate further.

b. The plume is beyond the ten-mile Emergency Planning Zone, and/or plume tracking is no longer required. The only environmental assessment activities in progress may be those necessary to assess the extent of deposition resulting from passage of the plume.

c. In-plant radiation levels are acceptable, and are stable or decreasing.

d. Radioactive releases are under control and are no longer in excess of technical specification limits.

e. The potential for uncontrolled radioactive releases is acceptably low.

f. Containment pressure is within technical specifications.

g. The reactor is in a stable safe shutdown condition and long-term core cooling is available as required.

h. Any fire, flood, earthquake or similar emergency condition no longer exist.

i. All contaminated injured, personnel have been transported to a medical care facility.

j. All required notifications have been made.

k. Offsite conditions will not limit access of personnel and support resources to DBNPS.

l. Discussions have been held with all offsite and select regulatory agencies, and agreement has been reached to terminate the emergency.

9.2.2 The extent of recovery activities will dictate the precise framework of the Recovery Organization:

a. For events of a minor nature, the normal onshift organization should be adequate to perform necessary recovery actions (e.g., for UNUSUAL EVENT classifications).

b. For events involving significant damage to plant systems required to maintain operation of the plant, the onsite emergency organization, or portions thereof, should be adequate to coordinate the necessary recovery actions (e.g., for ALERT classifications).

c. For events involving damage to plant systems required to maintain safe shutdown of the reactor, a formal Recovery Organization will be established to manage the recovery actions (e.g., for SITE AREA or GENERAL EMERGENCY classifications).

Particular attention should be directed toward isolating components and systems as required to control or minimize the hazards. A systematic investigation will be conducted to determine the extent of any equipment damage. Recovery operations are considered to be terminated when the plant has returned to pre-accident levels of radiation and contamination or to conditions, which are acceptable and controllable for an extended period of time.

Recovery operations that may result in the release of radioactive materials shall be evaluated by the Recovery Director. Such events and data pertaining to the release will be reported to the appropriate offsite emergency organizations and agencies.

In the final phase of the recovery operations, a restoration program will begin. The overall purpose of the restoration program is to prepare for resumption of full-power operations. This program will include a detailed incident analysis. Determinations will be made as to the repair work required to perform needed modifications to plant equipment and/or operating procedures. Repair work and approved modifications will be carried out as authorized. Test programs to confirm fitness and acceptability to return to service will be developed and executed.

Since no emergency is considered to exist during this time period, normal limits of radiation dose will be applied during the restoration. Compliance with the limits are the responsibility of the Recovery Director.

A recovery plan, must be flexible enough to adapt to existing, rather than theoretical, conditions. It is not possible to anticipate in advance all of the conditions that may be encountered in an emergency situation. Therefore, the DBNPS plan addresses some general principles that will serve as a guide for developing a flexible plan of action.

Specific members of the Recovery Organization will be selected based upon the sequence of events that preceded the recovery activities.

9.2.3 The following is a basic framework for the formation of a formal Recovery Organization. The reporting chain for the organization is outlined in Figure 9-1. This organization may be modified as necessary for any particular incident.

a. Recovery Director

The Recovery Director is responsible for directing the activities of the Recovery Organization, including the following:

1. Ensure that sufficient personnel from DBNPS and other organizations are available to support recovery.
2. Direct the development of a recovery plan and implementing procedures, as required.
3. Coordinate with the CNRB to ensure adequate review of engineering activities and proper review and approval of the recovery plan and implementing procedures.
4. Coordinate the deactivations of emergency response facilities and personnel as appropriate.
5. Coordinate the integration of available state and federal assistance into recovery activities.
6. Coordinate with offsite authorities, and provide support as required for offsite recovery activities.
7. Review all information released by the Public Information Organization.

b. Plant Recovery Manager:

1. Reports to the Recovery Director.
2. Coordinates the development and implementation of the recovery plans and procedures, under the direction of the Recovery Director.
3. Directs all onsite activities supporting of the recovery of DBNPS.

c. Radiation Protection Coordinator:

1. Reports to the Plant Recovery Manager.
2. Develop plans and instructions to process and control liquid, gaseous and solid wastes in a manner consistent with the recovery organizational goals.
3. Coordinate cleanup and repair activities, in such a manner as to ensure that dose to the workers is maintained as low as is reasonably achievable.
4. Estimate the total population dose, as necessary.
5. Develop plans for plant radiation surveys, sampling, and shielding in support of waste system processing, plant repairs, and design modification activities.
6. Designate members of Reentry/Recovery Team(s) dealing with onsite radiological aspects of the response.
7. Organize and coordinate actions of the Reentry Team.
8. Ensure teams are adequately briefed and equipped with the required protective gear, and are familiar with the radiological conditions and precautions for the area to be reentered.
9. Provide an interface between the teams and the Recovery Management to ensure reentry actions are approved and executed in accordance with instructions, and provide the teams with the required support.

d. Technical and Engineering Coordinator:

1. Reports to the Plant Recovery Manager.
2. Coordinate the development of plans and procedures in support of plant systems and operation activities.
3. Provide a central point for the collection, retention, retrieval and transmission of plant data.
4. Analyze problems, determine alternatives and develop plans in the recovery of system operations.
5. Designate members of Recovery Team(s) dealing with technical and engineering aspects of the plant.

e. Operations Coordinator:

1. Reports to the Plant Recovery Manager.
2. Direct recovery activities conducted by Operations personnel.
3. Provide recommendations to the Plant Recovery Manager regarding plant operations-related aspects of the recovery.

f. Maintenance Coordinator:

1. Reports to the Plant Recovery Manager.
2. Coordinate maintenance activities conducted in support of recovery.
3. Designate members of the Reentry team, as appropriate to support maintenance.

g. Offsite Recovery Assistant:

1. Reports to the Recovery Director.
2. Provides liaison with offsite agencies and coordinating DBNPS assistance with offsite recovery and assessment efforts, as requested.
3. Coordinates any ingestion pathway sampling DBNPS elects to do to supplement that performed by the state.
4. Coordinates the collection of other offsite radiological data, as required, in support of DBNPS recovery activities.

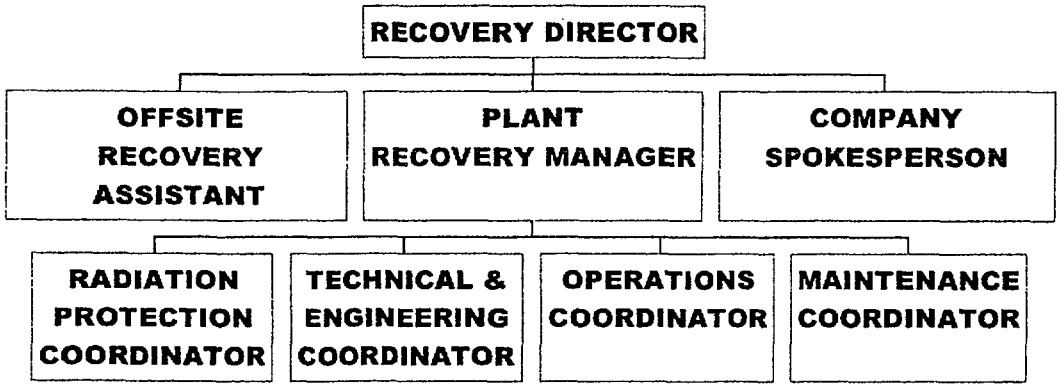
h. Company Spokesperson:

1. Reports to the Recovery Director.
2. Functions as the official spokesperson for the Company on all matters relating to the accident or the recovery.
3. Coordinates with non-Company public information groups (e.g., Ottawa County, Lucas County, OEMA, NRC, FEMA, etc.).
4. Interfaces with the news media.
5. Coordinates media monitoring and rumor control activities.

9.2.4 The Recovery Organization described herein represents the disciplines and areas of expertise that would typically be required to support recovery from a severe nuclear accident. The organization will be modified based upon the specific accident from which DBNPS is recovering.

FIGURE 9-1

Recovery Organization Framework



Appendix A

EMERGENCY PLAN IMPLEMENTING

PROCEDURE INDEX AND CROSS-REFERENCE

Emergency Plan Implementing Procedure Index and Cross-Reference

Implementing Procedures	Procedure Number	DBNPS Emergency Plan Section
1. Emergency Classification	RA-EP-01500	4.1
2. Unusual Event	RA-EP-01600	4.1.1
3. Alert	RA-EP-01700	4.1.2
4. Site Area Emergency	RA-EP-01800	4.1.3
5. General Emergency	RA-EP-01900	4.1.4
6. Emergency Management	RA-EP-02010	5.1, 5.2, 5.3
7. Emergency Notifications	RA-EP-02110	6.1.1, 7.5
8. ECC Activation and Response	RA-EP-02220	5.4.6, 6.1.2, 7.0, 7.2
9. Dose Assessment Center Activation and Response	RA-EP-02230	5.4.6, 7.2
10. Offsite Dose Assessment	RA-EP-02240	6.2
11. Protective Action Guidelines	RA-EP-02245	6.4
12. RMT Surveys	RA-EP-02250	6.2, 5.4.6
13. Radiological Controls in the DBAB	RA-EP-02260	6.4.1, 6.4.2, 7.2
14. Facilities Support	RA-EP-02270	7.0
15. TSC Activation and Response	RA-EP-02310	5.4.4, 7.2
16. Emergency Technical Assessment	RA-EP-02320	6.2
17. OSC Activation and Response	RA-EP-02410	5.4.5, 6.4.2, 7.1.2
18. Search and Rescue	RA-EP-02420	6.4.1
19. Emergency Security Activation and Response	RA-EP-02510	5.3.4, 5.4.4, 6.4.3
20. Assembly and Accountability	RA-EP-02520	6.4.1
21. Evacuation	RA-EP-02530	6.4.1
22. Offsite Personnel & Vehicle Monitoring & Decontamination	RA-EP-02550	6.4.1
23. Emergency RP Organization Activation and Response	RA-EP-02610	5.4.4, 5.4.5
24. Emergency Exposure Control and Potassium Iodide Distribution	RA-EP-02620	6.5.1, 6.5.2
25. Station Radiological Surveys and Controls During Emergencies	RA-EP-02640	5.4.5, 6.5
26. Reentry	RA-EP-02710	9.1
27. Recovery Organization	RA-EP-02720	9.2

Emergency Plan Implementing
Procedure Index and Cross-Reference

Off Normal Procedures	Procedure Number	DBNPS Emergency Plan Section
1. Medical Emergencies	RA-EP-02000	2.7, 5.7.2, 6.5.3
2. Preparation and Transport of Contaminated Injured Personnel	RA-EP-02800	2.7
3. Davis-Besse Emergency Telephone System	RA-EP-02805	2.7, 5.3.4
4. Emergency Helicopter Landing Zone	RA-EP-02807	2.7
5. Tornado	RA-EP-02810	2.6.5, 2.7.4, 7.9
6. Earthquake	RA-EP-02820	2.6.5, 2.7.4, 7.9
7. Flooding,	RA-EP-02830	2.6.5, 2.7.4, 7.9
8. Explosion	RA-EP-02840	2.6.5, 2.7.4, 7.9
9. Hazardous Chemical and Oil Spills	RA-EP-02850	2.6.5, 2.7.4, 7.9
10. Radiological Incidents	RA-EP-02861	2.6.5, 2.7.4, 7.9
11. Containment Evacuation	RA-EP-02864	2.7, 6.4.1
12. Station Isolation	RA-EP-02870	2.6.5, 2.7, 7.9
13. Internal Flooding	RA-EP-02880	2.6.5, 2.7, 7.9
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2. Emergency Plan Drill and Exercise Program	RA-EP-00200	2.7, 8.1.1
3. Emergency Planning Activity Scheduling System	RA-EP-00300	2.7,
4. Prompt Notification System Maintenance	RA-EP-00400	2.7, 7.7
5. Response to Prompt Notification System Malfunction	RA-EP-00420	2.7, 7.7
6. Maintenance of Emergency Plan Telephone Directory	RA-EP-00510	2.7, 7.5.3
7. Emergency Response Organization	RA-EP-00520	2.7, 6.1
8. Computerized Automated Notification System	RA-EP-00550	2.7, 7.5.1
9. Emergency Facilities and Equipment Maintenance Program	RA-EP-00600	2.7, 8.4
10. DBAB Emergency Response Facility Preventative Maintenance Program	RA-EP-00650	2.7, 8.4
11. Emergency Facilities Communications Monthly Test	RA-EP-04000	2.7, 8.1.2
12. Station Alarm Test	RA-EP-04001	2.7, 8.1.2
13. Communication System Quarterly Test	RA-EP-04002	2.7, 8.1.2
14. Computerized Automated Notification System Weekly Test	RA-EP-04003	2.7, 8.1.2
15. Emergency Facilities Communication Quarterly Test	RA-EP-04010	2.7, 8.1.2
16. Prompt Notification System Test	RA-EP-04400	2.7
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CROSS-REFERENCE

NUREG 0654	to	DB Emerg. Plan Section
A 1a		2.8, 5.7, Table 2.1
A 1b		5.1 - 5.7
A 1c		Table 2-1
A 1d		5.2
A 1e		5.1.2, 5.1.3, Table 5.1
A 2a		N/A
A 2b		N/A
A 3		App. C
A 4		5.0
B 1		5.3
B 2		5.2.1
B 3		5.2.1, 5.3.1-5.3.3
B 4		5.2.1
B 5		5.0, Table 5-1
B 6		Figure 6-2
B 7		Table 5-1, 5.6
B 7a		7.0
B 7b		7.2
B 7c		7.2
B 7d		7.2
B 8		5.7.4
B 9		5.7, App. C
C 1a		5.2.1, 6.1.6
C 1b		5.7.3
C 1c		7.5, 7.8
C 2a		N/A
C 2b		5.4.6
C 3		7.8.10-7.8.12
C 4		5.7, App. C
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D 2		Table 4-2
D 3		N/A
D 4		N/A
E 1		6.1, 7.5.2
E 2		6.1
E 3		6.1
E 4		6.0
E 5		N/A
E 6		6.4'
E 7		6.4
F 1a		7.5
F 1b		7.5
F 1c		7.5
F 1d		7.5
F 1e		6.1.2, 7.5.1
F 1f		7.5
F2		7.5.3, 7.7
F 3		8.1.2
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H 6b		7.8.11
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I 3a		Figure 4.1
I 3b		Table 4-3, Figure 4-1
I 4		Table 4.1
I 5		7.2, 7.8.8
I 6		7.8.8
I 7		7.8.11
I 8		7.8
I 9		7.8, Table 7-4
I 10		7.8
I 11		N/A

CROSS-REFERENCE

NUREG 0654	to	DB Emerg. Plan Section
J 1a		6.4.1
J 1b		6.4.1
J 1 c		6.4.1
J 1d		6.4.1
J 2		6.4.1
J 3		6.4.1, 6.4.3, 6.5.3
J 4		6.4.1, 6.5.3
J 5		6.4.1
J 6a		7.9
J 7		6.4.1
J 8		App. D
J 9		N/A
J 10a		App. D
J 10b		App. D
J 10c		7.7
J 10d		N/A
J 10e		N/A
J 10f		N/A
J 10g		N/A
J 10h		N/A
J 10i		N/A
J 10j		N/A
J 10k		N/A
J 10l		N/A
J 10m		6.4.1, Table 6-1 thru 6-6
J 11		N/A
J 12		N/A
K 1a		6.5.3
K 1b		6.5.1
K 1c		6.5.1
K 1d		6.5.3
K 1e		6.5.3
K 1f		6.5.4
K 1g		6.5.5
K 2		5.2.1, 6.5.1
K 3a		5.2.1
K 3b		6.1
K 4		N/A
K 5a		6.5.3
K 5b		6.5.3
K 6a		6.4.3
K 6b		6.4.3
K 6c		6.4.3
K 7		6.5.3
L 1		5.7.2, 6.5.4, 6.5.5
L 2		6.5.3
L 3		N/A
L 4		5.7.2, 6.5.4
M 1		9.1, 9.2
M 2		9.2, Figure 9-1
M 3		9.2
M 4		9.2.3.c.3
N 1a		8.1.2
N 1b		8.1.2
N 2a		8.1.2
N 2b		8.1.2
N 2c		8.1.2
N 2d		8.1.2
N 2 e(1)		8.1.2
N 2e (2)		8.1.2
N 3a		8.1.2
N 3b		8.1.2
N 3c		8.1.2
N 3d		8.1.2
N 3e		8.1.2
N 3f		8.1.2
N 4		8.1.2
N 5		8.1.2
0 1		8.1.1
0 1a		8.1.1
0 1b		N/A
0 2		8.1.1, 8.1.2
0 3		8.1.1, Table 8-1
0 4a		8.1.1
0 4b		8.1.1
0 4c		8.1.1
0 4d		8.1.1
0 4e		8.1.1
0 4f		8.1.1
0 4g		8.1.1
0 4h		8.1.1
0 4i		8.1.1
04j		8.1.1
0 5		8.1.1

CROSS-REFERENCE

NUREG 0654	to	DB Emerg. Plan Section	NUREG 0654	to	DB Emerg. Plan Section
P 1		Table 8-1	P 6		App. A, 8.3, Table of Contents
P 2		8.1.3	P 7		App. A
P 3		8.1.3, 8.3	P 8		App. A
P 4		8.3	P 9		8.3
P 5		8.3	P 10		7.5.3

Appendix B

Department of Energy Emergency Radiological Assistance Plan

for

Toledo Edison Company

Davis-Besse Nuclear Power Station

(Under Separate Cover)

Appendix C

SAMPLE LETTERS OF AGREEMENT

Contents

EMERGENCY RESPONSE AGREEMENT

This Agreement made and entered into by and between FirstEnergy (herinafter "Utility") and the Carroll Township Emergency Medical and Fire Service, Inc., in consideration of the following:

1. The Carroll Township Emergency Medical and Fire Service, Inc., (hereinafter "Service, Inc.") agrees to use equipment available to it to provide twenty-four hour emergency ambulance and fire protection for actual emergencies, drills and training activities at FirstEnergy, located within the jurisdictional boundary of Carroll Township, Ottawa County, Ohio, all subject to the actual emergency needs of the whole Township. When necessary to provide such actual emergency service, Service, Inc., will request any mutual aid or assistance, as may be necessary and that may be available from surrounding communities.
2. The Utility shall provide Service, Inc., with any supplies and additional equipment or modifications to current equipment that may be necessary, as determined in the sold judgment of the Utility, for Service, Inc., to fulfill its obligations hereunder or to meet the requirements of the Nuclear Regulatory Commission that may apply to this Agreement; if the necessary equipment is not provided to Service, Inc., by Utility, then the obligations hereunder required of Service, Inc., are waived and Service, Inc., shall not be required in any fashion to fulfill the obligations hereof, nor shall Service, Inc., be liable for failing to fulfill said obligations. Any equipment provided by the Utility to Service, Inc., shall be stored and maintained in the discretion of Service, Inc.
3. Further, the Utility agrees to assume all expense and costs of providing specialized training for participating personnel and support personnel as designated by Service, Inc. This training shall include an annual review of necessary emergency transportation procedures, equipment, supplies, annual training sessions and participation in periodic emergency drills. Service,

Inc., will submit invoices for reimbursement on a time and material basis which shall be promptly paid to Service, Inc., by the Utility.

4. Carroll Township Emergency Medical and Fire Service, Inc., agrees to make practice runs and/or drills in conjunction with exercises of the emergency plan as may be mutually agreed upon, but such agreement shall not be unreasonably withheld.

5. It shall be the responsibility of The Utility to protect and safeguard the personnel and equipment of Service, Inc., and any mutual aid responders, from radiation, and The Utility shall further be totally liable for and shall assume all costs of complete decontamination, repair and/or replacement of any and all property, damaged or destroyed, and the expenses and damages for persons injured or killed, in fulfillment of the obligations of this Agreement, regardless of what entity or person is injured or killed, or what entity or person is the owner of the damaged property; this shall be done promptly in order to avoid any interruption in fire and ambulance service to the community. However, in no event shall The Utility be required to replace or repair any property in excess of its prior fair market value. Further, The Utility shall not be liable for any cost of complete decontamination, repair and/or replacement of any and all property which is the result of sole active negligence of the Service, Inc.

6. Further, The Utility shall indemnify and hold Service, Inc., Carroll Township, the Board of Carroll Township Trustees, any other entity providing mutual aid response, and any and all persons associated with any such organizations, harmless from any and all liability for damages, expense, injuries or losses that may occur in the fulfillment of the obligations of this Agreement, except for nonradiological emergency ambulance and fire protection services. The Utility aforesaid indemnity and hold harmless agreement shall not be applicable to any liability caused by the sole activity negligence of Service, Inc., or any other mutual aid responder.

7. There shall be no charge for the aforesaid fire protection; however, the Utility shall pay the Carroll Township Emergency Medical and Fire Service, Inc., the rate of $60.00 per hour, for time from call until the ambulance is back in service, for emergency ambulance calls in excess of twelve per year.
8. This Agreement shall remain in effect until terminated in writing by either party (30) days prior to the effective date.

FirstEnergy	Carroll Township Emergency Medical and Fire Service, Inc.
By:	By:
By:	By:

STATE OF OHIO)
) SS:
COUNTY OF OTTAWA)

Be it remembered that on this 8th day of August, 2000, before me a Notary Public in and for said County, personally came Guy G. Campbell and _____, officers of FirstEnergy, who acknowledged the signing of the above Agreement as officers of FirstEnergy, on behalf of FirstEnergy, and by the authority of its Board of Directors, and that the Agreement is the voluntary act and deed of Guy G. Campbell and _____, as such officers, and the voluntary act and deed of FirstEnergy for the purposes stated therein.

IN TESTIMONY WHEREOF, I have hereunto subscribed by name and affixed my seal this 8th day of August, 2000.

Nora L. Flood

Notary Public – State of Ohio
My Commission expires Sept. 4, 2002.
Nora L. Flood

STATE OF OHIO)
) SS:
COUNTY OF OTTAWA)

Be it remembered that on this 23rd day of August, 2000, before me a Notary Public in and for said County, personally came Lowell Johannsen and Ed Dewitz, officers of Carroll Township Emergency Medical and Fire Service, Inc., who acknowledged the signing of the above Agreement as officers of Service, Inc., on behalf of Service, Inc., and by the authority of its Board of Directors, and that the Agreement is the voluntary act and deed of Lowell Johannsen and Ed Dewitz, as such officers, and the voluntary act and deed of the Service, Inc., for the purposes stated therein.

IN TESTIMONY WHEREOF, I have hereunto subscribed by name and affixed my seal this 23rd day of August, 2000.

Sharon K. Farrow exp 08-24-00
Notary Public – State of Ohio
My Commission expires August 24, 2000
Sharron Farrow

EKT 00-00625
E1.19.1

Magruder Hospital

615 Fulton Street
Port Clinton, Ohio 43452
(419) 734-3131, FAX (419) 732-8217

November 29, 2000

Mr. Patrick J. McCloskey
Supervisor – Emergency Preparedness
Davis-Besse Nuclear Power Station
5501 State Route 2, Mail Stop 3060
Oak Harbor, Ohio 43449-9760

Dear Mr. McCloskey:

This is to reaffirm our commitment of November 14, 1972 in that H.B. Magruder Memorial Hospital will accept casualties arising from radiation accidents at the Davis-Besse Nuclear Power Station.

It is understood that the FirstEnergy Company is financially responsible for any modifications of the existing hospital facility which may be required by regulations of the Nuclear Regulatory Commission or others, for the treatment of patients exposed to radioactive materials. This also includes training of hospital personnel as may be required, and for special equipment as may be necessary.

It is further understood that written procedures detailing the actions to be followed for the care of these patients will be implemented and that our personnel will continue to receive instructions regarding this plan of action and will make periodic "dry runs" as needed.

This agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

Sincerely,

David R. Norwine
President & CEO

DRN/pap

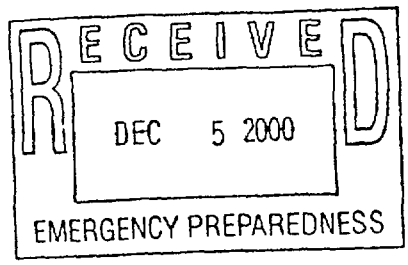
12/7/00
cc R. Strauss

OK7 00 00626
E1.19.1

ST. CHARLES
Mercy Hospital

2600 Navarre Avenue
Oregon, Ohio 43616
(419) 698-7200

30 November 2000



Mr. Patrick McCloskey
Supervisor - Emergency Preparedness
Davis-Besse Nuclear Power Station
5501 N. State Route 2, Mail Stop 3060
Oak Harbor, OH 43449-9760

Dear Mr. McCloskey,

This is to reaffirm our commitment, specified in our mutual agreement with First Energy, that St. Charles Hospital will accept casualties arising from radiation accidents at the Davis-Besse Nuclear Power Station.

It is understood that First Energy is financially responsible for any modifications of the existing hospital facility which may be required by regulations or other guidance of the Nuclear Regulatory Commission (NRC) or the Federal Emergency Management Agency (FEMA) for the treatment of patients exposed to radioactive materials. This also includes training of hospital personnel as may be required, and for special equipment as may be necessary.

It is further understood that written procedures detailing the actions to be followed for the care of these patients will be implemented and that our personnel will continue to receive instructions regarding this plan of action and will make periodic "dry runs" as needed.

This agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

Sincerely,

Sharon Belkofer

Sharon Belkofer, RN, CEN
Director Emergency Services

cc: Carol Whittaker, Metro Vice President Patient Services

12/5/00 cc J. M. Teal

EKT 01-00053
E1.19.1

January 26, 2001

MEMORIAL
HOSPITAL

715 SOUTH TAFT AVENUE
FREMONT, OHIO 43420
419 332-7321

Mr. Patrick J. McCloskey
Supervisor - Emergency Preparedness
Davis-Besse Nuclear Power Station
5501 State Route 2, Mail Stop 3060
Oak Harbor, Ohio 43449-9760

Dear. Mr. McCloskey:

This letter reaffirms our commitment of June 30, 1998, that Memorial Hospital will accept casualties arising from radiation accidents at the Davis-Besse Nuclear Power Station.

It is understood that FirstEnergy is financially responsible for any modifications to the existing hospital facility which may be required for regulations of the Nuclear Regulatory Commission or others, for the treatment of patients exposed to radioactive materials. This also includes training of hospital personnel as may be required and for special equipment as may be necessary.

It is further understood that written procedures detailing the actions to be followed for the care of these patients will be implemented and that our personnel will continue to receive instructions regarding this plan of action and will make periodic "dry runs" as needed.

This agreement shall remain in effect until terminated in writing by either party thirty (30) days prior to the effective date.

Sincerely,

John A. Gorman/pc

John A. Gorman, CEO

1/31/01
cc RWS/DSG

JAG:pc
cc: Safety Committee
Jerome McTague, Medical Director, Emergency Department

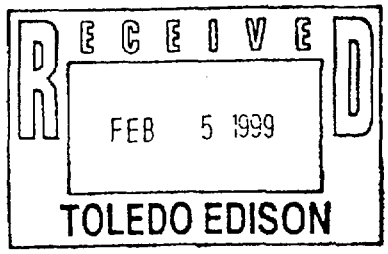
INPO

Institute of
Nuclear Power
Operations

700 Galleria Parkway, NW
Atlanta, GA 30339-5957
770-644-8000
FAX 770-644-8549

February 2, 1999

EXT-99-00086



Mr. Michael Brees
Senior Staff Advisor
Perry Nuclear Power Plant
FirstEnergy Corp.
P. O. Box 97
Perry, OH 44081

Dear Mr. Brees:

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 86-032. 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) 644-8210.

Sincerely,

James R. Morris
Vice President and Director
Plant Operations Division

JRM:ss

cc: Mr. John P. Stetz
Mr. James L. Freels
Mr. Vernon K. Higaki
Mr. James H. Syrowski
Mr. Sigval M. Berg

Appendix D

Supporting Documents

(Under Separate Cover)

FIRSTENERGY CORPORATE EMERGENCY RESPONSE PLAN

EVACUATION TIME ESTIMATES

THE OHIO PLAN FOR RESPONSE TO RADIATION
EMERGENCIES AT LICENSED NUCLEAR FACILITIES

OTTAWA COUNTY PLAN FOR RESPONSE TO
RADIATION EMERGENCIES AT LICENSED NUCLEAR FACILITIES

LUCAS COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN

Davis-Besse Nuclear Power Station

EMERGENCY PLAN IMPLEMENTING PROCEDURE

RA-EP-02245

Protective Action Guidelines

REVISION 03

Prepared by: B. W. Cope

Procedure Owner: Manager, Regulatory Compliance

Effective Date: JUN 0 8 2005

Procedure Classification:

X Safety Related

_____ Quality Related

_____ Non-Quality Related

LEVEL OF USE:

IN-FIELD REFERENCE

TABLE OF CONTENTS

1.0 PURPOSE

1.1 This procedure defines specific guidelines for determining protective action recommendations for emergencies involving abnormal releases of radioactivity at the Davis-Besse Nuclear Power Station (DBNPS).

2.0 REFERENCES

2.1 Developmental

2.1.1 U.S. Food and Drug Administration, Federal Register, Vol. 47, No. 205, Oct. 22, 1982

2.1.2 NRC IE Information Notice No. 83-28: Criteria for Protective Action Recommendations for General Emergencies, dated May 4, 1983.

2.1.3 EPA-400-R-92-001, May 1992, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents

2.1.4 Anno, George, Dore, and Michael: The Effectiveness of Sheltering as a Protective Action Against Nuclear Accidents Involving Gaseous Releases, EPA 520/I-78- 001A, April 1978.

2.1.5 SAND 77-1725, Public Protection Strategies for Potential Nuclear Reactor Accidents – Sheltering Concepts with Existing Public and Private Structures.

2.1.6 Davis-Besse Nuclear Power Station Emergency Plan.

2.1.7 Regulatory Information Summary (RIS) 2003-12, NRC Regulatory Issue Summary 2003-12: Clarification of NRC Guidance for Modifying Protective Actions

2.1.8 KLD Associates, Inc., "Development of Evacuation Time Estimates for Davis-Besse Nuclear Power Station", Revision 5, February 2003.

2.1.9 NEI Position Paper, Range of Protective Actions for Nuclear Power Plant Incidents, July, 2004.

2.1.10 Regulatory Information Summary (RIS) 2002-16, Current Incident Response Issues

2.1.11 Regulatory Information Summary (RIS) 2004-13, Consideration of Sheltering in Licensee's Range of Protective Action Recommendations

2.2 Implementation

2.2.1 RA-EP-02110, Emergency Notification

2.2.2 RA-EP-02240, Offsite Dose Assessment

2.2.3 RA-EP-02520, Assembly and Accountability

2.2.4 RA-EP-02530, Evacuation

2.2.5 RA-EP-02620, Emergency Dose Control and Potassium Iodide Distribution

3.0 DEFINITIONS

3.1 ALARA – As Low As Reasonably Achievable, means making every reasonable effort to maintain exposures to radiation as far below the dose limits in 10CFR20 as is practical and consistent with the purpose for which the licensed activity is undertaken.

3.2 COMMITTED DOSE EQUIVALENT (CDE) – The dose equivalent to organs or tissues that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

3.3 CORE MELT SEQUENCE – A situation in which the core could be uncovered and there is no means for restoring cooling to the core. Without cooling, overheating and melting of the fuel will occur.

3.4 DADS – The Data Acquisition and Display System is a computerized system, which provides plant parameters, meteorology data, dose calculations, and other related programs.

3.5 EMERGENCY PLANNING ZONE (EPZ) – The two zones that are established around a nuclear power station in which predetermined protective actions plans are needed.

3.5.1 The first zone has an approximate radius of 10 miles for the plume exposure pathway.

3.5.2 The second zone has an approximate radius of 50 miles for the ingestion exposure pathway.

3.6 EVACUATION DOSE – The dose that a potential evacuee would receive if he or she were openly exposed during the evacuation.

3.7 EVACUATION EXPOSURE PERIOD – The period during which those people being evacuated are exposed to the radioactive plume.

3.8 EXPOSURE TIME – That period of time during which the offsite population will be exposed to radiation as a result of an airborne radioactive release.

3.9 KI FOR THE GENERAL PUBLIC - Recommending potassium iodide (KI) for the general public is the responsibility of the State of Ohio Department of Health. The station will recommend to the State administrating KI in accordance with State procedures upon declaration of a General Emergency.

3.10 LAKE BREEZE – A meteorological condition that may occur on clear, sunny days. During a lake breeze, a radioactive release can travel inland, rise, reverse course in an overhead return flow, and then return to land in a convoluted path.

3.11 MINIMUM RADIOACTIVE RELEASE PROTECTIVE ACTION RECOMMENDATIONS (PAR) – At a minimum a PAR will be issued for Subarea 1, Subarea 12, and affected downwind subareas within five miles AND advise the general public to take KI in accordance with the Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities.

3.12 OFFSITE – Any area outside the Owner Controlled Area surrounding Davis-Besse Nuclear Power Station.

3.13 PUFF (SHORT DURATION) RELEASE – A radioactive release of less than one hour duration.

3.14 RELEASE - A release is defined as a radiological release attributable to the emergency event. Two levels of radiological release exist:

a. A minor unplanned release below levels that require offsite Protective Action Recommendations.

b. A release that requires offsite Protective Action Recommendations.

3.15 SAFETY PARAMETER DISPLAY SYSTEM (SPDS) – The SPDS is a group of graphic displays developed to assist with monitoring plant operations.

3.16 SECTOR – One of the 16 areas bounded by radii 22½ degrees apart into which the 10-mile EPZ is divided. Sectors are designated by the Letters A through P, excluding I and O. Sector A is north, E is East, J is south, and N is west.

3.17 SHELTERING – The use of a structure for radiation protection from an airborne plume and from deposited radioactive material. A wood frame home without a basement is the assumed structure for sheltering in the Davis-Besse EPZ.

3.18 TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE) – The sum of the deep-dose equivalent (for external exposure) and the Committed Effective Dose Equivalent (for internal exposure).

4.0 RESPONSIBILITIES

4.1 The Emergency Director is responsible for directing protective actions for Station personnel and recommending protective actions to offsite officials for the Plume Exposure Pathway (10-mile EPZ).

4.2 The Dose Assessment Coordinator is responsible for collecting and analyzing offsite dose assessment data used to provide the basis for protective action recommendations.

5.0 INITIATING CONDITIONS

Initiate this procedure when a declared emergency has the potential for an abnormal release of radioactivity.

6.0 PROCEDURE

6.1 Onsite Protective Actions

6.1.1 The Emergency Director shall initiate the necessary actions to protect DBNPS personnel.

a. Evacuate personnel in accordance with RA-EP-02530, Evacuation.

b. Account for personnel in accordance with RA-EP-02520, Assembly and Accountability.

c. Distribute potassium iodide in accordance with RA-EP-02620, Emergency Dose Control and Potassium Iodide Distribution.

6.1.2 All supervisors shall ensure that appropriate safety and ALARA precautions are implemented.

NOTE 6.2

- ANY CONDITION THAT JUSTIFIES ISSUING AN OFFSITE PROTECTIVE ACTION REQUIRES A GENERAL EMERGENCY DECLARATION.
- Offsite Protection Action Recommendations shall be made with initial notification of a General Emergency.
- Davis-Besse will always recommend EVACUATION of Subarea 12 (Lake Erie) and when appropriate Subarea 10 (Wildlife area) due to lack of shelters in these areas.
- A SHELTERING PAR will **NOT** be issued for any subarea in which an EVACUATION PAR has already been recommended.

6.2 Offsite Protective Actions

6.2.1 Complete Attachment 1 to determine recommended PAR.

CAUTION 6.2.2
Protective Action Recommendations once issued start in motion a sequence of events in the 10-mile emergency planning zone that, if modified, have the potential to cause confusion that may hamper the orderly implementation of protective actions for the general public.

6.2.2 Notify offsite agencies and the NRC of the PARs and the affected subareas using RA-EP-02110, Emergency Notification, and Initial Notification Form, DBEP-010.

a. **IF** these are revised PARs
THEN DO NOT downgrade a previously issued PAR for a specific subarea until the conditions that caused the PAR to be issued are fully under control. The new PAR should include those subareas that were previously evacuated or sheltered and any new subareas.

b. **IF** a lake breeze is occurring, the wind direction is unknown, or the wind direction is from between 162° and 277°,
THEN inform the NRC that the release may enter Canadian territory.

c. **IF** TEDE doses are $\geq$ 1 Rem or thyroid dose $\geq$ 5 Rem are projected beyond 10 miles,
THEN coordinate with state and county officials to determine appropriate PAR.

6.2.3 As Radiation Monitoring Team (RMT) data becomes available, compare it to dose projections and verify that Protective Action Recommendations are adequate.

6.3 Continue to monitor radiological and meteorological conditions, and repeat Steps 6.1 and 6.2 as required.

7.0 FINAL CONDITIONS

Terminate this procedure when the Emergency Director, and offsite agencies determine that dose assessment and protective actions are no longer necessary.

8.0 RECORDS

8.1 The following quality assurance records are completed by this procedure and shall be listed on the Nuclear Records List, captured, and submitted to Nuclear Records Management in accordance with NG-NA-00106:

8.1.1 None

8.2 The following non-quality assurance records are completed by this procedure and may be captured and submitted to Nuclear Records Management, in accordance with NG-NA-00106:

8.2.1 None

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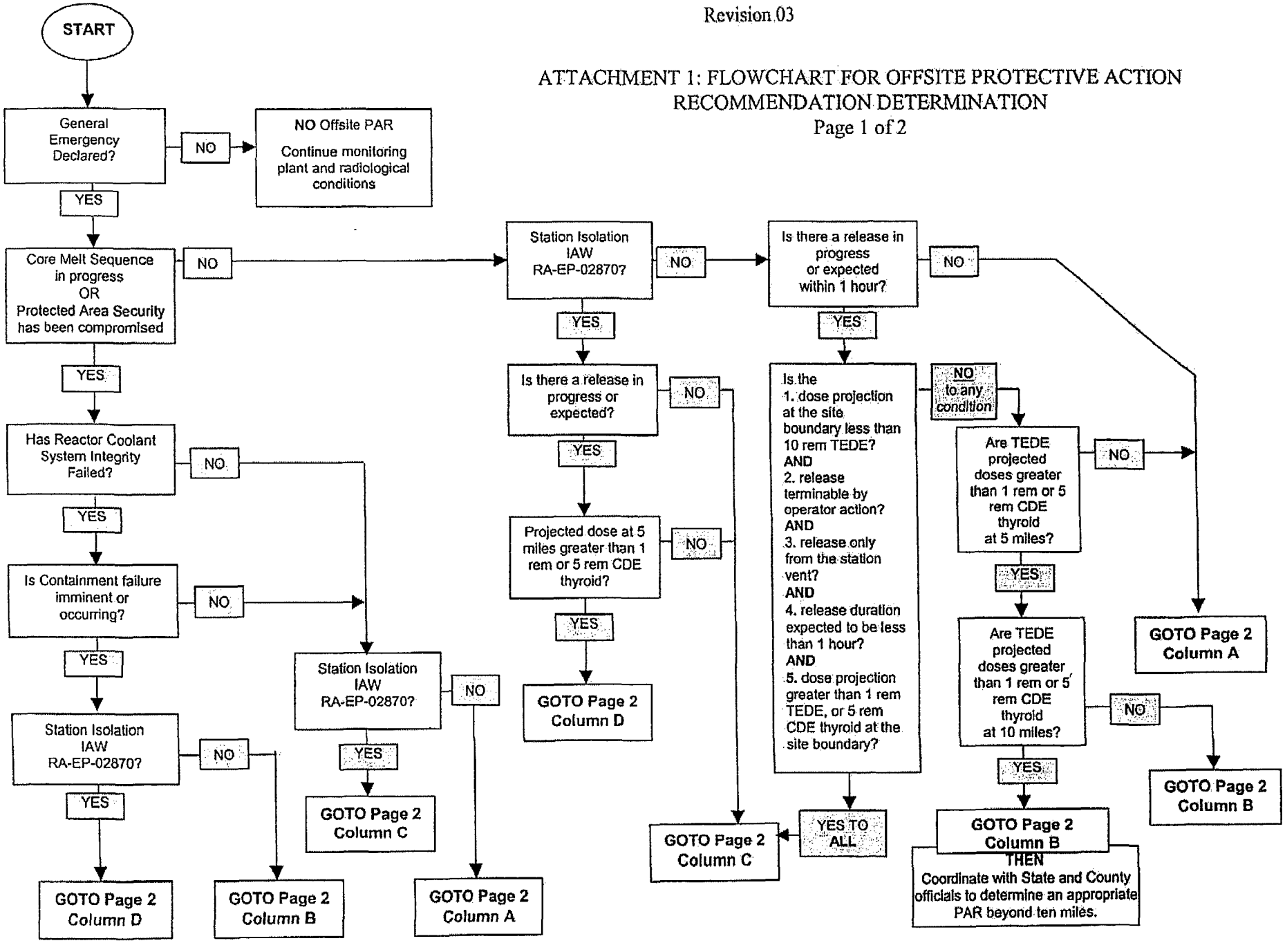
ATTACHMENT 1: FLOWCHART FOR OFFSITE PROTECTIVE ACTION RECOMMENDATION DETERMINATION

Page 1 of 2



ATTACHMENT 1: FLOWCHART FOR OFFSITE PROTECTIVE ACTION RECOMMENDATION DETERMINATION

Evacuate

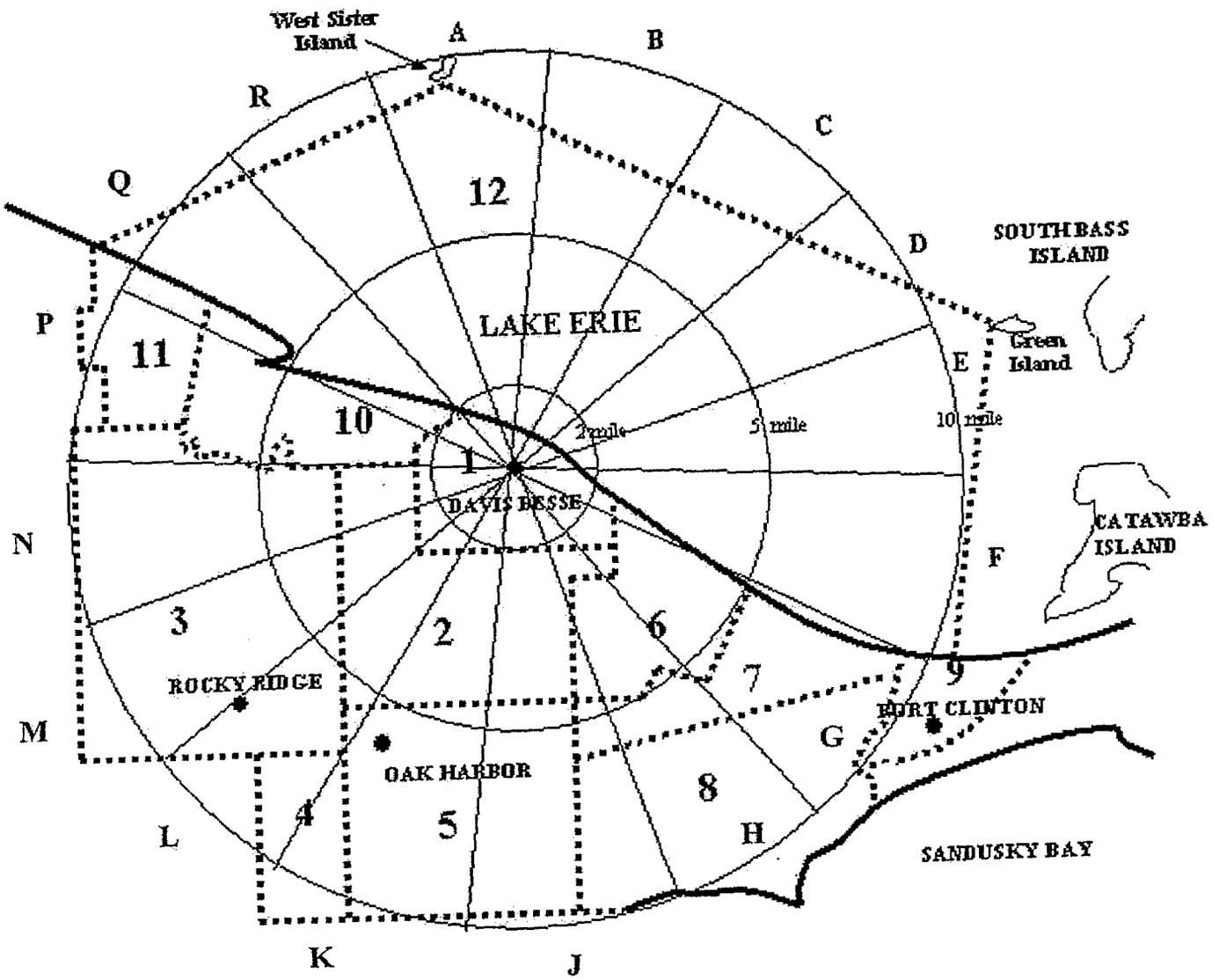
Wind Direction From	A 2-Mile Radius & 5-Miles Downwind Subareas	B 5-Mile Radius & 10-Miles Downwind Subareas
Unknown or Lake Breeze	1, 2, 6, 10, 12	ALL Subareas
141° to 278°	1, 12	1, 12
279° to 286°	1, 6, 12	1, 6, 7, 9, 12
287° to 293°	1, 6, 12	1, 6, 7, 8, 9, 12
294° to 330°	1, 2, 6, 12	1, 2, 6, 7, 8, 9, 12
331° to 005°	1, 2, 6, 12	1, 2, 5, 6, 7, 8, 12
006° to 013°	1, 2, 6, 12	1, 2, 4, 5, 6, 7, 8, 12
014° to 020°	1, 2, 12	1, 2, 4, 5, 12
021° to 065°	1, 2, 12	1, 2, 3, 4, 5, 12
066° to 072°	1, 2, 12	1, 2, 3, 4, 12
073° to 078°	1, 2, 10, 12	1, 2, 3, 10, 12
079° to 117°	1, 2, 10, 12	1, 2, 3, 10, 11, 12
118° to 122°	1, 10, 12	1, 3, 10, 11, 12
123° to 140°	1, 10, 12	1, 10, 11, 12

Once the PAR and subareas are selected **GOTO** Step 6.2.2

Shelter/Evacuate

Wind Direction From		C 2-Mile Radius & 5-Miles Downwind Subareas	D 5-Mile Radius & 10-Miles Downwind Subareas
Unknown or Lake Breeze	Shelter	1, 2, 6	1, 2, 3, 4, 5, 6. 7, 8, 9, 11
	Evacuate	10, 12	10, 12
141° to 278°	Shelter	1	1
	Evacuate	12	12
279° to 286°	Shelter	1, 6	1, 6, 7, 9
	Evacuate	12	12
287° to 293°	Shelter	1, 6	1, 6, 7, 8, 9
	Evacuate	12	12
294° to 330°	Shelter	1, 2, 6	1, 2, 6, 7, 8, 9
	Evacuate	12	12
331° to 005°	Shelter	1, 2, 6	1, 2, 5, 6, 7, 8
	Evacuate	12	12
006° to 013°	Shelter	1, 2, 6	1, 2, 4, 5, 6, 7, 8
	Evacuate	12	12
014° to 020°	Shelter	1, 2	1, 2, 4, 5
	Evacuate	12	12
021° to 065°	Shelter	1, 2	1, 2, 3, 4, 5
	Evacuate	12	12
066° to 072°	Shelter	1, 2	1, 2, 3, 4
	Evacuate	12	12
073° to 078°	Shelter	1, 2	1, 2, 3
	Evacuate	10, 12	10, 12
079° to 117°	Shelter	1, 2	1, 2, 3, 11
	Evacuate	10, 12	10, 12
118° to 122°	Shelter	1	1, 3, 11
	Evacuate	10, 12	10, 12
123° to 140°	Shelter	1	1, 11
	Evacuate	10, 12	10, 12

ATTACHMENT 2: COMPARISON OF OFFSITE SECTORS AND SUBAREAS
Page 1 of 1



COMMITMENTS

Step Number	Reference	Comments
Attachment 2	O 13602	Depiction of both 22.5° sectors and evacuation subareas
Attachments 1	O 13523	Combination of subareas 1 and 12 for protective action recommendations
Attachment 1	O 13592	Release duration considered in projected dose calculations
Attachment 1	O 13645	Automatic recommendation to evacuate "keyhole"
Attachments 2	O 13920	Combine Subareas 1, 8, and 11 of Evacuation Sector Map (Note: Original Lake subareas were 8 - 13. Subarea 12 now includes all of Lake Erie within 10-miles of the station. The area within 2 miles of the station is described by Subarea 1 (Land) and Subarea 12 (Lake Erie)
Attachment 2	O 13684	Large scale EPZ map same as this attachment
6.2.2.b	O 14992	Protective Action decisions during Lake Breeze
Attachment 1	O 13584	Provide sufficient guidance to make appropriate Protective Action Recommendations
Entire Procedure	Q 00780	Procedure for determining protective measures during an emergency
6.2.2.a	O 20716	RIS 2003-12, Clarification of NRC Guidance for Modifying Protective Action guidance for changing offsite protective action was incorporated. (CR 03-06439)
Attachment 1		RIS 2004-13, Consideration of Sheltering in Licensee's Range of Protective Action Recommendations

Davis-Besse Nuclear Power Station

EMERGENCY PLAN OFFNORMAL OCCURRENCE PROCEDURE

RA-EP-02870

STATION ISOLATION

Revision 02

Prepared by: Craig Stachler

Procedure Owner: Manager - Security

Effective Date: NOV 13 2002

Procedure Classification:

_____ Safety Related

_____ Quality Related

_X_ Non-Quality Related

LEVEL OF USE:

IN-FIELD REFERENCE

TABLE OF CONTENTS

1.0 PURPOSE

This procedure describes measures to be taken if the Davis-Besse Nuclear Power Station (DBNPS) is or is likely to become isolated.

2.0 REFERENCES

2.1 Developmental

2.1.1 Davis-Besse Nuclear Power Station (DBNPS) Emergency Plan

2.1.2 Emergency Plan Telephone Directory

2.1.3 Human Resources Letter 513: Pay in Adverse Weather/Emergency Situations

2.2 Implementation

2.2.1 NOP-LP-1002, Fitness for Duty Program

2.2.2 RA-EP-00600, Emergency Facilities and Equipment Maintenance Program

3.0 DEFINITIONS

3.1 ADVERSE WEATHER CONDITIONS - Weather conditions which can disrupt normal vehicular transportation to and from DBNPS. These conditions are primarily winter storms and flooding.

3.2 CONTINUOUS STATION ISOLATION PREPARATIONS - Actions taken in advance to minimize discomfort for persons who are stranded at DBNPS. These preparations include storage and maintenance of isolation supplies and the staging of Isolation Supply Trailers.

3.3 ISOLATION WATCH - Adverse weather has formed and is approaching the area.

3.4 ISOLATION WARNING - A formal notice that DBNPS may be isolated from normal vehicular transportation by adverse weather conditions.

3.5 STATION ISOLATION - DBNPS will be considered isolated when normal vehicular transportation to and from the station is no longer possible.

3.6 ISOLATION SUPPLY TRAILER(S) - Three trailers contain basic supplies for 50 people for two days; and one trailer contains supplies for 100 people for two days.

3.7 STAGING - The act of relocating one or more of the Station Isolation Supply Trailers in preparation for use.

3.8 EMERGENCY VEHICLES - Any vehicle which may be utilized during an emergency (salt truck, ski-dozer, etc.).

3.9 DISMISS - As used in this procedure, dismissed personnel are not required for continued station operation. Dismissed personnel may stay at DBNPS or they may leave if they wish.

4.0 RESPONSIBILITIES

4.1 The Supervisor - Emergency Preparedness shall maintain food supplies and sleeping facilities as defined in RA-EP-00600, Emergency Facilities and Equipment Maintenance Program.

4.2 The Shift Manager is responsible for declaring Isolation Watches, Warnings and Station Isolations when weather conditions necessitate these declarations.

4.3 Other positions with responsibilities in this procedure are: The Emergency Plant Manager, the Shift Engineer, the Supervisor - Security Shift, and the Isolation Coordinator.

4.4 Davis-Besse Nuclear Power Station Personnel:

a. should monitor local television and radio stations for weather and road conditions.

b. shall not contact the Control Room for weather and road reports.

c. shall carry their Company identification card whenever performing Company business.

d. are responsible for leaving their work area in a safe condition.

5.0 INITIATING CONDITIONS

This procedure shall be utilized by the Shift Manager during station isolation. Station isolations are typically caused by adverse weather conditions such as snow storms, ice storms, and flooding.

6.0 PROCEDURE

NOTE 6.1

1. An Isolation Watch is used to increase station and On Call Management's awareness of the potential for adverse offsite road conditions, and to prestage equipment and personnel.

2. Refer to Attachment 4, Terms Commonly Used During Adverse Weather Conditions.

6.1 Isolation Watch

6.1.1 The Shift Manager and Emergency Plant Manager, utilizing available information, evaluate projected severe weather conditions which may impact access to station.

Note: Available Information Sources are:

- Distribution Dispatcher (Delaware Service Center)
- System Dispatcher (System Operation Center)
- Periodic weather reports received on Control Room fax machine
- Local weather reports
- Reports from staff
- Other

6.1.2 If the assessment determines that projected weather may impact access, the following should occur:

a. Evaluate consumable resources: fuel oil, compressed gases, gasoline, etc., necessary for continued plant operation and, as appropriate, arrange delivery prior to the storm.

b. Ensure proper staging of an Isolation Supply Trailer as needed for the Protected Area. Primary staging for the Protected Area is the north side of Service Building 6. Consideration should be given to staging the trailer out of the weather if possible (inside Service Building 6 or the Turbine Building Train Bay).

c. Fuel and shelter designated emergency vehicles, e.g., snow plows.

d. Notify the following continuous service personnel: Maintenance, Security, Radiation Protection and Chemistry.

NOTE 6.1.2.e

1. Call-outs of personnel are subject to the requirements of NOP-LP-1002, Fitness for Duty Program.
2. As appropriate, establish conference calls between selected personnel.

e. Evaluate plant needs and place on standby those personnel which may be called in. At a minimum, call in the following on-call personnel when an isolation warning is issued:

- Emergency Plant Manager
- Emergency Assistant Plant Manager
- Emergency Offsite Manager

6.2 Isolation Warning

6.2.1 When the Distribution Dispatcher (Delaware Service Center), the System Dispatcher (System Operation Center) or any other credible source indicates that weather conditions will impact or are impacting station access to the point that conditions will result in a Station Isolation the Shift Manager shall:

a. Issue an Isolation Warning with the concurrence of the Emergency Plant Manager.

NOTE 6.2.1.b

1. Call-outs of personnel are subject to the requirements of NOP-LP-1002, Fitness for Duty Program.
2. As appropriate, establish conference calls between selected personnel.

b. Call in the Emergency Plant Manager (EPM), Emergency Offsite Manager (EOM), and the Emergency Assistant Plant Manager . The EOM and EPM may elect to call in additional staff.

c. Call in or retain Operations, Security, Radiation Protection, Chemistry and Maintenance personnel.

d. Notify all personnel on the Integrated On Call Report of the Isolation Warning.

e. Notify the Supervisor - Security Shift of the Isolation Warning.

f. Appoint an Isolation Coordinator to assist the Shift Manager by maintaining a current status of activities associated with the isolation. Ordinarily the EOM is appointed Isolation Coordinator upon arrival at the site.

6.2.2 The Supervisor - Security Shift shall:

a. As appropriate, seek information from personnel reporting to the Station as to the road conditions.

b. Establish contacts with local law enforcement agencies to gather information on road conditions.

c. Periodically advise the Shift Manager as to current road conditions.

6.2.3 The Shift Manager or designee shall:

a. Ensure proper staging of an Isolation Supply Trailer as needed for the Protected Area. Primary staging for the Protected Area is the north side of Service Building 6. Consideration should be given to staging the trailer out of the weather if possible (inside Service Building 6 or the Turbine Building Train Bay).

b. Ensure proper staging of two Isolation Supply Trailers as needed for the Owner Controlled Area. Primary staging for the Owner Controlled Area is the east parking lot between the Davis-Besse Administration Building and the Davis-Besse Administration Building Annex.

c. Ensure emergency vehicles and snow removal equipment are ready for use, as appropriate.

d. If station warning is due to snow, ensure that Maintenance Services personnel keep station roadways accessible.

6.2.4 The Emergency Plant Manager should:

a. Confer with the On Call Emergency Director to determine the disposition of non-essential personnel. The following issues should be considered:

1. Staffing requirements for continuous station operation.

2. Staffing requirement for the Emergency Response Organization.

b. IF non-essential personnel are to be dismissed,
THEN, Human Resources Letter 513, Pay in Adverse Weather/Emergency Situations, should be reviewed. An appropriate message should then be prepared and communicated to non-essential employees.

NOTE 6.2.5

1. The need and ability to arrange for transportation is dependent upon the duration and severity of the storm, and the need for personnel. In some cases, it may be more appropriate from a personnel safety perspective to wait out the storm.

2. Call-outs of personnel are subject to the requirements of NOP-LP-1002, Fitness for Duty Program.

3. As appropriate, establish conference calls between selected personnel.

4. Utility employees with a valid Company Identification Card are permitted to travel "closed roads" when performing Company business or when returning directly home from work. As always, personnel should exercise good judgment when traveling on weather impacted roads.

6.2.5 The Isolation Coordinator shall:

a. Use Attachment 1, Minimum Supplemental Station Isolation Staffing, and the Emergency Plan Telephone Directory, to assure the minimum staffing is called in.

b. Arrange transportation for required staff members that can not reach the Station. Transportation resources should be considered in the following order:

1. Station resources

- 4 Wheel Drive Vehicles
- Various Trucks
- Ski-dozer

2. First Energy resources

- Materials/Fleet Management Director

c. Contact personnel to advise them of the location of the pickup point. Contacted personnel shall be informed of the impending isolation, and should be told to prepare to remain onsite for several days.

d. Arrange for staging of Protected Area and Owner Controlled Area Isolation Supply Trailers.

e. Coordinate eating and sleeping arrangements for all isolated personnel with the On Call Emergency Facilities Services Manager (Owner Controlled Area) and the Shift Engineer (Protected Area), as appropriate.

6.3 Station Isolation

NOTE 6.3.1

Flooding is a local problem which generally affects all access routes, winter weather may only impact employees in a given community.

6.3.1 When vehicle access to the plant is no longer possible, the Shift Manager shall:

a. Declare station isolation based on the current weather conditions and with the concurrence of the Emergency Plant Manager.

b. Make an announcement over the Gaitronics advising all station personnel of the station isolation.

c. Develop a shift schedule utilizing all available personnel based on the estimated duration of the station isolation.

d. Notify the NRC if the isolation is considered to be a reportable condition under 10 CFR 50.72(b)(1)(v). At a minimum this notification should occur if minimum staffing of the Emergency Response Organization has been called for, and the isolation has lasted longer than four hours. The On Call NRC Liaison should be consulted, as appropriate.

e. Evaluate ongoing and planned work activities and, as appropriate, suspend work which has the potential to impact plant operations.

6.3.2 The Isolation Coordinator shall:

a. Establish a center to collect information and station a communicator.

b. Advise the Shift Manager, Emergency Plant Manager and Emergency Assistant Plant Manager of your location and keep them informed as to the isolation status.

c. Contact each office area in the Owner Controlled Area and advise personnel to keep you appraised as to the number of personnel present in the structure.

d. Supervise issue of supplies from Isolation Supply Trailers for the Protected Area and the Owner Controlled Area using Attachment 3, Inventory Sign Out/Sign In Checklist located in each trailer, as appropriate.

e. Coordinate use of the berthing areas in the DBAB.

6.3.3 The Isolation Coordinator should coordinate the recovery effort to establish priorities following the isolation.

a. Shift relief and staff augmentation

b. Re-establishment of site access and parking

c. Additional and replacement material, as needed.

6.4 Deactivation

6.4.1 The Shift Manager shall contact the Emergency Plant Manager and obtain concurrence to deactivate Station Isolation.

6.4.2 The Shift Manager, when the isolation is terminated, shall:

a. Notify the Supervisor - Security Shift that the isolation is terminated.

b. Return shiftworkers to their normal hours and rotation.

c. Release extra personnel from duty.

d. Advise NRC that Station Isolation has been deactivated.

6.4.3 The Isolation Coordinator shall:

a. Ensure that all equipment is returned to the appropriate Isolation Supply Trailer(s) for the Protected Area.

b. Forward all Inventory Sign Out/Sign In sheets to the Supervisor - Emergency Preparedness.

6.4.4 The Supervisor - Security Shift shall:

a. Reevaluate Security staffing and return to normal as appropriate.

6.4.5 The Isolation Coordinator shall:

a. Ensure that all equipment is returned to the appropriate Isolation Supply Trailer(s) for the Owner Controlled Area.

b. Forward all Inventory Sign Out/Sign In Checklist sheets to the Supervisor - Emergency Preparedness.

6.4.6 The Supervisor - Emergency Preparedness shall:

a. Inventory all Isolation Supply Trailers in accordance with RA-EP-00600, Emergency Facilities and Equipment Maintenance Program.

b. Order/replenish immediately all supplies needed to restock all Isolation Supply Trailers to ensure a continuous state of readiness.

c. Ensure restaging of Isolation Supply Trailers to specified locations.

d. Ensure any soiled linen is laundered and replaced in the appropriate Isolation Supply Trailer(s).

7.0 FINAL CONDITIONS

Normal access to the Station has been restored, extra personnel have been released, normal shift manning restored housekeeping supplies inventoried and stored, and replacement supplies ordered.

8.0 RECORDS

8.1 The following quality assurance records are completed by this procedure and shall be listed on the Nuclear Records List, captured, and submitted to Nuclear Records Management in accordance with NG-NA-00106:

8.1.1 None

8.2 The following non-quality assurance records are completed by this procedure and may be captured and submitted to Nuclear Records Management, in accordance with NG-NA-00106.

8.2.1 None

ATTACHMENT 1: MINIMUM SUPPLEMENTAL STATION ISOLATION STAFFING

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Required*	Recommended	
		Control Room
1		Shift Manager
1		Unit Supervisor
2		Reactor Operators
2	5	Equipment Operators
1		Emergency Assistant Plant Manager (as required by Technical Specifications)
5		Fire Brigade Team
1	2	First Aid Team
		Operations Support Center (OSC)
1		OSC Manager
1	2	Chemistry Tester
	1	OSC Briefer
2		Mechanical Maintenance Personnel
2		I&C Technicians
2		Electrical Maintenance Personnel
	1	OSC Materials Manager
1		OSC RP Coordinator
5		RP Testers
	2	Maintenance Services Personnel
		Technical Support Center (TSC)
	1	Emergency Plant Manager
1		TSC Engineer Manager
1		Core/Thermal Hydraulic Engineer
1		I&C System Engineer
1		Electrical Engineer
1		Mechanical Engineer
	4	Operations Engineer
	1	Computer Technician
	1	Emergency RP Manager
	1	Emergency Security Manager
	1	DBAB Access Security Supervisor
		Emergency Control Center/Emergency Operations Facility (ECC/EOF)
1		Emergency Director
1		Emergency Offsite Manager
1		Emergency Planning Advisor
1		Dose Assessment Coordinator
	1	Dose Assessor
	1	RMT Coordinator
	1	RTL Coordinator
3	6	Radiological Monitoring Team Personnel
1		NRC Liaison
1		State/County Communicator
1		Emergency Facilities Manager

* Required in accordance with the DBNPS Emergency Plan Table 5-1

ATTACHMENT 2: EMERGENCY VEHICLE LIST

Page 1 of 1

Vehicle	Storage Location	Location of Keys
Isolation Supply Trailers	Outside Service Building 4	ECC/EOF Dose Assessment Area, Security, and Shift Manager
*RMT Vehicles	Parking Lot between DBAB and DBABA	ECC/EOF Dose Assessment Area
Ski-dozer	Outside Service Building 4	Shift Manager
Maintenance Services Dump Truck	Service Building 6	Maintenance Services Key Box
*4-Wheel Drive Pick-up	Outside the Personnel Processing Facility (PPF)	Maintenance Services Key Box
Station Services Tractors	Service Building 6	Maintenance Services Key Box
Forklift	Service Building 6	Maintenance Services Key Box

*Denotes vehicles which are equipped to tow the Isolation Supply Trailers

NOTES:

1. Fuel is available at Service Building 4. If the pumps are locked, contact Security for the key.
2. Back-up locations for all keys are the Security locksmith or Mobile Central.
3. This list is correct as of November 2002 and changes may occur.

ATTACHMENT 3: INVENTORY SIGN OUT/SIGN IN CHECKLIST

ATTACHMENT 4
TERMS COMMONLY USED DURING ADVERSE WEATHER CONDITIONS

NOTE

Experience has found that these terms are not consistently used by all media and governmental agencies.

1. *Blizzard Warning* - The worst of all winter warnings, with winds speeds of at least 35 MPH. Heavy snow, dangerous wind chills and blowing snow.
2. *Blowing Snow Advisory* - Snow already on the ground being wind blown and intermittently reducing visibility to ¼ mile or less.
3. *Freezing Rain or Drizzle Advisory* - Light amounts of freezing rain or drizzle enough to cause some travel problems. A winter storm warning is issued for severe freezing rain events.
4. *Snow Advisory* - Snow fall in amounts sufficient to cause significant travel problems (usually several inches).
5. *Snow Emergency* - Bans parking on streets identified as snow-routes. A Snow Emergency may be classified as one of the following levels:

   Level 1 Roadways are hazardous with blowing and drifting snow. Roads are also icy. Drive very cautiously.

   Level 2 Roadways are hazardous with blowing and drifting snow. Only those who feel it is necessary to drive should be out on the roadways. Contact your employer to see if you should report to work.

   Level 3 All roadways are closed to non-emergency personnel. No one should be out during these conditions unless it is absolutely necessary to travel. All employees should contact their employer to see if they should report to work. Those traveling on the roadways may subject themselves to arrest.
6. *Storm Warning* - Bad weather is imminent and actions shall be taken immediately to protect life and property.
7. *Storm Watch* - Bad weather has formed and is approaching the area.
8. *Wind Chill Advisory* - Wind chill levels in the dangerous category (-30° or below).
9. *Winter Weather Advisory* - Used for a combination of snow, freezing rain or sleet and cold temperatures which reduce visibility and cause problems for travelers.

COMMITMENTS

Section	Reference	Comments
None	None	None

8. EVACUATION TIME ESTIMATES (ETE)

This section presents the current results of the computer analyses using the IDYNEV System. These results cover:

- Eleven evacuation scenarios as summarized in Table 8-1, and discussed in Section 5.
- Ten regions within the Davis Besse Station EPZ, as defined in Table 8-2 and discussed in Section 5. Each region consists of one or more Subareas.

The ETE for each Region-Scenario combination are presented in Tables 8-3a through 8-3c for Scenarios 1-10. These tables present the time to clear the indicated population percentages from those subareas where an evacuation is the recommended protective action. Tables 8-4a through 8-4c present the times to clear the 2, 5 and 10-mile radial areas. Note that, in most cases, subarea boundaries do not fall on these radial arcs.

The issue of voluntary evacuation must be addressed when an evacuation recommendation is issued to regions, which comprise an area less than the entire EPZ. Voluntary evacuees are defined as those people who live within the EPZ in subareas for which an evacuation recommendation has not been issued who, nevertheless, choose to evacuate spontaneously. People who have been asked to evacuate may be delayed in leaving the area at risk due to the presence of voluntary evacuees on evacuation routes.

The ETE for Davis Besse Station addressed the issue of voluntary evacuees in the manner shown in Figure 8-1. Within the annular ring defined by the furthest extent of the evacuation recommendation, 50 percent of those people in subareas not advised to evacuate will do so. In the annular ring beginning at the furthest extent of the evacuation recommendation, 25 percent of the people will evacuate spontaneously.

Table 8-3a presents the time to evacuate 50 percent of the affected population. Evacuation times are expressed as hours and minutes after the evacuation recommendation is given. It should be noted that the park and lake areas will be alerted earlier than the general population and it is likely that those areas begin evacuating before the general population is notified of an evacuation recommendation.

Table 8-3b presents the ETE for 90 percent of the affected population. Table 8-3c similarly presents the ETE for 100 percent of the affected population.

The values of ETE are obtained by interpolating from IDYNEV output, which are generated at 30-minute intervals, then rounding to the nearest 5 minutes. Thus, the numerical precision of these values is within ±10 minutes.

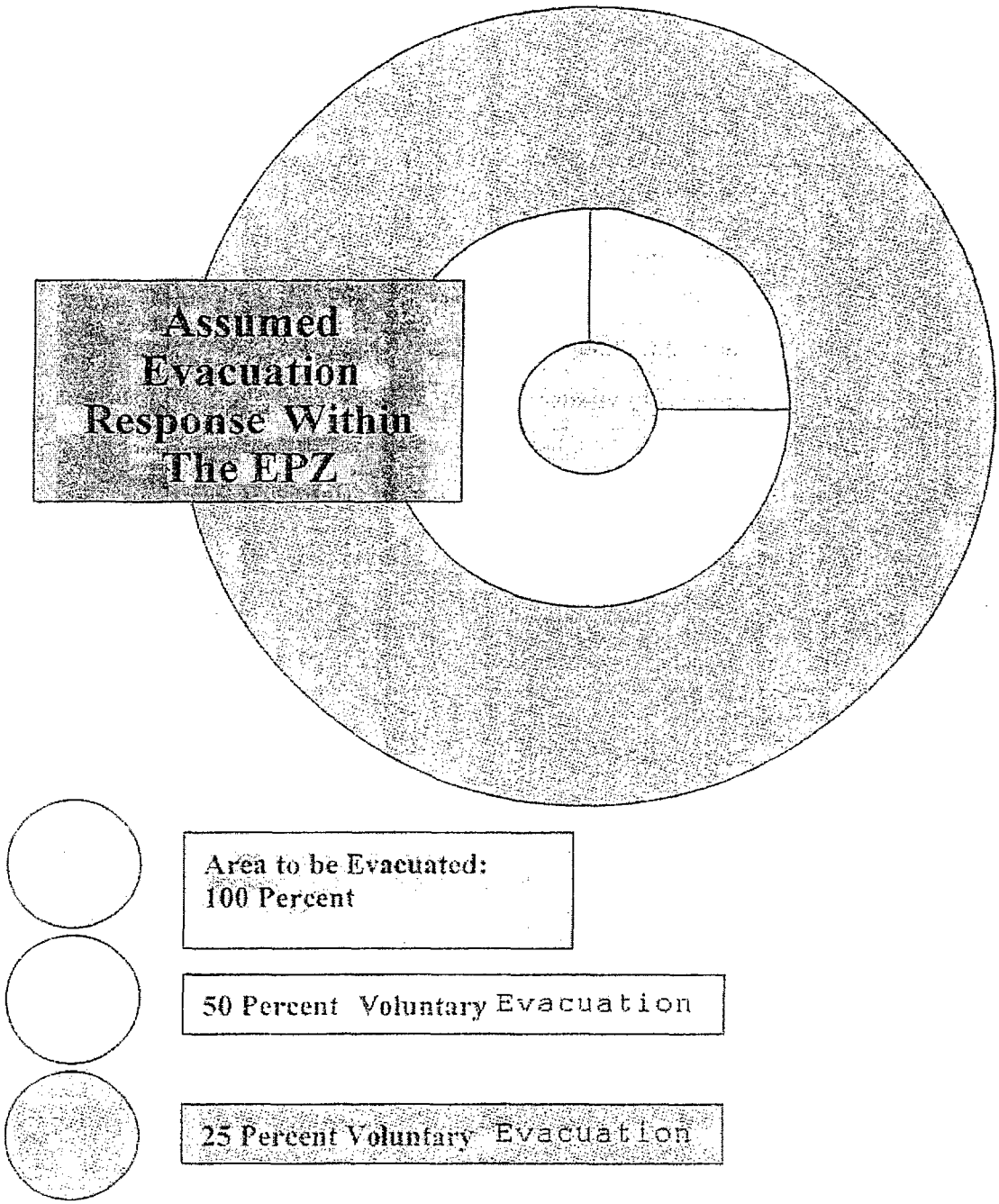

Figure 8-1. Voluntary Evacuation Rates

Table 8-1. Summary of Evacuation Scenarios

Scenario	Description
1	Summer, Midday, Midweek, Good Weather
2	Summer, Midday, Midweek, Rain
3	Summer, Midday, Midweek, Flood
4	Summer, Midday, Weekend, Good Weather
5	Summer, Midday, Weekend, Rain
6	Summer, Evening, Good Weather
7	Winter, Midday, Midweek, Good Weather
8	Winter, Midday, Midweek, Rain
9	Winter, Midday, Midweek, Snow
10	Winter, Evening, Good Weather
11	Spring, Midday, Midweek, Flood

Table 8-2. Summary of Evacuation Regions

Region	Subareas Evacuated
0 - 2 miles	1, 10, 12
0 - 5 miles	1, 2, 10, 12
	1, 6, 10, 12
	1, 2, 6, 10, 12
0 - 10 miles	1, 6, 7, 8, 9, 10, 12
	1, 2, 5, 6, 7, 8, 9, 10, 12
	1, 2, 3, 4, 5, 10, 11, 12
	1, 2, 3, 10, 11, 12
	1, 10, 11, 12
	1 through 12

Table 8-3A: Time to Clear the Indicated Area of 50 Percent of the Affected Population (Hrs:Min)

		Summer						Winter				Spring
		Midday					Evening	Midday			Evening	Midday
		Midweek			Weekend			Midweek				
Region	Subareas	Good Weather	Rain	Flood	Good Weather	Rain	Good Weather	Good Weather	Rain	Snow	Good Weather	Flood
0-2 Miles	1,10,12	1:15	1:15	1:05	1:20	1:30	0:45	0:55	1:00	1:25	0:45	0:40
0-5 Miles	1,2,10,12	1:25	1:30	1:10	1:30	1:45	0:55	1:05	1:10	2:00	0:50	0:50
	1,6,10,12	1:10	1:15	0:55	1:20	1:30	0:45	0:55	0:55	1:15	0:45	0:35
	1,2,6,10,12	1:20	1:25	1:05	1:30	1:45	0:55	1:00	1:05	1:45	0:50	0:50
0-10 Miles	1,6,7,8,9,10,12	1:35	1:45	1:25	1:50	2:05	0:55	1:10	1:15	2:15	0:55	1:15
	1,2,5,6,7,8,9,10,12	1:45	1:55	1:30	2:00	2:15	1:00	1:15	1:20	2:25	0:55	1:20
	1,2,3,4,5,10,11,12	1:45	2:00	1:40	1:50	2:05	1:10	1:20	1:25	2:30	1:00	1:25
	1,2,3,10,11,12	1:30	1:35	1:20	1:35	1:50	0:55	1:10	1:15	2:20	0:50	1:10
	1,10,11,12	1:30	1:35	1:10	1:35	1:35	0:45	1:10	1:15	1:55	0:45	0:50
	1 - 12	2:00	2:15	1:55	2:10	2:30	1:10	1:20	1:25	2:35	1:00	1:35

Table 8-3B: Time to Clear the Indicated Area of 90 Percent of the Affected Population (Hrs:Min)

		Summer						Winter				Spring
		Midday					Evening	Midday			Evening	Midday
		Midweek			Weekend			Midweek				
Region	Subareas	Good Weather	Rain	Flood	Good Weather	Rain	Good Weather	Good Weather	Rain	Snow	Good Weather	Flood
0-2 Miles	1,10,12	2:30	2:50	2:05	2:40	3:15	1:30	1:50	1:50	3:10	1:30	1:45
0-5 Miles	1,2,10,12	2:55	3:30	2:15	3:05	3:50	2:00	1:55	2:10	3:40	1:45	2:00
	1,6,10,12	2:30	2:50	2:00	2:40	3:15	1:35	1:50	1:50	3:00	1:30	1:35
	1,2,6,10,12	2:55	3:30	2:10	3:05	3:50	2:00	1:55	2:05	3:30	1:40	1:55
0-10 Miles	1,6,7,8,9,10,12	3:00	3:30	2:55	3:45	4:40	1:50	1:55	2:05	3:45	1:40	2:40
	1,2,5,6,7,8,9,10,12	3:25	4:05	3:25	3:55	4:55	2:25	2:10	2:25	4:00	1:55	2:50
	1,2,3,4,5,10,11,12	3:50	4:45	3:55	3:55	4:55	2:55	2:25	3:00	4:05	2:20	3:00
	1,2,3,10,11,12	3:05	3:35	2:40	3:10	3:55	2:00	2:00	2:10	3:50	1:45	2:25
	1,10,11,12	2:30	2:50	2:10	2:40	3:10	1:30	1:55	1:55	3:35	1:30	2:00
	1 - 12	3:45	4:45	4:05	4:20	5:25	2:50	2:20	2:45	4:05	2:15	3:00

Table 8-3C: Time to Clear the Indicated Area of 100 Percent of the Affected Population (Hrs:Min)

		Summer						Winter				Spring
		Midday				Evening	Midday			Evening	Midday
		Midweek			Weekend		Midweek				
Region	Subareas	Good Weather	Rain	Flood	Good Weather	Rain	Good Weather	Good Weather	Rain	Snow	Good Weather	Flood
0-2 Miles	1,10,12	3:30	3:50	3:00	4:00	4:55	1:50	2:30	2:30	4:30	1:50	3:00
0-5 Miles	1,2,10,12	4:00	4:55	3:15	4:20	5:20	3:00	2:30	2:35	4:40	2:30	3:30
	1,6,10,12	3:50	4:50	3:00	4:00	4:55	2:40	2:30	2:30	4:30	1:50	3:00
	1,2,6,10,12	4:00	4:55	3:15	4:20	5:20	3:00	2:30	2:35	4:40	2:30	3:30
0-10 Miles	1,6,7,8,9,10,12	4:25	5:55	4:30	5:10	6:15	3:30	2:35	2:45	4:35	2:15	3:20
	1,2,5,6,7,8,9,10,12	5:50	7:30	5:55	6:15	7:45	4:45	3:10	3:50	4:55	3:20	4:05
	1,2,3,4,5,10,11,12	5:50	7:30	5:55	6:15	7:45	4:45	3:25	4:20	4:55	3:20	4:05
	1,2,3,10,11,12	4:55	5:45	4:05	5:15	6:35	3:30	2:40	3:15	4:40	2:40	3:30
	1,10,11,12	3:55	4:00	3:00	4:00	4:55	1:50	2:30	2:30	4:30	1:50	3:00
	1 - 12	5:50	7:30	5:55	6:15	7:45	4:45	3:25	4:20	4:55	3:20	4:05

Table 8-4A: Time to Clear the Indicated Area of 50 Percent of the Affected Population (Hrs:Min)

Region	Summer						Winter				Spring
	Midday					Evening	Midday			Evening	Midday
	Midweek			Weekend			Midweek				
	Good Weather	Rain	Flood	Good Weather	Rain	Good Weather	Good Weather	Rain	Snow	Good Weather	Flood
0 - 2 Miles	1:30	1:35	1:05	1:35	1:40	0:45	0:55	1:00	1:30	0:45	0:40
0 - 5 Miles	1:45	1:55	1:05	2:05	2:25	0:55	1:00	1:00	1:50	0:50	0:45
0 - 10 Miles	2:00	2:15	1:55	2:10	2:30	1:10	1:20	1:25	2:35	1:00	1:35

Table 8-4B: Time to Clear the Indicated Area of 90 Percent of the Affected Population (Hrs:Min)

	Summer						Winter				Spring
	Midday					Evening	Midday			Evening	Midday
	Midweek			Weekend			Midweek				
Region	Good Weather	Rain	Flood	Good Weather	Rain	Good Weather	Good Weather	Rain	Snow	Good Weather	Flood
0 - 2 Miles	2:55	3:15	2:05	2:55	3:45	1:30	1:50	1:50	3:20	1:30	1:45
0 - 5 Miles	3:15	4:05	2:15	3:40	4:35	2:00	1:55	1:55	3:30	1:35	1:55
0 - 10 Miles	3:45	4:45	4:05	4:20	5:25	2:50	2:20	2:45	4:05	2:15	3:00

Table 8-4C: Time to Clear the Indicated Area of 100 Percent of the Affected Population (Hrs:Min)

	Summer						Winter				Spring
	Midday					Evening	Midday			Evening	Midday
	Midweek			Weekend			Midweek				
Region	Good Weather	Rain	Flood	Good Weather	Rain	Good Weather	Good Weather	Rain	Snow	Good Weather	Flood
0 - 2 Miles	3:25	3:50	3:00	3:25	4:30	1:50	2:30	2:30	4:30	1:50	3:00
0 - 5 Miles	3:55	5:00	3:15	4:25	5:20	3:00	2:35	2:35	4:40	2:30	3:30
0 - 10 Miles	5:50	7:30	5:55	6:15	7:45	4:45	3:25	4:20	4:55	3:20	4:05

Patterns of Traffic Congestion during Evacuation

Figures 8-2 through 8-3 illustrate the patterns of traffic congestion that arise for the case when the entire EPZ is ordered to evacuate during the summer, midday, weekend period under good weather conditions (Scenario 4).

Traffic congestion, as the term is used here, is defined as Levels of Service E and F. Level of Service E and F may be characterized as follows:

- Level-of-service E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

- Level-of-service F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level-of-service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow, which causes the queue to form, and level-of-service F is an appropriate designation for such points.